Kodikologie und Paläographie im digitalen Zeitalter

Codicology and Palaeography in the Digital Age

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Leicht veränderte Fassung für die digitale Publikation (siehe Vorwort).

Slightly modified version to be published digitally (see preface).

Codicological Descriptions in the Digital Age*

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Abstract

Although some of the traditional roles played by codicological descriptions in the print era have not changed when translated to digital environments, other roles have been redefined and new ones have emerged. It has become apparent that in digital form the relationship of codicological descriptions to the books they describe has undergone fundamental changes. This article offers an analysis of three of the most significant of these changes: 1) the emergence of new purposes of and uses for these descriptions, especially with respect to the usefulness of the highly specific and specialized technical language common to codicological descriptions; 2) a movement from a one-to-one relationship between a description and the codex that it represents to a one-to-many relationship between codices, descriptions, metadata, and digital images; and 3) the significance of a shift from the symmetry of using books to study other books to the asymmetry of using digital tools to represent and analyze books.

Zusammenfassung

Einige der traditionellen Funktionen kodikologischer Beschreibungen aus dem Druckzeitalter haben sich im Übergang in eine digitale Umgebung nicht verändert. Andere Funktionen aber sind neu definiert worden oder überhaupt erst entstanden. Offensichtlich hat sich im Digitalen das Verhältnis zwischen den kodikologischen Beschreibungen und den Büchern, die sie beschreiben, fundamental gewandelt. Dieser Beitrag untersucht drei der wichtigsten Veränderungen: 1) die Entstehung neuer Zwecke und Verwendungsweisen dieser Beschreibungen, insbesondere in Bezug auf die Nützlichkeit des sehr speziellen Fachvokabulars, das in kodikologischen Beschreibungen üblich ist; 2) die Entwicklung von einer 1:1-Beziehung zwischen einer Beschreibung und dem dadurch sie repräsentierten Codex zu einer 1:n-Beziehung zwischen Codizes, Beschreibungen, Metadaten und digitalen Abbildungen; und 3) die Bedeutung des Übergangs von der Symmetrie, Bücher zu benutzen, um andere Bücher zu untersuchen, zu der Asymmetrie, digitale Werkzeuge zu nutzen, um diese Bücher wiederzugeben und zu analysieren.

1 Introduction

It is by now well established that electronic technologies have fundamentally altered the form and uses of critical editions, as attested in electronic editions and texts produced by scholars such as Hoyt Duggan, Jerome McGann, and Kenneth Price, and in articles and anthologies—by these scholars and others—that document the scope and importance of this shift.[1] More broadly, these editions and critical discussions have made manifest the fundamental impact that technologies such as electronic databases, hypertext, digital imaging, and tools for searching and manipulating texts have had on scholarly practices and the production, use, and reception of cultural artifacts. The goal of this essay is to articulate the significance of these developments to the authoring and use of codicological descriptions, a genre that has received comparatively little attention in these discussions. While my observations are applicable to any codicological descriptions available in electronic form—and frequently to digitized bibliographical descriptions and other forms of analytical descriptions and catalog records—I will focus primarily on digitized manuscript descriptions from the *Roman de la Rose* Digital Library (RRDL) and the Parker Library on the Web project as case studies to illustrate my points.

The aim of the RRDL, a joint project of Johns Hopkins University and the Bibliothèque nationale de France, is to provide digital surrogates of all extant manuscripts of the *Roman de la Rose*, a 13th-century poem surviving in more than 300 manuscript copies. Surrogates are accompanied by and linked to full codicological descriptions, as there are many features of physical books that may be inaccessible or unclear when represented in digital form. The manuscripts are held by a wide variety of local, national, and university libraries, art museums, and private collectors worldwide, and as a consequence only brief or provisional descriptions of them exist in many cases. There is no comprehensive catalogue or other reference work in print containing descriptions or even a complete list of *Rose* manuscripts; prior to the RRDL, the most recent such work was Ernest Langlois's *Les Manuscrits du Roman de la Rose*, which was published in 1910 and offers short descriptions of approximately two-thirds of *Rose* manuscripts known to survive today. Because of this, the RRDL has undertaken the task of writing new descriptions for the site, a process in which I have been actively involved during the past several years. The Parker Library on the Web project, meanwhile, is in the process of digitizing the holdings of one collection—the famous library assembled

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[1] Duggan is the Project Director of the Society for Early English and Norse Electronic Texts and co-editor of several hypertext editions of Piers Plowman manuscripts published by the *Piers Plowman Electronic Archive*, which he also directs. McGann is the editor of *The Complete Writings and Pictures of Dante Gabriel Rossetti: A Hypermedia Archive* and a leader on a number of collaborative digital projects, including the Networked Infrastructure for Nineteenth-Century Electronic Scholarship. Price is co-editor of *The Walt Whitman Archive*.

in the sixteenth century at Corpus Christi College, Cambridge, by Matthew Parker, a well-connected book collector and public figure who played a key role in the English reformation. The Parker project inherits a rich tradition of descriptions of the library's collection, which has been catalogued four times,[2] including the rather thorough work of M. R. James, whose *A Descriptive Catalogue of the Manuscripts in the Library of Corpus Christi College Cambridge* was published in two volumes—the first in 1909 and the second in 1912. The James *Catalogue* is being digitized by the Parker project, with descriptions marked up and linked to the medieval codices they describe.

In many ways, the descriptions that I have written for the RRDL differ little from traditional work of this sort; I analyze the physical books in person and produce a prose description that, in print form, would not be out of place in catalogues of manuscripts produced twenty-five or even a hundred years ago. The descriptions on the Parker site, meanwhile, are marked up versions of work begun over a century ago by James. Yet in marking up both sets of descriptions—one custom made for the web, the other a digitized version of a printed reference work—for inclusion in digital libraries, and in designing and implementing interfaces for accessing XML-encoded descriptions and the surrogates to which they are linked, it has become apparent that in digital form the relationship of codicological descriptions to the books they describe has, like the relationships of critical editions to the texts they document and represent, undergone fundamental changes. I will offer here an analysis of three of the most significant of these changes: 1) the emergence of new purposes of and uses for these descriptions, especially with respect to the usefulness of the highly specific and specialized technical language common to codicological descriptions; 2) a movement from a one-to-one relationship between a description and the codex that it represents to a one-to-many relationship between codices, descriptions, metadata, and digital images; and 3) the significance of a shift from using "books to study books"—in this context, printed codices containing descriptions that represent other codices—to hypertext descriptions that escape "the time-and-space frames established by the material characteristics of the book" (McGann 20, 22).

2 Evolution in the Purposes and Uses of Codicological Descriptions

Some of the traditional roles played by printed codicological descriptions have not changed in digital environments. Descriptions formalize an approach to and vocabulary for understanding cultural artifacts, and they provide an expert opinion on the origins and status of manuscript books for the benefit of scholars who are unable to con-

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2   The four catalogues are by Thomas James (1600), William Stanley (1722), James Nasmith (1777), and Montague Rhodes James (1909–1912). For more information, see "About the Catalogs" on the Parker Library on the Web site.

sult the original objects and/or non-expert users who lack the necessary skills to make such judgments for themselves. Because they typically summarize dates, origins, owners, and contents of books, descriptions also serve as useful preliminary resources for researchers looking for information that will suggest which volumes, collections, and repositories are most likely to reward further time and effort. Codicological descriptions are usually characterized by a highly specialized and specific vocabulary—developed and augmented over the years by curators, codicologists, art historians, and others—and terse prose entries that make highly efficient use of space in printed books. Abbreviations and formulae are common, as they facilitate conveying a considerable amount of information in a brief space. These features are seen clearly in the following excerpt from a description of M. 948, a *Rose* manuscript held by the Morgan Library & Museum and available in surrogate form through the RRDL:

> M. 948 GUILLAUME DE LORRIS AND JEAN DE MEUN. Roman de la rose. France, about 1520, written by Girard Acarce for Francis I, king of France.
>
> Vellum, 210 leaves (10 5/16 x 7 5/16 in.) (262 x 186 mm.), foliated. 2 cols., 33 lines (180 x 125 mm.). Gothic script, black and some gold ink, written by Girard Acarce. 2 full-page miniatures with architectural frames, 67 large miniatures with full-page architectural frames which also include portions of text, 38 small miniatures (half-column) with simple gold frames, 2 small decorated borders, numerous gold initials against alternating red and blue backgrounds throughout. The miniatures are by at least two distinct artists: examples by the stronger are fols. 77v, 83v, 95; the weaker, fols. 172, 180, 186. Collation: I4, II8, III7, IV8, V2, VI8–XIII8, XIV6, XV8–XXVI8, XXVII6, XXVIII9. Binding: Modern red velvet, edges gilt and gauffered, with a row of lozenges containing the letter F flanked by rows of lozenges containing fleur-de-lis.
>
> The text is complete except for two breaks: a leaf between fols. 12 and 13 (containing lines 656–768 of M. Méon, Le roman de la rose, Paris, 1814, I, 23–32, and a small miniature probably depicting caroling or dancing), and two conjoint leaves between fols. 198 and 199 (containing lines 20907–21125 of Méon, III, 282–291, and a large miniature probably depicting Pygmalion at work).[3]

Such descriptions have traditionally met (and continue to meet) the needs of two types of users. The first is the visitor to the library who wishes to use the description as a guide to a manuscript being consulted in person. Information such as the name of the scribe responsible for the manuscript, the location of—and text lost as a result of—missing leaves, and the distribution and relative merit of the work of the two artists facilitates and expedites the work of most researchers, and is particularly valuable in enabling the work of those who wish to consult the manuscript for literary, historical, or other

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[3]   This description is available in hard copy to visitors of the Morgan's reading room and in PDF via *CORSAIR*, the Morgan's online catalogue. It continues with a detailed list of the subject matter of the miniatures.

reasons, but are not themselves equipped with the specialized knowledge to make such judgments. The second type of user whose needs are met by such descriptions is the researcher who is studying the manuscript remotely, and thus needs information that would otherwise be available only if the manuscript were at hand. The fact that the manuscript contains two columns of 33 lines each, for example, or that there are "numerous gold initials against alternating red and blue backgrounds throughout" is information that one does not need to provide to a library visitor who has the manuscript in front of her. In such cases, the language of codicological descriptions has needed to be precise and clear because it needed to convey an image of an original object that a user often could not see in person.

In digital environments, we encounter new forms for both codicological descriptions and the objects they describe. As Daniel Pitti has observed, "[i]n order to apply computer technology to humanities research, it is necessary to represent in machine-readable form the artifacts or objects of primary or evidentiary interest in the research, as well as secondary information used in the description, analysis, and interpretation of the objects" (474). In digital libraries such as the RRDL and Parker Library on the Web, color digital images of manuscript codices are the machine-readable forms of the original artifacts, and XML-encoded codicological descriptions are the secondary information used to describe, analyze, and interpret these artifacts. Some purposes and uses of these descriptions—and the precise, specialized language used to write them—remain the same or very similar to their print predecessors, while others are being transformed as a result of digitization. In order to demonstrate this, I will focus here on three categories of information found in hypertext codicological descriptions, as well as their similarities to and departures from their print analogues. The first of these—the dissemination of specialized knowledge—remains relatively unchanged; whether working in a physical or an online library, many users will need the combined paleographical, codicological, literary, and art historical knowledge found in descriptions such as that of M. 948 above. Such information is of course more easily searched, mined, and disseminated in a digital environment, but this is true much more broadly of marked up texts of all types, and thus need not detain us here. The second category is information that refers to the physical nature of manuscripts, and hence is not available via digital surrogates. This includes physical measurements of bindings, folios, and text blocks, tactile information such as the thickness of paper or whether one is seeing the hair or flesh side of parchment, and a reliable collation of the book, which necessitates physical inspection. This category of information also serves as a check against distortions to our understanding of physical objects that occur in electronic environments. Online libraries and archives are frequently equipped with tools for manipulating images, such as the ability to zoom, pan, and rotate; for example, the RRDL allows users to choose three display sizes in order to accommodate the variety of monitors which visitors to the online library may be using, and adds to this a larger "popup" option and a number

of zoom and pan tools. While such technologies are enormously useful to a researcher wanting to conduct a detailed analysis of a miniature or marginal inscription, they also tend to distort a sense of scale, both within one book and between multiple books. Digital repositories, meanwhile, are subject to mistakes that look remarkably similar to those made centuries ago in scriptoria and binderies. Instead of mistakes in foliation or pagination, files are misnamed. A break in a digital codex might as easily be the result of a lost file as a lost leaf in the physical book it represents. And rather than a binder misordering his gatherings, we might find files sequenced incorrectly. Descriptions made from physical books therefore serve as a means to diagnose and correct such problems.

The third category pertains to information that previously was included to meet the needs of those researchers studying manuscripts remotely through descriptions of them; it is in this category that we witness the most fundamental changes in the purposes and uses of codicological descriptions in digital environments. This category concerns information that, in printed descriptions, was designed to summarize and provide details of the physical appearances of manuscripts. Needless to say, the need for such information is substantially lessened when descriptions are accompanied by digital images; that the text of M. 948 is in two columns or that there are "numerous gold initials against alternating red and blue backgrounds throughout" is now attested by the images themselves, and thus there is not the same need for this information in the description. But this information has gained new usefulness even as it has lost much of its original purpose, for it now serves as a means for sorting, classifying, and comparing collections of manuscripts:

> Most historical or traditional documents and records are too irregular for direct representation in databases. Data in databases are rigorously structured and systematic and most historical documents and records simply are not. [...] While database technology may be inappropriate for representing most historical documents and records, it is very appropriate technology for recording analytic descriptions of artifacts and in systematically describing abstract and concrete phenomena based on analysis of evidence found in artifacts. Analytic descriptive surrogates will be useful in a wide variety of projects. Archaeologists, for example, may be working with thousands of objects. Cataloguing these objects involves systematically recording a vast array of details, frequently including highly articulated classification schemes and controlled vocabularies. Database technology will almost always be the most appropriate and effective tool for collecting, classifying, comparing, and evaluating artifacts in one or many media. (Pitti 476-77)

The textual materials comprised in the RRDL project provide clear examples of both types of documents mentioned by Pitti. Full transcriptions of manuscript versions of the 13th-century poem, which typically exceed 17,000 lines in length, are clearly "too

irregular for direct representation in databases." Yet the precision and specificity of the language of codicological descriptions, developed to convey a substantial amount of information in a small space (a necessity in print reference works if one wishes to avoid prohibitive cost and unwieldy volumes) now facilitates databases that provide highly flexible, searchable, and sortable relationships between the original artifacts. When, for example, a visitor to the RRDL views the codicological description of M. 948 written expressly for the digital library, he first sees a header containing information including features such as the date, origin, number of folios, and number of illustrations, as seen in Figures 1 and 2.

This information not only summarizes data about the physical book and the RRDL's work on it (for example, we see here that a transcription of the text and descriptions of the illustrations have been completed), but provides data for a database that allows users to sort other books using these categories. A menu on the left of the screen mirrors these categories and allows one, for example, to look for all volumes from the same country, repository, or century, or to produce a list showing the numbers of folios and illustrations that will help to convey how any given manuscript fits into the spectrum of available manuscripts.[4] Does it have relatively more or fewer folios than most other manuscripts? Is the number of illustrations unusually high or low? For example, a search reveals that M. 948 is near the top of the list in both categories (and the fact that it is a relatively lengthy book with numerous miniatures surely relates to its status as a luxury copy designed for presentation to François I of France). A more complete database built upon information marked up in the codicological descriptions—including the data above plus additional information such as height, width, number of leaves per gathering, and average number of lines per column—can be viewed online or downloaded in spreadsheet format so that users of the RRDL can search, sort, and analyze this information across the entire corpus of manuscript descriptions. The specialized terms found in the descriptions that are less easily adapted to spreadsheet categories and conventions of standardization, meanwhile—from *gauffered* edges to *cursiva formata* script—are rendered searchable across the collection. And while some information is rendered less useful for basic descriptive purposes in the presence of digital facsimile images, it gains new usefulness because it is searchable across multiple descriptions; a user might no longer need a description to inform her that a miniature has a gold leaf background, but the presence of this information in hypertext descriptions means that she may now search for all other manuscripts that feature such decoration and map out other similarities (or differences) that the volumes may share.

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[4]   It should be noted that both the heading for M. 948 and my description of the layout of the site are a snapshot of a particular moment—April 2009—in the RRDL's evolution. These features and their placement are likely to change over time as development work continues.

Roman de la Rose DIGITAL LIBRARY   [Search]

Advanced search

Home
Rose outline
Extant manuscripts
Collection
spreadsheet
Narrative sections
Illustration titles
Character names
Help

Book
Description
Page turner
Browse images

Select book by
Repository
Common name
Current location
Date
Origin
Type
No. illustrations
No. folios
Transcription

Project
Terms and
conditions
Partners
Project history
Donation
Blog
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Language
English
Français

Updated: 04/17/2009
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Morgan Library & Museum, M. 948

Repository:	Morgan Library & Museum	**Type:**	manuscript
Common name:	Morgan 948	**No. folios:**	210
Current location:	New York	**No. illustrations:**	107
Date:	16th century	**Transcription:**	Complete
Origin:	France	**Illustration description:**	Complete

IDENTIFICATION

M. 948, Morgan Library & Museum, New York. French, c. 1520.

BASIC INFORMATION

Parchment, 260mm × 180mm, 210 folios

MATERIAL

Parchment of good quality, with only the most minor instances of holes or soiling (3v and 4r, the dedication page, show the most signs of use).

QUIRES

I	1-4	two adjacent bifolia, one ruled and blank except for title; the other containing dedication page and coat of arms; first bifolium might possibly be two single leaves
II	5-12	
III	13-19	(one leaf missing before fol. 13; Lecoy 652-763)
IV	20-27	
XXVI	188-195	
XXVII	196-201	(two leaves missing after fol. 198; Lecoy 20677-20840)
XXVIII	202-209	; (fol.210 added singleton)

ii+210+ii. Modern quire numbers are present in bottom left gutter beginning with quire II (i.e. the numbering of the quires begins with "1," on fol. 5, continues with "2" on fol. 13, etc.). Signatures were formerly on the first four leaves of each gathering at the bottom center, but are now mostly lost to cropping. A few remain, however, e.g. fol. 88r *Liij* (L3), 109r *oij* (O2), 119r *p4* (P4). (The alphabet used to designate signatures includes "J" but not "W.") No catchwords. Modern foliation in pencil, top right corner, is accurate.

Folios 1 and 2 deserve a special note. These leaves appear to be added to the front of the manuscript to provide a title page, either singly or as a bifolium, just as folio 210 is added singly to the end of the codex, and all three of these leaves share a ruling pattern not found elsewhere in the codex. Leaves 3 and 4 form a separate bifolium. Thus quire I does not constitute a cohesive codicological unit per se, but grouping these leaves together makes for a clear means of describing the structure of the book that has the added benefit of agreeing with quire numberings extant in earlier descriptions.

LAYOUT

Ruled in red, probably in ink. Prickings feature one hole for each line. These are mostly lost to cropping, but some survive, e.g. fols. 190, 200. (The most conspicuous examples of prickings occur after folio 180 in quires with a different ruling pattern.) The text is ruled in two columns of 33 lines each. Text blocks are 180 mm × 55 mm. There are four vertical lines, two horizontal lines at the top, and one at the bottom. This is true on folios 5-179, but the following exceptions occur:

Figure 1. A screenshot of the description of M. 948. Courtesy of the *Roman de la Rose* Digital Library. Modified for printing; text on quires shortened.

1) Fols. 1-2 and 210 have a single rather than double horizontal line at the top, but are otherwise ruled the same. Note that these are not part of the normal quire structures, as described in section 4 above.

2) Fols. 3-4 are not ruled beneath images; 4v has double horizontal lines at top and bottom and is ruled for a single block of prose rather than in two columns, with a text block 177mm in height; note that this bifolium contains the dedication page, coat of arms, and prose preface.

3) Fols. 180-209 have one horizontal line at the top and two at the bottom – i.e. the ruling pattern is an upside-down mirror opposite of the main pattern; text block is about 178mm in height rather than 180.

SCRIPT

The manuscript is the work of one scribe, Girard Acarie, who uses a cursiva formata script throughout.
Few if any corrections.

DECORATION

No rubricated text. Numerous one- and two-line initials alternating gold ink on blue backgrounds and gold ink on red backgrounds. No text decoration aside from initials. No line fillers other than one in prose dedication, fol. 4v. Architectural frames around large miniatures, simple gold borders around small miniatures. Small borders at the bottom of the second column on fol. 180v and at the top of the first column on fol. 181r mark the spot of lines not typically found in the *Roman de la Rose* that were added here for King Francis I. 2 full-page, 67 large, and 38 small miniatures by at least two artists.

BINDING

Modern red velvet binding, likely 19th-century. As described in the *Seventeenth Report to the Fellows of the Pierpont Morgan Library, 1972-1974*, "edges gilt and gauffered, with a row of lozenges containing the letter F flanked by rows of lozenges containing fleur-de-lis." No clasps or metallic pieces. Parchment flyleaves numbered i, ii in front, 211, 212 in back.

HISTORY

The book was copied c. 1520 by Girard Acarie for presentation to Francis I, king of France; Acarie copied the text from a 1519 edition printed in Paris by Michel le Noir. Francis is depicted receiving the book on fol. 4r, and his coat of arms appears opposite this on 3v. The following provenance is from the *Seventeenth Report to the Fellows of the Pierpont Morgan Library, 1972-1974*:

TEXT

Contains only *Roman de la Rose*; lacunae at Lecoy 652-763 and 20677-20840, as described above in collation. The following 10-line interpolation praising Franics I was added on fols. 180-181:

Mesmes Francoys premier du nom
Roy des francoys de grant renom
Prudent en faictz doulx en parler
Aux armes preux hardy vouloir
D'esprit tres beau forme de corps
Tres gracieulx misericors
Saige en conseil et raisounable
Royal de cueur begnin a fable
Large en honneurs Richesse avoir
Plus que Cesar prompt en scavoir

Description by Timothy L. Stinson

Figure 2. Screenshot continued; text on history shortened.

3 The Relationship of Description to Codex

In addition to changes in the purposes and uses of codicological descriptions, their relationship to what they describe has changed in number and complexity. Printed codicological descriptions exhibit a one-to-one relationship to the manuscript books they describe, offering a summary and analysis of the book's physical and textual properties. This is not meant to imply, of course, that the descriptions themselves or their relationships to the codices they describe are in every case simple. On the one hand, many descriptions comprise little more than a relatively brief summary of facts about a book's physical makeup and history. When many catalogues of manuscript descriptions were created, their primary goal was simply to compile a basic record of a library's holdings; in many cases neither libraries nor their visitors had any reliable means to know with any reasonable degree of comprehensiveness what manuscript materials a given library held. A good example of this is the aptly titled *A Summary Catalogue of Western Manuscripts in the Bodleian Library at Oxford*. As that great library neared the dawn of the twentieth century, curators and researchers were continually beset with difficulties of knowing what manuscript books the library possessed and, upon knowing of a book, sometimes of locating it.[5] As a result, the *Summary Catalogue* was initiated with the goal of creating a master list comprising short descriptions of all of the library's western manuscripts. Thus the complete entry for MS Douce 195, a well known *Rose* manuscript held by the Bodleian, is as follows:

> **21769**. In French, on parchment: written in the second half of the 15th cent. in France: 14 X 9 ¾ in., ii + 158 leaves, in double columns: illuminated: binding, maroon leather with gold ornament, doublé (French 18th cent.).[6]

> '... Le rommant de la Rose' by Guillaume de Lorris and Jean de Meung: after the usual ending come, without any break, 24 lines, beginning 'Et lors quant ie fu esueillie.' There are many fine miniatures illustrating the poem, chiefly small, but larger ones are at foll. 1, 86v, 105v, 108, 152v. On fol. 1 are the joint arms of Orleans and Savoy dimidiating each other per pale.
> Now MS. Douce 195 (Vol. IV, 550)

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[5] For a detailed account of the troubles caused by this situation at the Bodleian, see Andrew Clark's *The Cataloguing of MSS. in the Bodleian Library: A Letter Addressed to Members of Congregation*. Clark outlines fundamental goals, noting that "[t]he Summary Catalogue would furnish, within a few years, a complete guide to the Western MSS. of the Library" (which would include "both MSS. quite uncatalogued and MSS. imperfectly catalogued"), as well as more colorful advantages, such as that "[t]he Summary Catalogue would effect an immediate and perpetual saving of time of the staff, and avoid much heartburning among readers" and "enable the Library to do justice between trifling and valuable MSS." (52-54).

[6] The identification of this as an 18th-century French binding is doubtful, as it is signed by C. Lewis, an English binder active primarily during the first half of the 19th century.

The relationship of this description to the original codex is direct and clear; it reports basic physical features of the book along with the text it contains, and offers brief comments on its decoration, including a coat of arms that might suggest provenance. Together, many such descriptions document the extent and individual components of the Bodleian's collection and serve as a valuable reference work for librarians and researchers. Of course other catalogues, such as James's catalogue of the Parker Library's manuscripts, feature descriptions that might span many pages, and these descriptions are often themselves highly accomplished works of scholarship. In addition to documenting basic facts about a book, they might also record textual variations, what exemplars were likely used, the dialect and identity of scribes, the identity or school of an illuminator, and the possible users and owners of a volume over time. As such, these descriptions might be small essays that account for the shifting milieux of a codex over the many centuries of its existence. A medieval codex is rarely a simple artifact, and may more accurately be thought of as an archeological site contained within a binding; as such, accurate descriptions of these objects are often very complex documents. Even such a complex description, however, stands in a one-to-one relationship to the book it describes; the description may discuss many intersections of textual transmission and/or artistic production, but it does so because the book itself manifests its own participation in those intersections.

In digital archives comprising images, however, this one-to-one relationship is supplanted by a one-to-many relationship. At a minimum, the original book, the codicological description, and the images that constitute the surrogate book each present relationships to the other two. In such an environment, the description describes not only the original book, but also the surrogate. While the original codex maintains an ultimate authority in that it possesses the ability to show whether a codicological description and/or the surrogate codex is somehow faulty or incomplete, the reality, and indeed the very goal, of most digital libraries is that far more people will use the digitized description as a guide to the surrogate book than would ever be able to use it as a guide to the original artifact. As such, a description in a digital environment should work equally well as a guide to both. The original codex and its surrogate images also participate in one-to-many relationships. The images, like the description, are a representation of the artifact; in turn, the images are described by and linked to the description. The original codex, meanwhile, stands in a set of new relationships to virtual versions of itself, the ramifications of which will be discussed further in section 3 below. But of course, this model is frequently complicated still further, as when transcriptions and other metadata offer new sets of relationships both to the original book and to other digital representations of it. In the RRDL, for example, the images are frequently linked not only to the codicological descriptions, but also to transcriptions and to descriptions of the illustrations written by an art historian. The codicological descriptions, meanwhile, serve not only as guides to original codices and surrogate images, but, because

they are marked up in XML tags that define categories of data[7], they function as the foundation of databases and, in combination, as a large searchable "meta-manuscript" that contains combined data from numerous physical codices and thousands of digital images. The descriptions not only stand in complex multiple relationships to original artifacts, images, transcriptions, and other documents, then—they also stand in multiple relationships to one another. In a sense, this has always been true of a collection of manuscript descriptions. In Langlois's catalogue of *Rose* manuscripts, the collected descriptions stand in relation to one another—as well as to the books they describe—in that together they attest to the breadth and depth of manuscript traditions of one literary text; in James's catalogue, the descriptions together attest to the breadth and depth of one collection. But in that sense, every printed book is linked to all others contained in its bibliography and footnotes. In order to release and utilize these connections in printed books, however, one must create them anew each time, flipping through the pages to make connections or discern patterns. In digital form, conversely, the connections are always available, awaiting searching, sorting, parsing, and reorganizing, even in ways that—unlike the tables or indices in Langlois and James—the descriptions' authors did not intend or imagine. In short, with printed volumes of descriptions one is limited by the form of the book itself, and it is this set of limitations that forms the subject of my final section.

4 "The Rationale of Hypertext" and Codicological Descriptions

By now, anyone familiar with the scholarship of Jerome McGann, and particularly with his famous essay "The Rationale of Hypertext", will have noted the indebtedness of my argument to his. In particular, my discussion of the "one-to-one" relationship of description to original and my use of the term "meta-manuscript" are intentional echoes of McGann's argument that "the facsimile edition stands in a one-to-one relation to its original" and his depiction of the electronic *Oxford English Dictionary* (OED) as a "meta-book", respectively (20-21). I would like to turn now to an even more direct engagement with "The Rationale of Hypertext" through an analysis of how the relationship of the codicological description to the artifact it describes has changed in that formerly both tended to be in codex form, and thus to utilize similar technologies—e.g. indexes, glossaries, and concordances—whereas in a digital environment a description lacks such symmetry of form with the object it describes. In his essay, McGann articulates the many difficulties frequently encountered in using printed critical editions to study other printed books:

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[7] Manuscript descriptions are marked up using standards described in the TEI Consortium's *TEI P5: Guidelines for Electronic Text Encoding and Interchange* (see module 10, "Manuscript Description").

Brilliantly conceived, these works are nonetheless infamously difficult to read and use. Their problems arise because they deploy a book form to study another book form. This symmetry between the tool and its subject forces the scholar to invent analytic mechanisms that must be displayed and engaged at the primary reading level—e.g. apparatus structures, descriptive bibliographies, calculi of variants, shorthand reference forms, and so forth. [...] The crucial problem here is simple: the logical structures of the "critical edition" function at the same level as the material being analyzed. As a result, the full power of the logical structures is checked and constrained by being compelled to operate in a bookish format. (21)

Printed codicological descriptions are subject to the same limitations—and the same "crucial problem"—as critical editions, and those who have labored to become familiar with the "abbreviated and coded forms" (as McGann terms similar features in printed critical editions) and collational formulae of such descriptions will attest to the difficulty of their use. For an example of this, let us turn to James's work, which is in many ways a particularly good catalogue of manuscript descriptions. The following is a representative excerpt from entry 79, described as "Pontificale (London), Codex membranaceus in folio, picturis elegantissimis et omnibus literis initialibus deauratis ornatus":

Vellum, 157/10 X 10, ff. 24 + cclix, double columns of 30 lines. Cent. xiv– in a fine upright black hand. Music on four-line stave.

Collation: 14 (wants 1) 210 (1 canc.) 38 ‖ 44 58–78 (+ slip after 1) 88 98 (5 is half a leaf) 108–138 (+ slip after 3) 148–198 206 218–298 (+ slip after 1) 308–348 (6–8 removed and replaced by) 35 (six) 368 (+ slip after 7) 38 (five). (James 160)

In many ways, the James *Catalogue* is an exception that proves the rule. It would be a simple (if not quite fair) enough matter to quote many catalogues comprising terse summaries containing little more than what I excerpt here from James, and to use those examples to point towards the limitations of printed collections of manuscript descriptions. But this would point only to one limitation, namely the expense and unwieldiness that result from taking up extra space in printed reference volumes, pressures that have limited the scope and shaped the language of almost all reference works made available in the form of printed books. James's descriptions, however, are particularly detailed and generous, commonly running several pages per manuscript codex and frequently containing lengthy lists of texts and illustrations accompanied by observations on aspects such as the quality of the artwork, previous scholarly uses or mentions of the manuscript, and summaries of subjects covered in miscellanies. Even so, the James *Catalogue* contains and relies upon "abbreviated and coded forms" such as those above that demand considerable expertise from the catalogue's users and owe their form—at least

in part—to space-saving abbreviations and notational devices developed by James's predecessor.

   More to the point, however, is that James's admirable undertaking cannot escape the limitations forced upon it by its own bookishness. These are precisely the limitations of printed critical editions articulated by McGann: James's *Catalogue* is a book form designed to study other book forms that demonstrates symmetry between the tool and subject manifested in "analytic mechanisms that must be displayed and engaged at the primary reading level" (McGann 21). In its printed form, the true power of James's work lies latent; the data is there, but it is contained in a medium that limits its utility. In order to unleash this potential, the work needs digitization, a means of eclipsing the constraints of its codex format:

> Computerization allows us to read 'hardcopy' documents in a nonreal, or as we now say a 'virtual', space-time environment. This consequence follows whether the hardcopy is being marked up for electronic search and analysis, or whether it is being organized hypertextually. When a book is translated into electronic form, the book's (heretofore distributed) semantic and visual features can be made simultaneously present to each other. A book thus translated need not be read within the time-and-space frames established by the material characteristics of the book. If the hardcopy to be translated comprises a large set of books and documents, the power of the translational work appears even more dramatically, since all those separate books and documents can also be made simultaneously present to each other, as well as all the parts of the documents. (McGann 22)

Thankfully, we do not have to hypothesize about the virtues of digitizing the James *Catalogue*, for that work is well under way as part of the work of the Parker Library on the Web project. As digital images of the Parker Library's manuscripts are made available online, they are accompanied by and linked to the text of the James *Catalogue*, which is available both in marked up form on the site and via PDF files that visitors can download. The result is that the digitized entries of both volumes of the *Catalogue* are "simultaneously present to each other", freeing James's work from the constraint of the codex and enormously facilitating its usefulness as a tool for researching the cultural heritage of the Parker Library, whether one is working with physical codices in Cambridge or virtual books on the web. In its original form, the James *Catalogue* utilized technologies—including lists, tables, and indices—not at all dissimilar to those found in the medieval books it described. In digitized form, this symmetry is eclipsed, and the result is a far more flexible and powerful tool.

   As a footnote to this discussion, it is worth noting that James's collational formula quoted above points to the capacity of the printed book to shape—and perhaps misconstrue—our conception of the manuscript book, not merely in deploying "a book form to study another book form", but in invisibly shaping what our notion of a book is in

the first place. Perhaps the chief virtue of such formulae in manuscript catalogues is brevity; they are concise yet convey the entire structure of the codex. But to a descriptive bibliographer working on printed books, brevity is not the chief aim of a collational formula, as made clear in Fredson Bower's landmark work *Principles of Bibliographical Description*:

> The collational formula and the basic description of an edition should be that of an ideally perfect copy of the original issue. A description is constructed for an ideally perfect copy, not for any individual copy, because an important purpose of the description is to set up a standard of reference whereby imperfections may be detected and properly analyzed when a copy of a book is checked against the bibliographical description. In a very rare book the evidence may not be sufficient to construct a perfect description, but it is better to aim at this perfect description, even though its collational formula may be incomplete and full of queries, than to misrepresent a book by describing only an imperfect individual copy. (113)

But of course in the world of manuscript books, there is only the "very rare book", the "imperfect individual copy". No "standard of reference" is possible in a set of one, nor can we speak of "an edition" of a manuscript book. This should serve as a caution, then, against applying the principles and practices of describing printed books too liberally to those of describing manuscript books. Browsing the range of meanings for the word *formula* in the OED (whether the printed volume or McGann's meta-book), one encounters the terms *prescription*, *rule*, and *principle*, all of which imply an ideal against which individual instances must conform or else be deemed incomplete and imperfect. But with a manuscript codex there is no abstract ideal against which to measure copies or other instances; there is only the presumed original form, which itself is a slippery notion given the number of additions, subtractions, and rebindings undergone by many manuscripts over the centuries since their inception. The only ideal the codicologist can envision is what a single manuscript book once was before, e.g., leaves were lost or physical evidence was destroyed by a binder; we may collate one text of *Roman de la Rose* against others, but we cannot collate one book against others in the ways that Bowers suggests we should collate printed books.

The rubrication, historiated initials, and foliated borders of incunables remind us that in the early days of print the concept of what a book should be was dominated by the manuscript codex. During recent centuries, the opposite is true; descriptions of manuscript books bear witness to the dominance of printing in forming our collective notion of what a book should be, and thus we have, for example, assigned them titles and expressed their structures in collational formulae that better reflect the realities of printed rather than manuscript books. As we seek to liberate our codicological descriptions from the constraints of "being compelled to operate in a bookish format," we should also bear in mind the opportunity to correct the assumption that such books op-

erate—and should be described—in parallel with printed books. Both our tools and our mindsets need to be liberated from print if we are to achieve accurate representations of artifacts that were produced before the advent of printing. Our ideal for original artifacts—the manuscript codices themselves—is that they remain as stable and fixed in time as possible, the goals of our best curation and conservation efforts. But we should be eager to escape the fixity of our tools for working with and describing manuscript books—tools that are often byproducts of the technologies of the printed codex—and embrace instead new purposes and uses for our codicological descriptions, complex new sets of relationships between books, their surrogates, and the technologies we develop to study both, and our opportunity to move beyond the book in order to understand it better.

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