

Metadata

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Components of Metadata

Wait, we're not yet through our explanation! Besides the types just noted, metadata has three main components: syntax, semantics, and standards. As in language, metadata syntax, or encoding, defines the rules for construction of metadata "sentences." Examples of syntax include Machine Readable Cataloging (MARC), a numerical encoding which enables one to go online to determine a library's holdings, and Extensible Markup Language (XML), a "human readable" or language-based encoding which allows Web publishing, electronic data exchange, and portable, reusable metadata. XML is used in personal digital assistants, cellular phones, and automatic phone banking—and will be used in the library catalogs of the future.

In semantics, by contrast, we find the meaning of semiotic markers—in a metadata scheme as in language. But, because the word "chair" can refer to the piece of furniture or to the person presiding over a committee, a metadata system requires its third element, standards, which fix meanings that would otherwise—as in actual language—be unfixed, subjective, and contextual. Standards make possible the exchange of information by making metadata records compatible with each other and aiding interoperability between databases. There are standards for metadata element sets or schemes, element content, controlled vocabularies, and encoding.

Metadata Schemes

Because of the need for differences and levels of complexity in semantics for describing different types of resources, several different, but standardized metadata schemes have been developed; some are geared to specific disciplines and purposes. Among the most common are the:

- Visual Resources Association Core (VRA), used for describing cultural objects and works of art; the
- Encoded Archival Description (EAD), for describing archived collections; the
- Text Encoding Initiative (TEI), which facilitates the description and marking up of texts; and, most prominent, the
- Dublin Core, an all-purpose metadata scheme that, used in its simple or qualified forms, can integrate many different formats, including maps, images, and texts. In its simplest form, Dublin Core is a "lowest common denominator" scheme that facilitates system-to-system operability.

The original purpose of the Dublin Core was to organize the Web. Back in

1995, it was thought that the Web could be organized like a library if Web site creators would assign access points, descriptors, and subject headings to their content so that it could be located more easily. Web site creators did not have the motivation to catalog their Web sites, but museum curators, librarians, and visual arts librarians adopted the Dublin Core and were instrumental in its development and significance as a key component of the semantic Web.

WMU Metadata Projects

The Dublin Core metadata has already been used to describe the Caroline Bartlett Crane Collection and the Ward Morgan Photographic Collection (see *Gatherings*, No. 35, Fall 2004, p. 5) at WMU. Caroline Bartlett Crane was an early 20th century social activist. She designed an award-winning home, still standing in Kalamazoo, which was one of the first focusing on family spaces and convenience for women. The digitized collection includes blueprints of the house, photographs, and letters from Presidents Calvin Coolidge and Herbert Hoover congratulating her on winning the Better Homes in America 1924 Model Home contest. Dublin Core metadata is used to describe the objects, and, just as importantly, to provide a wide audience Web access to a rare and important collection that is otherwise difficult to view.

Ward Morgan was a 20th century Kalamazoo commercial photographer. The digitized collection includes hundreds of photographs of businesses, homes, and schools in the Kalamazoo area. Using the metadata, the researcher can look for specific known businesses and buildings, neighborhoods, types of buildings, objects or people in the photographs, such as "women," "soda fountain," or "automobile dealers." In addition, all photographs "about" certain topics may be gathered using browseable categories including education, advertising, and business products

Two additional and exciting metadata projects in the works will be of great benefit to Western faculty and students. The first involves tens of thousands of slides featuring art objects that are in the process of being digitized and made available electronically for classroom use. VRA is the metadata scheme chosen for this project. VRA includes a set of elements, which may be encoded in XML, that is designed to describe digitized images of art objects, analog slides or photographs of the objects, and the physical objects themselves. Because of the specific art-related VRA elements used in the cataloging of the slides, the searcher will be able to bring together from this collection all the works of art by a certain artist or architect, from a specific time period or

genre, and even all works created using a particular technique or material.

As described in Sharon Carlson's article, also in this issue of *Gatherings*, Western Michigan University recently received a grant of \$95,000 to digitize and provide Web access to eight Civil War diaries currently housed in the Archives and Regional History Collections. Each diary is in the process of being digitized so that the actual pages may be viewed electronically from anywhere, and also transcribed into an easy-to-read format. The metadata scheme chosen to describe, provide access to, and preserve these valuable pieces of American history was TEI encoded in XML. Using TEI provides a way, not only to create an item-level record for each diary similar to a library catalog record, but also to "mark up" the transcribed text. Places in the text will be marked for retrieval where particular people, places, battles, military units, and topics are mentioned.

Thanks to metadata, information has indeed escaped its containers. Information resources, deteriorating, hidden, and remote, are rediscovered, shared, and preserved. Threatened cultures and histories, muted voices that have been long lost, are given a global stage. Metadata, the magic behind the scenes, makes it possible.

Books as Art

By Pam Rups, Coordinator,
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People feel so empowered when they make a book. I've seen that reaction when I teach and also felt it in my own experience. Because most of us tend to buy everything ready-made—our clothes, our food, our homes, our toys, and, especially our printed books—most of us have lost the ability to consider making something from scratch—unless the item is available in a kit or is some "thing" simple to put together. As a result, when someone makes a book for the first time, he or she feels the magic of creation.

On the other hand, the physical structure of books seems uninteresting to those who stop to think about them. I know very few people, especially in today's electronic world, who have ever given any thought as to how a book is put together. Although most of us still use books almost daily: for reference, for study, for fun, and for training, we seem not to care about the package itself. If you ask people how this object, this book that

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they use every day, came into being, you get a shrug of the shoulders, or a “who cares?” look.

A few of us, however, have a great curiosity about these essential tools of our daily life—and especially someone who is a student of medieval history must look to the beginnings of books. And, so, several years ago, I gave myself the task of making a medieval manuscript and writing about the experience for my Master of Arts thesis. Of course, I was very anxious about making a mistake by not getting some part of the process exactly correct, but I had to move forward step by step to completion. And so, I

- split a hunk of aged oak for the cover boards and planed and scraped them flat; then

- spun my own flax fibers on a spindle I made;

- ground my own pigments for painting the miniatures;

- wrote in medieval Latin with a goose quill pen using ink made of oak galls;

- made a piece of vellum from a goat’s skin;

- made my own brass fittings and rivets; and

- more...

Despite my fears, I found that these tasks were not impossible or even all that difficult to do, but did take time and patience. At each stage, I reminded myself that manuscripts had been made for hundreds of years by hand, long before any of our modern technology and machines existed. Certainly, skills had to be rediscovered and a few learned from scratch. At the same time, as I progressed through the medieval book creation, it became evident that some of these ancient skills had some special benefits. Besides the basic satisfaction in discovering manual skills that were once fairly common, there is another “value added” consideration. Almost all contemporary books are made by machines, which gives people a very limited idea of what a book can or should be. Modern books are held together mainly with a lot of glue and other materials that do not necessarily contribute to easy opening and prolonged use. As a result, many of today’s books are simply another quickly deteriorating and disposable item in our lives. But when making a book by hand, the maker chooses the materials, and is free to use paper and boards and threads and such that will not break down quickly—nor will the wisdom and ideas contained in that book disappear.

My Books and Thoughts

Pocketbook, an early creation, is a book of mine whose idea is based on a play on words. I gathered pockets from my own clothing and items I found in thrift stores. I backed and sewed pairs of pockets together and then sewed the pairs much as one would sew a book with paper pages. I even added some conservative gray “endpapers,” also of cloth. The cover has a pocket into which I inserted a letterpress-printed label reading *Pocketbook*. I’ve often thought about putting small objects in the pockets as hidden surprises for viewers to find.

Another of my books presents an idea that had long been looking for a means of being expressed. As a child and even into adulthood, I somehow had this sense that



Pam Rups and Her Artful Books.

the world was, on the surface, a stable place yet this same world underwent alterations from time to time. And, as I explored the spiritual aspects of life, I began to comprehend how nothing remains the same, even our seemingly stable Earth. I also realized I could experience those changes during my short lifetime.

To convey this, I hunted down old world atlases and took apart one from 1985. This atlas was 21 years old—that seemed significant—and was actually quite difficult and time-consuming to take apart because of the adhesives, which were mostly not water-soluble. After choosing certain sections to use, I interleaved an archival translucent paper so that each page would have an overlying sheet. I then sewed this new set of pages together being careful to use the original sewing holes in order to do the least damage structurally. I gave the book a brand new binding and two attached bookmark ribbons. Onto the end of one

ribbon I tied a silver mechanical pencil, and onto the second, an eraser. On the tracing paper I have crossed out the names of cities and countries that have changed, scribbled out borders that no longer exist, and redrawn shorelines. The book is titled *The Unstable World Atlas* because I like the ambiguity.

The idea of constant change has found expression in a second book as well. This book is made of CDs, many of them those wonderful freebies that clutter our mailboxes—well, I just had to do something with them! I copied pages from various books of well-known authors and pressed the copied texts onto the CDs in a flat hot-press. This meant the text was backwards on the CDs, which I didn’t like at first, but later realized better contributed to the difficulty of recognizing the text. I included pages from *Fahrenheit 451* by Ray Bradbury and *The Handmaid’s Tale*, by Margaret Atwood, both forbidding pictures of what the future could be. I added a Table of Contents and a short introduction explaining the piece, and then bound it in a medieval limp goat vellum binding with cherry wood to reinforce the long stitching on the spine.

The title of this book is *The Silent Future: How Will We Speak from the Past?* This artful book demonstrates a serious issue facing all of us. Most of our communication in this 21st century is done by e-mail and Web pages and word processors, whereas in the past it was written down by hand on paper. We still have writings from hundreds of years in the past, but already I have computer files from only five years ago that are unreadable. And what about when your computer crashes and you haven’t backed up your files? Our children will not find old letters and diaries and photo albums in the attic. It will be a very different future indeed.

In the final analysis, making a book gives people a feeling of power because they can understand and even produce something whose structure was once unfathomable. And, since books are purveyors of information and ideas, making a book also bestows the power to give physical substance to one’s own ideas, just as computers and the Internet have enabled once obscure voices to find forums.

So it is that when people start making books, they soon want to personalize them: to decorate the covers, use special end papers, write or edit the text, and create their own illustrations. From there, the process can evolve to the point where the physical book no longer merely carries the message, but is itself part of the message in its appearance and construction. And that is when books become art.