ON THE DUBLIN CORE FRONT

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Those who can, teach: an interview with Jane Greenberg

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"*Emotive language has a tendency to increase and multiply according to some law of rhetoric. The end result is the generation of more intense heat and less clear light*." – Thomas Wassmer

ABSTRACT
This article features an interview with Jane Greenberg, Associate Professor in the School of Information and Library Science, University of North Carolina at Chapel Hill. Ms. Greenberg discusses metadata education, her research projects, and the future of the Semantic Web. She describes the Metadata Generation Research and Automatic Metadata Generation Applications projects, the ways library school curricula have changed and will likely change in the near future, and the influence Dublin Core has had on her career.

KEYWORDS
Jane Greenberg; library and information science education; metadata; Metadata Generation Research project; MGR project; Automatic Metadata Generation Applications project; AMeGA project; Semantic Web; Dublin Core Metadata Initiative; DCMI

The most influential teacher I ever had was Thomas Wassmer, an abrasive Jesuit who was unafraid to address difficult questions in his writings or in his classrooms. I first experienced Dr. Wassmer as a second semester freshman at the University of Massachusetts Dartmouth while attempting to enroll in his introductory philosophy course. When I asked if he'd sign me into his course, Dr. Wassmer looked down in a suspicious pose, with wide blue eyes and electrified white hair, and said that he would grant my request so long as I understood I would be worked hard and would contribute greatly to class discussion. It didn't take long for me to realize how serious he was. Dr. Wassmer engaged his students, asking us to proclaim and defend our positions on charged social issues. All opinions were challenged, but none mocked, providing they were defended in an intellectually rigorous manner. On occasions when I'd seek his help prior to our 8:00am start time, he'd look up from his *New York Times*, reading glasses perched near the end of his rosaceous nose, and with the energy of someone who'd been awake for hours, bellow, "Good morning Medeiros." He'd follow this drill sergeant welcome by recounting a story from the morning paper, a tale always more stimulating than the philosophical question that had prompted my visit. Soon I utilized these unofficial office hours merely to talk about life, which I think Dr. Wassmer knew and perhaps even enjoyed.

Students in the University of North Carolina's School of Information and Library Science are equally fortunate to have the opportunity to experience a similarly challenging and dynamic teacher. Jane

Greenberg, Ph.D., is Associate Professor with tenure in UNC's highly acclaimed graduate program. In a time when library school curricula are under attack, Ms. Greenberg stands in sharp contrast as an exemplar of what the best educators can be: innovators, mentors, motivators. In a mere five years at UNC, Ms. Greenberg has proven to be among her nation's leading library school metadata educators. Recently I had a chance to talk with Ms. Greenberg about her teaching, research, and professional goals.

NM: According to your vitae, your first library position was as an assistant in the Rush Rhees Fine Arts Library at the University of Rochester. What was that job like?

JG: It was fun. There was a great learning atmosphere. I had wonderful supervisors. I still remember Katie Kinsky, and the Head Librarian, Stephanie Frontz, and how they explained the way each new responsibility I was assigned fit into the larger library entity. I did normal things that library clerks do: circulation desk, card filing, shelving, and so forth—the online catalog was just coming up then. I remember learning to bar code books in order to get them ready for OPAC-supported circulation. We had very nice office parties that helped with the learning process too!

NM: Did you imagine 15 years later you would be teaching future library professionals?

JG: No. I originally planned on linking my interests in art history and law, and becoming an art attorney and working in the art market. I was in college in the mid-1980's. The art market was booming during this time, and one summer I interned at Citibank's Art Advisory Service in Manhattan. Our division helped top tier clients build comprehensive art collections. It was fascinating, and I thought this was the direction I would go post-college. I thought about teaching for the first time when I was finishing my MLS at Columbia University and Richard Smiraglia, with whom I had taken two bibliographic control courses, suggested I should think about pursuing a doctorate in library science after a few years of working in the field.

NM: When you arrived in Chapel Hill in 1999, metadata was still a buzzword. The Resource Description Framework (RDF) specifications had just been released by the World Wide Web Consortium, and the Santa Fe convention, from which would be born the Open Archives Initiative, was about to take place. How did these forces influence your teaching and research?

JG: The word "metadata" actually influenced my teaching a little earlier, during the last year and one-half of my doctoral studies (1997-1998) at the University of Pittsburgh. During this period, I was learning about the Dublin Core, the Encoded Archival Description (EAD), and the Text Encoding Initiative (TEI). In my last year in Pittsburgh, I taught several metadata workshops for the University's School of Information Sciences, PALINET, and AMIGOS. This experience set me on a path to focus my teaching and research efforts in the area of metadata. When I arrived in Chapel Hill, I built upon these workshops to design and offer a course entitled, "Metadata Architectures and Applications." RDF, and later the Open Archives Initiative, were incorporated into the class, which covered a range of metadata issues and schemas. UNC's School of Information and Library Science is highly integrated, offering master's degrees in both library and information science. The first time I offered the metadata class, attendance was fairly evenly split between information and library science students. The healthy mix of students from both programs has continued over the last five years.

Developments underlying the Dublin Core have had a profound impact on my research. In 1998, while in the final stages of my dissertation research, the Dublin Core metadata standard was gaining support from an array of communities striving to facilitate resource discovery of Web resources. A

significant aspect of the Dublin Core is that it was developed for the resource authors; that is, it was to be simple enough so that resource authors could create metadata. When I learned about this goal, I immediately saw questions urgently requiring investigation about *who should create metadata* (resource author, cataloger, volunteers, etc.) and *the best means of metadata production* (automatic and / or human-oriented processes). These questions have served as a teaching foci and are central to the Metadata Generation Research (MGR) project, which I founded four years ago. While Dublin Core developments sparked my research efforts in this area, my interests extend to many other metadata domains.

NM: The work of your advisees at UNC is impressive. Their master's papers are interesting and timely, and not surprisingly, representative of areas in which your own research is focused. How do you extract such excellence from your students?

JG: First, let me say thank you for the compliment about my advisees. I continue to be impressed by UNC's students and the master's papers they complete across the board, with all of our faculty. Not every LIS program requires a master's paper. This requirement at UNC is demanding for both students and faculty, but the outcome is rewarding and speaks to the excellence that you note. Students engage in and learn, first-hand, about the research process; they become better consumers of research; and they make a contribution to our field. Students wanting to complete a master's paper in the area of organizing information / metadata often find their way to me. I'm certainly not the only one to advise master's research in this area, but I am always happy to work with a student who has an interesting research question, and it's exciting when they find a link to my research. In the latter case, students frequently join the Metadata Project's team and conduct research that directly relates to the project. It's rewarding when students realize they have contributed to a research project's progress. The reward is amplified when they learn that their work is to be published, or they are listed as a co-author on a team publication. I believe such experiences inspire students to continue to contribute to the field as professionals after they graduate. In terms of extracting excellence, I can simply reiterate we have excellent students at UNC, and they take their master's paper work seriously. My colleagues and I value this experience as much as the students do.

NM: Much has been written and talked about regarding the demise of library school curricula, yet your teaching stands in direct contrast to the general sentiment that today's programs are not sufficiently preparatory or rigorous. What approaches in your teaching have helped you become a successful instructor?

JG: I stress the importance of theory and research, and integrate these tenets with practice. My master's degree education and experience as an information professional have been important influences on my teaching approach. Columbia University, where I earned my MLS, emphasized theoretical underpinnings of library and information science. Later, as a working professional, this understanding of theory helped me to articulate cataloging ideas and evaluate practices. This background has helped with formulating approaches focusing students' thinking on understanding *what one is doing*, and *why*. I emphasize exploration of these questions in my teaching because I believe they are paramount to producing superior information professionals.

NM: Over the next ten years, how do you see library school programs changing?

JG: The answer I give today may change over time. Currently, I see the library science programs changing in two ways, which I think will continue over the next ten years. First, programs are changing to serve the evolving library environment, which is now physical and digital, local and

networked. Second, programs are increasingly linking with different disciplines to serve an array of information environments beyond the library (e.g., archives; medical, nursing, and bio-informatics; commerce; museums; scientific research centers, educational enterprises, and more). UNC, for example, has joint degrees with a number of programs on campus, such as Business Administration, Nursing, and Public Health, which may, I think, be indicative of change (information about these joint degrees is available at <http://www.ils.unc.edu/html/overview.html>). It seems to me that the size of library science programs and faculty expertise will determine the different disciplines or domains with which library science programs partner. Many disciplines need core library science functions to operate successfully in today's information world, and I think that library schools are, at least at the moment, valued programs on campuses. I hope it stays this way!

NM: You are principal investigator of the Metadata Generation Research (MGR) project, an innovative and much-needed study designed to investigate the integration of human- and machine-created metadata -- work that facilitates the Semantic Web. How did you get involved in this work, and how is it proceeding?

Jane's baby, Jonathan Bierck, at two months, with Dublin Core Conference Proceedings – the youngest attendee! -- Photograph by Stu Weibel, OCLC.

JG: As indicated before, the development of the Dublin Core has had an important impact on my research, and made evident to me the need to investigate questions about "who" and "how" metadata should be created. When I arrived at UNC during the spring of 1999, I set out to find a partner and examine these metadata questions. Here, I have to thank former SILS Dean, Joanne Marshall, for putting Davenport ("Dav") Robertson, Library Director, National Institute of Environmental Health Sciences (NIEHS), in touch with me when his organization began their metadata initiative. When we first met, I advised his team on some basic metadata issues concerning the Dublin Core, and then convinced him and Ellen Leadem, Technical Services Librarian (NIEHS), of the need to study the metadata questions underlying the MGR project. I am grateful to Dav and Ellen for this research partnership, and the many students that have contributed to the research project. The MGR project has been funded by Microsoft Research, OCLC, and UNC's University Research Council, and we have disseminated our findings through a number of publications. Our immediate project is complete, although there is still some final research reporting to come. An aspect of the MGR project is continuing through the AMeGA (Automatic Metadata Generation Applications) project—the goal of which is to identify and recommend functionalities for applications supporting automatic metadata generation in the library/bibliographic control community. The project is being conducted in connection with Section 4.2 of the Library of Congress' *Bibliographic Control Action Plan*, which is providing leadership to libraries and other information centers in this new millennium. (Information on both the MGR project and the AMeGA project can be found at <http://www.ils.unc.edu/mrc>.)

NM: You edited the April/May 2003 issue of *Bulletin of the American Society for Information Science and Technology*, an issue devoted to the Semantic Web. You concluded your editorial by saying, "The Semantic Web is an engaging territory to explore and cultivate" (Greenberg, 2003). What will it take to conquer this territory?

JG: Further collaboration and coordination is needed among a range of disciplines. People in library and information science need to work with people in computer science, psychology, linguistics, and other disciplines if we are to have a functional Semantic Web. The World Wide Web Consortium (W3C) is a powerful organization, and stands behind the development of the Semantic Web. This organization has the capability to provide needed management, but there must be buy-in from multiple parties. I recall commenting about the notion of "old wine in a new bottle" in the Semantic Web piece you reference here, and saying that this metaphor is not really true because today we have an unprecedented information infrastructure defined by the Web. I still stand behind this statement. The Semantic Web is likely not for every information source or repository, but the potential of "Semantic Web-like" operations or communities to help solve problems is exciting and I believe worth striving for. I'm an optimist, and I believe something good will come out of greater collaboration in striving for something like the Semantic Web. I already see this as communities, like the Dublin Core Metadata Initiative, bring together people from many information sectors.

NM: You've accomplished much during your brief tenure at UNC. What's next for you professionally?

JG: My immediate plan is to continue current research activities, and share findings from the Metadata Generation Research and AMeGA projects. A more long-term goal is to develop the SILS Center for Metadata Research at UNC, and muster support for research on metadata creation, ontologies, content management, and other related issues. And, another goal in the coming months is to teach my 10 ½ month old child to say *metadata*!