Book Reviews

Bill Cope, Mary Kalantzis, and Liam Magee. *Towards a Semantic Web: Connecting Knowledge in Academic Research.* Oxford, U.K.: Chandos Publishing, 2011. 525p. paperback, $110.00. (ISBN: 9781843346012). $110.00.

I learned a lot from this book, which is a collection of chapters by a small group of authors loosely based around the notions of the Semantic Web and ontologies and their importance for scholarly and scientific communication and research.

I'm not entirely sure, however, what to make of it. On the one hand, it reads like something that might be useful in a graduate library science seminar on the Semantic Web. And yet, it does not cite the relevant library literature, ignoring even the researchers at the University of Illinois, home institution of two of the authors. The notions of semantics and ontologies go way back in the library world, after all. There is a huge literature surrounding indexing languages and thesauri construction. It would have been nice had the authors at least given a respectful nod to this venerable and important body of literature.

The book begins with several chapters foundational to the thrust of the book as a whole. Here we find chapters such as "Changing knowledge systems in the era of the social Web"; "Frameworks for knowledge representation"; "What does the digital do to knowledge making?"; and "Textual representations and knowledge support-systems in research intensive networks." It builds to a climax in what I think is the central and most important chapter, "Creating an interlanguage of the social Web." What is an interlanguage, you ask? "Interlanguage" is a neologism referring, in essence, to a semantically rich, many-to-many crosswalk between schemas or ontologies (if I may briefly and boldly conflate the two for the purposes of this paragraph). An interlanguage can be thought of as a sort of fuse box connecting circuits out to/among/between schemas. In this central chapter, the authors discuss their framework for capturing such linguistic and structural concepts as synonymy, contiguity, hyponymy, hypernymy, co-hypernymy, antonymy, meronymy, co-meronymy, consistency, and collectivity across multiple given schemas; then, how an interlanguage between them can be constructed relative to the degrees of similarity across these concepts. Interestingly, this construction is not a one-time activity that freezes and fixes relations between schemas; rather, it is a process of continual inference and refinement that results in an organic interlanguage. The authors illustrate this, using their CGML (Common Ground Markup Language) as an example. The chapter following this, "Interoperability and the exchange of humanly usable digital content," critiques the CGML approach to interlanguage construction and usefully contrasts it with two other extant techniques, COAX and OntoMerge, before offering a likewise useful analysis of the "commensurabilty creation load" (difficulty/cost of creating an interlanguage) of each. Throughout, the authors stress the need for "human interpretive intelligence" in creating these linkages.

The potential for irony here does not escape me insofar as CGML is currently intended to tie together multiple ontologies surrounding the publishing industry, specifically the print monograph industry, and this in an era when many have been proudly and loudly and with great exaggeration heralding the death of books and of the libraries that collect them for at least the past two decades since I began my career in librarianship. ("Was it something I said?") The authors seem to believe, as do I, that the print monograph remains

central to textual communication, and especially to scholarly communication. Witness the healthy 34 percent increase in print book titles published 2002–2009, compiled by Bowker: www.bowker-info.com/bowker/IndustryStats2010.pdf. Books are being written; books are being printed; books must be collected. Not only is the print monograph important, but dare I say it's most important? It is, at least, to cultural conservationists like librarians. It is heartening to have those walking the bleeding edge of semantic technologies bolster this notion.

I have to say, this book is in need of some editing. There were many places where words were left out. The frequently convoluted prose didn't help either (although I'll be the first to acknowledge that giving an author's style some time to rewire your brain often has big payoffs). Here is a random example, some narrative explaining how the foundation of the notion of "ontology" is "meaning function":

"The underlying design technique is based on the conceptualization of meaning function. The practical solution is to stabilize each tag schema as a controlled vocabulary or ontology. This is supplemented by tag languages that may be required, the precise referents and the ontologically given structural and conceptual relations between the meaning functions to which the tags refer. Schemas are used to represent tags paradigmatically, typically presented in taxonomies. Tag relations can also be represented as narrative, as activity sequences of a syntagmatic variety, and these alternative conversational or narrative sequences may be represented in user stories and flow diagrams. These two devices represent meaning function at a level of abstraction beyond the level of natural language. They are tools for the construction of a relatively stable semantic ground below the level of natural language. Now, the primary basis for the design of meaning is not the instantiation of meaning in the meaning forms of language (although this is the equally important but now secondary concern of stylesheet transformations). The basis, rather, is the activity and conceptual structures of human intention and experience, or meaning functions."

Reading this, I feel the urge to report my own activity sequence of a syntagmatic variety:

If I may use anachronistic library language for a moment, we create thesauri to represent concepts and the relationships, sometimes hierarchical, sometimes not, between them; we create them to capture human meaning. Practically, we create these thesauri so we can better organize information, as an aid to our storage and retrieval of it. More, these thesauri typically cohere around disciplinary subject areas or domains. And let's not forget that there is always a social and historical and political context framing and shaping these groupings of concepts, sometimes obviously, sometimes insidiously.

Library of Congress Subject Headings, anyone?

As someone with a background in philosophy, I enjoyed the philosophically oriented chapters by Liam Magee (RMIT [The Royal Melbourne Institute of Technology] University, Australia) and learned a lot from them, particularly the important two chapters devoted to the commensurability/incommensurability of knowledge systems. And yet, I can see how someone without this interest might find them tedious. Reading them definitely felt like sitting through a graduate seminar in the Philosophy of Language: informative and enlightening if you're into it, akin to a deep contemplation of the intersection of state accounting standards with municipal tax laws in historical-cross-cultural context if you're not. [Wake up!] I think it might have been better to divide this single volume into two: one for Magee's writings, and the other for the various other chapters, as this would have resulted in two more focused works. I'm assuming publishing them as one was a publishing house decision, as was the decision to charge a whopping $110.00 for a softcover book.

I would say that if you are interested in the philosophical, technical underpinnings of knowledge systems and of the Semantic Web and semantic technologies generally, this is a good book to have due to the chapters by Magee. (I found his chapter "On commensurability" to be something of a *tour de force* summary of some main currents of the past fifty years of both Anglophone and Continental philosophy, and the chapter following, "A framework for commensurability," in particular the subsection "Quantifying commensurability," to be the most novel in the book.) It is also a good book for its wealth of sometimes profound insights into the evolution of scholarship and scientific communication from a relatively static print culture into what's already emerged as a protean electronic culture, as well as the movement from a computational environment largely limited to the processing of dumb strings of characters to one where the semantics of those strings are specified and can be programmatically exploited.

This book nicely points the way along the emerging path to the future, a path where semantically aware technologies as simple yet profound as the "microdata" functionality in HTML5 and as complex as rich disciplinary ontologies and the prospect of the "interlanguages" that may link them winds through an increasingly dense forest of data and the artifacts of scholarly and scientific communication.

And this is the forest in which we all now live—a forest where each branch of every tree bristles with meaning.—*Mark Cyzyk, Johns Hopkins University.*

William Baker and Gerald N. Wachs. *Tom Stoppard: A Bibliographical History.* London and New Castle, Del.: The British Library and Oak Knoll Press, 2010. xlviii, 446p. & 1 CD-ROM. alk. paper, $79.95 (ISBN 9780712349666 / 9781584562856). LC-2010-052520.

This impressive reference work attempts to document the complete creative output of Tom Stoppard in print, on stage, and on screen from his earliest journalism up to January 2010. As a comprehensive primary bibliography, it has no equal; Malcolm Page's *File on Stoppard* (London: Metheun, 1986) is similar in structure but twenty-five years old and relatively slim, while David Bratt's *Tom Stoppard: A Reference Guide* (Boston: G.K. Hall, 1982) is primarily an index of reviews and ends in 1980. Baker and Wachs attempt to identify all works authored by Stoppard, excluding those where his primary role was as performer, director, or narrator. This limitation, combined with Stoppard's vast number of interviews and public appearances, often in support of social justice causes, means that this bibliography is not fully comprehensive, but it comes as close as can be reasonably expected. Indeed, the only criticism this reviewer can offer of its scope concerns the publication date; since Mr. Stoppard is still, at seventy-three, a prolific writer and active public figure, this volume will need to be updated at some point to document the work between January 2010 and his death.

Author William Baker, a University Trustee Professor and Distinguished Research Professor at Northern Illinois University specializing in literary bibliography, previously published *Harold Pinter: A Bibliographical History* (London: British Library, 2005), and this book follows the structure and method of that earlier work. His co-author, Gerald N. Wachs, is a New York dermatologist described on the book jacket as "a foremost collector of Tom Stoppard material" who has attempted "to gather together *all* known printings and unpublished materials of Stoppard." In addition to Dr. Wachs' collection, the authors also mined the Harry Ransom Center at the University of Texas at Austin (home to Stoppard's papers since 1991), various library catalogs, and the British National Sound Archive to identify printed and broadcast items.

The introduction provides useful information on the book's organization, methodology, and sources, as well as an interesting discussion of the complexities