Endnotes: The Journal of the New Members Round Table, 7(1), p. 23-24

***A Librarian's Guide to Graphs, Data and the Semantic Web.* James Powell and Matthew Hopkins. Waltham, MA: Chandos, 2015. 242 pp. ISBN 9781843347538.**

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A Librarian's Guide to Graphs, Data and the Semantic Web is an educational look at graph theory and its application in resource description and access, various scholarly disciplines, and graph visualization and analysis. Graph theory is an approach to modeling complex phenomena, usually in networks, by describing the relationships between entities. The book familiarizes the new librarian with not only semantic web technologies but also wider applications of graph theory in various scholarly disciplines and the technologies that support the storage, analysis, and visualization of graph data.

The first two chapters instruct the reader on the unique power of graphs to model relationships and interactions found in complex phenomena such as ant colonies. The next section explains the application of graphs in semantic web technologies. The readers is introduced to the resource description framework (RDF), which enables both humans and machines to define and understand the relationships between online resources. Subsequent chapters detail the technologies that allow RDF to work such as writing RDF through serialization, defining relationships through ontologies, and using RDF data through SPARQL and machine reasoning. How these technologies are put to use is explained in a chapter on linked online data initiatives. These initiatives enable resource discovery through linking resources together by machine-readable descriptions of how each resource is related.

The middle section of the book explains the various applications of graph theory in modeling discipline-specific data. These include citation and co-authorship networks as ways of exploring scholarship and library data, understanding complex sociological phenomena as social networks, and modeling biological, life science, and other scientific data in networks for better insight. The authors explain that network and graph models enable scholars to visualize and analyze data that has relationships.

The final section of the book deals with the implementation of visualization, analysis, and storage solutions for graph and semantic data. The beginning of this section details the design of ontologies for the rich description of domain-specific relationships such as ontologies for social networks, geospatial data, and temporal relationships. The book also includes a section on ontologies used for bibliographic description detailing current trends in making library metadata available to the semantic web. The second part of this section explores the tools and techniques of visualizing and analyzing graph data. Storage and retrieval solutions for graph data are also discussed with particular focus on contemporary methods used by applications wanting to take advantage of semantic data. InfoSynth and EgoSystem are semantic web projects that the authors describe in the final chapter to illustrate how these tools and techniques can be applied to facilitate discovery of resources by taking advantage of richly described relationships.

While the authors provide examples of library projects that use semantic web technologies, this book would be strengthened by a discussion and awareness of local implementations of semantic web technologies in libraries. In addition, references would have been helpful for those wanting to further explore topics raised in the book. Despite these concerns, however, the book is a great introduction to graph theory and its applications in semantic and networked data. It is highly recommended as a resource for librarians wanting to understand more about the semantic web, network visualization and analysis, and how various disciplines might use graphs to model complex data.