Book Reviews

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Book Review Editor

SVENONIUS, Elaine. **The Intellectual Foundation of Information Organization**. Cambridge, MA : MIT Press, 2000. xiv, 255 p. ISBN 0-262-19433-3.

Bibliographic control rests on a rich and intriguing theoretical foundation. All too often, however, students and scholars of information studies pass this foundation over, perhaps because of its fragmentation. Information organization theory has evolved in tandem with practice, and particularly through innumerable policy decisions: its central tenets, therefore, appear in prefaces to manuals and catalogues, in library bulletins, in standards and rule interpretations, and in professional and scholarly conference proceedings. Gathering this theory together is a formidable task, and Svenonius has already made a significant contribution through the two sourcebooks she has coedited: *Foundations of Cataloging* (1985), and *Theory of Subject Analysis* (1985). With *The Intellectual Foundation of Information Organization*, Svenonius goes a huge step further: she pulls the fragments of bibliographic control theory together and sets them within a holistic theoretical framework. The result is a significant contribution to LIS scholarship, one which evokes the best of all possible responses: dissatisfied cries for more.

Svenonius divides her treatise into two parts containing five chapters each. The first part provides a theoretically-grounded articulation of the objectives, entities, languages and principles of information organization. The field, she argues, rests on three distinct philsophical traditions. Systems philosophy, as developed in library circles by Charles Cutter, gives a holistic and visionary dimension to bibliographic control: a tendency to see individual processes as part of a larger, coherent structure. The philosophy of science, typified in the field by Cyril Cleverdon in the 1950s, emphasizes the need to quantify and generalize, and to subject the tenets of information retrieval to empirical verification. Language philosophy introduces the concept of language rules, and argues that information organization is a "particular kind of language use" (p. 6): an approach which enables us to employ linguistic concepts of semantics, vocabulary and syntax to explain the processes of information organization.

Having established this framework, Svenonius goes on to discuss the objectives of bibliographic retrieval systems. Deftly combining the seminal contributions of Cutter, Seymour Lubetzky, the Paris Principles of 1961, and the IFLA objectives of 1997, she produces five central objectives of bibliographic control: locating entities (finding), identifying entities (collocating), selecting them (choice), acquiring or gaining access to them (acquisition), and navigating a bibliographic database (navigation) (p. 20).

In chapter 3, Svenonius moves to bibliographic ontology, and discusses how information organization theory has defined the fundamental entities of the bibliographic universe: documents, works, superworks, editions, author sets and subject sets. Here we find the crucial distinctions that govern the structure of traditional cataloguing systems. Documents, she argues, are "the smallest or basic entities in the bibliographic universe" (p. 33). With justifiable skepticism, she discusses the "work" as "a Platonic object consisting of disembodied information content," a distinction which, she argues, is intuitively satisfactory, but frequently unreliable in practice (p. 35). The excellent discussion of the "edition" concept does justice both to the edition's importance and its complexities. Editions are "the *primary* objects of bibliographic description" (p. 39), which trigger the creation of new bibliographic records. They also have extremely fuzzy boundaries, and definitions depend either on the means of text production (all documents produced from the same master copy), or on the markings (the presence of identifying marks of an edition).

In chapter 4, Svenonius sets out the fundamental types of bibliographic languages which will define the

organization of the second part of the work: work languages (including author, title, edition and subject languages) and document languages (consisting of production, carrier and location languages) (p. 54). She also defines the fundamental components of a bibliographic language, including vocabulary ("the terms or codes of a bibliographic language" (p. 55)), a set of semantic structures (relational, referential and category), syntax, which governs the order of language elements, and pragmatics, which cover the various rules of use or application. And in chapter five, Svenonius articulates the fundamental principles that guide the construction of a bibliographic language: convenience, representation, accuracy, standardization, and integration.

Having spelled out the objectives, entities, languages and principles of bibliographic control, Svenonius turns in the second part of her treatise to specific bibliographic languages. In doing so, she adjusts the classification she created in chapter 4 into a scheme that fits more comfortably with traditional methods of teaching bibliographic control, in which subject cataloguing is separated from descriptive cataloguing.

Chapter 6, "Work Languages," deals with the realm of bibliographic control traditionally known as access points. She discusses author, title and edition languages in terms of the three primary activities required: choice of name, disambiguation of names, and mapping to variant names. She goes on to discuss bibliographic relationships in terms of five primary types: membership, inclusion, equivalence, aggregation, sequence, and commentary. In Chapter 7, document languages are described according to three types of attributes: physical or material attributes, publication attributes, and those related to access.

Chapters 8 through 10 discuss subject access. She begins with an immensely useful division of subject language semantics into three categories. "Category semantics," which she expands upon later in Chapter 8, refer to the process of dividing the terms of a subject language into specific categories, which are then joined together using a form of syntax generally called synthesis. "Referential semantics" refer to the complex process of using subject terms to refer, not to real world objects or to concepts, but to subjects: a process that involves elaborate disambiguation practices. "Relational semantics" refer to the practice of taking the classified and disambiguated terms of a subject language and establishing relationships of hierarchy, synonymy and near-relatedness among them. Referential and relational semantics are treated to more elaborate discussion in Chapter 9.

Chapter 10 returns to the concept of subject syntax, and analyzes what Svenonius considers to be the four major subject languages in the world today: Library of Congress Subject Headings, Dewey Decimal Classification, Library of Congress Classification and Universal Decimal Classification. Svenonius treats all four according to their positions along three dimensions: term vs. string languages, precoordinate vs. postcoordinate languages, and enumerative vs. synthetic languages (p. 178).

The primary virtue of this work is one shared by good bibliographic control systems: excellent collocation. As the substantial bibliography reveals, Svenonius gathers together the intellectual background on a subject and a range of practices that are too often treated as tyrannical, arbitrary and simplistic. By combining extensive experience with a rigorous and thoughtful understanding of data and relationships, she has articulated a coherent conceptual system, one which, like Wordsworth's visions, is half-created and half-perceived. Part of the book's fascination lies in the subtleties and nuances which Svenonius has revealed in the daily practices of subject and descriptive cataloguers. The other part lies in her imaginative syntheses of these insights into a tightly-organized, firmly classified structure of practices and assumptions. If Svenonius's chapters on subject cataloguing are less striking than those on descriptive cataloguing, it is only because subject cataloguing needs her less: Anthony Foskett and others have produced significant and recognized treatises to rival hers. But this work is sorely needed in bibliographic description, particularly in days when conventional cataloguing is struggling to adapt to electronic resources, when both the ISBD and the *Anglo-American Cataloguing Rules* are undergoing scrutiny and revision, and when significant work is taking place on modeling the logic of *AACR2R* in terms of entity-relationship principles. *The Intellectual Foundation of Information Organization* provides an important and meaningful context for all these efforts.

There are limitations, however. Svenonius presents information organization as a self-enclosed body of theory: while she acknowledges the field's debt to different philosophical and epistemological traditions, she confines herself to the explicit body of work that begins with Panizzi in the 19th century. This has the advantage of entrenching our sense of the identity and integrity of information organization as a separate,

distinct field, with its own history and development and its own seminal texts and paradigms. But in her effort to establish this stable and coherent structure, Svenonius fails to do justice to the various pressures being brought to bear on it.

One wonders, for instance, how this detailed schema of entities, languages and principles interacts with our current digital and networked environment. Svenonius, in her afterword, takes a largely optimistic approach, seeing the "juggernaut" advance of automation as a source of potential solutions to current conceptual and logistical problems in bibliographic control (p. 196-197). This confident outlook rests, I suspect, on an assumption that the theoretical and ontological scheme she has presented is media-neutral, and therefore reasonably secure. This confidence may not be warranted: expanding scholarship in the history of the book has made us freshly aware of how firmly our concepts of bibliography are grounded in the technologies and social implications of the printing press.

Similarly, Svenonius comes down firmly on the side of universal bibliographic control as an ideal, arguing that "the era of local in-house thesauri . . . is likely to wane as bibliographical control expands to achieve interdisciplinarity and universality" (p. 194). Implicit in this statement is the assumption that interdisciplinary communication is dependent on universality, an assumption which current research in knowledge organization calls into question. How will this theoretical structure stand up to new trends towards community-based information systems, culture-based systems, and information ecologies which derive their strength from a specific sense of place and a specific set of needs and values?

If voices within the knowledge organization research community ask tough questions, the voices in other disciplines will ask even tougher ones. Once you see bibliographic control arrayed in all its assumptions, objectives and ontologies, the wall between information science and all the other disciplines that strive to organize knowledge becomes transparent. Theories of bibliographic representation cry out for closer connections with similar theories in semiotics and anthropology. The discussion of texts, works and categories deserves a connection with treatments of text and genre in the humanities. The use of language concepts in bibliographic control leads inevitably to a comparison with the effect of linguistics on philosophy, and on literary and cultural theory. In this sense, Svenonius inspires a dissatisfaction of which she should be proud: her work has awakened us to a sense of all that still needs to be done.

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BOWKER, Geoffrey C., STAR, Susan Leigh. **Sorting Things Out: Classification and Its Consequences**. Cambridge, MA : MIT Press, 1999. 377 p. ISBN 0-262-52295-0 (pb).

This book is a deeply satisfying and intellectually stimulating discussion of the intersection of classification and human lives – in society, in work, and individually as trekkers on life's journey. The overarching theme is that classification is both material and symbolic (p. 39-40) and each of these has important consequences. Our classifications, at their worst, create torque, a twisting under stress. At their best, they create objects for cooperation across social worlds. The authors explore the many ways in which classifications reach into human endeavor, reflect it, and create the lenses through which we see. The authors ask three questions: 1. What work do classifications and standards do? 2. Who does that work? and 3. What happens to the cases that do not fit?

The book is divided into four sections, each with several chapters. In the first section, "Classification and Large-Scale Infrastructures," the authors present "the story" of the creation and functionality of the International Classification of Diseases (ICD), a classification that has evolved over a century, and that incorporates within its folds the vocabulary of an international community of practice with a stunningly diverse set of values, measures, and agendas. The ICD demonstrates how on the one hand we have a classification in which the "algorithms for codification do not resolve the moral questions involved, though they may obscure them" (p. 24). On the other hand, we have a pragmatic tool that can be used for coordinated work among agencies. The authors explore the practical politics of arriving at categories

This first section is important to the reader in that it lays out the method of inquiry adopted by the authors. It is a structured, polemical approach in which the exemplar (the ICD) serves as a framework for presentation of classification as a pragmatic, co-