ONTOSYNY AS ENABLING TECHNOLOGY FOR SHARING INFORMATION

A while ago, the artificial intelligence research community got together to find a way to “enable knowledge sharing” (Neches et al., 1991). They weren’t talking about writing papers or going to conferences; they wanted their computer programs to be able to interact with and build on the information from other computer programs. They proposed an infrastructure stack that could enable this level of information exchange, and began work on the very difficult problems that arose. Ten years
later, Berners-Lee articulated a wonderful vision of how this might all work on the Web—the Semantic Web (Berners-Lee, Hendler, & Lassila, 2001). Today the idea that Web-resident programs can interoperate with and build on each other’s data is widely accepted.

In the context of the Semantic Web, “ontology” is an enabling technology—a layer of the enabling infrastructure—for information sharing and manipulation. The approach is simple: parties who have software/data/services to offer identify some common conceptualization of the data; they specify that conceptualization as clearly they can; they build systems that interoperate on those specifications. This is standard-issue information technology with the twist that ontologies are specifications of the conceptualizations at a semantic level (Gruber, 1993). Other layers of the stack (other ways of enabling information sharing) include standard data formats, APIs, and sharing reference implementations of code that define the semantics of the APIs and data operationally.

FOLKSONOMY AS DATA THAT IS EMERGENT FROM SHARED INFORMATION

Not so long ago, keen observers of the Internet (Mieszkowski, 2005; Sterling, 2005; Vander Wal, 2004) and inventors of social software (Fake & Butterfield, 2003; Shachter, 2003) began to notice that people who don’t write computer programs were happily “tagging” with keywords the content they created or encountered. Of course, keyword tagging is nothing new; the interesting observation is that when these folks do their tagging in a public space, the collection of their keyword/value associations becomes a useful source of data in the aggregate. Hence the term “folksonomy”—the emergent labeling of lots of things by people in a social context. Vander Wal, who is credited with the term, emphasizes that the resulting folksonomy is not a taxonomy or even a collaborative categorization (Vander Wal, 2004). At least that was the original observation and intent for the term. Today, tagging is a widespread phenomenon popularized by applications such as social bookmarking (Del.icio.us) and social photo sharing (Flickr). In these applications, the emergent data from the actions of millions of ordinary, untrained folk doing things for their own local interests is rather useful. For bookmarking, tagging helps to counter the spam-induced noise in search engines, and for photo sharing, tagging gives those text-based search engines a fighting chance.

COMPARING APPLES AND ORANGES

Like all vague but evocative terms, both of the words ontology and folksonomy have taken on many senses. Given the frustration with how hard it is to share data at a semantic level and the delightful observation about how much value can come “for free” from bottom up tagging, it was inevitable that the terms would be compared as
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