them; and second, what people say when they want to find a document. A document may say about itself, "Translated from Amy Tan's *Joy Luck Club* into Spanish by Jordi Fibla" or "*Rudden and Wyatt's EU Treaties and Legislation*, edited by Derrick Wyatt, 8th edition; revision of *Basic Community Laws*, edited by Bernard Rudden and Derrick Wyatt, 7th edition." These are statements found on title pages that identify expressions. A library user may ask a question like "Do you have Seamus Heaney's translation of *Beowulf*?" (a request for an *expression*) or "Do you have Stephen Hawking's *A Brief History of Time*?" (a request for a *work*). Upon further questioning, many such users do not have a particular item or even a particular manifestation in mind. What they are interested in are abstractions—the content, either at the *expression* or the *work* level (not as published by a particular publisher on a particular date or on a particular item signed by an author or translator).

If library users did not ask such questions or initiate such searches, cataloging models including such abstractions as *work* and *expression* would not be needed. If they were not needed, they would never have been created by the cataloging community, regardless of statements made in items. We care about connecting users with the materials they seek. To do this well, we need the catalog to identify such abstractions as *work* and *expression*.

In our profession, we find a variety of troublesome abstractions. Consider, for example, the notions of "information" or "document"—many have tried to define and model these abstractions. However, the LIS community has yet to reach consensus as to what these words mean, or to agree on a particular model of them. To quote a familiar example, is an antelope a document? Under what circumstances might it be a document, if it could be one? LIS students often laugh when they read Briet's 1951 assertion that an antelope, under specific circumstances, is a document.[10] However, Briet's claim that an antelope is a document, and the circumstances under which it is or is not a document, is a serious attempt to make the notion of document more concrete—in other words, to model the notion of "document." It offers an example of the type of evidence needed to decide when one has a document and when one does not.

Entity-Relationship Models

To make matters more complicated, FRBR is a very specific type of conceptual model—an entity-relationship (ER) model. ER modeling is a technique that specifies the structure of a conceptual model. In other words, it specifies the kind of things that have to be in it and the properties those things may have. A simplified explanation of the structure stipulated by an ER model is that three kinds of things are allowed in it: *entities, attributes,* and *relationships. Entities* are things, either physical or abstract. Thus, an entity can

be virtually anything: *relationships* are interactions among entities; and *attributes* are properties or characteristics of either entities or relationships. For example, one of the simpler FRBR entities is "object," which is defined as "a material thing."[11] Objects have attributes such as "term"; thus, Seattle's most conspicuous architectural object has the term attribute "Space Needle." In the bibliographic universe, objects frequently have an aboutness relationship with works, so the work *The Space Needle: Symbol of Seattle* is about the Space Needle.

Chen introduced ER modeling as a technique to facilitate the development of database systems.[12] Creating a good database is difficult, and good conceptual modeling of the world that the database system is intended to capture can help make a more successful system. In general, the better the conceptual modeling, the more successful the system.

Because ER models are created for specific purposes and have a specific structure, they include only those aspects of the world that are relevant to their purpose. As a result, ER models tend to highlight limited aspects of what they are modeling. Thus, an ER model is not a complete picture of the world but a picture that is drawn to accomplish a purpose. One ramification of this fact is that limitless ER models could be created to represent the same thing.

Evaluating Conceptual Models

Many people want to evaluate a conceptual model such as FRBR using true or false criteria. While one can say that a model is true to the extent that it explains accurately and false to the extent that it does not, this is not a very helpful way to look at models. A much more useful way to evaluate models is to ask whether they are successful at fulfilling their purpose. When the purpose of a model is to improve a product or process, the best way to make an evaluation of that model is to see whether it succeeds or not. From this perspective, a model that contains many inaccuracies could do a better job than one with few, because it is more successful at fulfilling its purpose. For example, some conceptual models are very complex—so complex that they are difficult for people to understand and implement. A complex model could fail quite easily if, because it was too complex, it was never used.

Another way to look at evaluating models is to consider love again. If one were to model love, how would one do it? In ER modeling terms, love could be modeled as a single entity, encompassing all different types of love, or it could be modeled as multiple entities (parental love, brotherly love, and so on). The choice to make love one or more than one entity should relate to purpose—what end is a particular model of love trying to serve? Saying that an ER model of love that treats it as one entity is true and one that treats it