INVENTORIES

Inventories are a type of record found across a period of centuries in Europe, making it a stable platform for serial analyses of data across time and space. They usually represent a large proportion of a household’s contents and derive from a spectrum of social classes, capturing a broader range of material culture than sources oriented towards high-status objects. Inventories are particularly valuable because the systematic biases that generate silences in the textual record are often quite different from those that affect the survival of tangible things. Comparing evidence from each of the two domains makes the systematic biases inherent in each readily apparent and subject to statistical analysis. They also offer a crucial practical advantage: as legal documents, they tend to be highly formalized and exhibit only a small range of variation in form of how the data is presented.

LEXICALIZATION

Lexicalization consists of creating the auxiliary data necessary to translate the contents of the documents. This involves: (1) translating the contents of the documents into a machine-processable format, (2) discriminating words and non-words, (3) discriminating terms, and (4) linking terms to existing ontologies. For this project, we have opted to use the ATT terminology framework as the base terminology for the objects and materials we are describing. ATT offers a readily available and comprehensive set of terms that can be used to describe a wide range of materials. The difficulties come from having to map between the terminologies used by the inventory compilers and the ATT terminology framework.

OBJECT DESCRIPTIONS

Object descriptions within inventories can be separated into discrete records consisting of strings of words with well-defined boundaries (e.g. order-determining phrases, such as “first or next”). Ancestral types consist of a quantifier, the name of an object, and a list of its attributes. For example:

Item unum coffrum ferratum cum duobus auricularibus

The object is usually identified by a noun (or noun phrase) followed by variables that describe additional properties.

Challenges

Arcial challenge faced by DALME has been the development of a system that preserves the original folk taxonomies in the documents while also making it easier to describe and reclassify objects using modern research-oriented categories. The difficulties stem from huge variability of the language used to describe material culture, both across time and space but also within the same cultural context.

For example, medieval Provençal used at least fourteen different Latinized terms to refer to the object we would call a laundry basket. Furthermore, depending on context, these terms can be categorized in very different ways. While all of them refer to “basket”, some can be categorized under agricultural equipment while others are household equipment. This requires the use of flexible and non-exclusive systems of classification, whereby each object or attribute must be classified based on its original form, rather than assimilated under an artificial classification scheme (e.g. by assigning the same terms mentioned above into the laundry basket category). Consequently, such mapping must somehow be classified in ways that will allow users a convenient way to query the database at multiple levels (e.g. pulling all the documents described by the words above when querying for “basket”).

WE HOW WE USE LINKED OPEN DATA

Our system uses a selected approach that can assign different aspect (temporal, spatial, formal) to terms, in order to archive regional and temporal variations in spelling and meaning while retaining semantic links to the objects they describe. The latter is accomplished by linking an object or an aspect as an abstract concept rather than a term. In the database, in which many terms or concepts can exist, we use semantic markup to link to concepts in an abstracted taxonomic model of material culture. For the latter we use and extend wherever necessary, the Getty Research Institute’s Art & Architecture Thesaurus.

THE TERMS: BLINDNESS AND SANGENETIC

So the terms blood red and blood red on English. This way, we can search the database for blood red with certainty that the results will include all objects described as described per the terms. Regardless of the specific terms used. Similarly, by using the ATT taxonomy, with which the concept is linked, one could ask the computer to return increasingly broader categories such as all red color, all chromatic colors, or all objects with physical attributes.

The abstracted taxonomic tree of the very heart of the DALME database and provides enumerators ease in developing queries and analyses.

SOME RESULTS

RECYCLING: Textual sources, however important, provide a useful complement to archaeological evidence. In the medieval archaeological record, for example, evidence for the reuse of durable objects and materials is found everywhere. However, analyzing recycling processes has been a focus of some studies and has been directly related to the archaeological record. Historical sources are often equally fragmentary and respect the information they offer about recycling, but the types of information provided complement those found in the archaeological record. By providing a deeper understanding of the categories of material culture from inventories compiled in the 13th century, it should be possible to develop a more detailed understanding of how objects were reused and recycled.

CLOTHING: Documentary sources, in particular, have often recorded organic and inorganic materials in great detail, often providing information that would otherwise be inaccessible to archaeologists. An example is provided by the description of kiln colors and design details in clothing. This graphics shows a preliminary analysis of items of clothing from the Italian city of Florence between 1324 and 1445. A number of interesting patterns emerge from the dataset. For example, if we consider the sample gender, it seems more likely to be female than male. Of the materials described in the sample, all but one appear to be gender biased towards women. Just as with materials, other descriptive terms seem strongly linked to female objects, with ingenuity and rigid definitions being almost exclusively used by women. Lastly, looking at the distribution of colors, red appears to be the most popular color for women, while red and white seem to be the most popular for men. Preference for blue and green is similar for both genders.