JSON and the Argonauts: Using Linked Data to Promote the Study of Classics in Introductory-Level Students

The Internet's role as an educational tool in the Classics has long been recognized, both with the implementation of projects such as Perseus (Rydberg-Cox et al. 2000) and more broadly by the identification of areas such as resource-based learning (McManus and Rubino 2003). One such resource is the subject guide found on many libraries' web sites. However, these subject guides are typically static, enumerative lists of resources, and suffer from low use—a situation that is further compounded in fields such as Classics by the broad scope of resources, which have not always easily identifiable as having relevance to a more specific subject. Studies have shown that students want subject guides that guide their research process (Hintz et al. 2010) and are more likely to use subject guides if they are tailored to the student's needs (Ouellelte 2011). A potential solution to this impasse is the development of interactive subject guides using Linked Data, and in particular the Resource Description Framework (RDF) and the JSON-LD (JavaScript Object Notation-Linked Data) specification. Such an interactive subject guide in the field of Classics would not only make research more accessible to introductory-level students, but also encourage students' exploration of the content by means of the unconventional interface and by investigating the relationships encoded in the Linked Data.

This project takes as an example the Catalogue of Ships (Hom. 494-759) as its subject domain, within which there is a subject guide for multiple related topic items, such as the groups Homer claims in the Catalogue sailed to Troy, the leaders of these groups, the lands represented by them, and the number of ships they brought, as well as less discrete items such as affiliated deities and epithets for people, places, and ships. An interactive web interface facilitates the exploration of topics (displayed as notecards with a link to a relevant subject guide) and the

connections between them (displayed as annotations). When a user clicks on a topic's notecard, it moves to the center of the interface and is then said to be the primary card in the current information display. Surrounding it are other notecards, called secondary cards, with which the primary card has relationships, which are explained by the annotations. For example, for the primary card "Arcadians," secondary cards would include "Arcadia," "Agapenor," and "60-69," with the corresponding annotations "Land Represented," "Leader," and "Number of Ships." The user can also click any of the secondary cards to make it the primary card and view its relationships.

While the implementation of the interface as described above operates in a very specific context (namely, the Catalogue of Ships in the *Iliad*), the interface and its underlying structure are flexible enough that they can easily adapt to other, broader contexts, including multi-volume works of literature, subjects in the study of civilization, and historical surveys, to name a few. As long as the content can be described with Linked Data relationships and RDF-compliant vocabulary, there are few limitations on prospective uses, while the potential benefits are substantial. The exploratory analysis of content, made possible by the interactive interface and in combination with the linked subject guides, offers the guidance and customized presentation that students want, and thus promotes increased learning, the synthesis of new ideas, and deeper understanding than can be acquired by a subject guide alone. In the field of Classics, this translates to increased interest in the subject matter, greater enthusiasm and motivation when pursuing research, and a general desire for further study of Classical subjects.

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