Time Capsule by Jessie Wei-Hsuan Chen

T ime Capsule is a research platform designed to assist users in exploring how data are interrelated by extracting their temporal, geographical, and informational context.¹ The platform currently integrates eight datasets from seven providers with materials related to the history of pharmacy and botany to enable users to track the historical trajectories of drugs and plants. Additionally, according to the website, the system can be adapted for other datasets. In terms of the categories defined by Anna-Luna Post and Andreas Weber in the December 2018 issue of *Isis*, Time Capsule thus functions both as a "Resource" that allows researchers to explore the included data and as a "Tool" for historians to analyze their own dataset(s).²

CONTENT/SOURCE MATERIAL

The eight datasets include a wide range of source materials with various focuses. Three datasets provide metadata on plant samples or specimens; two linguistic datasets present the origin of Dutch words and seventeenth-century plant names and their variations, respectively; and one dataset describes the eighteenth-century circulation of commodities. The platform uses the *Farmaceutisch-Historische Thesaurus* as its ontological foundation, with additional data coming from Wikipedia via DBpedia. These diverse types of sources present multiple perspectives on the same pharmaceutical components and plant matter. In particular, the inclusion of the dataset on the cargos and ships of the Dutch East India Company in Batavia reminds platform users that these drugs and plants are material objects that migrate. However, the timespan on the historical timeline is not entirely clear, as only two datasets indicate the periods from which their data come. The majority of the references are Dutch sources, which creates a concentrated corpus for users who work with early modern drugs and plants within a Dutch context but can be challenging for non-Dutch users and insufficient for those that want to explore the materials in a global context. The datasets thus have their limitations and do not offer a complete picture of the historical trajectories of a drug or plant, but this is explicitly addressed in the site manual.

PRESENTATION/INTERFACE

Time Capsule takes advantage of a clean interface design and simple graphics to present its data thematically through five tabs. The manual is descriptive and easy to follow. While not essential,

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¹ http://www.timecapsule.nu/

² Anna-Luna Post and Andreas Weber, "Notes on the Reviewing of Learned Websites, Digital Resources, and Tools," *Isis*, 2018, 109:796–800.

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step-by-step replication of the process described in the manual yields a better understanding of the features supported by the platform and aids in interpreting the data brought forward by the system. For example, using *Asafoetida* (a resinous gum) as a demonstration, the manual explains how to find information related to this material as a drug and as a plant, along with some shipment records under the tabs Drug Components (1), Naturalia (2), and Cargo & Trade (3). Pulling information from several of the aforementioned datasets, the search result from the Naturalia tab shows that *Asafoetida* was also recorded as *Duivelsdrek* and *Ferula*, among other names; that it appears in two editions of the book *Pharmacopoeia Amsterdam* (1636, 1660) printed by the Blaeu family; and that it can be used as a digestive aid, as a condiment in food, and as an essential oil. The tab Query Machine (4) is effective in filtering sources and information from the datasets to find specific mentions of *Asafoetida*.

There are, however, several minor issues with the platform. The geographical aspect of the data is visualized on a map. A modern Google map might misrepresent certain geographical areas recorded in historical documents. In addition, the tab Reference Sources (5) arranges the data entries in alphabetical order, but there is no option to organize or search information by author, year of publication, or dataset of origin. This tab is thus somewhat redundant as it stands.

ACCESSIBILITY/SUSTAINABILITY

As with every system, there is a learning curve when using Time Capsule, but one starts to understand the richness of these interconnected data after a number of searches. A major contribution of Time Capsule is to make all the included datasets accessible through one entry point. This can help users make previously unobserved connections and has the potential to spark formerly unasked questions. However, although Time Capsule states that it can be adapted for other datasets, its website provides no instructions as to how this can be achieved. Another critical concern is the sustainability of the platform. There is no information about whether Time Capsule is a stand-alone project or an output of a larger research project; hence it is unclear whether the building of the system has concluded. The platform, albeit extensive, seems incomplete, as the subtabs of Animals and Minerals under Naturalia contain no entries. Additionally, the user can access Time Capsule only as a guest, since the contact email address to register for the platform is no longer valid. If issues regarding the sustainability of the platform and the adaptation of the system can be resolved, Time Capsule can be a useful resource for exploring the interrelated history of pharmacy and botany and potentially a valuable tool for other interdisciplinary inquiries.