## **DASH!** Lessons learned and future considerations

We have covered the details of DASH! usability as well as feedback from user representatives on other pages. We provide a quick overview of some of these lessons here, as well as add some information regarding specific development and technological approaches.

Usability testing and user representative feedback summary

- Usability testing revealed that, although people were generally able to find the information they were asked to find, we could design the subject
  page to better clarify the role of the timeline and map on the subject page. User representative feedback showed us that, in addition to clarifying
  options like "display all subjects", we could add more interactivity to the map and review the choices provided for timeline and map display.
- User representatives told us that the data from Wikidata about influences seemed arbitrary and incomplete. Publication data from Wikidata also
  did not always seem to provide a complete set of publications for a given contributor. In addition, it was unclear how this publication information
  aligned with information from the catalog.

## Development and technology lessons

- Timeline
  - It was unclear whether the Histropedia timeline errors we encountered were due to the cross origin data loading issues we encountered
    once we ran the code on a server using https or due to other reasons.
  - The timeline seemed a little sensitive with respect to scrolling. It's unclear whether or not this issue was related to the use of the touchpad specifically.
  - With the version of Histropedia we employed, we couldn't see a way where we could have a particular timeline card selected when the
    timeline was loaded. This feature would have been useful to highlight the subject heading which was the focus for the page.
- · PeriodO integration
  - The code prototype subject page with map and timeline integration relies mostly on the Solr index to retrieve PeriodO data, but there are remnants of usage of the PeriodO data as a JSON object being loaded into the code. If this code is refactored or updated, the dependency on the JSON should be removed entirely and PeriodO information should be retrieved from the Solr index (with any updates to the index as required).
- Map
- We had to update the code for retrieving Wikidata geographic coordinates in realtime to go through a proxy page. We needed the coordinates for many different locations for display on the map when the user selected "display all" subjects. We need to keep in account requirements for specifying the user page originating multiple queries when integrating a large number of Wikidata queries into a page.

## Data and index lessons

- Not so much a lesson learned as a lesson reinforced: there are still too many gaps and inconsistencies in data sources like Wikidata and DBpedia
  to rely on them for robust discovery features. Examples of this include the publication timeline and influence diagram that we included for authors.
  The inconsistent use of IDs across these sites is also a drawback, forcing the use of multiple queries or queries with unions to try to find matches
  or making locally stored IDs/URIs less relevant.
- The scripts for populating the index with related Wikidata information required multiple queries against the system. We may need to take into
  account timeout and throttling issues with querying against Wikidata.