Visualizing Russian Avant-Garde and Émigré Networks

Thesis Proposal
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1 Concept and Collaborations

This fall, Slavic Languages and Literatures Professor Marijeta Božović is spearheading an initiative to juxtapose theoretical and literary practices in Slavic Studies with techniques in the digital humanities, in order to carry out research on Russian avant-garde and émigré writers that traditional close reading practice could not in itself produce. The Slavic department course taught through this initiative is called DH Lab: Avant-Gardes and Émigrés.

I propose a project that will closely collaborate with the aims of the DH Avant-Gardes and Émigrés course and its intent to bridge gaps in the disciplines of Computer Science and literary studies. I will use the d3.js toolkit to create visualizations depicting the relationships and movements of different figures in the Russian avant-garde and émigré movements. I will work closely with Professors Rushmeier (CS) and Božović (Slavic) to experiment with visualization technologies and interfaces, while creating a viable digital humanities tool for Slavic Studies practice. This thesis will focus chiefly on past data visualization technologies, and d3.js experiments for representation literary networks and movements, while work in the DH lab course will specifically entail a literary interpretation of the visualized data and its implication for the Slavic field.

2 Research Question

Legible and usable data visualizations have a lot of important implications in the study of the humanities. For example, user interfaces of library archives could be greatly improved to include an attention to transnational movements, knowledge production and exchange, which in turn could be critical for uncovering under-researched and under-accessed collections in the Beinecke Library.

Furthermore, improved data visualizations might help us build the technical tools necessary to conduct distant and transnational readings, which would otherwise be difficult to
uncover for scholars focusing on a particular national literature. This might include representing global networks of artists, or interactions between Soviet and Western literary figures in the period before and during the Cold War. We might also use such an approach to study the dissemination and appropriation of national literatures in a global context.

We can find many examples of visualizations that attempt to depict the relationship among artists or among a certain genre of artistic work. For instance, consider the PopCha! Movie Network (http://bl.ocks.org/paulovn/9686202), which graphs and connects movie nodes based on their similarity. What is missing from such projects is the incorporation of changing temporal and spatial variables (i.e. comparing nodes in a network over time, or showing their movement across nations and geographic areas). Such projects serve as a starting out point for modeling knowledge production on a global scale, but much more can be done in this arena; it is by no means a trivial technological feat to represent networks of related artists and oeuvres across time and space.

The puzzle I hope to address in this thesis is the inherent difficulty in representing the relationship between artists and their movements in time and space (consider the study of émigré authors, which would be impossible without considering the physical space the author occupies at any give point of time). Using data visualization technology, I will attempt to depict relationships and movement in a non-trivial format. In so doing, we might envision an interactive interface that allows digital humanists to study interactions between literatures and literary figures in both static (one time, one place) and dynamic (different times or different places) ways.

3 Technology and Methods

I will use d3.js to create different visualizations of émigré and avant-garde networks. I will attempt to conceptualize technical and visual devices through which we might study the physical movement of interrelated artists across time. This might, as an example, involved overlaying a d3.js generated network on a physical map.

The initial inspiration for a data visualization project making use of the d3.js toolkit came from a reading of the thesis “Visualizing YCBA Artist Relationships.” (http://zoo.cs.yale.edu/classes/cs490/15-16b/hemmady.shonaseema.ssh53/)

This study of dynamic visualizations of avant-garde and émigré networks will either consist of a series of experiments to achieve a proof of concept visualization that is satisfactory to Slavicist digital humanists, or attempt a series of related, but different visualizations to test the legibility and usability of potential visualization methods.

4 Deliverables

Throughout the course of the semester, I will experiment with the d3.js toolkit, while cooperating closely with the Avant-Gardes and Émigrés DH seminar to consult on the legibility and usefulness of the visualizations.
The main deliverables for the project are as follows:

1. A literature review of at least three representative digital humanities projects that focus on network-based and geospatial visualizations of knowledge production and exchange, including a discussion of strengths, weaknesses, and involved technologies. Special attention will be given to applications of such data visualizations in Slavic studies, if such examples exist. (min 4 pages)

2. At least three separate experiments or successive iterations of data visualizations focusing on networks and movements of Russian avant-garde and émigré figures and/or the collections of such figures throughout the Yale library holdings. These visualizations will experiment with representations of time, movement, and geography as they relate to literary figures and their networks (e.g. related figures, influences). The exact nature of visualization will highly depend on the identification and/or generation of a database of properly tagged and linked data on the literary figures. As an alternative, metadata from related materials in the Yale holdings could be used.

   • In conjunction with the above, d3.js source code for at least three experiments or iterations will be produced, as well as a
   • Written report discussing the technology and data visualization implications of the provided experiments, with special attention to implications in the digital humanities and Slavic Studies (min 4 pages) and how the visualizations might be used in the corresponding Avant-Gardes and Émigrés DH Lab course.

5 Timeline

A rough timeline for project goals and deliverable might look as follows:

• Week of 9/26: discussion and investigation of potential sources for linked data on Russian avant-garde and émigré literary figures.

• Weeks of 10/3-10/17: research and discussion of previous digital humanities projects visualizing literary networks and movement. Initial experimentation with d3.js toolkit. Collection and curation of necessary data.

• Weeks of 10/24-10/31: preliminary sketch of prototypes for possible d3.js-created data visualizations. Outside consultation with professor and students of DH Avant-Gardes and Émigrés lab to discuss approaches and desired features for a visualization of literary networks and movement.

• Weeks of 11/7-12/5: implementation of several experiments or iterations of the proposed visualization, with regular consultation of DH lab for legibility and usefulness feedback.

• Week of 12/12: final report including the aforementioned written materials.