Visualizing the Gradual Production of a Novel

From a stemma view illustrating genetic relations on text level…

Consequently, the establishment of the genesis of a work relies on comparing, arranging and describing the different stages the text went through in the apparatuses of (printed) genetic editions, the relations between texts on higher levels (such as witnesses, versions) are commonly either described in a commentary or depicted in a stemma tree.

Such a tree for Lokalbericht, Swiss author Hermann Burger’s first novel is given on the right (fig. 1). Burger crafted his novel as a mosaic consisting of numerous surfaces of a re-typed version. The visualization is an integral part of the navigation component that vertically displays the two respective pages.

…to an interactive view of relations on surface level (or below)

The user is able to switch between two levels of visualization and to zoom in and out of the displayed stemma tree. Marker objects represent the sheet/surface level, while the genetic relations are depicted as links between marker objects, connecting two entities which are either a genetical dimension (gathering relations) or a functional dimension (e.g. capes, letters). They are grouped in nodes of macro-genetic intangibles (intangible textual units such as genres, styles, etc.) or physical documents (operational personal documents and letters).

Guiding principles

The visualization follows two main goals:

- Text genetic goal: Illustrating the Lokalbericht corpus and rendering the genesis of the novel comprehensible.
- Navigational goal: Offering access to any editorial typo-script and documentary material of the digital edition.

Providing JSON input (cf. fig. 5) delivers much more complex process from sketching the initial design to the final implementation and improved (full) feedback from the user.

The visualization is being built using the Javascript library D3.js [1], which turned out to be a good choice thanks to its versatility and very accessible documentation and examples. A CSV specific feature was the clients side not be burdened to do less than 98% processing (heraclitean transformations, string operations). Providing JSON input (cf. fig. 6) delivers much more performant outcomes.

Of further concern was the sizing of interative elements. Due to their number they are drawn somewhat too little to be reliably readable. We aimed to use the 3D effects coming with D3.js (using a distant-illuminated Herbart trees) assuming the users to make out the intersections more difficult (e.g. by dragging mouse/pinkie to the connections).

Outlook

In addition to providing the user with a tool to 3D explore the digital edition, it would be very desirable to complement the visualization with a more narratological perspective. That way the most interesting genetic processes and key findings could be presented to the user in an engaging manner.