UDE

PALUNO
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HCI ESSEN

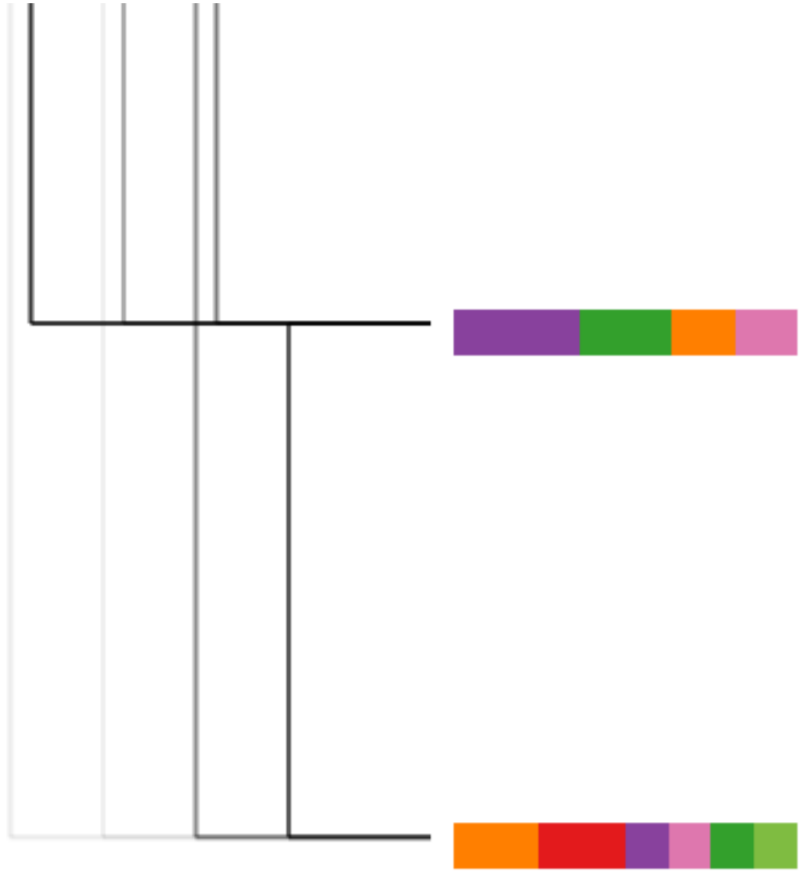UNIVERSITY OF BAMBERG — OTTO-FRIEDRICH-UNIVERSITÄT

Cohesion
The text's ability to connect concepts is called cohesion. It consists of multiple linguistic features, not all covered here. While the reader's interpretation is subjective, it might be influenced by the text's cohesion.

263 Historical items have similar complex data dimensions as biographies, as only the viewpoint is switched to objects instead of persons.
264 It reaches from combining maps and timelines to specialized Space- Time Cubes.
265 As before, interactions like linking, filtering, and selecting and showing details on demand play an important role.

161 Trajectories display the continuous movement behavior of an entity over space and time.
162 Mostly, they are visualized by three - dimensional Space - Time Cubes.
163 displays the movement behavior during a trip with a Space - Time Cube, where its path and stations are highlighted.
164 Furthermore, the path can be enriched with qualitative and quantitative information by coloring or varying the width.
165 It also can be enhanced by linking multimedia objects, whose details are displayed on demand.

Words of Topic 5
time space historical cube figures cubes dimensional highlight context comparing visualized interwoven spread interaction exploration connect enables able description trait propose triangle pattern hot

5 time space historical

CohExplore: Visually Supporting Students in Exploring Text Cohesion

Carina Liebers, Shivam Agarwal and Fabian Beck

ABSTRACT

A cohesive text allows readers to follow the described ideas and events. Exploring cohesion in text might aid students enhancing their academic writing. We introduce CohExplore, which promotes exploring and reflecting on cohesion of a given text by visualizing computed cohesion-related metrics on an overview and detailed level. Detected topics are color-coded, semantic similarity is shown via lines, while connectives and co-references in a paragraph are encoded using text decoration. Demonstrating the system, we share insights about a student-authored text.

APPLICATION EXAMPLE

– Imbalanced structure in the Overview Panel: Only one chapter, "Visualizations of Historical Figures and Events", has subchapters; Similarity lines show imbalance
– High similarity "Movement Behavior" and "Analysis of Historical Items" due to common themes (topic1 ■, topic5 ■)
– Similarities between sentences in the Conclusion section highly vary: Pie chart colors indicate abrupt topic shifts (l. 263 , l. 264 , and l. 265); Harder to follow due to the absence of co-references

DOCUMENT OVERVIEW
– Similarity lines: Similarities of chapters and paragraphs, ordered hierarchically
– Hierarchical structure of the text (B_1)
– Colored Stacked Bar Charts: Topic distribution of para-graphs (B_2)

TOPIC BARS
– Discovered topics of the entire text
– Color-coded consistently
– Hovering shows words of each topic

LEGEND
– Explanations of features and encodings
– Highlighting on hover

TEXT PANEL
– Pie charts: Topic distribution of sentences
– Arcs: Semantic similarity within a paragraph
– Co-references: underlined in the first and given a grey background on subsequent occurrences
– Connectives: **bold**

TEXT HIGHLIGHTING
– Selecting a paragraph shows the topic words in their respective color

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