EXPLORING COUNTRY IMAGES IN SCHOOL BOOKS: A COMPARATIVE COMPUTATIONAL ANALYSIS OF GERMAN SCHOOL BOOKS IN THE 20TH CENTURY

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Abstract

This paper is based on an ongoing PhD project entitled "An international triangle drama?", which studies the depictions of West Germany and East Germany in Finnish, and depictions of Finland in West German and East German geography school books in the Cold War era. The primary source material consists of Finnish, German (both West, East and unified) geography school books published between 1946 and 1999.

Contrary to traditional methods of close reading thus far applied in school book analysis, this paper presents an exploratory approach based on computational analysis of a large book corpus. The corpus used in this presentation consists of 91 school books in geography used in the Federal Republic of Germany between 1946 and 1999 (n=77), and in the German Democratic Republic between 1946 and 1990 (n=14). The corpus has been created by digitising all books by applying OCR technologies on the scanned page images. The corpus has also been post-processed to correct OCR errors and to add metadata. The corpus has ca. 540,000 tokens and ca. 16,000 unique lemma.

The main aim of the paper is to extract and analyse conceptual geocollocations. Such an analysis focuses on how concepts are embedded geospatially on the one hand, how geographical entities (cities, regions, etc.) are conceptually embedded, on the other. Regarding the former, the main aim is to examine and explain the geospatial distribution of terms and concepts. Regarding the latter, the main focus is on the analysis of concept collocations surrounding geographical entities.

This paper exploits digital methods in three different domains. First, we use standard methods of text mining to extract geographical clusters, i.e. text blocks with geographical concepts (names of different regions, cities etc.) in the centre. Second, we create geospatial data by enriching non-geographical concepts in each cluster with geocodings. And third, we use statistical and digital methods to explore geography-based differences in the use of other concepts and to visualise our main results.

Since the paper is based on an early-stage research project, it will present preliminary results only. We hope to be able to evidence correlations between regions/places and the concepts used to provide information about the region. We also seek to visualise differences in geospatial distribution of core concepts used in the school books.

Concerning historical research from a more general perspective, one of the main objectives of this paper is to exemplify and discuss how computational methods could be applied to tackle research questions typical for social sciences and historical research. The paper is motivated by the big challenge to move away from computational history guided and limited by tools and methods of computational sciences toward an understanding that computational history requires computational tools developed to find answers to questions typical and crucial for historical research.

Keywords: Exploratory analysis, Computational history, School book analysis, Geospatial modelling