# Modelling prosopographic knowledge from historical events

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## Abstract

The paper presents first ideas of modelling prosopographic knowledge in the context of the current research project CORE-H ("Collaborative Open Research Environment for the Humanities"). The aim of the project is to establish a collaborative research environment to digitally reorganise the historical workflow. The research environment presents itself to the outside world in the style of Luhmann's *Zettelkasten* as a "digital assistant", that helps historians to process, enrich and evaluate various historical sources, which previously had to be evaluated manually in time-consuming work. The functionality of the research environment is facilitated through a knowledge base in which the relevant knowledge about historical persons, institutions and events is formally represented.
As a first benchmark for our research environment, we have chosen the study of learned elites of the late Middle Ages. In this study we want to integrate knowledge about the scholars and clerics of the Late Middle Ages from different online resources into a historical knowledge base: knowledge about curical trials and ecclesiastical institutions (Repertorium Germanicum and Germania Sacra), knowledge from charters (Regesta Imperii and Monasterium), as well as communicative knowledge from letters (e.g. the regesta of the "Melanchthon-Briefwechsel"). These data collections for German medieval sources are available in digitised form, which makes them analysable with semi-automatic evaluation methods such as text mining. They contain in thousands regesta information derived from the late medieval Vatican registers, imperial charters and other historiographical sources, thus providing a large amount of prosopographical data.
The integration of these disparate sources requires the development of an ontology which provides a common vocabulary for modelling the relevant knowledge. Such an ontology of late medieval church and constitutional history has to incorporate concepts to describe persons, institutions and geographical places. This includes different roles in the monastic and the secular hierarchy as well es different interrelationships between concepts. The main challenge for our knowledge base and the underlying ontology is that the resources are not describing a state of the world but primarily talking about events changing the world. For example, persons can hold offices, so-called benefices, whose possessions and relationships to each other change as a result of the events. We are meeting this challenge by two design principles: 1) We explicitly model events and their effects on the state of persons, institutions, etc. and 2) Each time-dependent statement in the knowledge base is provided with an time range of its validity. By means of automatic reasoning the knowledge base will be able to infer time-dependent statements (in the sense of 2) from knowledge about events (in the sense of 1). Thanks through

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the formal representation in a knowledge base of the relationships of persons to offices, income and places, we can then draw conclusions about the careers of the intellectual elites of the late Middle Ages.

We see our efforts of building such an ontology as part of a wider collaborative endeavour. At the moment we are eager to establish a consortium for the development of an ontology of medieval history which is shared by the community and lays a conceptual foundation for the interoperability of online resources and software tools.