Knowledge organisation and integration of heterogeneous data in Art History

Thursday, 20 April 2023 10:00 (30 minutes)

The Bibliotheca Hertziana (BHMPI) has been involved with the process of conceiving a Consortium for the cultural-historic sciences in the Humanities, which led to the foundation of NFDI4Culture in June 2020. The NFDI4Culture mission is to systematically develop, make accessible, and sustainably secure research data from art, music, architecture, theatre, dance, film, and media studies into a demand-oriented infrastructure for research data on tangible and intangible cultural assets. BHMPI is a long-term partner and aims at official membership in the Society.

Though the most prominent BHMPI digital research assets in art history are its library and its photographic archive, the work of several related research departments throughout the past decades has resulted in a myriad of databases characterised by unique valuable content, implicit data interlinking through authority control (e.g. GND), but otherwise compartmentalised implementations and management. These include the digitised rare book collection, the Zuccaro information system on Italian art history, digitised and geo-referenced historical maps of Rome and Naples, and several catalogues based upon Linked Open Data, such as Mapping Sacred Spaces (Medieval church interiors) and Magnetic Margins (history of science census).

Through the foundation of a Digital Humanities Lab, and under the auspices of NFDI4Culture, BHMPI is developing a data infrastructure, compounded with curatorial and re-engineering workflows, able to manage and publish data from these art-historical projects and from future ones. The goal is for these data to be consumable by third parties - through standardised interfaces like RDF, IIIF and SPARQL - as if being part of one connected knowledge graph, allowing related iconographic content from the photo archive and bibliographical/citational contexts from the library to be delivered and discovered. The challenges involved include: (1) dealing with the highly variable scales of the datasets; (2) prioritising the efficiency of textual search, geographical querying, and bibliographical lookup; (3) ensuring data integration whilst minimising the overhead of cross-source transforms; (4) not disrupting the established curatorial practices of existing projects. An experimental implementation, interoperating with the photo archive reengineering work underway and based on these standards and widespread data schemas for GLAM and Humanities research, such as CIDOC-CRM and FRBR, is selectively being made available.

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