“Life of Paper” Project Report: Quire Structures and Watermarks in 17th-Century Icelandic Manuscripts

In the three-year-project “Life of Paper. Cycles of Paper Production, Use and Reuse in 17th-Century Iceland”, we focus on paper history in Iceland during the 17th century. An essential part of the project is the analysis of material aspects, particularly watermarks and quire structures.

Watermark analysis was conducted with a hyperspectral camera from the Fraunhofer Institute for Factory Operation and Automation (IFF) in Magdeburg. This is a line camera which uses 320 spatial pixels and 256 bands in the range from ca. 1 000 to ca. 2 500 nm, ie. the spectral range in which iron-gall ink becomes invisible. Illumination is done by an off-axis halogen lamp. The scans of the watermarks are added to the *Wasserzeichen-Informationssystem* database, where we can compare the scans to other watermarks providing information on the production of the paper.

Information about the analysed watermarks is additionally added to the relevant online database for Icelandic manuscripts, Handrit.is. There, we provide links to the entries in question in *Wasserzeichen-Informationssystem* together with digital representations of the manuscripts’ quire structures, which allow the user to grasp more easily the physical and textual context of the watermarks’ occurrence. Our graphic representations are based on VisColl, an open source-model for modelling and visualising manuscript quire structures developed by Dot Porter and others at the Schoenberg Institute for Manuscript Studies. In order to incorporate the VisColl files into Handrit.is, however, some adjustments had to be made.

Finally, we will touch upon limits we encountered in our watermark research. For example, cases where there are no comparable and dated watermarks present in databases or because carbon ink on the paper prevents the analysis.

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