

## **Digital Hermeneutics in History: Theory and Practice**

### **Save your sources! ...but can you?**

Historians have been working for over a hundred years with the historical-critical method, which is divided into the recursive steps heuristics - source studies - source criticism - interpretation - representation. Analog sources can be referenced, as most can be easily retrieved for re-examination.

For the use of digital objects as sources, however, the method must be adapted because digital objects are fundamentally different from analog objects: they are genuinely digital, multimodal and -dimensional, incomprehensibly manipulable, volatile, data carrier-independent, loss-free, reproducible and (simultaneously) reusable and dependent on a specific, digital information system. The fact that digital objects are volatile and manipulable is particularly problematic, because the ethics of scientific work requires the traceability of used sources in the original.

A digital object that can disappear or be changed with a mouse click is permanently traceable only if it is stored in an independent Trusted Digital Repository (TDR) that is legally obliged to store the contents permanently. The saving process, the Trusted Saving Procedure, should take place directly between the provider of the source (a website, a repository, but also the user) and the repository in order to exclude manipulations by the user as far as possible. The metadata in the TDR shows where the object comes from, when it was saved and to which collection of an identifiable user it can be assigned. The user can publish his source collection under a unique address and thus make his sources permanently available.

Users are mainly researchers who are not involved in a major project but pursue their own projects as such as master theses, dissertations or scientific publications. They do not currently have the possibility to publish their sources and research data. Science should therefore provide the necessary infrastructure in cooperation with legally mandated and financially funded archives to enable Researcher Driven Archiving. This makes it easier to reuse the sources and uncover new relationships between them. This would be of great benefit to the research community.

As the securing of sources has become massively more important, the methodology should be extended to include the step of source safeguarding. In order to cope with the associated problem complexes, scientists have to acquire new key competences, which the educational institutions also have to impart to the students in newly designed courses. This includes competences in information, media, communication, computer and data sciences.

When saving a digital object, it must be decided which object or objects are to be saved, in which form, in which format, with which hardware and software components, in which storage location and with which standardized metadata. All relevant aspects must be taken into account so that the digital object can be displayed again and correctly. It may also be necessary to be able to interpret a source code. Should historians learn to code? My answer: Yes, historians should learn the syntax of programming languages in order to be able to interpret algorithms and program code independently, even if very few of them will code themselves.