

Archiving by Analogization!?

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Keywords: *digitalization—analogization—archaeological documentation—archiving*

CHNT Reference: Goeldner, Reiner. 2021. Archiving by Analogization !? Börner, Wolfgang; Kral-Börner, Christina, and Rohland, Hendrik (eds.), *Monumental Computations: Digital Archaeology of Large Urban and Underground Infrastructures*. Proceedings of the 24th International Conference on Cultural Heritage and New Technologies, held in Vienna, Austria, November 2019. Heidelberg: Propylaeum.

doi: [10.11588/propylaeum.747](https://doi.org/10.11588/propylaeum.747).

We love digitization because we live in a digital world. Information technologies (IT) help us to tackle complex affairs like never before. Bookshelves, photo albums, worldwide maps, excavation documentation available at about 100 grams of IT, as is intelligent interpretation of handwriting as well as voice and face recognition. No problem. Archaeology too benefits greatly from such digital methods. High resolution 3D-scans from archaeological objects are created, examined, analyzed and published, as can be seen at the “archaeo | 3D” website (LfA-SN, 2020).

However contemplating sustainability, preservation and things that remain, the chances for digitized objects are not that good. Digital life is short and it takes much effort to archive digital content and especially digital functionality. Often it is too expensive. Often there is no spare capacity for the preparation and curation of archive material. So, mountains of digital data grow and grow, waiting to be excavated by future digital archaeologists.

Though contemplating cognition, creativity and our real world interaction, bits and bytes are usually not helpful, analogue information is needed. People read analogue texts, study analogue images (on-screen) and listen to analogue sounds. Especially scientific reasoning will continue to be a non-digital method (even though artificial intelligence seems to expand into refrigerators and washing machines). So digitization needs analogization (Fig. 1).

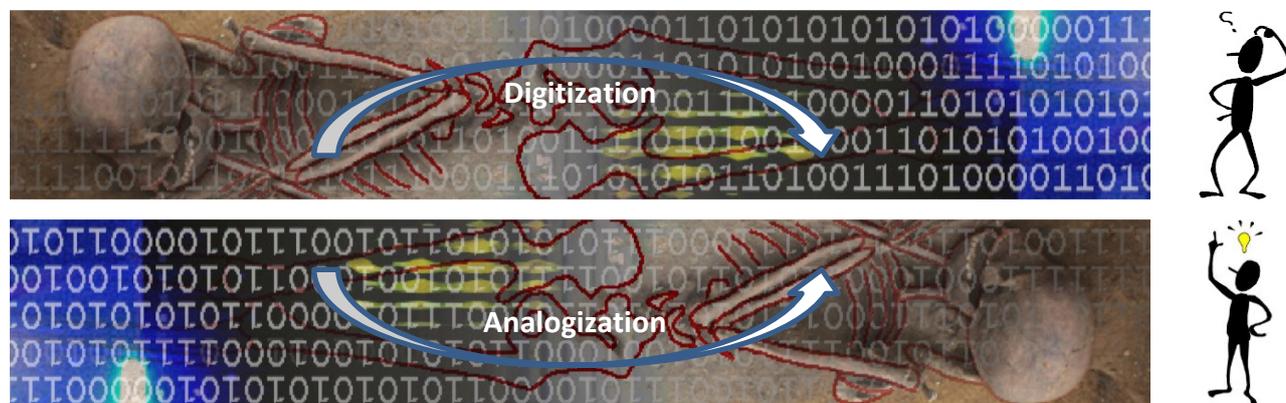


Fig. 1. Digitization needs Analogization. (© R. Göldner)

Archaeologists, especially, are familiar with lots of analogue things that survived thousands of years (without any curation effort). Some archivists also try to preserve digital information in an analogue

form, as hardcopy maybe on/in LE paper, PET microfilm (Göldner, 2012) or ceramic tiles. The major advantage is: these archive materials are directly readable (recognizable), without any help of IT. Let's consider two examples. The "Rosetta Stone" (Fig. 2) is more than 2000 years old, its inscriptions has been visible very clearly with the naked eye until now and its life cycle has a very good prediction. The "Memory of Mankind" (MOM, 2018) tries to use ceramic tiles with engraved texts and printed images (ceramic colors) to save information e.g. from books, news articles or private documents. The tiles can be read by eye with 10x magnification. They are archived deep in a salt mine at Hallstatt (Austria) and the location of this archive is published by ceramic tokens (Fig. 3) with an engraved schematic map, that can be spread as wide as necessary. MOM wants to preserve stories of our time on most sustainable analogue media saved deep in the mountain.



Fig. 2. Part of Rosetta stone (source: Rosetta 2019)

So one may hit on the idea of omitting all the IT. Wouldn't it be cheaper to draw excavation plans on paper than digitize it first and print it out last? Wouldn't it be more authentic to draw a plan directly by hand then to trust hidden data exchange of bits and bytes?



Fig. 3. Ceramic tokens from the "Memory of Mankind" MOM (source: Token 2018)

Here are some ideas to answer these questions. Consider the whole working process starting with analogue information and ending with analogue information. Consider the whole digital process starting with digitization, including analogization and (never) ending with frequently renewal of hard- and

software and especially with ongoing and costly curation efforts. Consider the drawbacks of a non-digital process, especially the loss of functionality (no order, filter search function, no links, no internet publication, no complex analysis, no complex statistics and so on). Comparing all the results it cannot be ruled out that a non-digital method will top the IT but this will be solitary cases because a broad functionality is usual and it is expected.

Some interested professionals discussed this provocative idea at the workshop on “Digital Archiving” (CHNT 24, Vienna 2019). They agreed that analogization can be an effective way of archiving, especially if an analogue representation is sufficient and if there are special circumstances that are contrary to an appropriate digital archiving (e.g. lack of resources). But, in kind of “real” digital data that supports digital content and digital functions, there is no way around active digital preservation with all steps known from the OAIS reference model (OAIS, 2019) especially Data Management and Preservation Planning).

The résumé is: analogization may be helpful to archive special content but normally an appropriate digital archive is needed to preserve digital data for a long time.

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