[to be published as an edited version in a project that is emerging (with Lori Emerson and Darren Wershler) on "labs" in humanities and media archaeology]

1. Can you start by telling a bit about how the idea for the Media Archaeological Fundus came about? When and how, and why.

When in 2003 the seminar for Media Studies was founded at Humboldt University in Berlin, it replaced former Theatre Studies. All of the sudden, spaces like the student practicing stage and its relating fund of objects for rehearsal were empty. This was the ideal moment for the Berlin school of media studies (insisting on the materialities of communication and epistemic technologies) to claim such rooms under new auspices. The stage became the Media Theatre where technical devices themselves become the protagonist, and the fund became the space for a collection of requisites of a new kind: media archaeological artefacts.

Technological media (both in communication and in noncommunicative contexts) are not mere cognitive constructs but really exist. Any media theory therefore needs to be archaeologically grounded in the twofold material (engineering) and symbolical (mathematical, logical, diagrammatic) presence of media technology - in archaic artefacts (which are never "dead media"), in illustrative key elements (like the enlarged version of a flipflop circuit to store one "bit"), and in essential operative principles (algorithmic source code). All this becomes experimental in terms of techno-epistemological questions. Technological items need to be analysed in action in order to reveal their media essence; otherwise a TV set is nothing but a piece of furniture. Therefore for media academic media analysis it requires a pool of past media objects which teachers and students are allowed to operate with, different from the "don't touch" imperative in most museums. The Media Archaeological Fundus is populated with core technological molecules which at first glance look outdated but become a-historical once they are deciphered with media-archaeological eyes, ears and minds. A telegraphy apparatus turns out to be "digital" avant la lettre, surpassing the age of so-called "analog" signal media like the classic electric telephone.

2. The Fundus is clearly something that connects to your media archaeological theory, but acts as a pedagogical, education arm of that project, engaging with students. Is this collaborative, didactic side - research and with students - a key part of the Fundus?

Indeed. Teaching of media can not be reduced to lectures and text reading only. When students are supposed papers on the difference between cathode ray tube based television and digital videos of the YouTube style, they first of all have to experience what the

techno-materialities of analog television haven been. Whatever complicated the definition of "media" might be, as technological media (the focus of the "Berlin school" of media studies) they really exist(ed) and need to be experienced in performative ways. That is why next to our academic students a bunch of media artists come to visit and to make use of the Fundus as well.

We have an impressive Technological Museum in Berlin which displays most precious originals from media history. The problem is that visitors obviously are not allowed to investigate such apparatuses manually, and for curatorial reasons these objects are not being operated again. But a technological medium which is not signal processing is not in its medium state at all but simply a piece of metal. For academic media analysis it therefore required the establishment of a Media Archaeological Fundus which allows for students (and teachers) to literally "analyze" media not only in abstraction but literally to take them apart (the ancient Greek meaning of analysis). That is why most of the artefacts in the shelves have been deprived of their design cover. The Fundus is not ordered according to the familiar mass media like sets of radio or television or computers from past days but primarily consists of what is media-archaeologically considered as its electro-mechanical and electronic core elements: non-intuitive, even monstrous artefacts in the best sense of a technological curiosity cabinet (Wunderkammer). A relay which was familiar in telephone communication and later in the first generation of electronic computing serves to demonstrate how media elements cross the borders and undermine conventional mass media segmentation; this incites to consider new non-historiographical philosophies of how media exist in time. Such a pool is meant to represent both aspects of media-archaeological artefacts: the material "analogue" devices and the new type of digital artefacts which is, e. q., glitches known from defect pixel representation on computer screens. Therefore the Fundus is linked with a Signal Laboratory for the close reading of data processing.

3. Following the 1980s started enthusiasm concerning "Media Labs" (at MIT and then other places too), institutions are nowadays building more and more Humanities Labs - some more specifically related to Digital Humanities, some to Design, some to other sorts of Humanities spaces and activities. Does the Fundus in some way relate to the idea of a "lab" - and how might it differ from some of the other examples around?

I personally got my first impressions of such "labs" from the so-called Media Lab at the freshly founded Academy of Media Arts in Cologne as "artistic-academic" assistant teacher and researcher in the late 1990s. Those days computers for digital image sequences (rendering) were still costly and a privilege to students of such an educational institution. Nowadays every student with media-artistic ambition can install his own "lab" with free software on his private computer. I want to add, though, that the yearbook of the Cologne Academy for which I acted as an editorial production

assistant has been called "Lab" as well (*Lab. Jahrbuch für Künste und Apparate*). In the academic context, material analysis of technological devices is always coupled with its epistemological reflection which is still best expressed in words and texts.

Nowadays "labs" spread around the institutions in an almost inflational way. But a significant shift of emphasis took place: The traditional scientific laboratory has been a very material theatre for creating "epistemological objects" (as described by Canguilhem and Rheinberger); nowadays experimentation takes place in calculating space almost exclusively (computer modelling). Most Digital Humanities labs which employ algorithmic research to big data for new kinds of information within the humanities disciplines miss the material aspect of cultural analysis - which first of all starts with the hardware employed for research itself. The most intelligent algorith only becomes operative when implemented in the real world (that is: real time) of hardware architectures. Big data are still being prosessed by electronically driven computers in the most material sense. Digital Humanities therefore require synchronous self-critical reflection of their own technological condition - a kind of "humanities of the digital" in the sense of material media philology and classical auxiliary sciences of material investigation. What has been paleography or numismatics on the traditional humanities nowadays becomes media forensics (in Kirschenbaum's sense).

4. Another direction where your Fundus seems to have an implicit connection are the practices of hacking - hacker spaces and such - where issues of openability of technologies both in terms of code and hardware are raised, alongside even environmental issues (such as repairing old electronics). Such projects are often however more political and usually not connected to universities. How do you see this relation between the Fundus and such practices of hacking, circuit bending, etc.?

The best ways to analyze a technological medium is to take it apart and to re-assemble it. As an operative form of media research this does not lead to destruction but rather gives a more precise sense to what in the philosophy of the 1980s became known as de-construction. Re-assemblage as well allows for new combinatorics. To think media from their technological elements is like the alphabet in relation to spoken language: It allows for analysis on the sub-semantical level and leads to re-combinations in techno-poetic ways. Together with its sister laboratory, the Signal Lab, the Media Archaeological Fund makes transparent that what used to be hard-wiring of technical artefacts nowadays is programming. The very term for symbolical coding which remains close to the language of the machine itself is plain text here: ASSEMBLY.

Hacking and circuit-bending is a form of media-political criticism, of an-economy and of artistic experimentation which

mostly takes place outside the Humanities departments of academic universities. But when coupled to media studies, the focus of interest is a different one: to reveal and verbally make explicit the knowledge which is implicit in technologies (both in the material and the mathematical sense). Media archaeology as academic practice is applied epistemology: it does not leave technological expertise to engineering and computing sciences alone but learns and teaches how to create sparks of knowledge from objects in order to translate this into discourse.

5. How do you see the project of the Fundus relating to issues of cultural heritage - especially cultural heritage of technology? Does it offer an alternative "model" outside museums or what is the institutional basis that it could provide as something that is also transportable outside your specific institution?

It happens that the Media Archaeological Fundus is physically located right opposite to the Pergamon Museum in central Berlin. Whereas on the Museum Island art and artefacts from antiquity are housed in the traditional museum frame, the Fundus with its LEDbased message TECHNOPOIESIS right a the front entrance incorporates the new technological antiquity of contemporary culture like an antagonist challenge to the classical museums. In museological terms of cultural heritage, the Fundus reminds of the different nature of the cultural object when it comes to technologies. Whereas the cultural message of an ancient Greek sculpture or vase can be decoded in its pure visual and material presence once the contextual knowledge has been acquired, the cultural value of a technological artefact can be demonstrated only when being in operation - be it a signal-transforming analogue video image or a measuring oscillogram unfolding in micro-time by the scanning finger of the vacuum tube, or be it a computer program running a gaming algorithm. Just like a musical score or a theatre play only unfolds in performance, such operative (almost sonic, vibrational) museology is a new answer to techno-culture which is radically time-based. The archaic museion has been a "place for dancing" of the muses. Nowadays, the new museum has to be both operative and "algorhythmic" (Miyazaki) in order to preserve technological culture - with mediaarchaeological re-enactment and emulators.