# Roundtable discussion: "What does the history of IT have to say to media studies and computer science?"

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## HAL Id: cel-01345596

### https://hal.archives-ouvertes.fr/cel-01345596

Submitted on 20 Jul 2016

**What does the history of IT have to say to media studies and computer science?" – Liesbeth De Mol**

Why should one be doing history of computing? I couldn't care less about such questions when I started out with my PhD. For me, the real question at stake was: what is computing? I was and am strongly convinced that in order to understand modern "technique", it is necessary to tackle this question since it is computing which is a dominant technology and so gives us access to "technique". It is rooted in my reading of Heidegger's technique essay and, more particularly, the Hölderlin quote: "Wo aber *Gefahr* ist, wächst. Das *Rettende* auch" ("But where danger is, there grows / also that which saves").

In my reading, that meant going against the ideology of the GUI since it *hides* the machine and its logico-mathematical nature by creating the illusion of a "soft-ware", which can then be treated as if it is a "*device[...] like any other[...]*" (Dijkstra,). It is this attitude which makes possible Dijkstra's user, a "moron" which "hates any form of intellectual demand made on him" and so fits perfectly a business model of intransparancy.

So what *is* computing? One way into this question was by studying the history of modern computing, or, more correctly, by studying the different practices of computing: assuming a dynamic reading, grasping its own historicity is one way to render it transparent. Now, given this historicity, it is impossible to reduce computing to one particular type of "practice" and so it permits to embrace the simple fact that modern (!) computing is not engineering, not mathematics and not a science. Rather it brings together these different practices in an attempt to bridge the gap between humans and electronic symbol manipulation. It is there that resides computing's multilayered character or, perhaps more polemically put, its radically new character.

Rather than taking the "user" perspective for granted it was my aim to go to "the bottom" of things and to render comprehensible computing as a real technique, and thus, as something that /is/ hard to understand, something that requires not only awareness of the sociological, political and anthropological problems surrounding computing – the "soft" perspective – but first and foremost a *proper* understanding of the practices that underpin it, including its nasty little technical details. If one refuses that to the history of computing one is maintaining the ideal of hiding.

Let me now revisit my original question: why should one be doing history of computing? As is clear, I do not believe it should be done purely for the sake of other historians. For me, it serves another purpose which I prefer to call *political*. It is a method to render transparent computing by showing how it is shaped by its material, mathematical and notational practices and it permits to go against certain "ideologies" which I consider to be dangerous. It is at that point that I believe media studies *can* play their role: if their goal also is political, then the collaboration between history of computing and media studies *is* quite natural. In fact, as some of you know, my work on ENIAC is a collaboration rooted in a media art project called the ENIAC Nomoi project.
In general, I believe that one can use some of the more critical observations coming from media theory as a guide to analyzing certain developments in computing. One such insight that immediately comes to my mind is the

polemic *Es gibt keine Software* (there is no software)

Now, *if* history of computing serves a goal outside of history of computing, call it political, then who should be interested in it? The community that matters most to me is the computing community itself: they are the ones in charge of research, education, and, to some extent, development and maintenance. They are the ones who are "making" (part of) the history of computing and so they are the ones who are "making" computing intransparent also for themselves. Indeed, as we all know, there is a wide variety of issues within the programming business – most notably perhaps reliability – which are all very much rooted exactly in the accumulated complexities of and difficult interactions between humans, programs and hardware which, ideally, only make it hard (and not impossible) to see through multiple layers of abstraction. By doing history of computing, this accumulation is reversed and so one can start to see the forest for the trees again. Moreover, it permits to discern the more important problems from the less important ones and so, as it were, reverse engineer a foundation of computing which is still lacking today.

The *true* challenge then is to find a way, a method to bring history to computing (and conversely) and to "execute" it. It is the challenge I took with Giuseppe Primiero when organizing the first conference for the history and philosophy of computing in 2011. We were both missing a platform that allowed a conversation about similar topics but from different perspectives. Moreover, it was our shared frustration that both within history and philosophy there was quite some lower-quality work because it ignored or lacked technical knowledge. In that sense we have been explicitly looking for approaches which combine technicality (implicitly or explicitly) with more historical and/or philosophical insights and we are quite convinced that such approaches fit better with the computer specialists concerns.

In the meantime we have founded an international commission and organized over 20 different events. It was and is our aim to create opportunities where different approaches are embraced and discussed without pretence. This far, the experience is still a very positive one: wherever HAPOC is proposed, the reception is always one of enthousiasm. Moreover, and this is perhaps quite important, the more I am involved with actively seeking out people who want to contribute to this experimental project the more I realize that the people who are somehow involved with HAPOC-related stuff, are more numerous than one would expect. The only thing is that they are quite dispersed rather than centralized in a few research departments. For now, I see this as a positive thing: it forces us to seek out collaboration across national and disciplinary boundaries. I am realistic enough though to know that this situation is not ideal for the creation of new job opportunities. However, I do think it is one way to formulate more sharply and freely the potentials of any such interdisciplinary endeavor. To end with a rephrasing of a quote by Haskell Curry: "it is advantagous that such studies be prosecuted before the design[s] are likely to be frozen".