Conceptualizing computer media: Manovich Metamedium takes the lead

Book: *Software Takes Command*

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How can we study computer media in the context of constant innovation, new developments and implementations? Lev Manovich latest book-draft *Software Takes Command* undertakes this challenging task in attempt to trace the evolvement and conceptualize the specificity of 'cultural software'. The online published book can be seen as introduction to Manovich academic work under *Software Studies Initiative* at University of California (San Diego), aimed at studying computer and web media by using software methods and tools for analysis of cultural data.

Software Takes Command (version 1.0, published November 2008) is the first draft of the book, made available through Manovich official webpage. It, therefore, appropriates core principles of the online media: shared content; free access and feedback request that can contribute to the content of the book. Is it relevant to review this first draft published on the Web? Manovich explicitly traces similarities between content's evolvement and software development: the draft is the base version of the book that will be further developed. Asking is it relevant is similar to doubting the use of the first version of software knowing it will be upgraded. Moreover, Manovich acknowledges the need of 'immediacy' of the theory: in highly dynamic media environment, theory usually lags behind innovation due to a time-gap between writing and publishing. Having the book available online increases its chances to be timely 'tested'.

Specifically, I want to understand some of the dramatic transformations in what media is, what it can do, and how we use – the transformations that are clearly connected to the shift from previous media technologies to software. (Manovich: 41)

What does Manovich latest work stand for? The title of *Software Takes Command* refers to Siegfried Giedion's *Mechanization Takes Command (A contribution to anonymous history)*. In same pattern, Manovich attempts to define a new stage of different production means. What comes after the period of mechanization is the

software ‘command’. The book is divided into three parts: the first one traces the history of computer media through the works of its pioneers, their concepts and techniques that have turned the computer into ‘machine for media creation and manipulation’. Second part discusses the core mechanisms responsible for its continuing expansion and development (software enables designers not only to remix the content of different media but also their fundamental techniques) while the third one focuses on the latest shift from professional media authoring to social web and users generated content. The structure of the book corresponds to historical line that Manovich conceptualizes: ‘cultural computing’ begins with the work of J. C. Licklider, Ivan Sutherland, Ted Nelson, Douglas Engelbart, Seymour Paper, Nicholas Negroponte and Alan Kay (in the 60s, 70s and 80s), followed by software’s “Velvet Revolution” (early to late 90s) with the emergence of new visual language due to the use of media authoring and editing software and the latest stage (from 2000 onward) is the shift from desktop applications to web computing.

Manovich builds the corpus of his book conceptualizing the computer metamedium through the notions of ‘deep remixability’ (“Software production environment allows designers to remix not only the content of different media, but also their fundamental techniques, working methods, and ways of representation and expression” and “Once they were simulated in a computer, previously non-compatible techniques of different media begin to be combined in endless new ways, leading to new media hybrids” (Manovich: 28), ‘hybridity’ (“in hybrid media the languages of previously distinct media come together. They exchange properties, create new structures, and interact on the deepest level” (Manovich: 89), ‘metalanguage’, etc. His case studies are brought to support the specificities of the cultural software (deep remixability) and to define the aesthetics of the new visual language (hybridity) that the software produces. Manovich’s main case studies are *After Effects* program, Blake’s *Sodium Fox* and Murata’s *Untitled (Pink Dot)* videos, *Go* music video (directed by Convert/MK12, Kanye West), Taschen’s *Graphic Design for the 21st Century: 100 of the World’s Best Graphic Designers* (2001), *The Matrix* that go hand in hand with ‘minor’ examples in *Photoshop*, *PDF Acrobat, CAD*, *Final Cut*, *Google Earth,* etc.

Software Takes Command incorporates theoretical framework based on the works of the computational ‘pioneers’, structured in a way to finally produce the ‘history of cultural software’. Manovich almost ‘theologically’ relies on texts, hardly known and

popular outside of the computer sciences or corporate laboratories. The selection of his case studies, however, can be seen as limiting. Manovich focuses mostly on visual forms and software, motivated by the lack of research in this area and his personal affiliations. What Manovich also misses in his overall argument is relevant methods to study the new metamedium. Raymond Williams, for example, introduces qualitative registration as a mean for data gathering to study the television flow or Katherine Hayles coins 'intermediation' for conceptualization of digital subjectivity. Manovich acknowledges that "the existing work in software studies already demonstrates that if we are to focus on software itself, we need a new methodology" (Manovich: 9). However, in the first draft of *Software Takes Command* he is not providing it.

Manovich builds his argument upon several core considerations: media hybrids offer new representations, interfaces, tools and ways to navigate by combining and/or reconfiguring familiar media formats. Software enables previously non-compatible techniques of different media to be appropriated and exchanged. What get endlessly invented are not new types of media but new elements and their constellations. In the computer metamedium, media 'breaks' down to separate blocks: "These building blocks include algorithms for media creation and editing, interface metaphors, navigation techniques, physical interaction techniques, data formats, and so on" (Manovich: 98). Gathered under the computer metamedium, the separate media forms of cinematography, animation, special effects, graphic design, typography, etc. lose their previous atomized specificity since their elements can appear simultaneously in one frame under a software programme. Designers are now enabled to mix any number of visual elements regardless to their original media and to control each element in the process. Therefore, in *Software Takes Command*, Manovich not only provides genealogy of computer media (through its pioneers) and conceptualizes its characteristics (through the study of the changes in the visual representation due to systematical use of media authoring and editing software) but undergoes revisions of what media is and how it should be conceptualized in terms of medium specificity. Manovich explicates the change that computer metamedium has brought. Software challenges the previous specificity of media since it incorporates blocks of techniques and content that gets appropriated and remixed. Media properties are no longer seen as central to medium conceptualization. Therefore, it

can be suggested that Manovich has shifted the discourse from the medium (McLuhan and Williams) or media (in Hayles) to metamedium specificity. However, there is a certain paradox in Manovich's suggestion for the end of media specificity. On one hand, previously specific media become blocks of content and techniques (i.e. non-specific) but on the other, they build up a 'new' specificity, the one of the metamedium (with its deep remixability, hybridity and metalanguage).

Although *Software Takes Command* cannot be considered as 'traditional' publication (it is online shared; has not been edited; lacks clear structure, has many repetitions, there is no proper conclusion, index of content, notes, bibliography, etc.) its value for tracing, defining and analyzing the field of software studies should not be underestimated. Manovich has engaged with the responsible task to pave the way of 'cultural software' by coherently shaping its history and overall characteristics while boldly positioning it as the next stage of the human development (after mechanization). Moreover, the author has undergone a broad research of the moving image design (field that has lacked cultural perspectives on it) thus defining the practices and aesthetics of the cultural software and its products. He also revises what media specificity should account for. Computer media challenges the specificity of other media, remixing their previously specific content and techniques. What I have missed in the first version of the book, however, is incorporation of new methodology with which the new metamedium should be studied. Manovich has been working with data visualization and 'cultural' analytics and I think it is important for the relevance of this book to conceptualize and apply them, so that he can 'show' how the software has taken the command.