

Digital Constructivism: What Is European Software?

An exchange between Lev Manovich and Geert Lovink

[this e-mail exchange took place as a preparation of a lecture by Lev Manovich about the same topic which will take at De Waag, the Society for Old & New Media, Nieuwmarkt 4, Amsterdam, on December 2, 1998, 8.30 pm]

GL: If we look at the hardcore IT-sectors, the U.S. seems to dominate the market. How do you see recent developments on the European continent? For a while, it looked like continental Europe was determined to become a dusty "history belt," obsessed with its own micro difference, driven by the passion to deconstruct its own past, including its current projects. Europe is culture and cuisine, but also war and poverty. Defined by Hegelian forces, still very much stuck in the 19th century, despite all its attempts to leave this tragic realm, full of (fatal) grand ideas. But now it looks like there may be a slow recovery--for example, Airbus is beginning to compete very seriously with Boeing, one of the mainstays of U.S. military-technological hegemony (on the other hand, Mercedes-Benz merged with Chrysler), the Euro is coming, things like this. And, of course, European computer networks are on the rise, though still not as vast or saturating as in the USA. Do you see European ideas blossoming before the recession hits us? Will there be a short summer of digital constructivism?

LM: It seems that until now Europe was about two years behind as far as internet is concerned. At the same time, this notion of "behind" is complex, because in some areas related to computer culture, such as user safety and new media theory, Europe has had a lead for quite a while. And obviously there are substantial differences from one European country to another.

Concerning the notion of European software: it's easy to adopt the idea of U.S. software design dominating the world. I myself am guilty of it. For instance, I wrote that just as Hollywood cinema dominated global imaginary for decades, today the U.S. is doing this yet in another way: it dominates people' vision of what computer is by exporting a particular human-computer interface to the rest of the world. But how true is this? Given how easy it is to customize software--think of Netscape's release of the code for its browser--the simple concept of "domination" isn't adequate. At the same time, it seems to me that U.S.-designed software reflects sociological and ideological specificity of the U.S. in many ways, which is a phenomenon I'm trying very actively to understand. Take computer games as an example: The popularity of the navigation through space idiom in the U.S. games can be

related to the traditional U.S. idea that you travel through space to build a character and to find your identity. In contrast, Japanese games seem to focus on competition between two subjects, something which I assume is central to Japanese definition of identity.

I read internet software as also reflecting forms of social communication that are specific to the U.S. (or, lets say, specefic to capitalism in its most pure form, unencumbered by traditional culture). It is very easy to establish communication, to enter into a dialog with one person or a group (email, news groups, chat); but it is equally easy to exit it without any responsibility. You make immediate "friends" who you can always "drop" at any time. And this is how social communication in the U.S. works in real life as well: contact is easily established but easily broken as well. You move and you never hear from people whom you used to know in the old place. I can't help but think that here the design of software caricatures/brings to the extreme particular social forms.

HISTORY BELT EUROPE

GL: If space is American and the play with identity Japanese, would "history" therefore be the European equivalent? A mix of war, poverty, and tragedy? Big gestures, dialectics, rising and falling empires, the avant-garde?

LM: History, yes. And also, the cultural and linguistic differences between all the different people crowded together in Europe. So I would like to see a design for a Renaissance interface, Baroque interface, Neoclassical interface...by this I mean an interface that, on the one hand, reflects the visual mentality, so to speak, of a particular historical period, and, on the other hand, that period's semiotic worldview, the way world is understood and mapped out in discourses in each period. As a design document, we may use Wolfflin's classic *_Principles of Art History_* (1913), which plotted the differences between Renaissance and Baroque styles along five axes: linear-painterly; plane-recession; closed form-open form; multiplicity-unity; and clearness-unclearness. Another excellent design document is Michel Foucault's *_The Order of Things_*, in which he analyzes three epistemes: Pre-Classical, Classical, and Modern. I would like to see an interface based upon Classical episteme, for example.

GL: You presume here that software and interface designers know these texts, have "conceptual access" to them and are able to freely use and manipulate them, in order to intergrate them in their own environment. Do you think it is realistic to expect that? I doubt it. We are talking here about a high-level synthesis of the arts and technology disciplines. Only a few, closed institutions can attain that level, whether in Europe or in the U.S. Like Bauhaus? Moscow in the early twenties? MIT from 68 to 73?

LM: Well, in the U.S., all art students during the 1980s (although less now) were required to read Foucault, Barthes, etc. How much they understood and whether this led to better art is another question. In the 1990s, the U.S. saw a certain antitheoretical turn in the art world; but at the same time, I now start meeting Ph.D. students in different disciplines such as communication or film studies who also are quite proficient with multimedia and JAVA programming. I would hope that they will be able to synthesize theory and new media. Do you see any such turn of events of this happening in Europe? What is the relationship between "theory" and art schools, or theoretical departments and new media?

GL: The specific balances between living theory and true, embodied practice is exactly what makes Europe such an interesting place. It can be fundamentally different every few hundred miles (or less). I do not see this rich culture of confusion (called "difference") diminishing. I am a biased lover of German-speaking countries (as some might have noticed), and rather skeptical about my own country (as are most Dutch who work abroad). I see plenty of possibilities for Central and East European cultures, and not much coming yet from the Nordic and Anglo-Saxon regions (when it comes to theory-practice). I don't know enough about Southern Europe to talk about their potentials when it comes to developing a particular theory and practice. In general, I prefer melancholic attitudes about and around such slips into solid modernity--let me say, a profound ambivalence combined with a clear, decisive expression. A sense of a cultural elitist knowledge with a mission, not the banal and rude style of people who anyway already know the tastes of the masses. This vulgar market way of thinking is mostly anti-intellectual, something I really detest. I can critique conservatism and elitism, not but populism; but it's not clear that it's sensitive enough as an approach.

CULTURAL DETERMINISM (AND ITS DISCONTENTS)

LM: Now, for cultural differences: What would French or Italian or Dutch interfaces look like? One glimpse of is provided in the works of St. Pesterburg Neo-academist artists, headed by Timur Novikov. They reject twentieth-century modern art and return to the nineteenth-century models in order to reclaim beauty and academic ideals--but they use computers. Thus, Olga Tobreluts's films superimpose nineteenth-century neoclassical visuality and digital compositing to create a distinct aesthetic that can be called "neoclassical digital."

GL: Well, first of all, this presupposes that there is in fact a genuine West-American style, which, second, is embedded in and embodied by the Windows (and Macintosh) user interfaces. We tend not to think that way. The operating systems, icons, menus, interfaces are regarded as somehow "global" elements, both omnipresent in the interface and ubiquitous in computing. That is in fact how the software and hardware is produced: in India,

Malaysia, Ireland, Mexico, China... Intellectuals, myself included, are often suspicious about a global culture, whether "really existing" or even possible; I--and I'm far from alone--make a hobby of recognizing which elements in any given situation are local and historical, and the dynamics those elements suggest.

LM: Your point is well taken. But what is local? We can, for instance, postulate a certain "Silicon Valley culture" which extends beyond Silicon Valley itself to crop up in certain places in India, Malaysia, and so on. Would this be a global culture or American culture?

What I am really interested in--and I don't care too much how to get there, through theory or history--is seeing really different ways in which people imagine a computer can exist and function; not just different flavors of the same interface but fundamentally different constructions (my call for "national" interface was one way to approach this problem). In my own teaching, I tend to rely more on history--history of media, art, architecture. For example, we look at nineteenth-century pre-cinematic technologies to think about new ways to do multimedia; we look at the history of twentieth-century architecture to think about new ways to construct virtual spaces; we look at early twentieth-century modernist literature to think about new ways to do interactive narratives. Next semester, I will ask my students to do a multimedia "translation" of one paragraph of Proust. If different historical periods, different cultures, and different artists had their own worldviews, their own response to the world, how can we achieve this in new media? One way to start, in my view, is by simply copying the best examples from the past, recreating them in new media. In order to reach the future we need to go the past. (One example from my own work: in my forthcoming book *_A Language of New Media_* each principle of new media will be illustrated by a still from Dziga Vertov's 1929 film "A Man with a Movie Camera"). This is an area where Europe can in principle lead: it has all these museums, people are surrounded by history, they live--very literally--amidst different epistemes, manifested in architecture, town planning, landscape...

GL: So do you believe in formal structures, metaphysical constructs that might even exist outside of the technological realm, which we only have to uncover, assisted by (trans)-European intellectuals and artists? Most people would argue, to the contrary, that culture compensates for ugly, work-related technologies. There is a huge gap between these two views. "Only Proust can save us from the internet"--that's the dominant view within Western elites. But instead of a real fight between these schools, I see a lot of ignorance, arrogance, confusion, and misunderstanding. Aren't you a bit optimistic about the synthesis of the artist-engineer-intellectual (and worker, one could add...).

LAWS OF DIGITAL ELEGANCE

LM: I'd like to see Proust and computer come together for four reasons. First, the human-computer interface is a cultural language that offers its own ways of representing human memory and human experience. This language speaks in the form of discrete objects organized in hierarchies (hierarchical file system), or as catalogs (databases), or as objects linked together through hyperlinks (hypermedia). In short, just as any real artist or artistic style models the world in a particular way, existing human-computer interfaces offer a particular model of the world. I think that in order to imagine really different models we need to go artists who have already developed such models--such as Proust. Proust also seems appropriate because of his obsession with memory. Obviously, this is closely related to computers, particularly as they are used in our society: the computer is mostly a memory machine that stores our records, our "old media."

Another reason I would like to see this is the high-culture/low-culture split. Until recently at least, intellectuals and the art world were suspicious of new media because they saw it as low culture. So let us serve them multimedia Proust! And a final reason: despite new media's "postmodern" technology (for instance, hyperlinks which appear to deny closed text and final signification), new media are, artistically, completely premodern. Compare, for instance, characters in nineteenth century with characters in computer games. The latter have no psychological depth; all they do is act--like heroes in fairytales and myths, the ancient forms of literature. New media still need "go through" modernism. Here one problem that particularly interests me is the fact that one of the great achievements of literary modernism was developing new ways to represent our mental life in art. Montage, multiple viewpoints, and narrators, stream-of-consciousness, and other techniques allowed us to render the human mind with new fidelity. Computers make it possible to combine written word with audio, stills, digital video, and even three-dimensional spaces--so how can we take advantage of these new abilities to surpass the achievements of modernism. In short, how can we "jump over" Proust? (For more on this, see <http://jupiter.ucsd.edu/~manovich/text/proust.html>).

This is just one (negative) connection between new media and (European) modernism. We may recall that, to a large degree, this European modernism in the 1910s and 1920s was a response to American technology. For example, Mayakovsky, the Russian futurist poet, was fascinated with New York skyscrapers; and then there are the Bauhaus artists. Is there something similar happening today, in the way Europe approaches new media and the internet?

GL: No, Europe still is in an early stage of awakening (see Sloterdijk, Enzensberger, and so on)--it's still obsessed with its own history and inferiority complexes. Economistic views have taken over; culture in general

is in a defensive posture, it lacks the resources to defend itself on this terrain. All cultural expressions, even the most marginal and contemporary ones, are in immediate danger of being absorbed into the museum and transformed into "heritage." Intellectuals are way behind in all the urgent current political and economic topics. No one knows if the European Union, the Euro, the immigrants or the integration of Eastern Europe will work out. There is a strong sense of irony about failed technologies that are exclusively European in origin. The French sense of superiority toward the US is so sweet, so cute (and so deeply touristic as well, and above all and irrelevant). Two world wars, the Holocaust, Stalinism, the process of decolonization and the Cold War have seriously weakened Europe's ability to come up with any radical concepts that would combine negative thinking and utopian designs. Much too much is still about containment, regulations, the ballast of the past, whether it is fascism, the burned-out sixties, or the divestitures of the neoliberal 80s and 90s (a period whose damage still needs to be investigated). All we can do for now is profit from all the failures and miseries of the past and the present. I strongly believe that we have a period of (digital) modernism ahead of us--if we approach it positively. We have to try; I'm not afraid of avant-gardism. It's time to close the chapter of postmodernism. Everything has come to an end, even the twentieth century--that was never a secret. Still, the world keeps on turning, and we have numerous new recessions and crises ahead of us. And don't the heatwaves and storms. So let us welcome them, and sharpen our analytical tools so that we can act accordingly once the "integral accident" (Virilio) happens. What we need is an early-warning system, built into the systems and architecture--a scanner program. That would be post ideological Euro-software.

LM: Do you mean "scanner" in the sense scanning for the future, or in the sense of scanning and filtering for U.S. biases in the software? A kind of ideological filter through which you can put, say, Microsoft Office, and get back to Amsterdam Coffeehouse culture? But what would this filter do?

GL: You mean the hash coffee shops or the regular "brown" cafes? I meant scanning in the sense of detecting, with an in-built critique mode. Suspicious of any sort of "goodwill," exploring and testing all sort of bugs and holes in the system, enjoying all forms of imperfection, silly sales talk and the poverty of office culture.

PRO AVANT-GARDE

LM: Like you, I also believe in digital modernism or avant-gardism. Let me try to explain how I understand it. I'll begin with a question. To what extent can the computer revolution be compared to the modernist revolution in the beginning of the twentieth century? During this revolution, all key modern visual communication techniques were developed: photo and film montage, classical film language, surrealism, the use of sex appeal in

advertising, modern graphic design, new typography. But no fundamentally new approaches emerged after the 1920s; we are still using the same techniques, and the shift to computer media has not brought with it any new ones. Why? More generally, if historically each cultural period (Renaissance, Baroque, and so on) brought with it a new expressive language, why is the computer age satisfied with using the language of the previous period?

Part of the answer is that with new media, modernist communication techniques acquire a new status. The techniques developed by the artistic avant-garde of the 1920s became embedded in the commands and interface metaphors of computer

software. In short, the avant-garde vision was materialized in a computer. All the strategies developed to awaken audiences from a dream-existence of bourgeois society (constructivist design, new typography, avant-garde cinematography and film editing, photo-montage) now define the basic routines of postindustrial society--that is, the interaction with a computer. 3D visualization, windows, "cut and paste," and hyperlinking: these are all examples of the transformations of avant-garde techniques into the techniques of human-computer interface.

Does new media, just as postmodern culture in general (such as MTV) simply naturalize the old, modernist European avant-garde? No, but it does introduce an equally revolutionary set of communication techniques. The new avant-garde is quite different from the old. The old avant-garde came up with new forms, new ways to represent reality and new ways to see the world. The new avant-garde is about new ways of accessing and manipulating information. Its techniques are hypermedia, databases, image-processing, search engines, data-mining, and simulation. The new avant-garde is no longer concerned with seeing or representing the world in new ways but, rather, with accessing and using previously accumulated media in new ways. In this respect, new media is postmedia or supermedia: it uses old media as its primary material. From "New Vision," new typography, new architecture of the 1920s we move to New Media of the 1990s; from "A Man with a Movie Camera" to a user with a search engine, compositing program, image-analysis program, visualization program; from cinema, the technology of seeing, to a computer, the technology of memory.

UNDERSTANDING CONCEPTS

GL: Aren't your Californian students protesting when they hear you making these statements? Do they believe in the "digital revolution" and all the Wired-Third Wave-Long Boom talk? It seems rather confrontational to admit that the entire US computer industry is merely a child of the European crisis of values that occurred during and immediately after World War I. Isn't the twentieth century the "American century"? Isn't its "genius" to use some odd ideas to make a quick buck? Why is the (secret)

history of concepts so important? Why not admit that there is indeed an American hegemony, or imperialism--especially in the fields of the military and finance, two field in which computer networks are playing such a key role?

LM: I would not say that the entire US computer industry is merely an extension of European modernism--I am merely drawing a connection between modernism and the features of human-computer interface. The industry as a whole of course came about in the course of Cold War, and most of computer technologies were developed for military use (this is documented in Paul Edwards' *_The Closed World_* [Cambridge, Mass: MIT, 1996]). In my own forthcoming book based on my Ph.D. dissertation I will also be discussing the military origins of computer imaging: image-processing, computer vision, 3D graphics. In a recent conference I organized at my university, I juxtaposed Vertov's "Man with a Movie Camera" with a tape of real-time computer graphics for military simulators (Evans and Sutherland, USA, early 1990s). Military and flight simulators have been one of the main applications of real-time 3D photorealistic computer graphics technology in the 1970s and the 1980s, thus determining to a significant degree the way this technology developed. One of the most common forms of navigation used today in computer culture--flying through spatialized data--can be traced back to simulators representing the world from the viewpoint of a military pilot. Thus, from Vertov's mobile camera we move to the virtual camera of a simulator, which, with the end of the Cold War, became an accepted way to interact with any and all data--the default way of encountering the world in computer culture.

This is just one example of how the European avant-garde, the Cold War, and current human-computer interfaces can be linked together. I thought that my connection between the avant-garde and the interface will be relevant to our conversation because, in a certain way, it makes Europeans responsible for the American interface. So, why not say that the trajectory that leads to Silicon Valley begins at Bauhaus, and that in this sense all software is European software?

GL: Isn't that a very bold Eurocentric idea? Wouldn't it be better to be radically different, to **not** imitate America and instead work with different premisses? Ha, there the word "different" shows up again... (It's hard to avoid in this context!)

LM: OK, let's try to connect what we've talked about to the larger cultural dynamics of the last two decades--this may give us another way to think about what a "different" European software might be. When I arrived in the U.S. from Moscow in 1981, I soon discovered that here there are basically two cultures here: mass culture, which follows scripts and stereotypes, and a small, academic, New York-based high culture. There was very little in the middle, between the cliches of Hollywood, on the one hand, and the

self-centered experimentaion of New York downtown and university campuses, on the other. You either had multiplexes or downtown spaces where two dozen people gathered to watch experiemntal films. One could count on the fingers of one hand the people who existed in between, like Susan Sontag or Philip Glass. In contrast, my sense of Europe was that it had a much larger middle stratum. So what happened over the next two decades? It is often noted that the 1990s has been a decade of global business, of corporations--that's where all the cultural actions seems to be. At least this is the view one gets from the U.S. Does this mean that experimental highbrow culture is over, and that cliches have triumphed? I don't think so. What actually happened during these decades is that mass culture became much more sophisticated: it incorporated much experimental energy. From editing music videos to Baroque aesthetics of graphic design to websites, contemporary mass culture is not what is used to be. When Peter Greenaway's "Pillow Book" plays at your local multiplex, you have to realize that something very fundamental has happened.

So how does this relates to software? This is an interesting moment because computer products is finally beginning to follow the logic of the rest of consumer culture. In other words, product differentiation now relies on styling. Presently, this is beginning to happen very explicitly with hardware: if you pay \$2000, you are going to get pretty much the same system, regardless of the manufacturer--so styling has to be the key. The success of Sony laptops and the iMAC illustrates this very well. But this process hasn't happened to software yet. However, it's not hard to imagine that in few years I will buy a particular word-processor--and will pay extra- because of the styling of its interface. Can this be an opportunity for European software? Imagine interfaces designed by Scandinavian designers or Italian industrial designers. Or an Interface by Prada!

On another level, as software becomes an important part of culture, are we going to see the emergence of "middle culture" of software based in Europe? Today we have "mass culture" software (Microsoft Office, etc.) and maybe "high culture" software--for example, tools used by hackers and programmers. Can we imagine "middle culture" in software, an equivalent of "art house" cinema? Just as Europe gave us Fellini and Greenaway, can it give us "art house" interfaces and programs themselves? (I'll be the first one to buy them...)

GL: Sure--I could see that happening under the rubric of a "democratization of software." Let's think about the dynamics we now see, and now they could feed into such a development. For example, people find meeting and negotiation culture disgusting these days--consensus is tired as hell. There is an organized and staged willingness to do anything, something, a simulated decisiveness. But at the same time ambivalence is on the rise. We can overcome both bold gestures and numbed consumerism. I strongly believe in public-access initiatives, a lot of small, diverse media labs and a high dose of

activism, craziness, and freedom. Business will not provide this, and neither nor big, lame institutions. Perhaps something might change through the magical word "education." Still, most creative energies are being absorbed or sublimated into fashion, techno, image-driven industries, these kinds of things. It's only a matter of time before it jumps on software itself. And I can't wait.

LM: Yes, that's a very good way to put it I do hope that the new generation of students who are growing up with computers will use them as a true medium for the cultural expression of the generation--but not simply to make videos, arrange music, or design clothes--but, rather, to design software and interfaces themselves. In other words, they might express themselves through software design the way previous generations expressed themselves through books and movies.

Here's something concrete that exemplifies many of the issues we've talked about. Today one of my undergraduate students stopped by: he took a few digital arts classes here and then spent last year in Paris at the Sorbonne. He said that after a while he dropped out of Sorbonne because he was hired to teach Paris photographers Photoshop. Now he is back to finish his degree here. He talked to me about the computer animations he's working on, about Bentham's Panopticon. Not only did he read Foucault but he also read Bentham himself. We talked about how to represent Gase--which does not belong to anybody--through the movements of the virtual camera. He is only 20. So, I can't wait for the future as well. If the early twenty first century will be anything--even a bit--like the early twentieth century, some pretty exciting times are coming!

[edited by Ted Byfield]