When Hypertext became uncool: Notes on Power, Politics, and the Interface

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Abstract

This essay describes some of the structural limits of authoritative hypertext works and of the cultural interface in which they are perceived by looking at new media objects such as *Victory Garden*, the AOL interface, and the Netscape/Mozilla browser software. Rather than 'unmasking' hypertext as not having the potential for resistance that it seemed to have, however, it is argued within a post-Marxist political framework that hypertext, when understood as the totality of computers that are linked through the internet, on a formal level does promote an authoritative shift in the politics of new media objects.

1. When Hypertext became Uncool...

> Cyberspace is where the bank keeps your money.
> —William Gibson

On a hot day in late 1999, as a relative newcomer to digital media studies, I was clicking for the first time through Stuart Moulthrop's *Victory Garden* CD-ROM on an Apple Macintosh in the McHenry library at the University of California, Santa Cruz. I had heard a lot of enthusiastic criticism about the work, so as it was finally flickering on the screen before me, I did at first feel intrigued. That feeling, however, quickly gave way to the loneliness of a reader in a maze of hyperlinks: Trying to make sense of what then felt like 'postmodern' writing in digital form, I was simply annoyed at the impossibility of arriving at a mental model of the digital rhizome that was spreading wider and wider before my eyes with each click. A reading experience, I held then and I hold now, basically is strategically building many contradictive voices of a text into a mental whole. With *Victory Garden*, that just didn't work. If a book consists of materially sedimented social antagonisms, unchangeable but contradictive, the problem with hypertext is that simply stays fluid. In other words,

my reading became socially meaningless in that it was only *one among many*, I was equally distanced from the text as I was from my fellow readers. Looking back in 2002, it seems to me that during that afternoon in the library, I had lived through the second half of the 90s again—the period when hypertext gradually became uncool.

What happened during that time? In the first half of the 90s, books such as George Landow's *Hypertext 2.0* or Jay Bolter's *Writing Space* celebrated the coming of a new age for a medium that is a metaphor of the mind: decentered, fragmentary, associative. Symptomatic of these early publications is a statement that artist Nicole Stenger made in her essay „Mind is a leaking rainbow," which is included in Michael Benedikt's 1991 book *Cyberspace: First Steps*: Cyberspace, „though born of war technology, opens up a space for collective restoration, and for peace. As screens are dissolving, our future can only take on a luminous dimension! Welcome to the new world" (Stenger, 1991: 58). The company Eastgate Systems actually built a whole business around this ideology with its professional hypertext editing program Storyspace and CD-ROM releases of major hypertext fiction such as Moulthrop's *Victory Garden* (1995) or Michael Joyce's *Afternoon, a Story* (1990), both written in the Storyspace program. Since then, however, hypertext (in the sense of an authoritative artwork) has steadily been on the decline, alongside with the 'new economy.' Comparatively expensive hypertext works, shipped in boxes that almost blow one CD-ROM up to the size of a small paperback, did not overtake books in sales—after all, you would hardly bring your Apple Powerbook to the beach for a read. So the Digerati were as quick to turn away from hypertext as they were to hype it before. What you got now were remarks like „Hypertext? Oh yeah… been there, done that." Stefan Porombka's 2002 book *Hypertext* nicely illustrates this turn: Porombka's basic argument is that the liberatory hype about hypertext constitutes a narrative in itself. What gets lost in this argument and in an all too quick turning away from hypertext, however, is a critical discussion of some of the reasons why hypertext 'failed.' Or, in my mind, the critical remarks about hypertext hurried back to older conceptions of text instead of looking at the structural, socio-political reasons for hypertext's loss of coolness. The critics, it can be argued, celebrated the downfall with the same rhetoric as hypertext's appearance; a rephlex which, even on a cursory glance, looks like a market mechanism of 'hype.' Porombka's book itself, viewed in that sense, in its reaction to the hype becomes just another narrative (in that it acknowledges what it sets out to criticize).

To get a somewhat different grip on the question of why hypertext failed to bring about what has been called the freedom of information, in this paper, I'll attempt to argue that internet-based, authoritative hypertext or hypermedia works (software that includes texts, images, sounds, movies and so on) as new media objects have formal limitations that hold true for the graphical user interface (GUI) in general (for one thing, because the reception of internet-based artwork obviously takes place within this interface). To sum up my general hypothesis: The interface can be seen

as a site where absent cultural and social contradictions clash in its form/design, and meaning is being dialogically produced for a cultural community. Now, it is important to highlight that this is not to 'unmask' hypertext works as not having the potential of being the tools for resistance that they seemed to be: Instead, both the older celebratory and the recent gloomy rhetoric about hypertext are part of the same logic of capitalist hype. On a formal level, then, I will try to describe some of the structural limits of authoritative hypertext works and of the cultural interface in which they are perceived by looking at new media objects such as *Afternoon* and *Victory Garden*, the Storyspace computer program, the AOL interface, and the Netscape World Wide Web (WWW) browser software. Within a post-Marxist political framework, I will then associate the GUI in general with Ernesto Laclau's concepts of hegemony, articulation, and antagonism, and the hyperlink logic of hypertext with the Althusserian notion of interpellation. If this makes the interface laden with 'mainstream' political ideology, it may come as a surprise that I will refrain from calling all resistance futile.

But hypertext, when understood as the totality of computers that are linked through the internet, on a formal level does promote an authoritative shift in new media objects such as the Netscape: the software comes with an HTML (hypertext mark-up language) editor—unlike with old media, reading or manipulating a Website now becomes an equal choice in the file menu. The ability to manipulate data (and to redistribute the manipulated data) in computer programs such as Netscape, finally, might constitute a socio-political function of hypertext that contributed to the success of the WWW (which is the totality of HTML pages on the internet); the lack of these functions, on the other hand, might explain why authoritative hypertext works 'failed.' Whereas such works trap a user into a single reading experience, simply reading an HTML Webpage source code can actually constitute a shared experience that serves a user's 'desire for intimacy'—provided you have access to the code.

2. The Politics of New Media Objects

> Form and content in discourse are one; once we understand that verbal discourse is a social phenomenon.
> —M. M. Bakhtin, The Dialogic Imagination

Before I go into a discussion of hypertext software and its socio-political function, I'll attempt to describe what a political interpretation of new media objects can look like. European cultural critics Richard Barbrook and Andy Cameron have took some

steps in that direction with their essay „The California Ideology," but the result remains far from being a coherent theoretical position. In their text, Barbrook and Cameron state that „a loose alliance of writers, hackers, capitalists, and artists from the West Coast of the USA have succeeded in defining a heterogeneous orthodoxy for the coming information age." This 'heterogeneous orthodoxy' is what the two critics call 'California Ideology:' The idea that new media will make everybody „both hip and rich," being able to „express themselves freely within cyberspace." Barbrook and Cameron hold that this new media utopia is grounded in a „willful blindness towards (...) racism, poverty, and environmental degradation," so they see a need for European theorists to step into the picture "to develop a more coherent analysis of the impact of hypertext than can be found within the ambiguities of the Californian Ideology." Although I find this position somewhat overstated, I would like my paper to be seen as part of the theoretical project to ground new media theory more firmly in the social and political sphere (the German term *Kulturtechnik* nicely describes this) instead of the lofty U.S. West Coast cybertopia that Barbrook and Cameron criticize.

In a somewhat less polemical approach, then, I'll try and make several key concepts from Fredric Jameson's seminal book *The Political Unconscious* fruitful for my approach to a politics of the graphical user interface. Basically, remembering that "men represent their real conditions of existence to themselves in an imaginary form" (Althusser, 1971: 163), it is not hard to see how the political could enter the analysis of hypertext at all: The GUI is a cultural object that is indexical to the dreams and hopes that we have, as well as to the conflicts that are raging across the socio-political sphere. What's harder to see is the primacy of a political reading over other readings from theoretical schools such as psychoanalysis, feminism, or deconstructionism; this primacy, however, is precisely what I need to establish in order to make a reading of new media objects in purely political terms sound plausible.

In *The Political Unconscious*, Jameson asserts that he is not calling for just another 'method' of political criticism. The social and the political, for him, form the very backdrop of cultural production, so he rather holds that "Marxism subsumes other interpretative modes or systems; or, (...) the limits of the latter can always be overcome, and their more positive findings retained, by a radical historicizing of their mental operations, such that not only the content of the analysis, but the very method itself, along with the analyst, then comes to be reckoned into the 'text' or phenomenon to be explained" (Jameson, 1981: 47). In Jameson's view, then, text, method, and analyst all become part of a larger political configuration that can be uncovered by a historical analysis of the methods' mental structuring of material; zooming into a code-only version of cultural life, from this viewpoint, is too quick a move for an understanding of the structural limitations (and possibilities) that are at work in the culture the new media object originates from.

When applied to new media studies, this means that the feedback loop from the new media object (such as the interface of Netscape 7 or an authoritative hypertext CD-ROM) to socio-political reality has to be scrutinized *alongside with* the code in order to see how we present reality to ourselves numerically encoded through the GUI.

This takes us to Jameson's understanding of historical reality. Generally, Jameson does away with the fashionable notion that 'everything is a text' (in a similar way, Régis Debray does away with the 'sign' in favor of the structure in media studies in his notorious *Media Manifestos*). Without receeding to an essentialist notion of history, Jameson holds "that history is *not* a text, not a narrative, master or otherwise, but that, as an absent cause, it is inaccessible to us except in textual form, and that our approach to it (…) necessarily passes through its prior textualization, its narrativization in the political unconscious" (35). When the critic uncovers this narrativization in the process of the interpretation of a cultural object, however, historical reality never reveals its true meaning, but rather remains the absent cause for the production of the cultural object.

What's uncovered is not reality but the form of its interpretation. Significantly, Jameson also points to the necessity of reading history through cultural objects: We are left with them as 'traces' of the political unconscious, or of our ideas of historical power configurations. Jameson's move is thus twofold: While receeding from essentialist notions of 'history' by calling history an 'absent cause,' he also establishes a kind of 'formalist essentialism' with which stuggles over the interpretation of history can be discovered in the form of cultural objects (books, CD-ROMs, etc) and their structural limitations (and possibilities). Political criticism of any cultural object, then, will attempt to extract structural antagonisms that are indexical of a historical dialectic as 'absent cause.' Furthermore, when one understands form as "sedimented content" (Jameson), "the individual narrative, or the individual formal structure, is to be grasped as the imaginary resolution of a real contradiction" (77).

The cultural object can now be interpreted as a strategy for unification of differences which retains certain traces of those difference in its form. How does an interface make the world coherent? Are authoritative hypertexts simply a strategy for cutting something coherent into pieces, only to paste the parts into a mosaic whole again? What's the function of an authoritative hypertext if, given the right computer program, many people can authorize texts that enhance or contradict the original version?

But let's inquire a bit more into how hypermedia can be said to be political for now. Starting from a Jamesonian, formal approach to new media studies, I think that Ernesto Laclau's post-Marxist notions of hegemony, decision, antagonism, and articulation will provide a few more interesting ideas for the discussion of particular

new media objects. Laclau's theoretical framework starts from the understanding that "self-determination is not the expression of what a subject already is but the result of its lack of being instead" (Laclau, 1996: 55). This point nicely enhanced Jameson's theory in that it lays the foundation for a questioning of how new media objects might be used to influence users economically and politically: The pointing and clicking subject emerges through interaction with the GUI; it does not meet with a computer program 'on an equal level.' Determined to constitute herself, then, the user identifies itself with various interface objects/designs, since "self-determination can only proceed through processes of identification" (55). The critical point here, of course, is the decision taken with whom or what to identify. For Laclau, this decision is undecidable in the final instance, so the subject (simulating its own completeness) emerges in the distance between the undecidability of the structure and the decision: I can not really decide why I browse the Web with Microsoft Internet Explorer of Netscape 7, but my decision makes me (personally) a Netscape 7 user. The subject/user's decision is further complicated due to the fact that she is a part of a larger socio-political group and is therefore necessarily represented by an individual that hegemonically 'stands for' this group (nobody can decide on all issues all the time).

Now if this theoretical outlook sounds like a gloomy perspective for what some analytical philosophers call the free subject, let's not forget that the antagonisms of the interface contain possibilities for resistance as well: Hegemony is an "experience of the limit of all objectivity" (Laclau, 1996: 122) since "the presence of the 'Other' prevents me from being totally myself" (125). The impossibility to fully constitute oneself (let's say, for the AT&T telephone company in the face of severe hacker attacks in 1990) opens up a sphere for the critical "rewriting of the (...) text in such a way that the latter may itself be seen as the rewriting or restructuration of a prior historical or ideological subtext" (Jameson, 1981: 81). To come back to the 'California Ideology:' It incorporates into its world view the idea that politics has come to an end and that restistance is merely a matter of 'culture jamming.' This radical cultural turn, which, as Barbrook and Cameron have pointed out, ironically comes from the very people that participated in the 'countercultural' movements of the 60s, overlooks the ways in which political antagonisms are inscribed into the limitations and possibilities of new media objects as indexical strategies for the unification of socio-political differences. Or, as Jameson argues in *The Political Unconscious*, "the convenient working distinction between cultural texts that are social and political and those that are not becomes something worse than an error: namely, a symptom and a reinforcement of the reification and privatization of contemporary life" (Jameson, 1981: 20).

So again, it's important to keep in mind that the political criticism that I have layed out in this chapter will not lead to the 'unmasking' of new media objects as feedback loops into an economic system which they were originally opposed to: The benefit

of a formal, political analysis is that it won't automatically lead to the theoretical dead-end for new media or cultural studies of seeing opposition as only preparing another underground trend for the multinationals to recycle in their next campaign. Jameson puts it this way: The "lesson of the 'vision' of a total system is for the short run one of the structural limits imposed on praxis rather than the latter's impossibility" (91).

3. Cultural Software

> Without that material anchorage, text is free to become infinite, to assume magical, semi-divine powers. It is such a theological concept of the infinite text that inhabits cyberspace, and which a materialist account of reading must expose.
> —Sean Cubitt, Digital Aesthetics

I have been mentioning terms such as graphical user interface, new media object, or hypermedia in this paper without really describing what's behind any of these concepts. Also, I haven't said anything yet to differentiate between authoritative hypermedia works such as *Afternoon* and networked texts on the Web such as the Connex I/O project. Lev Manovich's recent *The Language of New Media* is one of the first books that establishes a formal view of new media, so let's now look at the concepts that Manovich employs to lay the groundwork for a later, more detailed analysis. In its most basic sense, Manovich's approach is somewhat similar to Fredric Jameson's argument in that Manovich seeks to establish a formal, 'digital materialist' reading of new media while at the same time deconstructing any 'real meaning' behind new media objects. He does this by tracing new media back to a historical convergence between photography and the computer in the first computers that executed whatever programs were fed into it in the form of punching cards (just as film is fed into a movie projector).

While this approach prevents Manovich from engaging in utopian cyberspeculations (recall Stenger's "our future can only take on a luminous dimension"), I disagree with the strong emphasis that he puts on the cinematic character of new media. The main thesis of the book, namely, that "the visual culture of a computer age is cinematographic in its appearance" and "digital on the level of its material" (Manovich, 2001: 180), is perhaps best understood in the context of Manovich's U.S. West coast background in computer graphics, programming, and game culture (Manovich now teaches at UC San Diego). But, as Inke Arns has asked in her review of *The Language of New Media*, what about text-based electronic mail as the most widely used service of the internet? What about

textual Web chats (http://www.chatcity.de) and IRC (internet relay chat), internet applications that more people use than 3D chat environments (http://www.thepalace.com) since the latter require elite, high speed Web connections?

But let's leave this discussion aside for now, since with the ecstasy about virtual reality (VR) of the early 90s having subsided and access politics having stepped to the foreground, the appearance of new media has in some areas become more simple or textual (hip, stripped-down code editors such as Textpad as opposed to larger programming environments), while it has become more cinematic in others (the Mac OSX and Windows XP interfaces, for instance). The relative dichotomy between Manovich's Californian interpretation of visual culture (surface/cinematic) over a European low tech aesthetics (code/textual) actually does not harm any of Manovich's underlying principles of new media—cutting and pasting also works on the text-only system of a Unix workstation. So let me turn to the new media characteristics.

Manovich employs several terms that I'm also using in this paper to describe the politics of cultural software. First of all, his term 'cultural object' needs some explanation. 'Object,' for Manovich, reaches beyond new media to the cultural sphere in that it suggests that various kinds of cultural expressions share a similar formal logic: books, CD-ROMs, hypertext, computer programs, video games, or 3D-environments can all be regarded as cultural objects. Furthermore, the term 'object' invokes the computer lingo of object-oriented programming (Java, C++ etc.) and the Object Linking and Embedding (OLE) technology in Microsoft Office (meaning, for instance, the possibility of inserting an image into a Word document). Labeling something, more specifically, new media object emphasizes the "principles of new media that hold true across all media types, all forms of organization, and all scales"—new media objects are a subset of cultural objects in general (14).

With this in mind, Manovich establishes five principles of new media (as opposed to old media): Numerical representation, modularity, automation, variability, and transcoding. Numerical representation refers to the possibility of a "translation of all existing media into numerical data accessible through computers" (20). A film, an image, or a sound can be manipulated on a computer without regard to their orginal format (for example through cut and past operations), since it is stored in digital code; as soon as an old media object (such as a photograph or a book page) is scanned/coded in numerical form it enters the logic of new media. Modularity and automation point to the fact that when composed into a new media object, data items retain their distinct, original structure. Think of a website: Its content is distributed over a database, with images, sounds, and text usually being stored in different 'folders.' A Website is then assembled automatically by a programmed HTML file that 'calls up' the modules—in fact, if a page has several frames and works with 'dynamical' content (a Website that requires a user log-in, for example), the

content modules are probably even stored on different computers. So much for the deconstruction of new media objects: Starting at a higher, metaphorical level, all modules are equal; on a lower level, all modules are hierarchical, since they are organised in a system of hierarchical folders; on the lowest level, the modules again become 'flattened out' into a stream of binary code.

New media, then, essentially remains open to changes. Old media, of course, is not put together on user request (except in a metaphorical way)—all copies of a book look the same, and an illustration cannot vanish, or be cut, changed, and later inserted again. "The epic world is an utterly finished thing, not only as an authentic event from the distant past but also on its own terms and by its own standards; it is impossible to change, to re-think, to re-evaluate anything in it," says M.M. Bakthin (Bakhtin, 1981: 17). As a closed object, a book structurally does not permit changes; annotations are always discernible as such from the main text, and errors can only be corrected in another edition, thus books as old media objects can be read as a sedimented strategy for unification and closure of a content that is divergent, or antagonistic, whereas new media objects remain open and liquid. Any political interpretation of new media will then have to take into account the module codes *and* the form in which they are remixed.

The most important principle of new media, for Manovich, is transcoding. Fredric Jameson describes this aspect for cultural criticism as "the invention of a set of terms, the strategic choice of a particular code or language, such that the same terminology can be used to analyze and articulate two quite distinct types of objects" (Jameson, 1981: 40). In computer culture, of course, transcoding is not a strategic invention but rather the everyday operation "to translate something into another format" (Manovich, 2001: 47). But Manovich takes the concept of transcoding further, suggesting that, in the last instance, the socio-political sphere and computer culture are being transcoded when "cultural categories and concepts are substituted (…) by new ones that derive from the computer's ontology, epistemology and pragmatics" (47). New media logic transforms everyday culture in many ways—think of the useless, interface-like forward/back-buttons that have entered contemporary graphic design. On a higher level, we are browsing through a cultural catalogue to chose modular clothes, music, friends, or food to copy and paste these things into our lives: We start seeing the world around us as a database (it is no wonder that Kittlerian, heavyweight media theory has started to advance the concept of *Kulturtechnik*). Furthermore, the principle of transcoding, as has often been suggested throughout the last ten years or so, holds some new implications for authorship.

In *The Language of New Media*, Manovich attempts to grasp this be refering to the figure of the DJ: Programming a new media objects seems to be something like the record mixing of the DJ in modern musical culture (many DJs prove this logic when stopping to work with analog media at all to employ notebooks for their sets).

The German Connex I/O project (http://www.c-io.de) has taken this up and developed the concept of the text jockey (TJ), but in my mind, such metaphors of the DJ/TJ remain sketchy. I would rather put forward an additional principle of new media to understand the different role of authorship in new media objects more clearly: instability. As I have said above, I regard a book as a sedimented strategy for closure of a divergent socio-political content, so what happens if content and strategy are not sedimented but modular and liquid? Doesn't the author then have to juggle with instable objects that can at best temporarily forced into a coherent form? And what happens if there are multiple authors?

Authorship, in my mind, then generally becomes a matter of coping with unstable links and programs. In a nutshell, the computer can be regarded as a desiring machine, so authorship becomes charged with intimacy or a closeness that can never be fully attained. One of the most obvious illustrations of instability as a sixth principle of new media are the characteristics of pornography on the internet: Similar to the early stages of other cultural technologies such as film, there is a fascination with the indexical in so-called 'adult entertainment' chatrooms ("Are you masculine or feminine?" is the first questions asked in any conversation), but at the same time the indexical is heavily disturbed by the instability of technology—the images are grainy and Webcams deliver a slow, 'thumb cinema'-like picture quality, for instance. This is where the other five principles come in to oppose, if combined with instability, the fascination with the indexical in old media objects: Everyone seeks to be close to everyone through the machine, even if that remains an empty gesture in the last instance (this has been called the 'desire for the real simulation'). Furthermore, the teleactive aspect of Web pornography can be a way to interpret new media socio-politically: The discourse about intimacy or closeness in the directing of another person via chat and the fascination if the person did what one told her to do (Webcam feedback) also highlights the impossibility of attaining stable links and thus the impossibility of the fullness of politico-social relationships—and the ongoing desire to nevertheless *connect*. But to come full cycle in my argument, even the communites of hypertext authors can be read as imagined desiring communities. New media authorship, then, is a kind of authorship that takes place at the within an environment of unstable technology.

4. The Innocence of the GUI

> The Macintosh interface is designed to provide a computer environment
> that is understandable, familiar, and predictable.
> —Apple Computers Inc.,Macintosh Human Interface Guidelines

Computer programs and hypertext objects today typically 'run' on a computer workstation that consists of the computer, a monitor, a mouse, and a keyboard. The graphical user interfaces of today can thus actually be regarded as a medium between numerical computer data and the user, with software applications as the main and (necessarily) mediating layer, so the formal aspects of interface design should substantiate my thesis that the interface is a site where absent cultural and social contradictions clash and meaning is being dialogically produced for a cultural community, in that the interface constructs out of an unstable, messy, or liquid data world a surface that seems coherent to the user. In what follows, to set the general backdrop for my analysis of the politics of hypertext in the next chapter, I'll try to substantiate this thesis by looking at the interface designs of two prominent operating systems (Mac OS and Windows XP), along with the computer programs AOL 8.0/Internet Explorer and Mozilla/Netscape 7 that are usually used to access internet-based hypertext works.

Most graphical computer environments of today (such as Windows XP, Gnome, or KDE) derive their interface design from the first Macintosh computer that Apple introduced in January 1984. Arguably, we're now moving toward the invisible computer that is integrated, for instance, into human clothing, but Apple's initial desktop metaphor still serves as the most widely used interface, since the company's idea of a relatively inexpensive personal computer was apparently years ahead of the computer development at the time of its design (expensive multi-user systems prevaled that were securely stored away in some computer lab on a university campus). Interestingly, although Apple had the possibilities of designing a product almost entirely from scratch, the strategy turned out to be quite conservative. The company puts its strategy this way: "The 80 percent solution means that your design meets the needs of at least 80 percent of your users. If you try to design for the 20 percent of your target audience who are power users, your design will not be usable by the majority of users" (Apple Computers, 1992: 35). Out of marketing considerations, then, Apple apparently reduced the relative complexity of text-based computer interfaces from the start to familiar, graphical metaphors of everyday U.S. life, thus heeding the warning of Ben Shneiderman's *Designing the User Interface*: "Surprising system actions, tedious sequences of data entries, inability or difficulty in obtaining necessary information, and inability to produce the action desired all build anxiety and dissatisfaction" (Shneiderman, 1998: 75).

Generally, the Apple solution became 'point and click' rather than type a command, and to design and communicate an ease and simplicity in the use of a Macintosh computer has ever since the design of the first Mac been Apple's major promotional strategy. In June 2002, for instance, Apple launched the famous switcher campaign (ads that feature 'real life people' who switched from PC to Mac) that again makes use of such terminology: "More people are interested in switching from PCs to Macs than ever before. See why they made the change and how easy it was. (…) And understand how Macs can make your life easier and your possibilities endless" (http://www.apple.com/switch). In its official design handbook from 1992, the *Apple Human Interface Guidelines*, Apple developed eleven principles of interface design by which the company tried to incorporate ease and simplicity into its products: Metaphors, direct manipulation, see-and-point, consistency, WYSIWYG, user control, feedback and dialog, forgiveness, perceived stability, modelessness, and aesthetic integrity. The Apple Macintosh interface thus ideally presents the user throughout with nicely designed, familiar metaphors (such as the trash can or the desktop itself) which one can interact with in close-to-real time by using a point-and-click device while immediately seeing results or getting a failure feedback and a possibility to 'undo' the action. Since Microsoft, having copied the Mac interface and its principles almost one to one, dominates the personal computer market with its Windows operating system, the socio-political purpose of virtually every user interface today can be said to be to "create safety nets for people" (Apple Computers, 1992: 10).

From the principles in the official Apple design handbook, I think it's already clear that, at its inception in 1984, the personal computer as we know it in 2002 has not been arbitrarily designed into "the friendly computer" (Microsoft on its XP website). Rather, the eleven principles seem to rest on specific socio-political assumptions that Apple expresses in the *Interface Guidelines* discourse on the power user and stability. First, the *Guidelines* strictly separates the features that the so-called 'power user' needs from those that 'the rest of us' play with. The *Guidelines* explicitly advises the interface designer not to "hide features in your application by using abstract commands" (Apple Computers, 1992: 8) or not to "use technical jargon or computer science terminology" (307). Whereas the power user of an Emacs editor might have extensive keyboard shortcuts that call up the many program functions, the 'rest of us' is better left with a few directly visible choices in plain English, or so Apple says. After all, we might even do harm to the computer, or, as the *Guidelines* nicely put it, the goal of today's 'safety net' interfaces is to achieve "a balance between providing (the power) user with the capabilities they need to get their work done and preventing (the rest of us) from destroying data" (9).

Such expert politics are incorporated into today's interface design in many ways, most notably perhaps in Windows XP, Microsoft's most recent computer operating system, in the so-called principle of gradual disclosure. Gradual disclosure means

that, for instance, in Office applications such as Microsoft Word, the menus only show a small number of commands by default (such as 'format paragraph'), but hide more specific commands (such as 'format styles') from the user—those commands are only available to the 'power user' who moves his point-and-click device over a little arrow at the bottom of the opened menu. Another, more general instance of gradual disclosure in the Windows XP interface is data visibility in the file manager program Explorer. By default, the Explorer starts with a subfolder that only contains user data ('My files') and hides the content of subfolders from view that contain programs or system files, such as C:/Progam Files or C:/Windows/System. On opening such a subfolder, the Windows XP interface warns: "This folder contains files that are important for your systems stability. You should not modify the content of this folder." For expert use, below the large letter warning is a link that reads in small font "Show folder content." Expert interface politics is closely intertwined with the discourse of stability that serves as the other bottom line of Apple's eleven design principles. Not regarding Apple's claim to sell the more stable operating system, both Mac OS and Microsoft Windows exhibit design features that back up the user perception of stability and continuity of a GUI.

The most prominent example of stability design is the taskbar that is located at the bottom of Windows XP and at the top in most Mac OS. It doesn't matter how many programs you are running, in Windows XP the taskbar is always visible and by default tells you the local date and time (thus locating your physical body), always shows you a pop-up start menu (or gives power to execute commands), and usually iconically represents all programs that are running in small form. The taskbar visually remains 'always on top,' meaning that you cannot move another window over it, so it's the most prominent stability feature in every interface (even alternative shells such as LiteStep have one). Other stability features include the feedback that the interface gives when the computer calculates for a longer time—usually this is done in the form of a growing bar at the bottom of a window (such as Internet Explorer) or a 'remaining time' pop-up. Familiar icons such as the Recycle Bin or Trash that have a specific place in many different interfaces, the upper left corner in Windows XP, make novice users feel 'at home' instantly. Also, the continuity of design throughout all applications is important for the stable look-and-feel: Every program has menu bar and it's first and second entries are usually 'File' and 'Edit.'

Now, all these stability features are linked to the expert discourse in the following way: They actually cover up an *instable* system to 'the rest of us' (Apple has even taken this into the design of the iMac and the iBook themselves: closed, shining entities). If you run an alternative shell such as LiteStep, you'll see on a little monitor the data writing and deletion that constantly takes place on your computer's virtual an physical memory; thus, much of the data representation you have in, say, the Explorer file manager is actually a reference to a quite unstable heap of data. As

even the *Apple Guidelines* remind the designer-expert, "it is the *perception* of stability that you want to preserve, not stability in any strict physical sense" (11).

Given the inherent instability of new media objects, it is perhaps little surprising that Jacob Nielsen and Don Gentner came up with their Antimac interface that turns most of the Apple principles upside down (although the authors, for whatever reason, emphasize that they do not think the Mac is bad). The basic assumption of Nielsen and Gentner in their "The Antimac: Violating the Apple Human Interface Guidelines" is that while the Mac/Microsoft interface that we're using today might be appropriate to teach what a computer can do to novice users, today's computer users are "people with extensive computer experience who want to manipulate huge numbers of complex information objects while being connected to a network shared by immense numbers of other users and computers." In other words: Apple's 80 percent solution doesn't work if your users are the "Post-Nintendo Generation" (NielsenGentner, 1995:. In the *Antimac*, Gentner and Nielsen detect a number of problematic aspects of what they call the 'WIMP model' (windows, icons, menus, pointer) of the original Apple Macintosh GUI. Although the principle of metaphor usage, for instance, may help the novice user ("Oh, the trash can is where my deleted file went!"), metaphors usually hide those computer capabilities that go beyond the actual metaphor: The trash can, for instance, saves deleted files on every physical drive separetely, but if you 'empty' it, all data are gone from all drives—the possibility to only delete files on, let's say, the C: drive, is undermined by the very use of the metaphor.

The problem with the principle of consistency according to Gentner and Nielsen is that, although learning might be reduced if new media objects look the same, new possibilities are overlooked. As the *Antimac* puts it, for Apple and Microsoft we're "still children in the computer age, and children like stability. They want to hear the same bedtime story or watch the same video again and again. But as we grow more capable and are better able to cope with a changing world, we become more comfortable with changes and even seek novelty for its own sake." Finally, WYSIWYG is inappropriate to computer usage in 2002, since the "What you see is what you get"-principle "assumes there is only one useful representation of the information: that of the final printed report." The principle thus overlooks that "it may be useful to have a different representation when preparing the document. For example, we may want to see formatting symbols or margin outlines, or it may be useful to see index terms assembled in the margin while we are composing." Against this interface politics of the beginning new media age, Gentner and Nielsen set an interface that features the central role of language, richer internal representation of objects, expert users , and shared control. Instead of a poor office imitation, then, they see the computer today as an ubiquitous tool to work, communicate, and play. The computer, so to say, introduced the new ethic of "You

won't always have to work that hard" instead of giving you the early digital capitalist "Power to Be Your Best" (Nielsen).

Of course, when recalling Althusser's statement that "men represent their real conditions of existence to themselves in an imaginary form," even the Antimac becomes another imaginary, cultural representation of absent socio-political reality. For instance, to invoke a gendered reading of both Mac and Antimac: One could say with Robert Milthorp that the Antimac is a result of men's "fascination with technology (that) is linked to the masculine need to be in control of the material world, to know how to extend that control, to be able to act, and to be independent of reliance on others" is expressed in the Antimac (Milthorp, 1996: 137). However, I do not want to elaborate on this criticism here but instead underscore that the very Antimac alternative points to the existence of the space of inherent instability of new media objects that is so central to my argument.

Now, in the coming age of the highly networked computer, Web browsers are the other important new media objects that frame and politically shape data within GUI. I'll look at the AOL 8.0 software and Mozilla/Netscape 7 in order to show how this might be so. America Online, a subdivision of AOL Time Warner, claims to be the single largest access provider to the Internet—although relative in size in relation to the US population, the AOL member figures actually do suggest that many people (at least in the U.S.) access the Web through the company's software. According to the company's website, AOL has "more than 35 million members of its flagship AOL service along with more than 3 million CompuServe members, 120 million registered users of ICQ, and 48 million registered users of the Netscape.com service" (www.aol.com). In addition to those 206 million users, AOL also operates popular services on the World Wide Web such as AOL Instant Messenger and Winamp, a music filesharing tool. No doubt then, that "America Online has played a major role in creating the consumer online experience worldwide," as the AOL website claims. Now, similar to Apple's 80 percent solution, at the heart of the AOL marketing strategy stands "providing convenient, easy-to-use services for mass-market consumers." But as we have seen above, the internet remains a new media object that is unstable and multilayered, so in reaction to that, AOL has developed its own version of an Apple Macintosh desktop for internet access, namely, the AOL software suite. This software contains the AOL Mosaic Web browser, an email client, chat programs and other tools conveniently compiled in one package that is downloadable from the company's website or freely available in many stores or on CD-ROMs that come with digital lifestyle magazines.

Similar to Apple's Macintosh, the installation instructions of AOL's Website address a novice computer user: They highlight the ease and simplicity of the software usage ("Follow the easy online instructions to install your FREE America Online Software!") and the speed with which the novice user gets accustomed to the new programs ("You'll be enjoying the benefits of America Online in no time!"). AOL is

also quick to warn the novice user of the dangers that might lurk in her computer file system: "Important: Be sure to write down the filename and path to the directory where you save the file." After the user has installed the program ("Look for a file that starts with 'setup'!"), she is ready to experience "the Internet in an instant!" The mission statement page of the German AOL subdivision nicely summarizes the general AOL strategy: "In the infinite world of the internet, AOL offers you a home. An intimate place where you meet friends, where you feel cared-for and safe."

Similar to Apple, AOL is aware that the company is painting a neat surface/interface over something that is messy, fragile and unstable. And similar to Apple, AOL silences the space for difference on the internet; a strategy that can be deduced from what AOL holds its term 'netwise' to mean. "Like the rest of the world, the Internet may contain some material that is inappropriate for young audiences" is one of the conclusions of the instability factor for AOL (one might imagine "for any audience" as an alternative ending). To answer this problem, AOL has coined the term 'netwise' for what it likes its member to be: informed about those countermeasures against messiness and instability which AOL gives you: "Working together, we can make the online environment a safe and rewarding experience." Not surprisingly, in stark contradiction to what one might imagine a term 'netwise' to signify, AOL safety strategies heavily rely on automatic filtering software ("Filtering software like CyberPatrol, NetNanny, and SurfWatch can help keep children from inappropriate online areas") and AOL-controlled on-the-surface security settings (similar to Microsoft Internet Explorer).

AOL devised software improvements for the 'netwise' user such as "giving members greater control over their incoming mail with a mail sorting feature that lets them choose to view only messages from people they know," alongside with new "self-expression features, including animated Buddy Icons, a choice of new Buddy Sounds, colorful backgrounds and stationary that let members tailor the appearance of their e-mail and instant messages to reflect their personalities and moods," and a "choice of (...) six different versions of the Welcome Screen offering distinct programming tailored to member interests and updated through the day" that include "Headlines, Business News and Sports," "Headlines, Latest Music, Games and Homework Help," and "Headlines Nightlife and Great Discoveries." The 'netwise' person, then, uses MatchChat, Music Share, and Buddy Share technologies to let their computer find out their likings. Generally, then, the templateverse of "AOL seeks to build a global medium as central to people's lives as the telephone or television," and this is were AOL does not grip the new logic of the net. German hacker Dragan Espenschied has talked about this in his "How AOL influences its users," observing that within the AOL software environment, basic principles of new media do not work anymore, namely, "there does not exist an option to save or edit the content of a viewed site" and "one cannot rely on the principle of copy and paste."

His analysis culminates in the assertion that "the totality of the Web turns into one single page out of AOL's content" (Espenschied, 2001).

In contrast to the restrictive interface policies of America Online stand the capabilities of the Mozilla software suite which derived from the Netscape source code. Since the date of Microsoft's coupling of its fast-and-easy browser program Internet Explorer to the operating system Windows in 1995, the percentage of users that surf the Web with the Netscape browser has been steadily on the decline. In fact, Netscape is only used by an estimated 10% of internet surfers to access Websites, and as a result of that many Websites such as amazon.com target their content only to the capabilities of Internet Explorer (you can't click on "Buy this book" for example as a Netscape 7 user—there's no button there to click on). Notwithstanding the low usage, Netscape, now in version 7, still does stand as an alternative approach to the politics of Web browsing of AOL or the Internet Explorer, possibly due to the fact that at one point of usage decline, the company thought the browser battle against the Internet Explorer lost and decided to lay open the program source code of the Netscape browser and to make it freely available for modification and redistribution. With one limitation: Netscape used a restricted general public licence (GPL) that allowed the company to later integrate the free, changed code into its proprietary program again (more restrictive free software licences such as the GPL only allow the free, open distribution of the program). The result of this act is the Mozilla 1.0 browser which again serves as the code basis for Netscape 7. Again, this is not to suggest that Netscape 7 is the 'better' choice—it's just to highlight formal differences that do suggest a different user politics of AOL or the Internet Explorer and Netscape 7/Mozilla. Now, both Netscape 7 and Mozilla are freely available for download from their respective websites (www.netscape.com and www.mozilla.org). Since the programs are software suites, modules such as the web browser, the email client, or the usenet mailer have a similar look and feel, and, in contrast to AOL, they allow copying and pasting in between each module. In addition, the similar feeling of, for example, writing an email or writing a usenet post, gives a feeling of equality of the action. Similarly, the equal look of an FTP address and an http address 'reminds' the user of the fact that email and http are only the most prominent, but not all, services of the internet.

As Dragan Espenschied has argued, Netscape/Mozilla's "view source" menu that makes the HTML source code of a website accessible to the user has pushed the HTML prominence to a large extent. Microsoft Internet Explorer has only later integrated this feature and it's still less prominently placed. The view source menu virtually gives the user power in that it shows how the website was done—if you copy the source code you have an identical website. In addition to this, Netscape/Mozilla comes with an HTML composer, which allows you to copy and edit the text of any Website you access or to program your own. Furthermore, in the browser 'file' menu, "edit page" becomes an entry just like "open page," so there

is a whole emphasis on the creation of content that is non-existent in AOL or the Internet Explorer that does not come with a composer program. Mozilla even goes beyond such features: The browser is able to suppress advertising pop-ups, and many script behaviors (most of which are potentially dangerous to your computer) can be individually configured.

Seemingly, data are "collections of individual items, with every item possessing the same significance as any other," as Lev Manovich has argued in his paper on the concept of the database (Manovich, 2001: 218). But although such 'data equality' might hold true on the level of a code stream or on a strictly physical level, I have suggested in this chapter that the modules in a database have a specific, socio-political organization within the GUI. It seems that in today's interfaces, programmers and interface designers (while trying to get closer to the machine and actually admiring its instability), seek to *sell* the computer as a nice looking, reliable work tool (which it is not) to 'the rest of us.' Apart from interface design strategies, this dichotomy also figures in the fact that many companies that engage in discourses of stability and constancy make a large amount of revenues from so-called 'second level services' such as bugfixing, anti-virus security, and installation support.

Now, recall that, for Ernesto Laclau, "self-determination can only proceed through processes of identification" (Laclau, 1996: 55) and that a subject/user emerges in the distance between the undecidability of the structure and the decision. Recall also that a subject/user is necessarily hegemonically represented as a part of a larger socio-political group. If this is so, a programmer and a designer of a user interface deals with several, in part contradictory, aspects: First, the decision with what to identify is largely taken on the level of the interface designer, not on the user level; the subject/user is only left to decide about pre-selected items. Ironically, if subjectivation in Laclau's sense then becomes limited in the context of user interface design (the undecidability of the structure becomes silenced through the interface design process), the very goal of interface design to foster identification with a specific company or interface is undermined: An identification with a Microsoft interface might as well turn into a passion for the Apple Macintosh desktop.

So here's a gap in new media that, in my mind, might open up a space for resignification (in a traditional Marxist framework, one could even say that someone gave away the means of production here) in the sense that interface logic then becomes essentially a logic of making something unstable repeatedly look nice (each time a start Windows XP—until it crashes). Notwithstanding coherent interface designs, however, I think that users 'feel' that the computer is essentially unstable, and that and how designers try to paint over this fact; "the presence of the 'Other' (the crash) prevents me from being totally myself," as Laclau says (125). Within such an framework, hypertext artists and everyday users become part of a

group that tries to bridge unstable media—the imagined, shared experience of, for instance, the Apple Macintosh user community might serve the desire for intimacy of each user. So in the next chapter, I'll try to interpret hypermedia authoring as trying to attain (empty) intimacy in the space that instability opens up.

5. Hypertext and Hegemony

> Can you imagine what The Futurists would have done with an Information Superhighway?
> —Mark Amerika, Hypertextual Consciousness

Although I find criticizing utopian dreams about hypertext a somewhat tiresome exercise, at this point of my paper I do have to look at a few of such classic, apologetical positions and at hypertext works in order to highlight the way in which projections onto those objects might be more than a cultural rephlex of the mediated society. Recall two of my general points in this paper: on the one hand one there seems to be a formal gap in new media that makes hypermedia authoring something like a 'longing for closeness' (to other *authors*) in the space that new media instability opens up, and on the other hand the instable states in digital technology and their link logic to some extent establishes what could be called a poetry of the digital. As a prerequisite for a discussion of those aspects that will follow up in the last chapter, it needs to be established how new media itself might foster the desire for closeness and 'the drive of the hacker'—negative hypertext criticism cannot grasp either one, since it can't account for the reasons of the failure of authoritative hypertexts to reach a wider audience or for the turning of chatlogs, emails, or peer-to-peer network structures (P2P) into lifelike art. As we'll see in the next chapter, digital poetry has surprisingly little to do with the standard, authoritative authoring of artworks/hypermedia—on the contrary, it is in everday internet culture that such poetrical gaps emerge.

One of the classic Utopian projections onto hypertext within a U.S.-American context can be found in Jay Bolter's *Writing Space*, a book that came out in 1991. In a nutshell, Bolter argues in the book that the hypertextual "writing space becomes a metaphor (…) for the human mind" (Bolter, 1991: 5). The concept of the human mind that lies behind such a statement is, of course, the fragmentary and associative structure that comes close to 'postmodernist' visions, or to what Gilles Deleuze and Felix Guattari call the 'rhizome' in their *A Thousand Plateaus*. In fact, Bolter explicitly equates nature and technology when he says that "the book of nature is a hypertext"—his argument here is in line with the still fashionable conception of the human mind as a computer (106). Since I am concerned with the

form of hypertext, I will not go into the discussion of the computer metaphor of the mind here, but rather criticize below what, for Bolter, formally derives from his initial standpoint: Having linked digital technology to human thinking, Bolter argues that electronic writing "opposes standardization and unification as well as hierarchy. It offers as a paradigm the text those changes to suit the reader rather than expecting the reader to conform to its standards" (233).

In a later piece *Degrees of Freedom*, Bolter elaborates on this thesis by saying that the "author of a hypertext is less a commanding figure than the author of a printed work. For the author's work is not a product of his ego alone; instead, the author works in collaboration with the readers to create the text" (Bolter, 1995). George Landow's *Hypertext 2.0*, another classic work in the field of new media theory and hypertext, rehearses a similar argument: "The presence of multiple reading paths, which shift the balance between reader and writer, thereby creating Barthes's writerly text, also creates a text that exists far less independently of commentary, analogues, and traditions than does printed text. This kind of democratization not only reduces the hierarchical separation between the so-called main text and the annotation, (…) but it also blurs the boundaries of individual text" (Landow, 1992: 25). Starting from an initial equation of digital life with biological/political life, one could position the hypertext reader into a much more active role that the traditional book reader, even to the extent that they see hypertext as the only democratic reading medium that exists. Or so Landow says when he sums up that hypertext "provides an infinitely recenterable system whose provisional point of focus depends upon the reader, who becomes a truly active reader" (36). Again, I want to emphasize that I don't simply want to 'bash' hypertext enthusiasts, so let's first look at one part of Mark Amerika's new media artwork *Grammatron* to see how Bolter and Landow might have arrived at their positivistic ideas and then discuss the limits of theirs (and Mark Amerika's) outlook.

Hypertextual Consciousness 1.0 (http://www.grammatron.com/htc1.0) is the theoretical, fourth part of Amerika's early internet art project *Grammatron* that has by now become something like an internet art classic—it was one of the first internet art project to be exhibited at the Whitney Biennal of American Art. Amerika programmed *Hypertextual Consciousness* (*HTC*) around 1995, so it originally relied on the Netscape 3 program architecture to work correctly. Today the work still runs without compatibility problems under Netscape 7/Mozilla, since *HTC* is largely a text-based collection of HTML sites and seldom uses more complex new media objects such as sound or animated images. In fact, Amerika's relying on the then-prominent Netscape browser and its (in contrast to Microsoft's Internet Explorer) ever-since relatively consistent style of HTML tag usage (HTML tags are short commands within HTML code such as, for instance, the <b> tag which tells a browser to print bold type text) might have even been vital for the work's reputation as one of the few "net art classics" in the first place.

Hypertextual Consciousness 1.0 runs within a browser program on a standard graphical user interface. When accessing the work on a computer interface that consists of operating system and browser, the reader is told on the first page that *HCT* is "an exploration into cyborg-narrators, virtual reality and the teleportation of narrative consciousness into the electrosphere." Interestingly, *HCT*, being the theoretical part of *Grammatron*, does give the user the opportunity to select from different text links to follow, but it branches into topical units that (with a few exceptions) are fairly easily identifiable by their file address in the location bar in Netscape 7: the files a-p.html to a-p13.html of Amerika's work, for instance, describe his concept of 'Avant-Pop' in an ongoing 'slide show,' with almost every text file containing just one link that leads to another file. The very file names are traces of Amerika acting as a sorting hand in a database that he then tries to link a little more randomly. This makes the fact that Amerika links the text "Next slide please" in the section about books (book3.html linking at this point to book4.html) somewhat less ironic—a large amount of Amerika's site works in this way.

In the section on Avant-Pop, Amerika explains how Avant-Pop differs from postmodernism and what role the artist/author takes on in the new paradigm: "Despite its early insistence on remaining caught up in the academic and elitist art world's presuppositions of self- institutionalization and incestuality, Postmodernism found itself overtaken by the popular media engine that eventually killed it and from its remains Avant-Pop is now born," Amerika writes (http://www.altx.com/htc1.0/a-p2.html). Furthermore, "Avant-Pop artists have had to resist the avant-garde sensibility that stubbornly denies the existence of a popular media culture and its dominant influence over the way we use our imaginations to process experience. At the same time, A-P artists have had to work hard at not becoming so enamored of the false consciousness of the Mass Media itself that they lose sight of their creative directives" (http://www.altx.com/htc1.0/a-p3.html).

There are, in my mind, a number of problems with Amerika's statements in *HTC* that link directly to what Landow and Bolter propose in their work. As Amerika states, "consciousness (a hypertextual construct) is now compatible with more radical forms of random departure or instantaneous clickual realities than previously thought possible" (http://www.grammatron.com/htc1.0/narr.html). Amerika reasons in much the same way as Bolter here; a direct between biology and new media is proposed in the sense that new media finally brings the human mind's functioning into close-to-material existence. But the equation of organic life and digital 'life' limits the mind and social interaction to the logic of the computer metaphor in much the same way as the Macintosh Desktop metaphors limits the actual computer capabilities. The whole misunderstanding about the 'democratic' nature of hypertext might actually have its origin in this equation: the mind is free, and so is hypertext, because it is a model of the mind. Since, as Michel Foucault has taught us, the mind is not exempt from power relations but, on the contrary,

deeply embedded in them through the concept of biopower (and 'resistance' makes use of this very fact, or so Judith Butler has added), the equation becomes absurd.

But apart from this, the question arises whether or not the very fact of thinking that hypertext is essentially democratizing is an outcome of the formal hegemony of the interface and computer semantics—an argument which I will take up later. Suffice it to point out here that Landow's use of "democratization" as a noun presupposes the active advancement of democracy and thus actually requires biopower. But to return to Mark Amerika: Amerika relativizes his own findings when doing away with any modernist avant-garde concept in his development of 'Avant-Pop': "Literary establishment? Art establishment? Forget it. Avant-Pop artists wear each other's experiential data like waves of chaotic energy colliding and mixing in the textual-blood while the ever-changing flow of creative projects that ripple from their collective work floods the electronic cult-terrain with a subtle anti-establishment energy that will forever change the way we disseminate and interact with writing" (http://www.altx.com/htc1.0/a-p9.html). Apart from overusing the future term 'will' in this text passage, Amerika himself can easily be said to be the establishment he that criticizes (a well-known problem for the 60s generation): Having exhibited his work at most of the important new media shows all over the world, he's part of the first generation of new media artists whose work young hackers today might consider prominent and, in its technological aspects, boring. In fact, Amerika's understanding of the artist as the beacon of 'Avant-Pop' is, in the final instance, not far removed from a conventional, modernist conception and its avant-garde claim (interestingly, the term 'avant-garde' derives from military use and thus shows the working of biopower again).

Since I am concerned with form and politics of new media objects in this paper, at this point I will discuss Amerika's understanding of reader- and authorship (and books as old media) in more detail. Alongside with Bolter and Landow, Amerika advances the idea that with "a change of the role of author from distinct self to collective-self comes a series of other complimentary changes that radically affect the way we interact with narrative environments. Instead of the author acting as a function of discourse, we will see the proliferation of cyborg-narrators who function as networkers who create publishing-nodes within cyberspace" (http://www.grammatron.com/htc1.0/hyper.html). The networking of the "cyborg-narrators," as we have seen above is to a large extent socio-politically influenced by interface and browser design/usage (given that such narrators wish to exchange artwork 'source code' at all—a much more heeded practice in electronic music production than in literary production).

Amerika's *Grammatron* itself is an example for the lack of a shift to the "collective-self" seldom takes place in conventional hypertext works. Using Mozilla/Netscape 7, I can save Amerika's work, open and change it in the Netscape composer HTML editor (which, again, comes along with the browser for free) and disseminate those

changes, for instance. However, there is no programmed function to collaborate with Amerika on his text in the actual work. The notion of the author as "collective self" is thus actively limited by the work itself, not by the formal software capabilities. It must be concluded that Amerika's view of the reader-author collaboration is largely that the reader "creates" a text by choosing from multiple reading paths—a notion that perhaps equally misperceives the formal nature of the Web in the same way that early film producers misunderstood their medium when inserting text into silent film. Furthermore, the process of collaboration in the perception of an authoritative artwork is nothing new in the world of art: All art perception rests on this, even to the extent that the practice of iconoclasm (the destruction of artworks) presupposes collaboration and relies, similar to Mark Amerika's work, on the logic of the conventional art institution in the final instance.

The (largely U.S. American) misunderstanding of authoritative artworks as liberating or democratizing (*sic*) rests on false assumptions about the nature of the book (which usually serves as 'closed' counter-example to the 'open' hypertext) and about the logic of the link on which the whole hypertext concept rests—both, as I will show, are in last instance overestimating the power of the free, liberal subject. Mark Amerika describes the book as a prison for the thoughts of the writer when he says that the "cyborg-narrator, whose language investigations will create fluid narrative worlds for other cyborg-narrators to immerse themselves in, no longer has to feel bound by the self-contained artefact of book media" (http://www.grammatron.com/htc1.0/cyborg-narr.html). Similar to Bolter and Landow, Amerika imagines the writer as a free acting subject in a pre-Foucauldian fashion when he says that every book writer is "being held hostage by the page metaphor and its self-limiting texture as a landscape with distinct borders." But similar to the perception of art, the practice of reading wouldn't be rewarding if power relations were taken out of the picture. In fact, it could be argued that part of the pleasure of reading is the very giving-away of control to the narrator/author—a state that has been called looking *though* the page, not at it. The 'democratization' of new media that ties its user to her seat in front of a computer (at least with the current interfaces) equals the book that ties a reader to an armchair (however, you can at least take the book anywhere you want to).

So it seems to be more interesting to discuss *why* writers such as Mark Amerika think that they are not "bound by the self-contained artefact of book media" when programming hypertextual works than saying that (as most hypertext arguments do) after all, they are bound by the form. With such a way of posing the question, of course, interactivity becomes a useless criteria to propose as a difference of books and hypertext, since books require interactive behavior on part of the reader as well. Now, on the discourse level, 'liberation-theories' about hypertext, apart from overemphasizing choice and reader 'freedom' in a programmed menu, also undervalue what Michael Bakhtin has called 'heteroglossia' in the book medium,

that is, they do not see the book as a "contradiction-ridden, tension-filled unity" (Bakhtin, 1981: 272). In a misreading of the outward form, the content of the book is seen to perfectly mirror the outward, monolithic form in that it contain only a single voice—a concept that, if phrased in this way, sounds strangely out-of-date since language, with Bakhtin, can be understood to be diverse and contradictory: "Every utterance participates in the 'unity of language' (its centripetal forces and tendencies) and at the same time partakes of social and historical heteroglossia (the centrifugal, stratifying forces)" (Bakhtin, 1981: 272).

As we have seen throughout this chapter, central to the libratory hypertext argument is the 'freedom' of the link as opposed to the 'closed' form of the book. Whereas Steven Johnson reminds us in his *Interface Culture* that "the link should usually be understood as a synthetic device, a tool that brings multifarious elements together into some kind of orderly unit" (Johnson, 1997: 111), the principle of linking itself for Bolter and Landow seemingly points to the liberty of the individual. However, as we can already see in contemporary consumer culture, selection is usually limited to prefabricated items that contain only a few, easily edible choices (the colors of Nike sneakers, for instance, not the overall design). Arguably, modern society itself, while dreaming of free choices, is in fact limited to a few options, especially if we take into account what Lev Manovich says about cultural transcoding: The "modern subject proceeds through life by selecting from numerous menus and catalogs of items" (Manovich, 2001: 126). Theoretically, all of this can be grasped within the Laclauian political framework that I outlined above: The link necessarily partakes in a hegemonic framework that actually highlights the limits of choice rather than its possibilities (whereas it does *not* say that such limits are 'bad').

One could also frame the logic of the link in terms of the Althusserian notion of "interpellation:" Instead of the famous example of the policeman calling a subject, the link is calling us to click on it, and the military-industrial complex (MIC) now becomes the Ideological State Apparatus (ISA). If the internet really is an extension of the MIC, we accept our place within it with each click (even if we can choose between two or more options). Althussers insights that "the vast majority of (good) subject work all right 'all by themselves', i.e. by ideology (whose concrete forms are realized in the Ideological State Apparatuses)" (Althusser, 1971: 181) Heath Bunting's internet artwork *readme.html* is a good example for the limits of the link in the new media sphere: The piece is simply a Website that contains a biographical text about the Britain-based artist, but Bunting has linked each word to its .com extension ("and" to www.and.com and so on). At its inception in 1998, hardly any of the words did lead to an existing company; as of 2002, almost all of them do.

Fredric Jameson traces the whole discourse of open/good and closed/bad that also figures in the discussion about 'open source' software to the paradigm of "American 'pluralism,' with its unexamined valorization of the open ('freedom') versus its inevitable binary opposition, the closed ('totalitarianism')" (Jameson,

1981: 31). Furthermore, a libratory link concept is based on a view that forgets that language "is not a neutral medium that passes freely and easily into the private property of the speaker's intentions; it is populated—overpopulated—with the intentions of others" (Bakhtin, 1981: 294). As Bakhtin goes on to argue, in language generally "in the makeup of almost every utterance spoken by a social person (…) a significant number of words can be identified that are implicitly or explicitly admitted as someone else's" (354). Thus, 'democratizing' hypertext (recall the active nature of the concept), apart from ignoring that the referential nature of language extends into its sedimented forms (books *and* hypertext), actually ties down a word meaning by linking it to only one specific other location.

Finally, a work that wonderfully illustrates the workings of power and hegemony in hypertext linking is Stuart Moulthrop's *Victory Garden* (http://www.eastgate.com/VG/ VGStart.html). While being considered a hypertext classic, *Victory Garden* has (to my knowledge) never been read in terms of restrictions and possibilities of form. For this purpose, it should be sufficient to point out that the content of work largely deals with the Gulf War rather than to give a detailed content analysis, for the form will be seen to entail the possibilities and limitations of the subject. Or, in other words, the structure of *Victory Garden* is deeply embedded within what has been called the military-industrial complex (MIC) of the United States and can actually be read as a reflection on this very fact *in form* (here I'm taking up an argument that has been suggested to me by Michael Joyce). The negative take of the implicit narrator on the Gulf War figures in a quotation from Donna Haraway's *Cyborg Manifesto*, which is linked to from a text section entitled "The Big Game:" "I argue for a politics rooted in claims about fundamental changes in the nature of class, race, and gender in an emerging system of world order analogous in its novelty and scope to that created by industrial capitalism; we are living through a movement from an organic, industrial society to a polymorphous, information system—from all work to all play, a deadly game" (Haraway). This 'deadly game' is, of course, the Gulf War and by extension of the military-industrial complex can also read to be the internet. The figure Thea is quite explicit about this connection between war and play: "'Call it a big game,' Thea went on, 'Call it the end of history, call it your New World Order, whatever name you hang on it, it's got a very elegant logic. Build all these tanks and planes and guns for a war with the Russians but the Russians go broke, oops, you just have to find somebody else to drop the old bombs on so you can go out and buy some new bombs. This isn't a war, it's a fucking clearance sale.'"

Contrary to this war as a game, however, in *Victory Garden* real war seems to exist that takes place elsewhere: "History is not about return or repetition. You can't get back to the future. History, the big story, is about the possibility of rapid and fundamental change. The kind of thing people fight wars about." Moulthrop has linked *Victory Garden* to a section of his personal Website entitled "What is a well-

formed text on the Web," in which he equates a link with 'real history' in that "You can never link to the same space twice. You only think you can." Thus, while his work is an extension of the MIC (it was written in Storyspace, a commercial software program for hypertext creation), Moulthrop also uses the very structure of the internet to highlight his point. As Moulthrop has written in an essay for the collection *Hyper/Text/Theory*: "Hypertext-and its as yet more distant cousins-will not produce anarchist enclaves or pirate utopias" (Moulthrop, 1994: 316).

6. Shifting Paradigms

> Of all the ways of acquiring books, writing them oneself is regarded as the
> most praiseworthy method.
> —Walter Benjamin, Unpacking my Library

Now that I have talked at length about the limits of the interface and hypertext, it is time to spend the rest of this paper on speculations about possibilities of the hypertext principle. To pose the question differently: In what way does new media form actually offer spaces for resignification and power play? What is the socio-political function of new media? Do peer-to-peer network structures (P2P) maybe come close to what has been called 'lifelike art'? As John Crary points out in the beginning chapters of his *Techniques of the Observer*, a technological paradigm shift is always useful in that it helps to think about the preceeding as well as the 'new' medium. So let's go back to the book to get a clearer view on hypertext.

As I have argued in the preceeding chapters, the surface form of the interface heavily restricts any 'liberatory' use of computer technology (apart from the fact that such a concept of liberation is highly simplified) through, for instance, metaphorical desktop design and limited capabilities of the most widely used WWW browser, Microsoft's Internet Explorer and the AOL client software. However, as I have described in chapter 4, a user necessarily has to interface to numerical data through software in much the same way as hegemony is a prerequisite for political representation in a non-technological political paradigm. While the current turning away from hypertext is, in the last instance, an extension of the 'miliary-industrial complex' and its emphasis on surface and the form, the existence of 'direct action' in the digital world points to a formal possibility that takes Butler's concept of 'resignification' from the symbolic level down to the level of a serious, technological play with possibilities. Since the end of this paper cannot be that location to muse on peer-to-peer network structures (and I'm only just beginning to read about the subject) I'll have to close by way of an analogy.

Arguably, the logic of the digerati's turn-down of the written page is repeated in their turn-down of authoritative hypertext in a misunderstanding of what a new medium actually brings about. Sean Cubitt has reminded us that the "book, that fortress of words, was not the sole invention of printing, which broadcast a riot of cheap dissemination" (Cubitt, 1998: 7). The novel, which is actually the main target of attack for many hypertext authors and critics attack is only a minor thing in the world of printing–socio-technologically, flyers, posters and so on were the much more (even revolutionary) application of printing as a *Kulturtechnik*. In much the same way, authoritative hypertext works seem to be misunderstood by literary critics to be the premier function of the internet, while online shopping malls are the premier function for global capitalism. If the book is a strategy for unification of antagonistic, diverging content that is sedimented in the monolithic book form, and the GUI works in much the same way since data are never accessed 'innocently,' peer-to-peer might disturb this logic through its decentralized, center-at-the-margin aspects. Instead of multinational capital, maybe now is time for the *Other* to finally stare back at us through our computer screen?

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