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## Transcoding metaphors after the mediatic turn

Hegel once wrote, rather regretful: „The owl of Minerva spreads its wings only with the falling of the dusk” (Hegel 1820). With this metaphor he indicated that philosophy understands phenomena only at the end of the day, when things have already passed. Wisdom always comes by hindsight, but at that moment the phenomenon at stake might be gone already. Hegel's winged words are still up to date. Thus, when philosophers and media scholars proclaim a mediatic or a medial turn, and start building conceptual frameworks, disciplines, and research programs around (New) Media Philosophy (Rodowick 2001, Munker e.a. 2003, Sandbothe 2005), we could have a gut feeling that this media thing might be already behind us.

And indeed, right at the moment scholars start thinking about what media are, what they do, how they constitute what we conceive as reality and truth, and what this implies for ethics, politics, education and culture at large, media seem to be gone. Or at least they are on the move. Contemporary media seem to have lost their stable ontology as apparatus, they can no longer be located in particular carriers, devices, modalities or institutions. They seem to be ubiquitous, everywhere and nowhere. They have become floating signifiers, ready to embark on any instance of articulation or communication, ready to mediate anything at hand. And, as usual in philosophy, with the wisdom of hindsight, we realize retrospectively that after all no medium – be it print, film, or television – ever *had* a stable ontology.

What do we have then? A minimum definition would be: we have processes instead of „things” – mediations instead of media. All endeavors to grasp the present-day media explosion/implosion point at the multiplicity, heterogeneity and volatility of contemporary processes of mediatization and mediation. Mark Poster takes up Foucault's notion of heterotopia (Poster 2001), Mike Sandbothe draws on Welsch's notion of transversality, in order to think „transitions in the transitionless” (Sandbothe 2005). Others invent new concepts: Rodowick proposes „the figural”, a force that erodes the distinction between word and image, inside and outside discourse. Henk Oosterling (2000) coins the notion of „radical mediocracy”, to indicate a situation so thoroughly mediated and intermediated that the „inter” has superseded the medium itself. We may try to hold on to media ontology, but as Oosterling states, „The claim that media have a life or existence of their own, can only be made acceptable with a lot of metaphorical displacements” (Oosterling 2000, 10).

These kinds of „metaphorical displacements” are what I want to track down in this article, by fleshing out the metaphorical concepts of the virtual community and Web 2.0. My primary aim is not to show how these metaphors deceive us, how they suggest ontologized things or media where in fact only heterogeneous processes of mediation are at work. This kind of deconstruction is valuable but secondary here, as I will primarily focus on the productive side of metaphors. I analyze these metaphors as transcoding metaphors, or what Katherine Hayles (2002) calls „material metaphors”, that is as metaphors which are able to do something in the world, something substantial, material. Material or transcoding metaphors are not just linguistic or conceptual frames, they are hybrid actors in social and cultural configurations. My claim is that these metaphors are the analytical keys to processes of contemporary mediation, as they are able to connect digital code and cultural code.

### **Perpetual remediations**

It is no coincidence that the media crisis became apparent with the domestication of digitality and the rise of the Internet. The combination of digitality and networking meant the collapse of media taxonomies by separate technologies (typewriter, phonograph, film), or modalities (visual, acoustic, text). Rescue attempts in terms of proclaiming the advent of „new media” only work provisionally, since the term covers very heterogeneous digital „objects”: material carriers like CD's or USB-sticks, devices like MP3-players, mobile phones and PC's, technologies like packet switching and network protocols, data objects like e-mail messages, webpages and databases, and software applications in general. To call all these objects „new media” obscures their differences as well as their procedural interdependency as nested systems. Besides, retrospectively all historically „old” media once were „new” and procedural. Bolter and Grusin, in their classic book *Remediation* (1999), showed how all media recycle, reassemble and redistribute elements of previous and contemporary media forms, no matter whether they are old or new from a temporal perspective.

Yet, while all media work by remediating other media, Bolter and Grusin claim that digital media enable a „more aggressive remediation” which „throws into relief both the source and the target media” (Bolter & Grusin 1999, p. 46). I argue this can be extended to an even more radical remediation: digitality not just enables the remediation of recognized ontologized media forms but also of non-media forms, phenomena previously or usually not conceived as media. Digitality radicalizes remediation, as it pushes it over the edge of existing media. After all, digital technologies not only mediate classic media forms such as newspapers, television, telephone, mail and telex; they also mediate what can be called *boundary media objects*: fuzzy artifacts situated somewhere between private memory and public communication. Think for instance of things like address books, telephone calls, diaries, banking accounts, et cetera. When digitally translated or automated (as with telephone calls on your mobile phone, or e-mail address books) these private „real life mediations” acquire an inscription, a form, and an ontology not present before. They become digital objects, nested in other digital assemblages, ready to be reiterated and transferred by nested networks. These mediatized things thus seem to acquire a life of their own, as a kind of micro

media. We might stubbornly insist on calling these nested micro procedures „new media”, but in fact they undermine and transform our very notion of media.

The micro–mediatization principle also holds for social mediations, fuzzy social phenomena which are of course always constructed or facilitated by mediation and communication, but which we usually do not conceive as media. Think for instance of friendship, communities, sex, or work. Especially the Internet enables the remediation and mediatization of these social interactions, by cutting them up in digitized entities, and subsequently processing and reassembling them online. The point is, digitally mediated phenomena as online friendship and communities are not just *represented* by „a medium” called the Internet, these things are *enacted on* the Internet. The difference between medium, reality and virtuality is completely dissolved here. Online friendship and online communities are as real as they are virtual and mediated. These hybrid social artifacts are the results of remediations of media fragments and real life fragments, and they are on their turn able to re–remediate other fragments. In other words, they function as ontologized micro–media.

Indeed, by digitization anything can become such a micro–medium. That is what radical remediation does: it turns fuzzy, non–formed or distributed phenomena into mediating and mediatized ontological forms; it creates distributed and nested micro–media processes, which go beyond the notion of media as such. In that sense there are no distinctive media anymore – instead there are perpetual remediations of our life, work and thought, by means of digital cut up procedures.

What enables this radical remediation? How can digitality invoke such profound social cultural phenomena? As Lev Manovich (2002) showed, digitality consists basically of the assignment of numbers to discrete entities. These numbered entities may be tapped from any medium, at any scale and of any composite – they may be letters, numbers, sound samples, icons, pixels, planes, images, movies, names, text files et cetera. Digital remediation is thus primarily numerical representation of discrete mediation fragments. How can numbers do things in the non–numerical world?

The numbers firstly enable further calculation (modulation, automation, variation, and programming) by number processing machines, consisting of hardware circuits and software instructions. Still, these calculations have no social or cultural meaning. The level of numbers, of machine–readable code, ordered by machine language and logic, has no meaning for humans. We have no access to these numbers, and if we had we would not be able to infer their meaning. In order to acquire meaning they have to come out of the machine in the form of human–readable output. It is this translation of machine–readable numbers into human–readable concepts Manovich calls *transcoding*. Transcoding is the process by which digital code, the „computer layer”, gets translated into human code, the „cultural layer”, and vice versa (Manovich 2002, 46). Transcoding enables us to see a movie on YouTube, or to write a Word–document with words, and not a series of numbers or numbered pixels.

Though we daily witness instances of these transcodings, the jump from meaningless numbers into meaningful signs bridges in fact a huge ontological gap: from the digital to the cultural, from calculations in a mathematical system to floating signifiers in a

conventional language system.<sup>1</sup>

Thus, the question still remains: how is this jump possible? How does transcoding work? I argue this is done by metaphors. I claim metaphors can function as transcoding devices, enabling the translation between digital code and cultural code, and vice versa.

I will illustrate this with the metaphor of „virtual community”, a transcoding metaphor which has been used to conceptualize social dynamics on the Internet since the early nineties. An analysis of this concept as a transcoding metaphor not only steers a spotlight on the historically specific software constructions involved, it also enables us to rethink the use of the concept in other software environments, as in the so called Web 2.0 environment.

### **The transcoding metaphor of „virtual community”**

Since the eighties of the last century the emergence of social gatherings by computer-mediated communication have been observed, on bulletin board systems and on the early embryonic Internet. In 1987 Howard Rheingold already coined the term „virtual community” for this phenomenon, but it remained underground until 1993, when Rheingold published his book *The Virtual Community: Homesteading at the Electronic Frontier*. From then the term really took off, along with Internet itself. Though the term „virtual community” was highly contested right from the start (Fernback & Thompson 1995), it became appropriated as an established concept to refer to more or less stable forms of sociability on the Internet.

Basic in Rheingold's definition were public debate and personal relations: „Virtual communities are social aggregations that emerge from the Net when enough people carry on those public discussions long enough, with sufficient human feeling, to form webs of personal relationships in cyberspace.” (Rheingold 1993, 5) This remained the core, though the appropriation in scholarly research, business models, and popular discourse did add some extensions and differentiations. A virtual or online community came to be defined as a social aggregation on the Internet, having a core of recurrent users, engaged in ongoing group interaction and negotiation at a shared virtual place. Over time the aggregation may develop shared norms and values, and imagine itself as a community, invoking a sense of belonging and partial identification: a virtual community, represented and enacted on the screen (Anderson 1983, Rheingold 1993, Jones 1997, Van den Boomen 2000).

That we imagine and experience a series of computer mediated text messages on the screen as a living community of people is facilitated by two things coming together – and here we recognize the two layers of Manovich: a computer layer and a cultural layer. First, on the level of the computer, the experience is mediated by the use of specific software for public or semi-public communication. These software applications

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<sup>1</sup> In analog media – photography, cinema, vinyl records – the translations between input and output may of course be as opaque as in digital mediations. But in analog media these translations are made by movement and inscriptions of patterns, not by calculation.

and protocols may consist of mailing lists, Usenet newsgroups, Internet Relay Chat (IRC), conference software or webforum scripts. Specific for these software configurations is that they of course enable interaction and communication between dispersed users, but most important is that they produce virtual *collective spaces* where the communication is visible for the users. Such a virtual space is bounded and held together by the interface, usually as an ordered list of messages. It is this production of collective spaces that distinguishes communities from other forms of computer mediated communication.

But software induced communication and social space is by itself not enough to produce a sense of belonging to an imagined collective. On the second level, the cultural level, a strong metaphor is needed to achieve this: the metaphor of community. Indeed, this is a metaphor, although we barely recognize it as such, used as we are by now to the notion of a virtual or online community. Rheingold's additional terms of „homesteading” and „electronic frontier” are more easily recognized (and criticized) as metaphors, precisely because these terms did not get so intricately and permanently blended with online sociality as did the concept of community.

However, this was not achieved without struggle and negotiation. Especially to detach the concept of community from its primary associations with geographical space and attach it to virtual space, can be considered hard metaphorical work (e.g. by Jones 1997, who introduced the concept of virtual settlement). The notion of space is foundational for the success of the metaphor of virtual community, as it connects the spatial software effects to spatial social experiences. The metaphor of community thus enforces and reinforces the sense of place and the sense of belonging to a spatially re-assembled group. This metaphor frames and models the digital assemblage into a social collective thing, which can not be done by software alone. After all, something social doesn't emerge automatically from something digital – some mediation work has to be done. And I argue this is done by metaphors.

Metaphors are great mediators, precisely because they connect two different things and enable us to see two things at once. According to contemporary theories of metaphor they are imported from an external source domain, transferred to or blended with the target domain, and thus cognitively and experientially flesh out and qualify elements in this domain (Lakoff & Johnson 1980, Fauconnier & Turner 2002). Their transference and mediation work can be tracked down by parsing the ontologized metaphorical entity into the different domains involved.

For the metaphor of community this is not difficult. The metaphor is obviously derived from the image of a pre-modern village. This village had clear borders, an almost self-sufficient economy, a homogeneous internal morality, a strong social cohesion, and rigid demarcations of insiders and outsiders. Everyone knew each other by face, by name and by status. The transference of this pre-modern notion to postmodern settings has been contested because of its historical inaccuracy, its implied nostalgia and utopian projections, but eventually its import to the Internet succeeded. In the early nineties the community metaphor served to highlight the communicative and social bonding capacities of computer-mediated communication – which was necessary since at that time computers were mainly conceived as cold calculation machines.

At that time the concept of virtual community was also associated with idealism, left wing activism and bottom-up democracy (not in the least by Rheingold's case

studies), but after the euphoric pioneer era the general utopian stance was dissolved. What remained was a more neutral association with a virtual space and a group of recurring communicating users. This ideological neutrality did not weaken the metaphor; on the contrary, it established the concept even stronger, as it became appropriated by a wider public. The notion of community did not only survive the demise of the utopian promises, it also turned out to be perfectly compatible with business models and marketing concepts (Hagel & Armstrong 1997). The dot com hype in end of the nineties was in many respects also a dot–community hype: online communities and community portals (“Build your own community!”) became big business. After the dot com crash in 2001 some of the biggest community organizers survived (Yahoo, MSN) and so did the community metaphor itself. Again, it came out stronger, not only as an accepted business and marketing model, but also as organization principle of various counter movements, such as anti–globalization groups and open source software developers. And today, in the midst of a new hype, called Web 2.0, the community metaphor is stronger than ever.

### **Are Web 2.0 data aggregations communities?**

Since publisher O'Reilly organized some conferences on the next generation web services, and dubbed it Web 2.0, this became a sticky buzzword (O'Reilly 2005). A few years after it's first mentioning Web 2.0 is still the latest thing on the Internet. The Web 2.0 discourse is partially about new kinds of software but most of all it is about a supposed new kind of culture. This new culture is indicated by a couple of recurring keywords: participatory culture, collective intelligence, sharing and linking principles, user added value, the wisdom of the crowds, and, of course, communities.

Classic examples of typical Web 2.0 sites are Flickr (sharing photo's), YouTube (sharing movies), Del.icio.us (sharing bookmarks), MySpace (sharing friends and interests), and weblogs (sharing diaries and links). Important is that this sharing is not just publicizing in the sense of delivering a self sufficient product, as was the case in what became retrospectively called Web 1.0, where the aim was to stick visitors to a bordered website. Web 2.0 is about making things public as semi–autonomous entities in a collective linking system. This system is provided as an infrastructure by the overarching website, but the acts of linking and tagging are up to the users: they create their own connections to other entities and formulate their own keywords (tags) to categorize their stuff. Moreover, these acts are not confined within the providing website – Web 2.0 services encourage linking and connection to other sites and applications. Contrary to Web 1.0 Web 2.0 works across websites, and uses the web as platform for linking and remediation instead of a passive self sufficient archive.

Hence, Web 2.0 is all about user participation, linking and sharing, giving away your digital stuff, your comments, your tags, your reviews, your votes, your lists, your links, your data. This massive sharing suggests a final victory of the idea of communities: finally the web has been turned into a common ground where people share collectively their stuff and thoughts. It has even been dubbed „digital maoism” (Lanier 2006), though this was not meant as a recommendation.

Unmistakably something social is happening in all this sharing and linking. Patterns

and clusters emerge, patterns of popularity, of quality, of hypes and memes, of wisdom perhaps (Suriowecki 2004), and also patterns and clusters of groups, of personal networks (Wellman 2004), of issue networks (Marres 2005). But should we call these aggregations communities? Is it analytically prolific to stick with that metaphor, or do we need other metaphors?

Metaphors are mighty things, as we have seen already. They are productive – their creative blending between formerly distinct domains produces new ways of perceiving, conceiving and acting. But by doing so they also tend to acquire a life of their own; metaphors tend to condensate, to ontologize, to become reified as a thing in itself; one thing instead of a relation between two things. The map tends to replace the territory, so to speak. This is almost inevitable, and even desirable, since this is exactly the innovative power of successful metaphors. Precisely because they get ontologized and reified they can become quasi-objects, able to do things in the world. A reified map enables you to travel to unknown places, or to claim territory. But reified metaphors also have a flip side: they render inconceivable their constitutive elements. When a map replaces the territory, we lose sight of the territory itself, and of the specific fabrication of the map.

In fact, this has happened with the concept of virtual community. The notion is no longer a metaphor for a specific relation, enacted as specific digital-social assemblages, but functions as a reified metaphor, a frozen concept. The metaphor, the map has completely colonized and absorbed the territory, the target domain of online sociability. Any trace of social gathering online became all too easily called a community, any virtual space for customer's complaints is proudly announced as „our community”, any webforum or web chat application is supposed to be a community. This easy equation of user interactivity with community may happen in commercial advertising, in popular speech and in scholarly research.

And, as could be expected, the social phenomenon of Web 2.0 sharing and linking tends also to be subsumed under the notion of community.<sup>2</sup> But in Web 2.0 the two constituting elements of the community metaphor have profoundly changed: the software and the sense of space. Web 2.0 software organizes space differently – what it basically does is dissolving the web page as a unity. Web 2.0 uses webscripts and databases to perform intricate actions with and within web pages. Webscripts are small procedures, a kind of micro programs, which can be executed by ordinary web-browsers. Where Web 1.0 was build up by autonomous HTML-pages, accessible by their unique URL, Web 2.0 pages consist of several semi-autonomous entities, each having its own URL. These entities may be movies, photo's, or blog posts, and each of them may be in itself a composite of several data entities: title, date, author, tags, comments, ratings et cetera, usually again with their own URL. These URL's do not refer to webpages, they refer to database entries, or better: to data base instructions to be executed by scripts. This enables the reassembling of alternative page orderings: by date, by author, by rating, by keyword et cetera. A Web 2.0 page is thus aggregated on the fly, by reassembling data fragments from its internal databases and inserting them in HTML-templates. The beauty of the web as platform is that URL's are public things, out there to grab: they can be taken up and reassembled again – by

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<sup>2</sup> Though not without some extra work, usually in the form of link analysis, since the supposed Web 2.0 or blog communities are not directly visible (cf. Park 2004, Efimova 2003)

tags, by search engines, by comparison sites, by blogs, by RSS–feeds.

Seen from this software perspective, Web 2.0 is more about data entities interacting with each other than of users interacting with each other; more about information than communication. Of course, there is communication on Web 2.0. You can find others, you can communicate with them, by chatting, by commenting on a blog, or a profile. Communication is ubiquitous, as all kinds of communication software can be integrated – mail, chat, guest books, forums, blogs. And we might even consider tagging and linking as acts of communication. Yet, the sum of these disparate public and private communications does not equal a virtual community. Neither does a clustering of issues or people necessarily constitute a community.

Web 2.0 in fact lacks two of the Rheingoldian basic ingredients of a virtual community. First, there is no common collective place of gathering provided by the interface – instead there are millions of vaporous micro–spaces with ever shifting permeable borders, millions of floating personal MySpaces and hyperlink clusters. These micro–spaces are not isolated, they are connected in multiple ways, and there is definitely something social going on, but not as virtual community at a virtual settlement. And second, there is no ongoing debate between a recurrent group of users – instead there are thousands of coming and going micro–debates between ever shifting groups of users. Again, not isolated but connected, and surely social, but not as the digital–social assemblage we have come to know as virtual community. The fuzzy spaces and floating debates on Web 2.0 are so hyper–virtual and volatile that they foreclose the very basis of a virtual community: collective communication in a bounded space.

In short, the community metaphor does not work here anymore. Detaching geographical space and attaching it to a virtually bounded space is one thing, and this metaphorical act has been very productive, but the subsequent dissolution of this virtual space can not be covered anymore with this metaphor. Definitely new digital–social assemblages are emerging on Web 2.0, but as yet we lack the vocabulary to analyze them. We might need other concepts or metaphors to frame what is going here. If we keep using old reified maps, we might miss precisely what makes this territory special.

### **Web 2.0 metaphors**

Some candidates for other metaphors are in the air. O'Reilly (2005) hints at them when he states: „If an essential part of Web 2.0 is harnessing collective intelligence, turning the web into a kind of global brain, the blogosphere is the equivalent of constant mental chatter in the forebrain, the voice we hear in all of our heads.” The brain metaphors spring directly to the eye, but since they have accompanied the arrival of all new media, starting with the telegraph (Peters 1999), we should not expect too much of them.

More promising may be the invisible metaphor hidden in the notion of „harnessing”. As Terranova (2007) showed, in O'Reilly's text on Web 2.0 the term „harnessing” is mentioned again and again. In fact, this is quite an anomaly in a discourse which is full of user control and freedom. Harnessing suggests quite the opposite: disciplining,

taming, domesticating, saddling. The concept is taken from the domain of work horses and horse power, which invokes the question: who is the work horse and who is in power? After all, while Web 2.0 thrives on users it is also meant to be a business model, a new way of making money with software. Scholz (2007) already analyzed Web 2.0 in terms of unpaid labour by users, and this may be a road to follow. The metaphor of harnessing collective intelligence anyway seems to blend domestication and exploitation with personal freedom and control – a connection which should be analyzed thoroughly, before it gets ontologized.

When looking for metaphors which capture these phenomena, we should not forget that Web 2.0 is in itself a metaphor. The metaphor „2.0“ is imported from the field of software releases, and diving in this source domain may reveal some of its peculiarities. A version 2.0 is supposed to be a fundamental upgrade of version 1.x, not just a minor update with some patches, as in version 1.1, 1.2 et cetera. The message is that this is fundamentally new. The release of such a version is usually accompanied with a strong urge to update, because soon version 1.x will not be supported anymore. The metaphor also suggests an integral package, released at a specific date. And though a software release need not necessarily be commercial, the metaphor of Web 2.0 certainly has a connotation of branding, marketing and business models.

It is a strong metaphor, though a lot can be objected against it. For instance, it may be argued that the Web is of course not a integral software package from the shelf, to be released to paying customers. Indeed, the Web is not a finished product, it is an assemblage of linked products in permanent beta status. Yet, the commodity aspect of the metaphor should not be disposed too soon, since it makes us alert to the packaging and harnessing strategies involved.

Most intriguing about the Web 2.0 metaphor is that it focuses on software as such. This is rare in transcoding metaphors; most metaphors indicating a digital–social assemblage lead our attention away from software – as with electronic highway, global brain, virtual community – but this one foregrounds it. And it claims a fundamental difference between the software of 1.0 and 2.0. As we have seen, the difference lies in scripts and databases. Web 2.0 reassembles webpages from database fragments, each fragment ready to be reassembled again, enabling endless nested recombinations and remediations.

In fact this shows how the metaphor of the page, imported from the domain of print and books, is now finally dead. There was a time we thought that the Web was undermining the linearity of print, by introducing hypertext and hyperlinks. But with the wisdom of hindsight, we can now see how Web 1.0 implied its own linearity, aligned by more or less stable pages. What's more, we can now see how these metaphorical pages enabled the settlement of virtual communities. Web 2.0 shows that the age of the page is over, that there are other forms of digital–social space construction, criss–cross assembled and nested on the fly. Created primarily by digital data remediations, not by page metaphors.

At the same time, the page, as delivered on our screen, is the only means of access we have to the software. We as users can see, or at least infer, the data remediations, as long as they show themselves publicly at the page interface of our webbrowser. As far as the database fragments are marked with a public URL we can do things with these data–objects, we can reuse and remix them, thus rewriting the page. But what

we don't see is what else is in the databases, what these databases process and extract in the back office, and how they may be connected to other databases. This is where the harnessing and harvesting takes place. Behind the public Web 2.0 there is a dark secret dataweb simultaneously at work, also reassembling and remediating data, also constructing new quasi-objects which are able to do things in the world.

The digital-social assemblages thus constructed might be more remediating our lives and thoughts than the metaphorized assemblages and data-objects we see on our screen. But in this deep database domain we not only lack the metaphorical vocabulary to grasp what is happening, we are often not even aware that something is going on. Perhaps we should take the software metaphor of Web 2.0 more serious, that is more literal, and scrutinize it beyond the level of the interface. It could provide cognitive access to the deep digital remediations at work in scripts and databases.

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