

Marianne van den Boomen: Decoding one-click space

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Abstract: My paper addresses the spatial collapse of reference and referent in the one click icon or hyperlink, and tries to open the digital black box by laying out the coded processes. My claim will be that we have no other access to these processes than by (mostly spatial) metaphors. Even if these metaphors represent one click immediacy, they interconnect multiple folded spaces. Therefore, opening up the digital black box not only implies hands-on appropriation of software code, but also the hacking of metaphors and spaces.

My research tries to tackle the issues raised by Internet-metaphors, i.e. the metaphors and the representational dynamics involved in our daily handling of the Internet. A rough distinction can be made between two kinds of metaphors:

Firstly, *discourse metaphors*.¹ These metaphors are often clearly recognized as metaphors, not just as ways of figurative speaking but as framing devices, configuring our way of talking, thinking and acting. In respect of the Internet we may think of well known concepts such as electronic highway, cyberspace or the global village.² Note that these metaphors are mostly spatial metaphors.

Secondly, what Katherine Hayles (2002) calls *material metaphors*. These are metaphors which connect semantic or symbolic concepts with technological artifacts. Most of the time these metaphors are barely recognized as metaphors. In respect of the Internet we may think of interface concepts as: menu, home, or mailbox. We use these metaphors primarily to *act*, to handle the Internet. Or, in more common terms: 'to navigate', 'to go' – which again suggests a spatial dimension.

It should be stressed that this distinction only holds on a primary level. On a secondary level, discourse metaphors are also material, i.e. they also create interconnections with the physical and material environment, thereby framing the way we act, interact and construct the environment. And conversely, material metaphors are secondary also discourse metaphors, framing the way we think and conceptualize. Metaphorical representation (and probably any representation) is, in my view, always material.

Space, representation and metaphor

The relation between space and representation is not an easy one. The philosopher Henri Lefebvre (1974) for instance distinguishes between lived space, representational space, and representations of space in his proposal for a 'new science of space'. This science should be able to give an account of social space without

¹ As proposed by Jörg Zinken, Iina Hellsten and Brigitte Nerlich, 2005 in their unpublished paper '*Discourse metaphors*'.

² See Rohrer 1997, for a comparison of the metaphor of the electronic highway and cyberspace.

attributing properties of mental or physical space to social space.

The post-structuralist geographer Doreen Massey (2005) also warns against the common confusion between space and representation. Massey's point is that the stability and ontological fixation so often attributed to the concept of *space* (as opposed to *time* as the bearer of dynamic movement and change) is in fact not an attribute of space, but of *representation*. She pleads for a conception of space as heterogeneous, coeval multiplicity. This space (or better: space-time) does not *precede* interconnections, it *emerges* from interconnections.

This space is not a fixed, delineated *state or domain*, regulated by its own internal laws of closure, it is an open *process* of multiple interconnections. This space is plural, it consists of many spaces, co-existing and intricately folded into each other. Representation, according to Massey, freezes this multiple spatiality into one singular and unequivocal space, as a slice through time, sucking the life out of it.

I think Massey's notion of plural space is very helpful in analyzing mediated spaces, in particular the spatial dimensions of the coded metaphors of the Internet, be they discourse metaphors or material metaphors.

However, I am inclined to doubt her notion of representation as singular. My claim will be that representation is multiple as well.

I will illustrate this with a specific material metaphor: the hyperlink.

At first sight the hyperlink has nothing to do with neither metaphor nor space. Clicking on hyperlinks seems to be the ultimate dissolution of any space. At interface value this sign represents primarily linking and motion, not space, according to Shields (2000). Even the notion of motion is dissolved in its taken-for-granted immediacy. No distance, no gap, so no vehicles or metaphors are needed to travel from one domain to another.³ The immediacy of the one-click gesture seems to transcend any transference or mediation.

So, no space, no metaphor, just one-click immediacy. A simple sign suffices, a sign which just says: 'I am a passage point to X, click on me to get there.' As far as the hyperlink does invoke a conception of space or a traversable gap between spaces, it immediately closes this gap by importing the referent ('X') into the referring expression itself ('passage point to X') and, in the same movement, by equating the passage with the arrival. In semiotic terms we could say, this is the complete collapse of referrer and referent, or, on another level, of signifier and signified. In terms of Michel de Certeau (1984), we could say: the map is the tour. Moreover, the tour is the arrival. The road sign is the road, the vehicle and the destination, all in one. But only, we should add, if everything works properly.

Meanwhile we know, things on the Internet don't work properly all the time. When our click on a hyperlink does *not* take us immediately somewhere else - for whatever reason - we get a glimpse of the hidden spaces between click and go. This space, which ought to be an imperceptible point of zero dimensions, filled with 'no time', suddenly exposes its implied dimensions, as Strate (2000) would have it. For instance time dimensions - when the loading of the page just takes too long you quit the transference. And also space dimensions - somewhere a server is down, a URL is redirected to a dead end, a file is moved or deleted. Or dimensions of modality - the link contains an html-error, or you need a special plug-in or application to

³ Buses in Athens are called 'metafora'. Lakoff and Johnson (1980) define metaphors as transferences from one semantic or cognitive domain to another.

execute the file. Or your operating system just crashes for some unknown but coded reason.

We know this - and we keep forgetting this as we click along. The concept of 'one click immediacy' thus keeps popping up, in Internet marketing discourse as well as at our finger tips - indeed, in our whole mental and bodily disposition behind the keyboard. The implied conceptual metaphor (Lakoff & Johnson 1980), TO CLICK is TO GO is TO ARRIVE structures actions and expectations, and frames the way we think about the Internet. The metaphor does this by representing certain modalities and attributes, while downplaying - we could even say: *de*representing – other attributes.

This metaphor is an orientational metaphor (Lakoff & Johnson 1980), but while most orientational metaphors suppose or imply a space to traverse or navigate, this metaphor does exactly the opposite: it denies traversing space. One click immediacy eliminates space on the threshold of its emergence, since you will arrive there immediately, without a journey, without any effort except just the click. Or better, one click immediacy obscures traversing space by representing *effortlessness* for you, the user, and hiding (*de*representing), the efforts and actions of your computer and other devices in the network.⁴

Besides, the metaphor enacts another twist. In the metaphor TO CLICK is TO GO is TO ARRIVE the representation is that *you*, the user, will go and arrive somewhere, immediately. While this certainly reinforces you as a subject in charge and in control, in fact, you don't go anywhere. Neither does your computer. What happens when you click on a hyperlink, is that you set in motion a string of activities and movements on the network, which result in the transference of the requested file to your computer. Or better, the result is the downloading of a copy of a specific file to your computer. It is not a question of *who* is moving but of *what* is moving.

Parsing the source code

Fortunately, we can disclose some of the travels and transferences in the network, since we are able to read the source code of hyperlinks, literally.

Let's zoom in on the hyperlink. What do we see? At the surface/interface we see:

hyperlink, mostly marked by an underscore or a deviant color. This sign, as we have seen, is a dissolved referrer and referent in one. The implied referred file to get (or the referred place to go, as we experience it) is not visible at this level. In order to see this we have to look 'underwater', at the source code of the hyperlink. It will look something like this:

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<A HREF="http://somesite.nl/mapname/filename.html">hyperlink</A>
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Linear as this string may seem, it is not a linear instruction sequence to be executed from the left to the right. This is a set of nested instructions, involving several scales, actions and spaces. We can differentiate these by parsing the string:

⁴ Chesner (1997) claims, 'Networks does not reproduce space, they eliminate it.' (83) I would rather propose: hyperlinks eliminate space, networks reproduce it while hiding the very way this is enacted.

<>... </>, <A..>...

These are general html-tags to mark the beginning and the end of the html-code, in this case the anchor sign.

<A HREF=

This is the html-code for the *Anchor of the Hyper Reference*, indicating an action of referring to a specific file on a specific location, where the referenced, requested file should reside.⁵

http://

Hyper Text Transfer Protocol, indicating the action will be managed by this specific network protocol.

somesite.nl/mapname/filename.html

This is the URL, the *Uniform Resource Locator* – that is, the path to the requested file, it's location, it's web address. The URL contains on its turn distinctive nested elements:

somesite.nl⁶

First, the Top Level Domain Name of the referred web server, which is geographically located somewhere on earth. These domain names are controlled by the Domain Name System, (DNS), a system of distributed name-servers, which translate human-readable names into machine readable IP-numbers. In order to contact the referred web server, the involved name-server has to be consulted also.

In this case the web server is located geographically in the Netherlands, shown by the extension '.nl'. These country domain names are controlled by national registrars, institutional bodies which regulate the emission and ownership of these domain names. Other Top Level Domain names, such as .com and .org, are assigned and regulated by ICANN, the Internet Corporation for Assigned Names and Numbers.

/mapname/

Secondly, the name of specific directory on the web server where the requested destination file is supposed to be located.

filename.html

Finally, the name of the requested file, with a filename extension indicating/invoking a specific handling or way of representation. This example refers to a plain html-file which can be executed by the plain web browser, but the extension can also refer to other formats (e.g. a movie with file extensions as .mov, .avi, or .swf), calling for a special plug in, or even another application, outside of the web browser.

The filename area can also contain a string of scripted instructions to get aggregated results from a

⁵ <A NAME is another html-anchor, marking the arrival point ('referred to') of a reference to a specific internal part on a html-page

⁶ Sometimes with a port number included, e.g. :80, the default value for the http-protocol

database⁷, which brings into play yet another server, on another location, to be consulted. These kinds of scripted strings are common in web fora, blogs, and search engines.

So, underneath the simple hyperlink we have indeed quite a heterogeneous multiplicity of spaces, movements and interconnections. But it is almost impossible to distinguish the spaces from the representations. Here, 'to refer to' is 'to go somewhere'. We experience this as if *we* go somewhere, but in fact we don't go anywhere; we get a file from somewhere, and this is finally *represented* on our computer. Some of the 'somewheres' involved seem to be clearly spatial. It can be a *location* – a geographical location, a particular web server at a provider, a database, or a DNS server, all located somewhere in the networked hardware space. It can be a *path* – the linear directory string to the destination file, or the more complicated scripted string, invoking databases and selections, from which a specific aggregation is constructed on the fly. And it can be a *destination*, an arrival point consisting of a unique file.

But these spatial categories as location, path and destination are not designating univocal material instances located in physical Euclidian space. A server, for instance, need not coincide with a particular computer, as hardware device; a server is a specific, software induced configuration of a computer. Thus, one computer may function as several servers (web server, database server) at the same time. Moreover, one destination file on the web, one html-file, is not necessarily located on one server. It may consist of an aggregation of several data taken from several servers (for instance pictures or database tables imported from another location) and finally represented as a whole to our computer screen. Likewise, the path to a directory is not equal to the traversing of some kind of Euclidian space. A map or directory is not a physical location on a computer; it is a userfriendly way of displaying, representing a logical address in computer memory. It is a metaphor, shorthand for the complex code executed. A spatial metaphor, which again constitutes our selves as subjects in charge, situated and steering in a navigational space, blind for the code at work.

Even more complicated is the domain name system as such – should we conceive this as space or as representation? Here, 'to name' is 'to address', is 'to locate'. Here, a name is a place, a place is a name, invisibly mediated by code translating numbers into names and vice versa. And, at last, when the extension of the destination file leads to a specific application located on our computer and results in the final representation on our screen, how could we ever differentiate between space and representation? Or between space and executed code?

It seems that digital spaces, heterogeneous and multiple as they are indeed - even in their one click disguise – can not function without representation and metaphor. We have no other access to the digital than by representations. These representations can consist of remediated (Bolter & Grusin 2000) metaphorical, 'analogical' interfaces (icons, screen layouts, windows) but also of representational spaces (directories, web addresses, DNS servers). While it is not sure whether we should classify the hyperlink as metaphorical interface or as representational space, it should be clear that these two levels are intricately folded into each other.

Indeed, these representations are by no means singular, stable and univocal. Their interactions and

⁷ Or even a virtual database, constituted on the fly by a system of distributed file storage. See http://www.infoanarchy.org/wiki/index.php/Distributed_file_storage

interconnections do not only mutually coconstruct each other, they are also part of the movements from which multiple space emerges. We have to conclude that both space and representation are not singular. Hence, in order to understand and analyze the digital we have to break open the black boxes of space, and of metaphor. That is, hacking, tracking down the processing code which interconnects space, representation and metaphor. Not only because this code constitutes our media and our tools, but also because it constitutes our selves as subjects. Open the black boxes - hacking code, hacking space, and hacking metaphors.

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