Utbildning & Demokrati 2005, vol 14, nr 1, 115–130
Tema: Estetik och utbildning

Is there any body in cyberspace?

or the idea of a ***cyberbildung***

Lars Løvlie

In this essay I argue ***against*** the suggestion that cyberspace is afloat with "disembodied subjectivities", and ***for*** the idea that we humans configure the Internet according to our bodily existence. The situatedness, orientedness and rhythm of our perceptions and actions carry over from the real to the virtual world, making them one experiential world. We do not, then, leave the body behind when we enter cyberspace. This topological perspective may not only explain why we find the Windows interface pleasant and easy to use. It also illuminates how bodily experience orders the world in terms of the basic directions front–back, right–left, up–down and over–under, and how it structures practical everyday life. Classical ***Bildung*** nurtured the expressivist idea of an independent mind in its free self-creation. Topology, on the other hand, wants us to think in terms of body-minds, and suggests that even a ***Cyberbildung*** begins as an education of the flesh.

It is remarkable how our language is replete with body imagery. Metaphors like being 'beside oneself', or 'out to lunch' or 'down to earth' or 'up in the clouds' implicitly describe the location of the body in its relation to the self and the world. The way we speak about our 'normal' world is repeated in the way we speak about cyberspace as well: we enter the 'information superhighway' in order to 'meet' other people in 'electronic cafes' or 'chat rooms' before we 'exit' to our normal world of work or leisure. It is all the more remarkable, then, to come across perspectives that decouple self and body in the cyberspace. We are told that even if traditional notions of the 'true self' will linger on, "… the new technology is opening up the possibility of radically new disembodied subjectivities" (Featherstone & Burrows 1995, p. 12). In cyberpunk literature this myth finds its way into descriptions of a fleshless life:

> The dream of cyberculture is to leave the 'meat' behind and [for the subject] to become distilled in a clean, pure uncontaminated relationship with computer technology (Lupton 1995, p. 100).

This seems to be an unexpected computerised version of the Romantic quest for a spiritual unity!

A simulation culture that turns everything real into a virtual reality seems to spell the end of self-education in its classical sense. Classical ***Bildungstheorie*** will not easily survive the loss of the dialectics between self and world and between self and body. What, then, are the prospects for the hybrid idea of a ***Cyberbildung*** – is not any concept of ***Bildung*** a contradiction in terms when everything is, as it were, subjectified? And what about educating the ***cybercitizen***, the critical and reflective subject of postmodern liberal democracy, when embodied political attitudes are left behind? – The prospects are not that bad for ***Bildung***. I think Mark Poster is right when he ventures that:

> The effect of the new media as the Internet and the virtual reality, then, is to multiply the kinds of 'realities' one encounters in society (Poster 1995, p. 86).

If I understand him right the Internet means more of the same old 'reality', but differently configured and differently lived. I think that one of the main reasons for this state of affairs is the simple and uncontroversial fact that you can hardly think of a theory of the self without having a body to go with it. In a certain sense there are 'real' bodies in cyberspace, and it is their presence that makes it natural for us to configure the Internet the way we have done. The body contributes to a concept of ***Cyberbildung*** that does not break totally with traditional aspects of ***Bildung*** but may even contribute to them.

The professed aim of classical German ***Bildung*** was the education of an emerging self in its successive transformations towards an autonomous character. In that educative context cultural artefacts typically served to confirm the individual in her moral identity. The Renaissance morality play, the 18th century ***Bildungsroman*** and even the 20th century feature film are conduits of reflection and self-perfection. The scene, the printed page and the film used to authenticate the self as the centre of the world, and acted as prime interfaces of formal and informal education. The historical shift from the scene to the screen in the late 20th century introduced the new interfaces of the TV and the computer. The computer contributed to the simulation technologies that take us beyond pure screen-based representations and actively syn-

chronise the virtual and physical world. When the virtual world blends with the physical, when simulation replaces the 'hard reality' as a mode of experience and action, we have created an interaction space that erases the traditional boundary between self and world. But that does not mean that the body is left behind. People feel frustrated or satisfied, respected or rejected, happy or unhappy on the Internet because their whole personality is involved. They tend to feel confident and at home on the Internet once they tackle the technical and emotional difficulties of getting online because the Internet is a space to relish and to suffer in. Even virtuality requires a body to go with it.

So – enter the body

The cyberpunk idea that we can leave the flesh behind belongs to fiction and radical thought experiments, like the famous one of the bodiless brain in the vat. In any case, it is beyond our conceptual and technological horizon today to conceive of disembodied subjectivities or identities roaming the virtual world, other than as interesting aspects of cyberpunk imagination. To reiterate, we are persons in the flesh. We naturally refer to ourselves in our bodily existence and take it for granted that our body is located in space, or rather, that it inhabits a geographical place. We get immersed in cyberspace in meaningful ways because we are already always immersed in 'normal' everyday space – only that in the virtual world we are differently immersed. The question is not if but how we are embodied on the Internet. I shall try and answer the question in two steps. First, by saying something about how we are ***situated*** in space and how we are ***oriented*** in space; second, by describing space in terms of places that we inhabit. Place takes precedence over abstract space in this description.

In the ***Cartesian Meditations*** Edmund Husserl took an important step for a later phenomenology of the cyberspace. He pointed out that the body – the "one spatial 'Nature'" as he called it – "is constituted throughout the change in [its] orientations". That is to say, the bodily organism is experiential ***a priori***. He further specified "the fact that my bodily organism can be (and is) apprehended as a natural body existing and movable in space like any other is manifestly connected with the … free modification of my kinesthesias, particularly those of locomotion". Here, then, the body is not just a thing in the world, but exists actively in its movements and rhythms. Moving and acting belong to the specific repertoire of the body and to its existence in general. Husserl went on to add the important observation that:

> I can change my position in such a manner that I convert any There into a Here – that is to say, I could occupy any spatial locus with my organism (Husserl 1988, p. 116, § 53).

He could not, of course, imagine the cyberspace of the last decade. But we may pursue the view that spatiality in general is dependent on the body. Whether I stand in this room or move on the information highway, those facts are constituted by my existence in embodied space. This is a topological perspective that refers experience and action back to the body as its locus. The body may now be seen as both a thing among other things in the world and the interface that mediates between them: it emerges as the prime interface of education. It may seem far-fetched to call the body an interface, because the term usually denotes aspects of the computer's hardware and software, first and foremost the screen. It is, however, not lost on the reader that in philosophy the 'I' has been the interface between self and world over the past 200 years, even if the embodied self will be our concern in what follows.

The basic ***situatedness*** of my body gives rise to another central feature of embodied experience and action: that of its ***orientedness***. The 'cultural world' Husserl argued, "is given orientedly on the underlying basis of the [bodily] Nature common to all and on the basis of the spatiotemporal form that … must function also in making the multiplicity of cultural formations and cultures accessible." And he went on to propose that "… in this fashion the cultural world, too, is given 'orientedly', in relation to a zero member and a 'zero personality'" (Husserl 1988, p. 134, §58). If we extend the cultural world to include the virtual – they are both created by us – and drop any egological suppositions, we come close to a description of bodily presence in the virtual reality. We do not leave the body behind when we enter the cyberspace. Rather, the body insinuates itself in the basic orientedness that makes the user able to move on the Internet.

It is worth noting here that to be located is not the same as to occupy a position in space – a description of body–space is different from that of objects in physical space. Natural objects – stars for example – may have positions in abstract space, but they are not bodily situated. The spatiality of the body is, as Maurice Merleau-Ponty once stressed in the ***Phenomenology of Perception***, not "… a ***spatiality of position***, but a ***spatiality of situation"*** (Merleau-Ponty 1962, p. 100). Spatiality of position characterises objects in designed space, for example the icons on a graphic user interface (GUI). Objects may appear as points in a grid, symbols on a map but also as icons on a screen. A first step towards a spatiality of situation takes place when the icons on the computer screen allow for the direct manipulation that gives the user

confidence as an initiator of action, for example when you go from letter combinations to icons and image mediated action. We may ask: Why was the introduction of the Mac Operating System such a huge success? Why does the Windows design appear to be easier to use and remember than a manual of key combinations? Part of the answer is that the Windows design plays on the spatiality of situation. Moving the mouse, the effect on the icons, and the possibility of immediate corrections, are close to real-life bodily actions that make the user feel in control. To be in control means to be bodily involved, not only on having control over what takes place 'objectively' on the screen, but being in control of one's own body-self before the computer. Ben Shneiderman speaks for designers when he says: "The trick [of the user-interface designer] in creating a direct-manipulation system is to come up with an appropriate representation or model of reality" (Shneiderman 1992, p. 200). The GUI works better both because direct manipulation is easier and faster than numeric manipulation; and because the former trades on the spatiality of the body.

I have suggested that the body is both object and interface, and described how the body as an interface constitutes space. But the body-subject is not only an individual self engaged in purposive action. This is an important qualification, because some recent descriptions of identity play on the Internet often operate with free-floating selves spurred on by their own individual intentions. These descriptions are part of a constructivism that makes the virtual world a playground for fantasies and fictions. That may enhance self-education and contribute to social cohesion; but it may also cater to a kind of latter-day individualism in education. The Faustian twist to this constructivism is that the moment the self seems to savour the fruits of its identity play, self-creation runs idle. It may come as a release, then, to return to one's bodily situated self. As Wolfgang Welsch puts it:

> … without the appearance of something as real none of the phenomena from the palette of doubt, phantasy, fiction, etc. could occur. They require a range of shared reality in order to allow some pieces of it to be questioned, attacked, or changed (Welsch 2000, p. 56).

A shared reality is partly dependent on bodies in their situatedness, or to be more concrete, on people in shared but not necessarily identical situations. Welsch opts for the 'intertwinement' between real and virtual. The body interface lays the ground for this intertwinement. The embodied mind configures virtual reality according to basic parameters of its actions in the real world. The Internet is both a vast expanse for explo-

rations and a refuge – ***refugium*** – for the intimate activities of the homestead. We now have the minimal bearings that seem necessary for talking about a ***Cyberbildung*** that leads to the formation of a coherent self-world relationship. Which are more specifically those bearings?

A clue to an answer is found in the further elaboration of orientedness and, by implication, the notion of place. Making the body rather than the ego, the subject of interaction marks the transition from Husserl's egological stance to Maurice Merleau-Ponty's bodily-grounded phenomenology. In the latter's theory intentionality becomes bodily in character. When I set out on a walk and lose my way, and then regain my geographical bearings, I am always located with an inclination towards getting from here to there. In a town I may, of course, orient myself according to the abstract coordinates of a town map. But again, I cannot make much use of the map if I cannot coordinate its information with my actual whereabouts, that is, where I am actually standing. According to Merleau-Ponty this is a basic condition:

> The word 'here' applied to my body does not refer to a determinate position in relation to other positions or external coordinates [in abstract space], but by laying down of the first coordinates, the anchoring of the active body in an object, [which is] the situation of the body in face of its tasks (Merleau-Ponty 1962, p. 100).

The 'object' here is not the body in isolation but the interacting body in its surroundings. Or more specifically, the body coordinates the 'geographical' bearings that accord the world its presence as a placeholder. The body orders the world by the basic directions: front–back, right–left, up–down, and over–under (cf. Merleau-Ponty 1962, p. 101f). This is the fourfold way the world is structured according to the basic orientedness of the body in practical everyday life.

The body on the Internet

As I have already mentioned, in cases of simulation the real and virtual merge. That, however, comes with a caveat. In his book ***The Language of New Media*** Lev Manovich suggests that in cases of simulation the body still forms a centre of experience and action: the body grounds or coordinates space with itself as the tacit point of reference (cf. Manovich 2001, p. 109f). A point in case is the fighter pilot who plugs in his helmet and flips down his visor to activate his Super Cockpit system. The virtual world he sees exactly mimics the world outside, and so erases the difference between the real and the virtual altogether (cf. Manovich

2001, p. 11). The super cockpit pilot seems to turn into a hyper humanoid in a totally virtual world. We may imagine a future of simulation implants that finally end our imprisonment in the body. Computer technology may converge with brain chips to make the way we talk about body experiences a thing of the past. But, as Manovich reminds us, we should not forget that the fighter pilot is strapped into the seat of his aircraft just like the VR user's body is strapped in his or her harness. They operate with an imprisoned body as the boundary between physical and virtual existence. There is, of course, the Cartesian idea of a totally free or virtual mind that figures as a non-spatial entity. The trouble is, if the body goes so do not only the mind, but imagination and emotions as well. For imagination is in the senses: in smelling, touching and seeing. And emotions belong to the body as visceral experiences of joy or gloom, empathy or antipathy (cf. Lakoff & Johnson 1999, p. 403f).

The original Mac OS interface was an instant success because it answered well to the body-centred experiences of 'real' life. The way the coordinates of body space integrate life on the screen can often be read off the way we visualise cyberspace. The user intuitively perceives it to be located in front of her, and not to the right and left, and definitely not behind her. This is partly due to the fact that the computer is, in the Heideggerian sense, something ***Vorhanden*** or ready-to-hand. As a tool it refers back to the body and the hands as the locus and origin of its workings. The interface metaphors bear this out. We 'enter' a browser or a Web page, 'travel' on the information superhighway, visit a 'site' and partake in the activities of a chat room. When finished we click 'home' and thus end our travel by returning to the starting point when the glow of the screen fades. These peripatetic movements remind us of the structure of the venerable ***Bildungsroman***: the home as a starting point for travelling and visiting new ***topoi*** both in the physical and literal sense of the word; then the integration of these experiences in a continuous self-creation. The metaphors used here and their narrative implications repeat the basic dimensions of body space: location, direction, and locomotion.

We do not know what the future holds for us, but for now both the configuring of the screen – for example the side-by-side spatial montage of the GUI – and the metaphors that describe our Internet behaviour are intimately tied to the body as locus of experience and action. But this is not as obvious as it sounds. In the ***Philosophy in the Flesh*** George Lakoff and Mark Johnson observe that many metaphors name disembodied minds. Both religious and philosophical traditions do, as we know, conceptualise the soul or spirit as something apart from the body – as a non-substantial or transcendental entity. This illusion is supported by common cases of elation, ecstasy or near-death experiences that seem

to show that soul and spirit are apart things. They argue that this is an illusion that disconnects what is basically connected and that "our very concept of a ***disembodied*** mind arises from ***embodied*** experiences that every one of us has throughout his life" (Lakoff & Johnson 1999, p. 562). They go on to list bodily experiences from which primary metaphors of subject and self arise. They proceed to show how the mind is metaphorically conceived as a person, an object or even a location, with a body, social roles and actions – a veritable topology of the mind.

My proposal that there are bodies on the Internet – and I am not here thinking primarily of bodily representations or avatars – makes sense only if bodily orientedness carries over from the real to the virtual world, so that both worlds become structured according to the same coordinates. Although different in their content, these worlds become similar in their basic topography, described in terms of places and directions we are familiar with, for example streets, stairways and corridors. The individual who sits in front of the computer screen, typically acts in the tacit presence of the room, the house and the locality he or she inhabits.

We may hesitate to use the expression 'located in cyberspace' about the body, because location usually connotes a place where you can physically dwell, and the body does not exist physically on the Internet. 'Home' therefore points 'away from' the Internet and back to the places you are most familiar with, the house and the room that you are working in. But the Internet is a dwelling place. Some Internet nomads actually find themselves better at home in virtual geography than in their physical surroundings, as expressed by one of Sherry Turkle's oft cited respondent, that

> RL [real life] is just one more window … and it's not usually my best one (Turkle 1995, p. 13).

The statement is significant not only for the variety of worlds the respondent moves in but for the window metaphor.

For us the window is indeed the perfect transparent boundary, as anyone who has bumped his or her head into a glass door is familiar with. Turkle's respondent uses a visual metaphor that gives prominence to transparency. The window as a metaphor is related to the ocular metaphors of light that abound in the religious and philosophical literature and express the non-substantial mind's unlimited access to knowledge. But the window also demarcates the inside from the outside of a room. There is a dark ambiguity in the shimmering half-transparent window façades of the brand new corporate buildings erected on the ***Potsdamer Platz*** in Berlin. They both invite the spectator's gaze – and

shut it out. They show both hospitality and a rejection bordering on hostility: the inside keeps its secrets from the prying public. The façade act as the transparent interface that juxtaposes the secure inside and the hostile outside. But it may also be the other way round: for those inside a house the outside may spell freedom from incarceration. For the inside of a house may be as uncanny or sinister as in an Edgar Allan Poe story; or as threatening as the empty corridors and stairways that the heroine Lara Croft searches in PlayStation games. The window is an interface, similar both to the eye and to the body in its interplay with the world.

In ***The Poetics of Space*** Gaston Bachelard argued more than 40 years ago that there is a rivalry between 'house and universe', a dynamic that is expressed in what he called the 'topoanalysis' of 'poetic images'. As one of the strongest poetic images we have, the house is not, he says, an 'inert box', with doors to shut behind you or windows to peer out of. Rather, the inhabited space 'transcends geometrical space' (Bachelard 1964, p. 47). The poetic image allows us to go beyond the geography of the material house and to analyse its topology. He cites Georges Spyridaki, who wrote:

> My house is diaphanous, but it is not of glass. It is more of the nature of vapor. Its walls contract and expand as I desire. At times, I draw them close about me like protective armor … But at others, I let the walls of my home blossom out in their own space, which is infinitely extensible (Georges Spyridaki cited in Bachelard 1964, p. 51).

Yet I would rather keep the glass as my preferred metaphor – or rather metonymy – for the transparency that connects. The title of Turkle's book, ***Life on the Screen***, is a wonderfully apt metaphor for postmodern man's 'glassy' existence! Gaston Bachelard's house is more than a metaphor, for it "constitutes a body of images that give mankind proofs or illusions of stability" (p. 17). The window seems to give only illusions and no proofs – it is the pure transparent interface and as such the metaphor for the immaterial. Bachelard's poetic images, on the other hand, are 'thick' images that carry proofs of the body's concrete existence. The metaphor "He's too big for his pants" implicitly refers to the body and means what it says. Or take the following lines from John Donne's poem 'The Good-Morrow': "My face in thine eye, thine in my appears/ And true plain hearts do in the faces rest". His lines create an extended poetic image that relates the eye, the face and the heart to the wonder of love. These parts of the body occur in well-known metaphors: the eye as the window of the soul, the face as the mirror of the soul and the heart as the expression of truth – in other words, the body as the conduit of emotions and feelings. To call Donne's

poetic lines an illusion may, after all, not be all that bad: for the word illusion is constructed on the Latin ***ludere***, which means to play.

Self and identity are words coined by modernity; they belong to the context of classical ***Bildung***. Virtual reality extends and enriches identity play, but it has not yet created new concepts of self and identity. The reason is, I think, that the concepts and metaphors of the virtual world trade on the traditional notions of self-formation. The idea that the Internet offers a free-play of identities is the result of the 'virtual world fallacy', the false idea that the virtual world is a bodiless space that frees the self for boundless self-creation. The fact seems to be that the coordinates of a centred body configure virtual life, so that the body exists online in its basic topology, that is, its situatedness and orientedness. It seems that Martin Heidegger's statement in ***Building Dwelling Thinking*** is still true:

> To say that mortals ***are*** is to say that ***in dwelling*** they persist through spaces by virtue of their stay among things and locations (Heidegger 1978, p. 335).

Bachelard's poetic images surely go beyond and extend the range and geography of the body coordinates of front–back, left–right etc. Neither Heidegger nor Bachelard could, for obvious reasons, appreciate illusion as the play of computer interfaces. The body that is physically defined in its traditional settings is present in the configuration of cyberspace as well. That seems to give the body not less but more force and reality.

The body and rhythm

The view suggested here has some repercussions on the concept of ***Cyberbildung***. The classical idea of ***Bildung*** put independence in forms of embodied and institutionalised self-creation. A concept of ***Cyberbildung*** takes into consideration that mind is spatial; that it is a body-mind. When we speak of personal identity, that identity is embedded in the coordinates of the body, and in the poetic images and metaphors that involve the body. The body is kinaesthetic, whether it is standing, leaning or crouching; looking, listening or smelling; talking, crying or smiling. Even the smileys that appear in SMS messages attest to the existence of embodied selves. We should, however, be weary of treating either the physical or virtual body as a centre or pivot of experience. The centred body is no doubt the source of corporeal orientation and direction. It is situated in time and space. But it is not an independent point of observation. The body is already embedded in the landscape it

observes. The individual may, of course, identify himself or herself as the person standing on this very spot, as we do as tourists on sightseeing. But that is possible only on account of his or her situatedness in the world. The body is, as I have said before, an object in the world and also the interface between itself and its surroundings. But this is not the whole story. For the body is also fundamentally 'spaced' in its situatedness. As Edward Casey puts it in ***The Fate of Place,***

> ***all*** orientation involves a gearing into a 'spatial level' that is not embedded in one's body proper but in the surrounding world (Casey 1998, p. 234).

In a spatial sense to be at home is not only to sit down in one's armchair or by the computer but also to partake in the ambience of the supporting world.

The body is, on the face of it, bounded by its surroundings, which act as the resources of a person's actions. In ***The Visible and the Invisible*** Merleau-Ponty asked the further question: 'Where are we to put the limit between the body and the world, since the world is flesh?' His radical answer was that the limit is mutually set by the body and the world, as being of the same 'flesh':

> The world seen is not 'in' my body, and my body is not 'in' the visible world ultimately: as flesh applied to a flesh, ***the world neither surrounds nor is surrounded by it*** (Merleau-Ponty 1968, p. 138, my italics).

Merleau-Ponty argued that the body and its surroundings mutually condition each other, and we might add: as both finite and infinite. Bodily presence is not delimited (the word ***unlimited*** should be avoided here) but also beyond itself in the eternal moment when past and future overlap in experience. Merleau-Ponty described the body as embedded in a world in which the boundaries between body and world are not given ontologically. That is to say, it is up to the body and the world together to define their boundaries, which may be seen as a phenomenological version of the dialectical self–world relationship that underpinned classical ***Bildung***. In the digital world these 'definitions' materialise as GUIs, of which the screen is the most obvious. Now the interface does not really define in the literal sense of drawing a boundary. As I have already shown, interfaces are double-edged and negotiable – they "neither surround nor are surrounded". Merleau-Ponty is primarily concerned with the kinaesthetic body – that is you and me in our daily life – that summons the world into situations of desires and satisfactions: the flesh as interface.

In ***A Thousand Plateaus*** Gilles Deleuze and Félix Guattari make another significant move. They describe the interface, not in terms of body, but rather of rhythm. They invoke rhythm as "the transcoded passage from one milieu to another, a communication of milieus, coordination between heterogeneous space-times". They go on to say that in music meter "is dogmatic, but rhythm is critical; it ties together in passing from one milieu to another". And they refer to an earlier book by Bachelard when they add the important qualification that

> rhythm is never on the same plane as that which has rhythm. Action occurs in a milieu, whereas rhythm is located between two milieus, or between intermilieus, on the fence, between night and day, at dusk, ***twilight*** or ***Zwielicht***, Hacceity. To change milieus, taking them as you find them: Such is rhythm. Landing, splashdown, takeoff (Deleuze & Guattari 1988, p. 313f).

Rhythm is, of course, a basic feature of the kinaesthetic body. The film ***Crouching Tiger Hidden Dragon*** is a point in case. The film is from beginning to end a movie of rhythm. Features of ballet, acrobatics and the martial arts combine action with the weightlessness of the body – the body as spirit. The actors run up walls and make somersaults back into courtyards, fly through the treetops in pursuit of each other – the body as transcendence. In the final scenes the hero dies from treacherous poisoning, reminiscent of Shakespeare's Hamlet. What to make of this? We may say that the 'soul' of the film plays itself out in rhythm – rhythm as a moving interface. Rhythm stretches and extends the boundaries of the body to include cultural artefacts that seem to have no connection with the body. Rhythm is the true illusion of bodily play in its diverse cultural expressions. But for Deleuze and Guattari rhythm goes beyond the choreography in dance, the meter in music and the cadence in poems. Their description catches the body, not as the locus of rhythm, but as partaking in the 'twilight', the in-between and transitional that cannot be pinned down to a particular interface like the screen. The two authors radicalise the idea of an interface by pointing to its rhythm, that is, to movement and transformation as a feature of the interface. The interface then includes the feel that the body has for the milieu and atmosphere that it partakes in. An analysis of rhythm may add significantly to the idea of a ***Cyberbildung*** that treats the body as an experiential interface.

Crouching Tiger Hidden Dragon is splendid kitsch that shows how body and rhythm together constitute the body. And it leads to another observation. When, in more mundane cases, we take a walk without having a specific destination but rest in the 'flow' of just

moving ahead, we leave the physical dimensions of space and time behind, and act according to directions given in the course of walking, choosing this path over the other, in what Deleuze and Guattari calls nomadic space.

> There exists a nomadic absolute where 'the absolute' is local, precisely because place is not delimited (Deleuze and Guattari 1988, p. 494).

This is the case when, as other writers have pointed out, the experience of the eternal moment or instant makes time or ***khronos*** collapse into ***topos***, that is, into the sense of place or simply being there. Rhythm sets no limits but is intermediate and marks the crossover from one modus to another – the poetic image of the body as interface. Rhythm describes the inherent movement that informs the house image and the body image as well. These images are conduits of both contradictory and mutually supportive experiences that may be realised in the eternal instant when the past is confirmed in its transition.

The Internet introduces a notion of ***Cyberbildung*** that reconfigures the classical relation between self and the world. The graphic user interface helps us see that the house and the body are not settled substances but interfaces, that is, creative and changing self–world relations. The extended perspective of the body offered by philosophers like Heidegger and Merleau-Ponty makes the picture of the body as an independent object that may be formed, sculpted and manipulated to performance something of an aberration. Descriptions of the body as both emplaced and oriented towards, sedentary and nomadic, bounded and unbound, do indeed retain the difference between the individual and its surroundings. But the difference is not categorical. In a working note written in 1960, Merleau-Ponty said that "the body is not simply a ***de facto*** visible among visibles, it is visible-seeing, or look" (Merleau-Ponty 1968, p. 272). It is that which inaugurates "the ***where*** and the ***when***" or the 'facticity' that "makes the fact be a fact" (p. 140). To agree with this is not to engage in metaphysics. We may take it as a memento for a ***Cyberbildung*** that retains the classical opposition between self and world, but remediates it within the context of the Internet.

Lost bodies?

Let me work towards a conclusion. In the Prologue to the first volume of ***The Rise of the Network Society***, Manuel Castells states that the global network of information and communication creates a "fundamental split between abstract, universal instrumentalism, and his-

torically rooted, particularistic identities". And he goes on and stress – in bold types – the fact that postmodern "societies are increasingly structured around a bipolar opposition between the Net and the Self" (Castells 1996, p. 3). I think that his first statement is generally right as a diagnosis of the current ideology, but not of the facts of the case. His last statement is possibly wrong. If what I have said in this paper is right, the Internet does not necessarily introduce a cleavage between abstract systems and the particular identities. Quite to the contrary, the Internet makes new connections between persons and the systems possible, in a way that may be conducive to ***Bildung***. But then our idea of the self is not confined to free-floating minds, but includes the phenomenology of the body-self. Electronic interfaces oppose – and connect. And they connect because the virtual world repeats the basic configuration of the body in the real world, that is, its situatedness, orientedness and transparency.

Some theorists leave the body behind. Niklas Luhmann is a case in point. In the last impressive, two-volume exposition of his theory, ***Die Gesellschaft der Gesellschaft***, finished just before he died, there are no entries on the word body in its German denotations of ***Körper*** or ***Leib***. It seems that he is not able to entertain the idea that the person is an interface that also includes an embodied person that partakes in a sensed world. He quite rightly says that

> One cannot assign people to functional systems, as if each person belonged only to one system, that is, only to justice, but not to business, to politics but not to the educational system.

Then he draws the wrong conclusion that this

> … leads ultimately to the consequence that one cannot any longer claim that society consists of persons; for persons obviously cannot be accommodated to any part system, that is, to a place in society (Luhmann 1999, p. 744).

If I understand him right he thinks that the idea of a person entails that it be assigned to a location in space. Since autopoetic systems operate as information networks across social arenas we cannot settle the person in location and place. That means a farewell to traditional ways of talking about the person. Luhmann's persons do not have bodies but function as individual points of reference in a larger grid – they are "reference points for self-referential, rational calculation", but not situated in any particular part of society.

Luhmann's functionalism reiterates the abstract space of Newton's physics, even if that space is now occupied by autopoetic sys-

tems. Luhmann would, of course, reject Castells' diagnosis, if only because there is no opposition between the Net and the self when the self does not exist as embodied any longer. In his vocabulary the idea of a ***Cyberbildung*** turns out to be a contradiction in terms, because the idea of an educated person is lost when there are no persons to educate. In this perspective ***Bildung*** in the sense of a self-formation in the encounter between self and other is a Romantic story of self-creation that belongs to a dear but obsolete narrative. When persons are described in terms of autopoetic systems in relation to other 'alien' systems, we can, of course, still talk of the learning processes and change of these systems, but hardly of persons that grow and transform into self-conscious personalities in mutual recognition.

According to the phenomenological approach that I have sketched above, there are no hard and fast walls between belonging to different worlds and being situated. Neither is there an absolute distinction to be drawn between transparent and embodied selves. The idea of an interface as a transparent boundary can be used to describe, not only the screen, but also the house and the body. In Merleau-Ponty's view the self and the world are not things apart because the body partakes in the world. I have tried to show how the body acts by proxy, as it were, on the Internet, through its basic orientedness. The body's presence in cyberspace is corroborated by as diverse works as Lakoff's and Johnson's research on metaphors, Bachelard's topoanalysis of poetic images and Deleuze's and Guattari's descriptions of rhythm. On his own account Luhmann's theory is just one out of several scientific vocabularies for describing modern society – and not the best at that.

A possible account of ***Cyberbildung*** hinges on the idea of the interface in its various meanings. The interface fascinates by its transparent substantiality: it exists both as a boundary and a rhythm, an impossibility that entails its own possibility. The body moves freely in cyberspace, but it is also settled in a location. The interface negotiates between different worlds, but always within the body–self-world context. Just like the window reflects light, the body reflects its own existence in the world through the world itself. By introducing the body and its surroundings as the basic interface there is no split between the Internet and the self. There are, however, constraints in the relation, and I have suggested that a main constraint on the vagaries of self on the Internet is its bodily situatedness. The fact that we are body-subjects makes it all the more fascinating to think of virtuality and the Internet as an opportunity for working out the idea of a ***Cyberbildung***.

References

Bachelard, Gaston (1964): ***The Poetics of Space***. Boston: Beacon Press.

Casey, Edward S (1997): ***The Fate of Place***. Berkeley: University of California Press.

Castells, Manuel (1996): ***The Information Age: Economy, Society and Culture***, ***Vol 1***: ***The Rise of the Network Society***. Oxford: Blackwell.

Deleuze, Gilles & Guattari, Félix (1988): ***A Thousand Plateaus***. London: Athlone Press.

Featherstone, Mike & Burrows, Roger (1995): Cultures of technological embodiment. An introduction. In Mike Featherstone & Roger Burrows eds: ***Cyberspace, Cyberbodies, Cyberpunk,*** pp. 1–21. London: Sage.

Heidegger, Martin (1978): ***Basic Writings.*** London: Routledge.

Husserl, Edmund (1988): ***Cartesian Meditations***. Dordrecht: Martinus Nijhoff.

Lakoff, George & Johnson, Mark (1999): ***Philosophy in the Flesh***. New York: Basic Books.

Luhmann, Niklas (1997): ***Die Gesellschaft der Gesellschaft.*** Frankfurt am Main: Suhrkamp.

Lupton, Deborah (1995): The embodied computer/user. In Mike Featherstone & Roger Burrows eds: ***Cyberspace, Cyberbodies, Cyberpunk,*** pp. 97–113. London: Sage.

Manovich, Lev (2001): ***The Language of the New Media.*** Cambridge, MA: MIT Press.

Merleau-Ponty, Maurice (1962): ***Phenomenology of Perception***. London: Routledge.

Merleau-Ponty, Maurice (1968): ***The Visible and the Invisible***. Evanston: Northwestern University Press.

Poster, Mark (1995): Postmodern virtualities. In Mike Featherstone & Roger Burrows eds: ***Cyberspace, Cyberbodies, Cyberpunk,*** pp. 79–97. London: Sage.

Shneiderman, Ben (1992): ***Designing the User Interface.*** Reading, MA: Addison-Wesley.

Turkle, Shirley (1995): ***Life on the Screen***. New York: Simon & Schuster.

Welsch, Wolfgang (2000): Virtual to begin with? In Mike Sandbothe & Winfried Marotzki eds: ***Subjektivität und Öffentlichkeit,*** pp. 25–61. Köln: Halem.