Interface Fantasy

A Lacanian Cyborg Ontology

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chapter 1

The Question Concerning Technology and Desire

1.1 Fantasy at the Interface

1.1.1 A Freudian view of cyberspace

Cyberspace is the "electronic space" that came into existence during the 1960s through a joining together of various computer networks; it became a broad social phenomenon between the 1980s and early 1990s. The interfaces that lead us into cyberspace prove that one cannot detach technology from desire. William Gibson's classical description of cyberspace as a "consensual hallucination" designates its intimate relationship with desire. Digital technologies promise to transcend familiar reality and to reconnect us to the paradise that reality has taken from us. Down with the detours and delays of reality: let us have instant gratification! With the computer we can connect to porn sites that satisfy sexual wishes, we can be the hero of our own (game) world, and so on.

In many cases the fantasies accompanying computer technologies boil down to the notion that they offer us means to surpass the limits that reality imposes upon us. The standard fantasy about the new worlds opened up by computer technologies considers them as new spaces where all the old limits might be transcended (Chesher 1997, p. 79). They offer to relieve us of the burdens of reality. From a Freudian perspective, this wish-fulfilling aspect of technology functions as the realized fantasies of a hallucination. What we cannot have in reality, we can have via the fantasy screen (of the computer). As a "consensual hallucination," cyberspace would be the utopic, new ideal world.

From a dystopic viewpoint, cyberspace is nothing more than an imaginary illusion: a world of false appearances alienating us from the real world. Nevertheless, a Freudian perspective must question such a sharp distinction between reality and illusion. And this is what Sherry Turkle does. In her 2002 Freud Lecture at the Sigmund Freud Society in Vienna, this prominent Internet (psycho)analyst describes cyberspace as what some have called—following the terminology of Erik Erikson—a "psychosocial moratorium." Cyberspace offers a "time out" from reality, during which people can experiment with their identity. Just as Freud describes fantasizing as a "time out" during reality testing, Turkle interprets cyberspace as such an always-available playground: "Time in cyberspace reworks the notion of moratorium because it may now exist on an always-available 'window'" (Turkle 2002, §4). Yet the idea of a sharp distinction between reality and the fantasy space of cyberspace does not necessarily follow, for she appeals to Erikson in order to suggest that this withdrawal from reality is necessary for personal identity itself: experimentation facilitates the development of a "core self" (Turkle 2002, §4).

Translated into Freudo-Lacanian terminology, Turkle's remarks signify that cyberspace is not merely a fantasy reserve for the pure functioning of the

pleasure principle. It is also a *window* for gaining insight into what actually is the object of desire. As a staging of the drives, it may offer a blindly desiring subject a view of what it wants and what kind of objects respond to that desire. As such, it is the *condition for fantasizing*: only after having a notion of what one wants can one stage the objects in imaginary scenes (Bernet 1996, p. 175). Although the Internet is of course an enormous playground for gaining pleasure from imaginary scenes, Turkle also shifts the attention to a deeper aspect. For a desiring being, fantasy is a vital window for being in the world. In Freudian theory, these two aspects of fantasy as an imaginary screen and a conditional window are closely connected, as I will briefly show by means of Freud's central notion of the lost object.

For Freud the hallucinative experience is a revival of earlier, real experiences. In the case of imbibing food by means of the mother's breast, the real or actual object of the drive (the breast) is lost. Fantasy tries to recover this object, but all it can do is to generate a *substitutive* experience of satisfaction. Although Freud uses fantasy as an "illusory" function that does not take reality into account, we can already discern a constitutive function in fantasy, because it is the recovery of the lost, real object that motivates us to confront external reality. Then fantasy is not solely the opposite of reality but also the (libidinal) motivation of our odyssey through reality.

In her essay on the role of foundational psychical fantasies in our current technological world, Teresa Brennan also touches on the Freudian theme of the subject of desire positing its own unconscious fantasies in the production of objects, as well as in their consumption. She stresses that consumer goods encapsulate foundational fantasies—that is, psychical fantasies operating throughout human history—which we now find expressed in commodities. The desire for instant gratification, the desire to imitate the original, and the desire for the mother are part of an original human condition (Brennan 1993, p. 94). This would imply that we constantly buy the same consumer goods (or are attracted to them) because they express transhistorical fantasies.

In her *Electronic Eros* (1996), Claudia Springer shows that a similar desire, the desire to merge (with technology), permeates many expressions of popular culture. And the work of psychologist, systems analyst, and philosopher Raymond Barglow may support the idea that "constitutive myths" pervade information technologies, as he maintains that they assume many maternal characteristics. As providers of information, they are bounteous mothers of a kind: all-knowing, all-powerful, limitlessly nourishing (Barglow 1994, p. 132). This "mythology" is actually built into technology. For instance, the voice control system in the cockpit of the Eurofighter jet enables the (usually male) pilot to perform tasks using his voice; in return, a computer voice gives him the information he asks for. It is intriguing that this computer voice is female, because the pilots react best to a female voice. Or, as one of the pilots

put it, "Mama knows best." The affective relationship with the computer voice leads to better performances. Another example comes from Clifford Nass, a leading theorist who focuses on the relationship between technology and psychology. In his study of voice user interface design, he discovered, first of all, that people react the same to a synthesized voice as to a natural one. Secondly, he found that fantasy plays an important role in the perception of a computer voice: a "male" computer voice is often perceived as competent and concise, whereas "female" computer voices are believed to be better in communicating on topics such as relationships and love (Nass et al. 2003).

Freudian theory depicting fantasy as what "rules" the formation of the desirable object gives us an awareness of a deep psychological structuration of the world. Much more than we are aware of, fantasy organizes our perception of the world. And technologies actually seem to embody this psychological level. Lacanian theory depicts fantasy as a medium that supports our reality by making it an attractive or engaging process (beyond our "instrumental" involvement): in a crucial passage from *The Four Fundamental Concepts of Psycho-analysis*, Lacan makes a very instructive distinction for understanding our interfacing with technological media. He distinguishes between the English terms "aim" and "goal" in order to "clear up the mystery of the *Ziel-gehemmt*," the drive that attains satisfaction without attaining its goal (Lacan 1998b, p. 179). A partial drive can reach its aim, which is to attain satisfaction by circling around the object, without achieving its goal, the realization of its biological function or the consumption of the object. Rendering Lacan's description of the fantasy object in the case of the oral drive is illustrative: "It is not introduced as the original food, it is introduced from the fact that no food will ever satisfy the oral drive, except by circumventing the eternally lacking object" (ibid., p. 180). Fantasy as a medium that constructs the drive's object can provide satisfaction—and actually does so in most cases—without fulfilling ("natural") needs. According to Lacan, this duplicity is a human characteristic: the drive aims at a *continuation of satisfaction* and not merely at a fulfillment of a need. It is this excess of pleasure that accounts for much of our construction of reality.

In our electronic realities we can find the same functioning of fantasy objects as media that support the reality we live in and provide pleasure. The cell phone, for instance, sustains the construction of a reality of mobile communication. And it is obvious that it does so by providing pleasure (of chatting) and enjoyment (of contemplating the beauty of the latest gadgets). Cyberspace itself would not be worth bothering about without the functioning of fantasy. Online psychotherapy, and online relationships in general, would be uninteresting—and hence would stop—without our (unconsciously) positing "something" in the impressions that we get from the other on the screen (Lacan converts this "thing" into theory as the *object a*: the object that causes

desire and sets desire in motion; fantasy decorates, and designs, this object). The other is more than his screen image. The whole sexual thing on the Internet would stop without its fantasmatic support. For if we simply measured it against "true, face-to-face reality," we would immediately realize that it is not real, and would quit surfing.

Online virtual worlds are also an expression of fantasy, but, as many users attest, they are far from being merely an imaginary illusion: users love them and "live in them"—with all the ambiguities attached to that phrase. Deborah Lupton's description of the inherent antagonism in this love affair of human and computer anticipates the issue of the (human-computer interface as a) fantasy screen that is both opening up and fending off the unrepresentable real dimension of reality:

> The relationship between users and PCs is similar to that between lovers or close friends. An intimate relationship with others involves ambivalence: fear as well as pleasure. As we do with people we feel are close to us, we invest part of ourselves in PCs. We struggle with the pleasures and fears of dependency: to trust is to reap the rewards of security, but it is also to render ourselves vulnerable to risk. Blurring the boundaries between self and other calls up abjection, the fear and horror of the unknown, the indefinable. . . . Computer users, therefore, are both attracted towards the promises of cyberspace, in the utopian freedom from the flesh, its denial of the body, the opportunity to achieve a cyborgian seamlessness and to "connect" with others, but are also threatened by its potential to engulf the self and expose one's vulnerability to the penetration of enemy others. (Lupton 2000, p. 487)

1.1.2 Fantasy as design

As a central theme in the philosophy of technology, design is generally considered to be a process, pattern, or scheme that describes how to realize a practical aim, function, or artifact. It has to take account of two different sorts of constraints (Mitcham 1980, p. 308; Brey 1997). The first is the scientific or technological constraint: it is only possible to create what is technically possible. The second is the "social constraint": the design process has to take account of the social, economic, and cultural demands that are imposed on it (safety regulations, standards, norms, prices, dominant aesthetics, and so on). Design involves both engineers and artists. Whereas efficiency is the ideal of engineering design, beauty is the ideal of artistic design—and beauty is not so much a question of materials and energy as of *form* (Mitcham 1994, p. 229). Interface theorist Steven Johnson expresses the idea that the interface is not so much a matter of engineering and programming tricks as it is about the design of desire. This technological enterprise is basically an artistic matter: interface design might be *the* art form of the twenty-first century (Johnson 1997, p. 213).

The perspective of the technological Eros stresses this role of "ideals" (fantasies) in the process of design. Designing relates directly to the human subject because "designing (from the Latin word *designare*, 'to mark out') . . . is, as it were, reified intention" (Mitcham 1994, p. 200). Design is to a large extent a matter of desire, both on an individual and a collective scale. Hence the manifestation of the technological Eros in design can help to clarify, for example, why people in a specific culture or subculture all try to look the same and love the same gadgets. For example, why did Michael Jackson suffer all his plastic surgery operations, and why does a computer addict sacrifice his relationship by being online all the time? (These examples indicate the difficulty of clearly separating the individual and the transindividual level, for doesn't the cultural context also determine Jackson's fantasy of his "perfect" face?) Technological Eros therefore stresses an element in the list of "social constraints" in the design process that is beyond pragmatic, instrumental, and teleological reason.

In his investigation of electronic technologies, Derrick de Kerckhove gives an equally broad scope to the intermediate status of design. He considers technology, as an extension of our mental and bodily functions, to be an externalization of our inner selves. Design gives a form to these technological extensions of ourselves, and is therefore at the interface of the body and the mind, the material and the cultural, our "inside" and "outside": "Design, as I understand it, is a modulation of the relationship between the human body and the environment as it is modified by technology. Technology comes out of the human body and design makes sense of it . . . mind and body are so intermingled that it is pointless to separate them" (De Kerckhove 1995, p. 156). Therefore a clear distinction between the material and the formal is, in his opinion, impossible. The place where we exist is in *the between* (in the middle, in media), where the content is intermixed with the form (or, in Lacan's theory, truth with fantasy). As a creation of the surface of things, design is "the skin of culture," De Kerckhove says; this description makes clear the immense importance of technological design (or technology as design) for the understanding of our culture and ourselves. As such a "skin of culture," design functions, I claim, as a technological externalization of the function of fantasy that Lacanian theory describes.

When one moves from technology in general via electronic technologies to "immersive technologies" like virtual reality, one can make even stronger claims about the role of design. As virtual reality is entirely based on software activities, it is the closest one can get to "pure" design (De Kerckhove 1995, p. 89). The goal of designing interfaces has always been to immerse the user in the virtual environment of the screen: think for example of the movie theater, with the surrounding screen of the IMAX theater as its apogee. Virtual reality is currently as close as one can get to the design of a "fully realized world" on the screen. It is the most intense experience of designer presence,

the best illusion of an experience of "being there" without mediation: "pure" technological enjoyment—or perhaps in actuality a manufactured enjoyment (see chapter 6).

1.1.3 Designing presence with metaphors

Metaphors play a crucial role in designing the form that digital information takes (Johnson 1997, p. 45). They help us to imagine and represent the information (a visual metaphor like a folder on a desktop) and to make sense of it (a discursive metaphor like "the information superhighway" as a representation of the Internet). Metaphors are means to give form to what does not (yet) have a place in reality "as we know it." They even link the nonrepresentable as such to familiar representations; all speaking about God can thus be said to be metaphorical. The notion of metaphors, for instance in the influential theory of linguist George Lakoff and philosopher Mark Johnson (Lakoff and Johnson 1980), is therefore crucial for the understanding of virtual reality, for virtual environments can be considered objectified metaphors delivered as sensory patterns (Biocca 1997, §1.2). According to Sandy Stone, cyberspace is nothing but a space in which everything, including bodies, exists as something close to a metaphor (Stone 2001, p. 190). And Marshall McLuhan calls the spoken word the first technology by which humans grasped their environment in a new way (an opinion shared by Lacan). The metaphors that intersperse speech hence have a constitutive function. But besides the spoken and the written word, McLuhan argues, optical, mechanical, and electronic technologies have throughout history been "active metaphors" and "translators" between human and world:

> All media are active metaphors in their power to translate experiences into new forms. (McLuhan 1994, p. 57)

> Just as a metaphor transforms and transmits experience, so do the media. (Ibid., p. 59)

Interface metaphors represent data objects that do not have a phenomenal existence. They are, to speak in Kantian terms, of the noumenal dimension. Information design transforms the data objects into something visible or understandable, something meaningful: objects of representation. And this transformation is not completely "objective," because the digitized real world does not possess in itself a structure or form according to which it should appear. For what is the true form of a data object? Is it the way it appears on your computer display, or on mine? And what is the true representation of cyberspace? Is it a huge brain (Pierre Lévy's "Collective Intelligence"), a database, or a medium? And if we digitize a dog into a data object, what would

subsequently be the "essential form" of a dog? A Tamagochi, the meaning of a dog reduced to the exact codes by which it is communicated? And even if objects did have a true form, this form might be impossible to retrieve. For example: whatever amount of information on the Big Bang we may have, it will still be impossible to visualize it in a virtual reality environment in its *true form*, because the event withdraws itself from its (technological) imaging. Platonism, the doctrine of the true form, is hard to maintain in the digital age.

So we should avoid considering cyberspace as an objective fact or objective information. It is a product of human imagination, in which we use known metaphors for a new domain of information and communication. These metaphors inevitably go along with a distortion, misrepresentation, or bias of the domain that they structure, since they describe it as something other than what it is. Lacanian theory incorporates this notion of metaphors by considering distortion as an aspect of human reality itself. Metaphors link the subject to the "original" event. Freud describes this metaphorical structure as one of the two basic mechanisms of the unconscious and calls it "condensation." A representation represents ("condenses") several associative chains and is therefore overdetermined. Several associative elements compose a dream image and other "formations of the unconscious" that therefore do not have a single referent. A character in a dream, for instance, is an "assembly" of traits of different persons. Those "metaphorical formations" do, however, form a link between a person's conscious life and the reality of his unconscious. They represent something of the inaccessible real—just as a dream character may represent, partially, a repressed truth.

Lacan therefore describes the Freudian process of condensation as a metaphorical process (Lacan 1998b, p. 247). By means (or media) of association and composition, there arises a representation of something that does not exist as such. The metaphor is therefore always a substitution: it substitutes a "real presence" that is impossible. And the computer deals with this impossible real, as a machine that can present photorealistic representations of impossible, nonexisting worlds and phenomena (Darley 2000). For Lacan, it is exactly the metaphorical dimension of language that precludes the truth of being (in the metaphysics of presence: the Idea, God, Logos) from being represented in exact language. All of our reality can therefore be said to be metaphorical. We never see "reality as it really is," but always via (conceptual) frameworks. The displays of the computerized world that surround us are new frameworks, in which we design our reality via the metaphorization of data. This metaphorization proceeds along the two basic principles that characterize most computer applications: *selection* and *compositing*.

As they compose the "real thing," we must be careful not to take metaphors literally, though this can be very tempting in case of the (metaphorical) worlds that computers create. George Lakoff explains: "This kind of mistake

happens because, first, people use metaphors unconsciously, and, secondly, because you *must* use metaphor to understand most of what happens in a computer" (Lakoff 1995, p. 128). This is the conundrum we are in: we inevitably "live in metaphors" and at the same time we must avoid the seduction of taking them literally.

1.1.4 Channels of perception: The imagination and the understanding

Data objects do not exist "in the real." The "real" of such an object is, rather, its code, assembled from zeros and ones (see also section 2.3.1). Cyberspace in general is therefore conceivable in this dimension of a reality without "real" objects, by proceeding from Kantian philosophy in which it is the human subject that also constructs the object with his or her imagination and understanding.

Here I want to raise the matter from a Kantian perspective, and start with Frank Biocca's clarification of the functioning of virtual reality: "In immersive VR the whole interface defines the boundaries and shape of the body by defining the boundary between inside and outside, between the part of the VR world that is 'me' and the part that is 'the world.' . . . From coherent patterns of energy impinging on the senses (i.e., the proximal stimulus) the virtual world is divided into 'self' and 'environment'" (Biocca 1997). Computer interfaces, in this case those of immersive virtual reality, stimulate different sensory channels: visual (via head-mounted display), aural (spatial audio), tactile (tactile feedback), and proprioceptive (force feedback and motion display). On the basis of ("real") data, the computer transforms sensations of a virtual world into a mental representation of a reality. The virtual reality interface synthesizes the (chaotic) stimuli, simultaneously causing a coherent perception of a (virtual) reality.

This transformation of (the real of) the computer code into the physical sensations of the computer output is already a "synthesizing" activity that the computer appropriates from the human subject, for whom it is—according to Kant—the most elementary activity in relation to the "object." For Kant, the human subject positions the (sensible) impressions of objects in the dimensions of space and time by means of the (transcendental) *imagination*, just as a television screen synthesizes electronic pulses and displays them as a coherent picture in time and space. As channels of imagination, the interfaces also function in this manner, similar to Lacan's understanding of fantasy—an issue I will address extensively further on in this book (particularly chapter 4). For Lacan, fantasy, or the imaginary order, both *synthesizes* the manifold stimuli originating in internal and external reality "into a number of preformed frameworks," and *anticipates* an ideal unity.

Not just the (transcendental) imagination determines perception. From the perspective of Kantian theory, the interesting point to be made is that

we should not think of perception as preceding the arrangement made by the *understanding*. The conceptual apparatus determines the senses, even before perception occurs. This much, as Horkheimer and Adorno already showed in 1947, both Kant and Hollywood film production know: "Intuitively, Kant foretold what Hollywood consciously put into practice: in the very process of production, images are precensored according to the norm of the understanding which will later govern their apprehension" (Simmons 1995, p. 147).

For Kant, it is what he calls the "anticipation of perception" that must ensure we are dealing with a real object of experience. Now, for the subject of the human-computer interface—for whom the computer is the framework that establishes the appearances—the question is whether a "real" object at the level of experience corresponds to the "codified object." Is the experience that a virtual reality installation provides also good enough to confine reality to it? Or does it fool us (turn us into hallucinating fools) by making us illegitimately apply the category of reality to its simulated experiences? That is, does it lead us into the illusion of presence, by exceeding the limits of (real) experience?

In her "Reflections on Real Presence by a Virtual Person," Carrie Heeter concludes that it is not technology alone that engages the subjective experience of presence. Real presence (here: the experience of "being there") is not only a matter of sensory realism and "real" sensory stimuli. She illustrates this by her visit to the space shuttle *Enterprise*. Despite the total physical realism, she did not particularly feel as if she was there, because her sense of presence was dampened by expectations, lack of familiarity, limited prior experience, and limited cognitive schemas (Heeter 2003, p. 336). Giving a survey of the literature on presence, she suggests that presence is not a static internal state but varies from moment to moment. And in daily life different individuals experience different amounts of presence. Furthermore, there is a difference between numerous moments of moderate presence and peak moments of extreme presence: "Some individuals are probably presence junkies, seeking intensity all the time. Others are the opposite, avoiding being present as much as possible" (Heeter 2003, p. 339). She rejects the dichotomy of perception ("perceptual processing") as presence and conception ("conceptual processing") as absence. Both can evoke presence, as long as they are tied to current sensory stimuli. Cognitive processes such as perception, attention, learning, thought, and affect must be closely tied to current perceptual stimuli in order to generate experiences of presence. So, as Heeter's Space Camp mission illustrates, presence may be lower during a real visit with inadequate conceptual processing (high expectations of what it would be like to be on a space shuttle, no sense of danger, little knowledge of or experience with the shuttle) than during a virtual, simulated visit with better conceptual processing.

The "Kantian" conclusion is that for "real presence" the objects must (also) conform, or pattern themselves, to the human subject. It is not simply sensory realism that takes the measure of presence; presence is the result of the interfacing of the real (stimuli) and the virtual (mind). It is *presence for a subject*.

1.1.5 Mind the gap!

The human subject also determines the appearance of the real object. This is the Kantian revolution that is so important for an understanding of the digital age: the insight that, in psychoanalytic terms, the needs, interests, and desires of the user also determine the way the data object appears on the computer display. Both Kantian philosophy and Freudian psychoanalysis subscribe to the idea that truth cannot be equated—in the modern scientific sense of Descartes—with the exactitude of the representation. Thus, it may already become a little clearer that for Lacan fantasy is the dimension that we must not exclude when we consider the Cartesian ideal of exact representation (see section 3.3.4). Even more, fantasy is actually the "content" of this format of representation. There is a gap between the object and its "exact" representation, and in this gap the (unconscious) functioning of fantasy takes place, as imaginary and metaphorical (trans)formations of data into new forms of reality.

In an uncritical approach, the notion that technologies—from photography to virtual reality—can achieve an unmediated presentation of what they represent, or an "undistorted" relation between subject and object, is still very compelling (Bolter and Grusin 2000, p. 30). For users hardly notice that the "images" they deal with are built up of discontinuous elements. But when one takes a closer look, one must admit that the digital world is discontinuous; it represents by means of discrete units (like the digital clock with its "jumps"). So, as Steven Holzman concludes, there will always be a gap of some sort in any digital representation (Holzman 1998, p. 164).

This discontinuity, however, does not characterize digital representations only. All sign systems have such a gap: they never represent the object as a perfect copy, but always by means of something (words, images, and so on) different from what it represents. Furthermore, in sign systems there are always processes of selection and composition of elements. (For instance in a sentence: which words do I choose, and how do I combine them? Lacan elaborated these processes into the metaphorical and metonymic axes of language.) The two basic principles that guide most computer applications also are selection and composition, as mentioned earlier. In many cases the materials of new media objects are selected from a database of documents. In his analysis of hypertexts, the "texts" that construct the World Wide Web, Espen Aarseth puts this problematic of the part and the whole in a central position. In hypertexts we never reach completion because there are always links that

we haven't investigated yet. Because of this "constitutive leftover," hypertexts are structurally constructed around aporias: "the hypertext aporia prevents us from making sense of the whole because we may not have access to a particular part. Aporia here becomes a trope, an absent pièce de résistance rather than the usual transcendental resistance of the (absent) meaning of a difficult passage" (Aarseth 1997, p. 91).

In the context of a theory of new media, Lacan's basic notion of mediation through the *Other* (alienation) is crucial: the Other is the *reservoir* of signifying elements we use to construct linguistic representations, and the *locus* where speaking takes place (see section 2.2.3). It teaches us that all representations are already discontinuous with "real reality," since they consist of discrete units (the binary oppositions of structural anthropology—high/low, in/out, etc.—or those of digitality—zeros and ones). And with this awareness of the constitutive role of the big Other, one could doubt whether it is the introduction of digital images as such—embroidering on the prior introduction of photographic, film, or television images—that leads to a bigger distrust of their veracity (Simons 2002, pp. 165 and 322). Representation always was to a large extent a matter of selection and composition. Although new media may supply us representations with a strong sense of photorealism, these representations still are a "language" in that they compose an "image" of the object by means of discrete and discontinuous units. This composition gives room to the fantasmatic formation of the object.

It is not without reason that some critics describe reality in the digital era as resembling the psychic reality that psychoanalysis analyzes: they both consist of the compositing of different elements or fragments. An essay called "Digital Desire" stresses this correspondence between digital media and Freud's theory: digital media represent history through fragments, in the form of images, sound bites, and video clips, without revealing the whole in detail (Savage 2000). In this gap Freud posits the functioning of the unconscious, with the psychic reality of fantasy as its core: fantasy "fills in" the gap. Therefore, Freudian theory is an instrument well suited to the analysis of the digital era. One consequence is that one cannot easily use Freudo-Lacanian theory for a romantic criticism of technology, as witnessed especially the 1960s (Mitcham 1994, p. 243). Technology is not alienation from a pretechnological real world.

1.2 Technological Eros

1.2.1 Philosophy of technology: Substantialism and constructivism

Now that I have introduced (digital) technologies from a Freudian point of view, it is useful to discuss the broader scope of philosophies of technology so that the Freudian position becomes more articulate. First of all I will try

to define what technology is. Not a simple task, for there is hardly any consensus on the meaning of the term "technology." However, there is a generally accepted—although not completely homogeneous—understanding of what technology refers to (Mitcham 1980 and 1994). First of all there is the "commonsense" view that identifies technology with particular *artifacts*, such as tools, machines, and computers. The second conception stresses the idea that the fundamental issue of technology is not the objects that are made but the *process* of making and using those objects. It focuses on the invention, design, and public use of technology. A third conception views technology as a kind of *knowledge*, consisting of skills, rules, laws, and theories that teach us how to achieve the technological artifact we desire. The fourth conception of technology relates it to the aims, intentions, desires, and choices of humans as the "users" of technology: technology as *volition*. It is on this most difficult and "hidden" aspect of technology, which considers it as grounded in some human act of the will (Mitcham 1980, p. 316), that I will focus.[1]

Philosophies of technology revolve to a considerable extent around the question of whether humans are autonomous in their use of technology or whether technology is, instead, an autonomous mover in the human world. The substantialist view of technology propagated by its first generation of twentieth-century philosophers—Martin Heidegger, Lewis Mumford, and Jacques Ellul—and later by such thinkers as Neil Postman and Don Ihde holds that technology has a transformative effect on our perception and awareness, on politics and society, and on our culture as a whole. Technology hence profoundly interferes with subjectivity: it is a strong "mediator" that transforms our perception of being. This vision strongly opposes the commonsense view—which is not very common among theoreticians—that technology is a neutral instrument that we can use for all sorts of different goals. This does not mean that the major current in the philosophy of technology is the substantialist one, quite the opposite. New, mostly American philosophers of technology support the view that technology is a (social) construction.

The British thinkers Thomas Hughes and Trevor Pinch, working with their Dutch colleague Wiebe Bijker, laid the foundations of social constructivist theories in *The Social Construction of Technological Systems* (1987). Social constructivism strongly opposes the substantialist view of technology as determining history and society. Such a technological determinism presents technology as a system with inevitable and irresistible social (or other) effects. In "hard determinism" (Levinson 1997, pp. 3–4), technology is an autonomous force that shapes humans and the world and eliminates human autonomy. The "soft" version of technological determinism also holds that technology has a determining influence, but it is *not the only* determining factor. The shape of society, culture, and subjectivity is the result of several forces (economic, military, social), of which technology is only one. Whereas this emphasis on

multicausality involves an overdetermination of an effect by multiple causes, the "soft" version of technological determinism still thinks in a scheme of cause and effect. Social constructivism tries to break out of this scheme.

Although there are different approaches in social constructivism, a common feature is the view of technological development as a contingent process that involves heterogeneous factors. Different actors or relevant social groups play a decisive role in technological change. They are engaged in all sorts of strategies in order to shape technology to their own plans. The directions and goals of technologies therefore depend on the choices and influences of the different social groups that carry out their design and implementation. By stressing the importance of the choices of actors and groups, and by its empirical approach, social constructivism tries to distance itself from the "monolithic" approach of technological determinism, and hence is much more in accord with the current distaste for "grand narratives."

1.2.2 Technology beyond conscious intentions

Social constructivism received important criticism in an influential article by Langdon Winner (1991), who used it as an umbrella term for the body of ideas of a variety of thinkers such as Steve Woolgar, Trevor Pinch, Wiebe Bijker, and Bruno Latour. Winner's critique concerns social constructivism's lack of consideration for the deeper structures that govern technology: it does not pay attention to the power struggles and the political dimensions that underlie the so-called construction of technology by social groups. It also ignores the influence of the broader cultural context on the shaping of technology. Philosophers of technology such as Marx, Mumford, Heidegger, and Ellul, who reflected on the broader patterns of technology, can thus too easily be pushed out as old-fashioned. Social constructivism seems to reduce the reason that permeates technology to its instrumental version. It cannot, I would say, understand technology as a construct of the "diseased animal" (as Nietzsche put it). Furthermore, when it makes the role of social actors in the construction of technology absolute, it seems to tumble into the same trap that it wanted to avoid in the first place: this is the trap of determinism, for it considers everything to be the result of social interaction. It therefore neglects typically human factors, like the meaning that people give to things and the (sometimes strange) reasons and motives they have for performing certain actions—not to speak of the ambivalence toward the openness of the future: the desire for certainty and for the impossible (Nusselder 2008).

According to Winner, social constructivism also disregards the social consequences of technical choice, the social groups that are not included in the construction and the evaluation of technology. I would add to this list the element of nonreflexive intentions: desire. For social constructivism considers the social construction of technology as the outcome of rational choices

and strategies. A simple example might show the limitations of this approach. Was the development of the flying machine solely the result of the rational intentions of the actors and groups that were involved in its production? What about the pioneers of aviation who willingly took the risk of flying the first flying machines, with the chance of crashing right away—was that simply a calculated risk? Probably not. It was also an (unreflected) act, for they did not know what the outcome was going to be.

The question of whether the human "will" is primarily a conscious affair returns in the discussion of technology. This fourth conception of technology, as a kind of willing or volition, is subject to different interpretations. An encyclopedia entry on the philosophy of technology—which commends the value of a social constructivist conception of it—replaces the volitional conception of technology, for instance, with the idea of technology as a social process (Kroes 1998). In this case the conscious intentions of social groups that produce technological artifacts determine the outcome of the process. Unconscious aspects of the human "will" are left out of consideration. This interpretation of technology as a social process thus emphasizes the determination of technology by the rational aims, choices, and preferences of social groups.

Considering technology from the perspective of desire—the term that I will use from now on to specify one domain of volition, namely the Lacanian Eros—apparently entails from the beginning a noninstrumental consideration of technology. Instrumentality strives for an exact knowledge of our intentions during the technological process, while the approach from desire points to the deficient transparency of those intentions. Human intentions are partly unconscious, which is what psychoanalysis takes a close look at. This limitation of self-consciousness is probably not absent with regard to human "use" of technology. The philosopher of technology Ivan Ilich speaks paradoxically of "unintended intentions" (Mitcham 1994, p. 183). And William Mitchell of MIT's Media Lab adds: "Tools are made to accomplish our purposes, and in this sense they represent desires and intentions. We make our tools and our tools make us: by taking up particular tools we accede to desires and we manifest intentions" (Mitchell 1992, p. 59). From the perspective of the technological Eros, technology involves more than the rational use of means. And technology as volition is more than the "conscious" intentions of individuals and social groups.

1.2.3 Technology: From means to media of desire

In philosophical anthropological studies, one considers technology in relation to the human position in and toward nature. The "classical" position holds that humans are defective animals that need technology in order to survive. As deficiencies and shortcomings characterize humans on the biological

plane, technology is a means to substitute for these shortcomings. The essence of technology is then its ability to compensate or substitute for biological or natural needs (Gehlen 1980). This dominant conception of technology defines its meaning completely in terms of our needs: technology is a *means* to transform or manipulate nature in order to fulfill human *needs*. It is a form of teleological or purposeful action that satisfies utilitarian or practical functions and goals. Or, to quote a training institute, technology "begins with a need and ends with a solution."

We must nevertheless ask the question whether technology is something that (instrumentally) helps us to exist in this world, or whether it (substantially) creates a world: is it merely a means or is it a *medium*? Do we use technology only in order to safeguard our biological survival, or do we also apply it in order to transform our environment—and ourselves—according to our *desires*? In order to stress my volitional approach to technology, I mention here that several philosophers of technology make note of this idea of technology as led by a will to transformation. The existentialist analysis of Ortega y Gasset grounds technology in a willed self-realization. Hannah Arendt considers modern technology as an answer to old cultural dreams, as a realization of the desire to leave the earth and its conditions (Mitcham 1980, pp. 243–249). For the French philosopher Jean Brun, "technology grows out of Western ontological aspiration to merge subject and object" (Mitcham 1994, p. 249). Heidegger—both in *Being and Time* (1927) and in his later important discussion of this subject in "The Question Concerning Technology" (1949–1950)—also rejects the common idea of technology as pure means: technology is, instead, a revealing or disclosing of what is. As Carl Mitcham points out: "Although Heidegger does not use the term 'volition' and 'will' frequently, *Being and Time* presents technology as object, knowledge, and activity as fundamentally related to volition" (Mitcham 1994, p. 256).

In the conceptualization of the computer as an instrument, "usability" is the central term: the question is which interface design is most effective in helping the user to perform her job. However, the computer has functioned increasingly as a medium since the design of the graphical user interface (GUI), designed in the 1960s at Xerox PARC. Together with Douglas Engelbart's invention of the mouse, the GUI was successfully introduced by Apple in the 1980s on the Macintosh computer. The graphical user interface gave, for the first time, a spatial dimension to data objects, so that the computer could appear as an *environment* that the user could travel through. With the boom of the Internet in the 1990s, this notion of the computer as a medium became very influential. The crucial difference between the computer as an instrument and as a medium holds for information technologies in general. Technologies often start as instruments, and later on they frequently become media as well. Computer technologies often reach the general public when they are

applicable to communication, marking the transition from information technologies (IT) to information and communication technologies (ICT).

Because the conceptualization of the computer as a medium closely connects to the representation of data objects on all sorts of displays, it may be a useful metaphor for my approach to cyberspace. Although we must not overlook the fact that cyberspace probably is a combination of several different metaphors—both on the level of the producer and that of the user; in design and in reception—the metaphor of the medium has a particular interest when one focuses on the "volitional" aspect in which the computer—unconsciously—creates a world.

1.2.4 Technological Eros and the seduction of the essential copy

In line with many present-day thinkers on information and communication technologies who consider cyberspace as a new medium for the fulfillment of our wildest fantasies, Michael Heim posits the old Platonic Eros, the desire for real presence, as the foundation of our actions in cyberspace (Heim 1993, p. 88). It is the desire to (re)find our Other Half—that which we are missing, what lies beyond the limit of our possibilities—that motivates our use of technology. Thus we can speak of a technological Eros, a term first used by Jakob Hommes in his *Der technische Eros* (1955). Carl Mitcham uses Paul Ricoeur's delineation of three levels of the human will to explain the technological Eros as technological desire, technical motivation or movement, and consent to technology (Mitcham 1994, p. 255). The relationship between technology and Eros is only one of the four "classical" ways to understand what technology is. Therefore, my investigation of the "technological Eros" does not cover the "whole" domain of technology, but is restricted to this aspect that is most intimate to us and therefore the hardest to grasp.

Incorporated in technologies is the age-old desire for presence, of which virtual reality technologies are the latest "material" manifestations. "The goal of virtual reality, presence, is part of an ancient desire to use media for transportation and experience 'physical transcendence' over the space we live in and to experience an 'essential copy' of some distant place, a past experience, or the experience of another person" (Biocca 1997, §5.1.2; also Biocca, Kim, and Levy 1995). Information technologies thus seem to design or create a second, parallel world. Philosophically speaking, this is the technological design of being, of presence. The issue is, however, that many (utopian or idealistic) perspectives consider this parallel world from a Platonic perspective: as a *substantial* world that exists independently of the human subject. Cyberspace, then, is an informational space in which the data are *already present*, and just wait for us to reveal them. This makes cyberspace a realm of immaterial data that exists independently of the computers and networks, of the hardware, the software, and the human wetware. Similarly, Plato thought that the content

of concepts is neutral with regard to the form in which they are represented: concepts (Ideas) exist independently of the knowledge, experience, or imagination of the human user. And in these uncritical perspectives, cyberspace also reproduces the Platonic dualism of body and mind, for they conceive the cybernaut as an immaterial mind that dwells unhindered by its bodily limitations through the data flows of cyberspace. Information and communication technologies seduce the user into thinking that there is a steady contact point between the representation and the things they represent. They make us believe that they represent the real "as it really is."

In semiotic terms, this "metaphysical" paradigm implies that there is something like an immediate relationship between the user and an abstract or medium-independent sign system that puts the user in a direct relationship with the content or concepts that the sign system expresses (Simons 2002, p. 148). From a Lacanian perspective, one could call this the dual, deceptive relationship between user and content. One must note that psychoanalysis recognizes the seduction of such a belief in transparency. And one must also recognize that digital media especially have the power and the aim of achieving such an immediacy (Bolter and Grusin 2000, p. 22). Nevertheless, what is at stake in the era of digital media is the exact analysis of the role of the medium, of the form, in the relationship between user and content—and thus to replace the dual paradigm with a triadic relation between user, sign, and medium.

1.2.5 A desire for simulation?

> Simulation is the ecstasy of the real. (Baudrillard 1988, p. 187)

As technologies are often considered ways to cancel the (sense of) loss, media theorist Peter Weibel therefore describes all technology as psychotechnology:

> Technology helps to fill, to bridge, to overcome the insufficiency emerging from absence. Every form of technology is teletechnology and serves to overcome spatial and temporal distance. However, this victory over distance and time is only a phenomenological aspect of the (tele-) media. The real effect of the media lies in overcoming the mental disturbances (fears, control mechanisms, castration complexes, etc.) caused by distance and time, by all forms of absence, leave, separation, disappearance, interruption, withdrawal or loss. By overcoming or shutting off the negative horizon of absence, the technical media become technologies of care and presence. By visualizing the absent, making it symbolically present, the media also transform the damaging consequences of absence into pleasant ones. (Weibel 1992, p. 75)

With (psycho-)technologies we try to transgress, confront, shift, or reposition our limit(ation)s. Within a Lacanian context, where the real is exactly what withdraws itself from our grasp and therefore poses a limit to ourselves, we cannot confront or reach the real except through a medium. As Weibel states, technologies are indeed media to bridge the gap that separates us from the real: teletechnologies that seek to overcome distances, immersive technologies that seek to close the distinction between the virtual and the real environment. The purpose of a technological medium is hence to obfuscate itself as a medium and to claim a real presence—and to provide enjoyment through this presentation of things on opaque screens. According to Bolter and Grusin this is what contemporary media are preoccupied with: the transparent presentation of the real and the enjoyment of the opacity of media themselves (Bolter and Grusin 2000, p. 21). Hence we may consider the notion of a *desire for simulation*: "Simulation is no longer that of a territory, a referential being or a substance. It is the generation by models of a real without an origin or reality: a hyperreal" (Baudrillard 1988, p. 166).

Two examples, one concerning mechanical technology and one concerning digital technologies, illustrate this thesis that technology seeks—in the end—to replace the real by its "simulated version." The first example is the experience of speed. The car, a technological vehicle that can provide us with this experience, is a frame that allows our experience of reality to change. Thus it allows for a hyperrealistic perspective upon the world, not only in the experience of speed, or in the feeling of autonomy, but also in the new world order that accompanied car use: the car became a new vehicle for the distantiation of the here and now. And as Kaufmann and Smarr show in their *Supercomputing and the Transformation of Science* (1993), supercomputers radicalize this drive in the digital domain: they can simulate things that no human has ever seen yet—molecules or the origin of the universe—or visualize places that are impossible for humans to reach, and hence almost fully detach our outlook from our physical position.

Within a Lacanian context, this dynamic can be translated as the erotic desire that has as its goal a realization of fantasy. Then fantasy, which normally is a vital support of desire, becomes an opaque screen turning the reality of the desiring subject into a lure. For these are the two basic forms of the object of desire:

> But the object of desire, in the usual sense, is either a fantasy that is in reality the *support* of desire, or a lure (Lacan 1998b, p. 186).

We can start to analyze this lure by referring to Freud's analysis of love, and find out that it has a fundamentally narcissistic structure. Fantasy can become so pressing that we take its images—which we love so much as the perfect reflection of ourselves—for real. In media studies one tends to call this striving

a desire for a "fully realized world" on the screen. Baudrillard elaborates on this theme in his theory of postmodern hyperreality in which entertainment, media, information, and communication technologies provide experiences more involving than the scenes of everyday life:

> Information devours its own content. It devours communication and the social. . . . Rather than creating communication, *it exhausts itself in the act of staging communication*. Rather than producing meaning, it exhausts itself in the act of staging meaning. . . . It is useless to ask if it is the loss of communication that produces this escalation in the simulacrum, or whether it is the simulacrum that is there first for dissuasive ends, to short-circuit in advance any possibility of communication (precession of the model that calls an end to the real). Useless to ask which is the first term, there is none, it is a circular process—that of simulation, that of the hyperreal. The hyperreality of communication and of meaning. More real than the real, that is how the real is abolished. Thus not only communication but the social functions in a closed circuit, as a *lure*. (Baudrillard 1994, pp. 80–81)

Considering Baudrillard's work as a description of a realized fantasy in this manner, I agree with Scott Durham's remark that it "may be most usefully read as one articulation of a certain *phantasy* of postmodernity as a totalitarian operational system" (Durham 1993, p. 161).

Media technologies have a peculiar relation to the real as the impossible. On the one hand they virtualize—via the screen (of fantasy)—our subordination to our immediate, real environment. On the other hand they try to restore—on the screen—a sort of virtual immediacy: think, for example, of real-time telecommunications. These technologies seem to be guided by the ideal of eliminating our immersion in the "natural" environment ("natural presence") and restoring an immersion in a virtual environment ("virtual presence"). As human beings we seem to be condemned (or blessed) to exceed the limits of our "natural" position in the world, and hence we try to rediscover the paradisiac enjoyment of immediacy (which was never a reality) "stolen" from us.

So, to formulate a Lacanian perspective in Baudrillardian words, we say that there is a desire for an ecstasy of the real.