

Cyberpunk, Technoculture, and the Post-Biological Self

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Abstract: Ollivier Dyens presents in his article, "Cyberpunk, Technoculture, and the Post-Biological Self," the argument that because of technology's intrusion in our perception and understanding of the world and because of its constant production of impossible images of the human body, today's representation of that same body must be fundamentally re-evaluated. As one can see in works of science fiction -- films and literature alike -- such as *Terminator 2* or *Neuromancer*, the body must now be perceived as a quantum-like pattern whose form and essence depend on the human or machine observer. The human body entangled in technology wavers between life and non-life, between biology and matter, between the finite and the infinite and as the cyberpunk genre clearly illustrate, only a re-inventing of ontology and phenomenology can help us re-acquire our own bodies.

Ollivier DYENS

Cyberpunk, Technoculture, and the Post-Biological Self

I still remember the excitement I felt when I first saw James Cameron's *Terminator 2*. There I was, in the amazing realm of the movie theatre, faced with something I could not truly define, yet that I knew instinctively to be important and influential. Before me, a window was suddenly opened onto a very different world, yet one very much like our own. For the first time in the history of moving images, we, the audience, could no longer distinguish between reality (the film's "normal" images) and deception (the special effects). For all of us, watching in awe, Robert Patrick was truly the T-1000 and he was truly mutating. We could not believe the screen's bright and shiny images, yet it was impossible to deny; the special effects were perfect, deception became a reality.

How real are images? How faithful are they to a world we believe in? Throughout my education, I was taught to embrace the truthfulness of photographic images (usually called "analogical" because of their so-called resemblance to the world). But it was true, analogical images *were* reality; they could be used in court; they could testify about history; they could record the most intimate moments of our lives (often becoming more important than these moments themselves, as Susan Sontag so perceptively noticed twenty years ago); and, most of all, they, like reality, were extremely resistant to deception (just think of those poorly altered photos from communist regimes). Many artists and thinkers considered these images to be an important component of our common social and ontological perception of reality. But in the space of a few years, with the advent of computing technologies, this whole fabric of perception began to crumble. All of a sudden, images would not reflect "our" reality anymore, but were becoming both reflections and actors of a strange and mysterious world made of an entanglement of human beings and machines. I think that the shudder I felt during *Terminator 2* had everything to do with this phenomenon. James Cameron, along with fabulous technicians and artists, had created a true new reality, where some beings *were* both human *and* technological. I was suddenly exploring a new world whose reality was that of beautifully impossible perceptions.

I was witness to a revolution in representation. *Terminator 2* had "materialized" what so many (from Jameson to Gibson) had already recognized. Cameron's achievement was not only to make this transformation visible, but also to make it complete, to blend it perfectly to both the story and its representation. Thanks to a variety of technologies, the story of *Terminator 2* (the physical, social, and psychological transformation of society by machines) and its representation (what we see on the screen) reflect one another perfectly, the masterful use of cinema techniques coalescing both into one perfect sum that seemed to arise from the strange depths of the future. Because of this movie, one could not pretend that our common reality was free of machines and their phenomenology.

Today, several years later, I still consider that day as a turning point. From that time to this, I have studied, either closely or at a distance, representation and its relation to technology. From that moment forward, I have perceived around me the deep changes and profound mutations slipping into human thought and biology because and through machine-made representation. *Terminator 2* tore the body from its *référents*, it deformed and melted it so as to reshape it later. Watching this film, I realized that we could not reassemble the body as we had during preceding paradigm shifts, for we had to account for the body's inherent new ontology: one of liquidity, plasticity, and multiplicity. As *Terminator 2* showed us, the whole ontology of the body had exploded and could not legitimately be reworked, renegotiated and rebuilt from the same foundations. Thanks to this movie, I understood that the body I was raised to believe in -- this unique, stable, intelligent body, this singular body that sheltered me, was disappearing. From its roots a supple, plastic, multiple collective was emerging, a collective immersed in a space and time that I did not yet understand. The body was becoming a science fiction...

The world in which we live is on the edge of a major reconstruction. Many call it paradigmatic because it not only affects us culturally, but physically and biologically as well. A new way of representing the world is about to change the actual structures of that same world. This is what

Terminator 2 allowed me to see. Here, I aim at exploring this phenomenon. Through science fiction texts I examine a *Terminator 2* type representation where signs and objects are no longer in a straight or causal relationship. What the following texts will allow us to see, in fact, is the gradual transformation of this new representation into a genuine "geography." That is, into a landscape made of a primordial soup of machines and humans. In fact, this essay will allow me to show that this new representation is essentially a model of the abyss. Using very specific fictions among other things, I will try to illustrate that a sort of fractalization of the models of the living and the non-living is actually taking place. By this term, I am suggesting a "place" (i.e., a body, a model, a geography, etc.) of several representations at once, a "place" that wavers between the finite and the infinite, that is simultaneously finite and infinite. The model that I propose here is based in some ways on Deleuze and Guattari's egg-body, but it is one with no shell, an egg-body that moves, extends, retracts and continually changes shape -- and *Terminator 2*, where the body is essentially a fractal entanglement, where the body endlessly wavers between several states and several representations at once, is probably the closest example to what I am trying to postulate. The basic question that arises is the following: how do we reconcile our traditional models of the body with the new technological ones? How does one read and understand a model of humanity when human beings no longer produce or control the relationship between signs and *référents*, when signs and *référents* no longer exist within a stable a systematic structure but are shared among diverse unstable configurations (biological, technological, cultural, etc.)? How do we define ourselves when representations of our own bodies become multiple and quantum-like? Many of today's thinkers base our new understanding on a concept of post-biology. Post-biology considers the body as a mosaic of biological, viral, technological, cultural and political dynamics, all meshed into one unstable pattern. In this model, the borderline between organic and non-organic dynamics is quite tenuous and our model of human being is called upon to mingle and to fuse with what was previously considered un-human, a-human. But if representations of the living body are really becoming post-biological, then post-biology cannot simply be a model of a living thing to which technology has been bound. If there is a post-biological model, we could, in fact, only truly examine it if we *ourselves became* (at least in part) *post-biological*. In fact, the post-biological model is a *simulation* of the living no longer having anything to do with an original, fundamental Idea of the living being. Post-biology is a modelling that exists in an entirely different time and space -- *between* matter instead of in it -- one that lies *outside* of organic representation. Post-biology produces entangled, dynamic, and autonomously functioning simulacra.

In this article, I approach these questions and phenomena through the unfolding themes of modern science-fiction. I will use this artistic genre because it allows me to examine to body through the post-biological viewfinder. Furthermore, as Scott Bukatman explains, one cannot ignore today's science-fiction in an era that "sees itself as science fiction" (Bukatman's emphasis). But despite an emphasis on science fiction, this article is less focused on physical modifications than it will be on cognitive ones. When technoculture addresses post-biology, it does so not by questioning physical modifications and alterations (considered inevitable). Rather, it questions the model of human identity and consciousness precisely because physical modifications seem irreversible (how does one define a conscious human being whose body is in continual mutation?). Most of the authors examined here agree that today's body is plastic and liquid, that it has become an egg-body. But is the same true for our minds? How far can the body change without the mind being affected? Can there be several proprietors of the same consciousness? Can one be multiple and unique at the same time? These are essential questions that today's science fiction -- cyberpunk in particular -- will address.

Science-fiction texts will also allow us to see how difficult it has become to define and delineate a living being precisely and scientifically (i.e., as an objectively measurable pattern). In fact, the impact of technology on our perception of life is so great that it prevents the building of any archetype of the human body. So, confronted with the possibilities of *invisible* biological manipulations (i.e., DNA, nanotechnology, implants, prostheses, pace-makers, etc.), only a constant instability between being and could-be, between finite and infinite, between presentation and representation allows us to assemble a useful model of the living body. In truth, as our ability

to measure increases there is also an increase in the instability of even our most time-honoured representations (such as life and death). Because of technology, the models of the world we now create are less and less grounded in human terms. And so it becomes increasingly difficult to define life, intelligence, consciousness, and what it means to be human in a stable way. Faced with this phenomenon, the living body no longer has an absolute identity. It can now be anything at will (i.e., an economic object, a sexual desire, an ideological landscape, a cyborg, a vehicle, etc.). Our new ontology is that of sand dunes, constantly moving and shifting under the winds of representation.

Next, I discuss a specific artistic genre: cyberpunk. I have chosen this particular branch of contemporary science fiction for the three fundamental vectors of analysis it offers. The first vector is the image of the human body itself. The second vector is also that of body images, but it is focused on technologically produced images. The third vector is the new techno-social and political persona of human beings. I will try to examine these phenomena by using art, and specifically the art of science fiction. If I have chosen this literary genre, it is not only because by its very nature, it observes and analyses the impact of technology on society, but also, above all, because it is nothing less than the reflection of our present imaginary. Science fiction operates by projecting into the future the society in which it exists, often magnifying this society's fundamental social issues at the same time. Science fiction acts like a microscope on the society from which it springs. And what cyberpunk proposes of our society, the implosion of the human body, is exactly what I believe to be our present state of being. What is cyberpunk? How can we define this artistic movement? The term itself was used for the first time by Bruce Bethke as the title of a story he published in *Amazing Stories* in November 1984 (Shiner,18). The term was popularized later that same year by a *Washington Post* journalist named Gardner Dozois, in a 30 December 1984 article entitled "Sf in the Eighties" (see Shiner 18). Whereas, when it was coined, this term more precisely defined the works of "new" science-fiction writers such as William Gibson and Bruce Sterling, it has since taken on much wider reach. Although today the term is less popular than it was several years ago it still tends to define a whole section of contemporary art. Cyberpunk art includes films as well as books, visual art and music.

But what exactly are cyberpunks? What do they represent? What is their discourse? These are not simple questions. My jumping-off point is the introduction to the cyberpunk anthology *Mirrorshades* written by Bruce Sterling, the movement's unofficial spokesman: "Technology itself has changed. Not for us the giant steamsnorting wonders of the past: The Hoover Dam, the Empire State Building, the nuclear power plant. Eighties tech sticks to the skin, responds to the touch: the personal computer, the Sony Walkman, the portable telephone, the soft contact lens. Certain central themes spring up repeatedly in cyberpunk. The theme of body invasion: prosthetic limb, implanted circuitry, cosmetic surgery, genetic alteration. The even more powerful theme of brain invasion: brain-computer interfaces, artificial intelligence, neurochemistry -- techniques radically redefining the nature of humanity, the nature of the self. ¼ The cyberpunks, being hybrids themselves, are fascinated by interzones" (Sterling 1986, xii-xiii).

Let me push these definitions by Bruce Sterling and Veronica Hollinger even further. Let us maintain that cyberpunk is not only a representation of the identification of man and machine, that it is not only a discourse on interzones (and on hybridization) but that it is, in fact, an actual manifesto on entanglement. For a cyberpunk, existence can only be understood in a sort of shared multiple territory in which biology, technology, and the cultural all interact. For a cyberpunk, a living being is not defined by its individuality -- that is to say by the materiality of his physical and cognitive borders -- but by its ability to project and multiply himself.

If cyberpunk is a genre, what then are its common narrative themes? Cyberpunk fictions anticipate. They tend to choose a moment in the more or less near future as the site of their narration (maybe fifty to one hundred years from now). A rather typical cyberpunk fiction would illustrate, in this near future, a chaotic society, governed by a swarms of street gangs, multinational corporations and mercenaries living together in a shaky peace in mega-cities whose size is that of a state or a region (Gibson's "Sprawl" for example, is a city that extends from Boston to Atlanta). Generally, a cyberpunk city contains both extreme material poverty and high-

tech apparatus (often in the same place, hence the name cyber/punk). But, for cyberpunks, technology is not the exclusive domain of the dominant classes. On the contrary, cyberpunks perceive technology (transformed or pirated) as basically subversive, always potentially "corruptible" by "the Street" to ends not foreseen by those in power (whomever they may be). For cyberpunks, technology is liberating; it permits one both to survive *and* to gain access to spheres of economic power. Furthermore, the technologies that appear in these fictions are not the expensive, desk-bound symbols of social success. Rather, just as Bruce Sterling explains below, these machines are generally supple, plastic, popular, deeply mingled with the human body, at once "wetware," "software," and "hardware." In this literary genre, technology has begun to melt on and into human beings; it is in the process of "biologization." For cyberpunks, entanglement is seen as a living convergence of both the biological and the technological: "In the future, computers will mutate beyond recognition. Computers won't be intimidating, wire-festooned, high-rise bit-factories swallowing your entire desk. They will tuck under your arm, into your valise, into your kid's backpack. After that, they'll fit into your face, plug into your ear. And after that -- they'll simply melt. They'll become fabric. What does a computer really need? Not glass boxes -- it needs threads -- power wiring, glass fiber-optics, cellular antennas, microcircuitry. These are woven things. Fabric and air and electronic and light. Magic handkerchiefs with global access. You'll wear them around your neck. You'll make tents from them if you want. They will be everywhere, throwaway. Like denim. Like paper. Like a child's kite" (Sterling and Gibson 1993, 1 <<http://www.interesting-people.org/archives/interesting-people/199305/msg00003.html>>).

As technology becomes more biological, cyberpunks are capable of conceiving of information technology (be it computers, artificial intelligence, the world wide web, the internet, etc.) as fundamental and even founding elements of both cultural and biological dynamics. In this artistic genre's novels and films, technology controls the narration, it lies at the core of it, characters are born by and through it -- living, dying and being reborn in it. In the cyberpunk genre, all life incubates in technology.

In these fictions, information technologies and their networks symbolize the matrix (in both its biological and technological meaning), the Grail, the locus of all resolutions. In it breathe redemption, understanding, and fortune. For cyberpunks, technology is truly the post-biological future: "Someday you're gonna come into a room, and you're gonna see this funny-looking thing, a piece of flesh clutching into naked console, and you're gonna stop and stare, because you won't be sure where the flesh stops and the chips and circuit begin. They'll be, like, melted into each other, and some of the console'll be as alive as flesh and some of the flesh'll be as dead as console, and that'll be me. All of that'll be me" (Cadigan 1991, 214 <<http://www.wmin.ac.uk/~fowlerc/patcadigan.html>>). As a consequence of this, the idea of the cyborg -- which I will analyse later on -- *must* emerge within cyberpunk fictions since it portrays perfectly the post-biological entanglement of wetware and hardware.

Aside from their discourse, beyond their political, aesthetic, and technological structures, the cyberpunks lead one to the following thought: We resemble Kafka's Gregor Samsa -- fragmented, multiplied, "schizophrenic" (in the sense of the separation of ego and body) and imploded in a making of a world that we cannot understand in its entirety. There may be a reason (or reasons) for our "metamorphoses," they may mean something, but in the implosion of our actual definitions of life, it is hard (and maybe impossible) to truly apprehend them. Because they are influenced by these ontological desynchronizations and breakdowns, cyberpunk fictions propose *both* a celebration of organic technology and an attack on living flesh. Sexuality is very frequently the cyberpunk expression of this wish, having become little more than pornography and prostitution. For cyberpunks, technology leads *equally* to life *and* to death. It is both utopia and dystopia, surface and abyss. And so, cyberpunk protagonists experience their sexuality outside of all romantic representation. In the majority of cyberpunk works, from Gibson's *Neuromancer* trilogy, and Cadigan's *Synners* and *Mindplayers*, to the films *Lawnmower Man* and *Demolition Man*, it is no longer possible to make love unless one is absorbed in cyberspace, immersed in an antiseptic immateriality totally freed of any links to our species evolutionary needs. Furthermore, in a number of cyberpunk novels, the "normal" body is literally considered to be "a piece of meat." Not

only does it undergo the entropy of the material world, but it also appears too confined to its (organic) space and time to be of any use. The organic body spoken of by cyberpunk authors is a body that is not supple enough to integrate into itself the dynamics necessary to be an effective "player" in the cyberpunk society. The meat-body is a too-human, too biological body, a body that is too easily limited and defined, a body whose only possible future is putrefaction: "-It's a *cheval*. -Very good, class. ¼ A mindless, soulless, sexless shell, genderless as a baby-doll," she said to me -- at me -- whoever she was talking to, it wasn't me. She didn't believe I existed. -- "A crisp new brain without a tenant. A bottle to be filled by one of us, empty brass waiting to be turned into a bullet. A shiny new horse to be offered to the desperate Horseman, in the vain hope that he or she will prefer it over the nearest infantry grunt. A domestic animal bred and broken for one of us to ride" (Bull 101).

For cyberpunks, the body has no biological integrity of its own, being a territory on and in which diverse dynamics coexist. A cyberpunk, therefore, does not see himself as an entity; nor does he see himself as a duality. A cyberpunk sees himself as an incomprehensible multiplicity. For a cyberpunk, the body is a egg-body (in Deleuze's words), that is to say, a complexity of diverse and multiple elements that both warrants a presence in the material universe and dilutes consciousness into an infinite number of dynamics (hence is quantum-like state). In the cyberpunk universe, the body (the whole body) is a schizophrenic construct; its identity is a centerless amalgam of informational systems (such as DNA, viruses, genes, memes, etc.). In the cyberpunk model of the body the homogenous whole is replaced by a supple and permeable mosaic, one whose selfhood is diffuse; the whole is only a series of heterogeneous elements grafted to one-another. This means that the cyberpunk protagonist sees his body as *alien*. For him, the body that he inhabits carries neither *his* essence nor *his* materiality, rather, it plays host to a multiplicity of other, often parasitic, presences (a phenomenon well-illustrated in many science-fiction films, such as the *Alien* trilogy): "He spread his awareness out cautiously. It was like being in many places at once, taking the information that came at the speed of light and working in nanoseconds as matter-of-factly as he had worked in minutes and hours to shape it into something understandable for himself. He was already accustomed to the idea of having multiple awareness and a single concentrated core that were both the essence of self. The old meat organ would not have been able to cope with that kind of reality, but out here he appropriated more capacity the way he once might have exchanged a smaller shirt for a larger one" (Cadigan 1991, 325 <<http://www.wmin.ac.uk/~fowlerc/patcadigan.html>>).

The question of the body is thus essential to all cyberpunk works. What "unity," what form to ascribe to it? What identity must we imagine for it: biological, technological, or cultural? How are we to resolve the schizophrenia inherent in its multiplicity? In short, what intelligibility are we to propose? Cyberpunk fiction evokes an altered existence where living bodies melt into machines and their networks. The structures of societies are of less concern to cyberpunks than the unity of the human being. For a cyberpunk, the human "ego" has social presence only when woven into a multiple body in which technology, "virality" and culture coexist. Yet strangely, while the cyberpunk protagonist perceives his body as a multiplied system, this multiplicity carries with it a return to unity. But this unity is not that of the human being, it is of the techno-organic. In his fragmentation and multiplicity, the cyberpunk discovers that he belongs to a whole in which he is but *one* of the founding elements. What does this say to us? The model of the body proposed here is one *en abime*, a quantum model, a model that is incomprehensible as a whole. Thus, cyberpunks do not claim the disappearance of representation itself, but the impossibility of its global comprehension. We can understand this new model, but we can only do it partially since that model entails a *mise en abime* between the individual and the collective. The physical body still exists, but just as with the egg-body, it exists only as a multiple biological, technical, and cultural construct free of all histories (be they temporal, causal, and/or biological). Just like a bee in the hive, the body is only a piece of the collective behaviors, attitudes and reactions: "Bodiless we swerve into chrome's castle of ice. And we're fast. It feels like we're surfing the crest of an invading program, hanging ten above the seething glitch systems as they mutate. We're sentient patches of oils swept along down corridors of shadow. Somewhere we have bodies, very far away,

in a crowded loft roofed with steel and glass" (Gibson 1986, 173). Thus, what can one say about the human body? What model can one imagine in relation to its schizophrenic and quantum-like structures, what representation can one suggest in relation to its constant *mise en abîme*?

According to Scott Bukatman, Arthur and Marilouise Kroker, Alvin Toffler, and David Cooks, to "exist" socially a human being must become information media (just like a cyberpunk protagonist). This means that one must be able to become a chunk of information, easily carried and spread by technological networks. According to these authors, human beings faced with today's technocultural environments can only define themselves as informational structures: one's identity could then only exist as binary language). Bukatman gives a name to this phenomenon; he calls it *Terminal Identity* (69) (in the equivocal sense of "final," "deadly," and "depot." As in Bukatman's model, in many of today's models of human beings, identity can exist outside of the biological framework and can reside in technological networks. This does not mean that there will be no more bodies (there will be, on the contrary, *more* bodies as the definition of life will take on a multitude of dimensions). It means that these bodies will only be *provisionally* biological. This is not a model of a denatured body, but rather one of an *over-natured* body, i.e., a body whose definition cannot exclude technology (this, of course, is the idea already developed by authors such as Pierre Lévy, Gregory Stock, and Kevin Kelly). Over-naturing is, in a way, the intrusion of the cultural into the model of life. This intrusion proposes a pattern of over-materialization (the body being multiple and plastic, being several bodies [i.e. several forms, several places, several owners] at once). In the terminal identity model, for example, "identity" is projected into several bodies. If it still implodes into the meshes of the network for example, it is no less present in the physical world (although in a different way). In fact, it now exists in greater and greater numbers (for it is now present in living bodies, computer terminals, infospheres, etc.). And it is from this multitude that an entanglement (an over-naturing) is inevitable. An entanglement that produces the cyborg.

Through its "natural" over-materialization, the cyborg questions both the fundamental characteristics of what it means to be human and the boundaries of that same humanity. The cyborg is thus an essential concept, suggesting both a representation adapted to technoculture, and the "end" of organic identity. The idea represented by the cyborg is not simply that of the amalgam or entanglement. The cyborg suggests a fundamental, but certainly definitive change in representation, for if one uses the model of the cyborg, one must then abandon the classic biological model (since the cyborg is founded on the idea of fusion, where biology and technology are inseparable from one another). Using the model of the cyborg, the human becomes an Other. In fact, the concept of the cyborg represents not only biology's leap toward post-biology, but it also represents the irremediable leap of technology towards biology. After the cyborg, "normal" living things are no longer possible. The cyborg is the egg-body, the perfectly and totally entangled body, the body that only the social and cultural consensus can define (since it is impossible, because of the "perfection" of its entanglement, to determine whether it is alive or not, whether it is artificial or natural, human or machine: "The body must become a cyborg to retain its presence in the world, resituated in technological space and refigure in technological terms. Whether this presence represents a continuation, a sacrifice, a transcendence, or a surrender of 'the subject' is not certain" (Bukatman 247). And Jameson: "My implication is that we ourselves, the human subjects who happen into this new space, have not kept pace with that evolution; there has been a mutation in the object unaccompanied as yet by any equivalent mutation in the subject. We do not yet possess the perceptual equipment to match this new hyperspace, as I will call it, in part because our perceptual habits were formed in that older kind of space I have called the space of high modernism. The newer architecture, therefore -- like many of the other cultural products I have evoked in the preceding remarks -- stands as something like an imperative to grow new organs, to expand our sensorium and our body to some new, yet unimaginable, perhaps ultimately impossible, dimensions" (Jameson 1991, 38-39).

The concept of the cyborg presupposes a complexity that surpasses the simple addition of physical or neural prostheses. The cyborg of which we speak here is not a robot "built" of human flesh, it is the model of a being with a fundamentally different kind of life. The cyborg is the

signifier of a definitive mutation. As the cyberpunks have shown, art's representations of human beings are deeply changing. Let us now try to see exactly what these new representations entail. The post-biological model suggests fundamental transformations not only in the representation of the human body but also in that of human identity -- human identity having always been defined, first and foremost, through its biology. In the post-biological model, the basic question to be asked is not that of the biological/ technological entanglement (since, if this entangling is possible, and in several respects it already is, it will take place), but that of the modelling itself. Post-biology is, in a way, the manifestation of quantum representation. What exactly do I mean by that? When Fredric Jameson proposes the transformation of the human body, when he suggests that the body's phenomenology must adapt to new cultural spaces (such as post-modernism), when he insists that it must "grow" new organs, he, in fact, suggests that we must let go of the objectivity of the body. From now on, Jameson tells us, validity belongs only to an unstable construct of the body and of life, a construct that is produced in the shifting collection of dynamics (culture, biology, technology, etc.). The cyborg spoken of by Bukatman, Jameson, and Haraway is in fact a culture-body, i.e., a body constructed out of the impossibility of its objective material definition. It is a weightless, yet moving body, always *both* signs and referents. But even though the body becomes, at once, weightless and plastic, it cannot be ignored. When we examine recent models of the body (including that of the cyberpunks), we realize that the body is an unavoidable concept. All of the fictions we have examined until now have proposed at least *one* body for human beings (either virtual, cyborganic, mechanic, informational, biological, etc.). The body is thus, even in the most over-materialized representations of technoculture, a primeval model of the world.

But it is also important to note here that the body is, simultaneously, the original disappearance of the world: since one can only conceive of it, and technoculture affirms this very clearly, in the *ephemera* of cultural dynamics. An undeniable disjuncture has surfaced here. It is both impossible to negate the body and to objectify it. The post-biological model answers by emphasizing the weightlessness of the body. In post-biology, the body is nothing more than an unstable construct, just as ungraspable as that indefinable something between the hive and the bee. What does this mean? If the body is *always*, and invariably an integral part of all possible models and representation of human beings, and if it is *always* fundamentally ungraspable, then we must bring the following analysis to bear: we are not moving towards a virtual body, but towards a multiplication and an over-modelling of it (the absence of stable and measurable definitions suggests a multiplication of definitions) whose understanding exists only in a quantum-like state (i.e., one's observation of the body is bound to change that same body). Thus, observation becomes a fundamental part of the body's ontology. However, as quantum mechanics tells us, the observation itself can only be partial and can never grasp the phenomenon observed in its entirety. Thus the body itself can only be partial and its shape is always unstable.

Just like Kafka's Gregor Samsa, like Gibson's protagonists, or like Haraway's cyborg, the body does not disappear. On the contrary, it is more and more present but in a constant state of instability. The body does not become any less human and any more technological, but something else that is differently human and technological. It is not a case here of denaturing and/or dehumanizing, but of over-definition: the body is constantly redefined and has several definitions at once, all being produced by an infinite number of observations (it is at once a biological system, an information processor, a vehicle for genetic survival, a maker of machines, etc.). The body, through its entanglement, its fragmentation, its plasticity and its schizophrenia no longer belongs to the individual alone, but is owned, in both its construction and intelligibility, by the technological society (which acts here as the observer). The post-biological body is a body in the abyss between the social and the individual; it is a body that slides and hesitates constantly between society and the individual; it is a body that can only exist in someone's or something's observation of the world. What this illustrates is the profound impact that technoculture has on the definition of the body. The post-biological model is thus less a concept than it is an actual transformation. Consequently, an objective measure of life made without cultural dynamics is no longer possible. Life and the human body are too rapidly and constantly redefined, re-evaluated, deconstructed

then reconstructed by technoculture (acting as the observer) to be able to give an independent and absolute measure of it.

The model of life, it would appear, can only be adequately read as slippage. The questions of where life, intelligence and consciousness begin and end in the infinitely small and the infinitely great (for example, where is the intelligence in a hive?) are questions that will possibly remain, on the scientific level at least, unanswerable. They can only be taken up adequately through a kind of wavering (both this and that, this or that); that is, life can only be understood now through continual changes in definitions and through the impossibility of repeating these definitions exactly (whence its quantum-like characteristic), precisely because technology allows us to examine and to explore these phenomena more and more carefully (the number of possible observations being infinite). As Paul Verhoeven's *Robocop* has shown us quite clearly, it is precisely because it is possible to implant various mechanisms in the human body that it becomes more and more difficult to delimit what is human and what is not. Today, the definition of life is quantum-like and fractal. It wavers between finite and infinite and this wavering prevents us from defining it clearly as a whole (since each definition gives us access to other models). The cultural must now, openly, be part of the human equation since it, alone, can form relatively supple models in instability and multiplicity. It is here of course that such movements as postmodernism, cyberpunk and post-biology turn out to be important for each of them includes in itself an over-defined observer examining an unstable world (science, as the possibility of an objective and repeatable measurement, is obviously not excluded from the equation, but can only be included in it as entangled, synthesized and submitted). Cyberpunk and postmodernism are unleasers of phenomena. It is they who, more and more, sculpt the model of what we are. As Stanislas Lem so eloquently wrote on the last page of *Solaris*, we are entering an age of "cruel miracles." In this age, our body will become as fluid and as liquid as those of Robert Patrick in *Terminator 2*; receptacles of phenomena as diverse as life, representations and machine-made consciousness. Our bodies will take on new forms and new meaning, disassembling, at the same time, what we perceive as being ourselves. The human being is about to disappear....

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