

SUBJECT: A WAR IN HEAVEN

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As a historian of religion, it is extremely obvious to me that the internet is a religious phenomenon. This may not have occurred to everyone who is closer to it than I am. First of all, all technology can be analyzed according to religious principles. When I speak about religion, I am not speaking from the point of view of religion. All technology is a religious phenomenon: Why? Because unless you belong to the human condition, you cannot have technology. What is the human condition? What makes a human being different from an animal? I would say consciousness or self consciousness. One of the symptoms of consciousness, or self consciousness, is technology and it is impossible, structurally or historically, to separate technology from consciousness when we try to imagine what it is to be human. As soon as we see evidence in the archeological record of a Simian or a similar creature that we could identify as human, then the only reason why we do so is because there are some broken stones next to the bones, that look like they may have been intended to be tools. What separates animals from humans is technology. From one point of view, that is religion. Because you cannot have technology unless you can extricate consciousness outside the body. If you cannot understand that consciousness is something which projects outward into the world, you cannot create the prosthesis, the extension of the body, which is technology, be it a broken stone, or a computer. Because there is this intimate relationship between technology and consciousness, technology itself is always threatening to take the place of religion. Technology is always becoming confused with religion—the Marxists used to call this reification. It means making an intuition a “thing,” making it “thingy,” or giving it “thinginess.” If we want to talk about the Greek word *technê*, it would be useful to describe the whole range of prosthesis of consciousness.

But, if we want to talk about technology, then we are moving into different ground. Technology is *technê* plus *logos* in Greek. *Technê*, the technique or the mechanic principle plus the *logos*, or the word. If we are trying to find out what the first technology is, in the strict sense of the word, you would have to answer that it is writing, which adds the mechanic to the word. Therefore, there is no *technê*, but *technologia*. Then we see the process of reification that works immediately here. Writing itself defines words. Words do not define writing, but immediately a paradoxical feedback comes up, where writing defines words and words define things. Logically, it should be the other way around, but we know that language is a double edged sword. As a means of communication, language leaves a great deal to be desired. Heath Bunting said that “communication doesn’t always communicate.” Everyone can understand this immediately: a map is not a territory. As soon as you mistake the word *Budapest* on the map for the city of Budapest, you are in deep trouble. You have got a cognitive problem. If you want to talk about love, or patriotism, or valor, or truth, or communication, or the net, or freedom, or any words like that, which have very few references in the world of thinginess, you have a problem. We reify those concepts and solidify them in writing, in sign systems. Then they influence consciousness as you grow up, as a child learning language. All of these signs are imprinted. Even the alphabet, alphabetic writing, which is supposedly is not free of all images. When you move from the alphabet to binary writing, this is also not free of images. It is a very simple image system, black–white yes–no, but it is still an image system. The computer is still a machine of inscription, it is still a writing machine, in fact for most of you it is just a glorified typewriter. There is going to be a gradual process in the realm of tech-

nology of the reduction of the sign: from the complexity of a representational picture to the abstraction of a binary sign system which apparently no longer contains pictures, although we can see that the pictures are just more deeply buried. The Greek word for symbol, *symbolon*, actually means an object that is broken in half. That is why communication systems are not monodic or unitary, they are always dual or diadic. I prefer to say that all communications are diadic, it involves twoness. There must be a speaker and a hearer, then these relations can be reversed. The breaking of the *symbolon* symbolizes the split in human consciousness itself. A split between the animal intimacy that we can hypothesize as our Simian heritage, and the idea that consciousness and self are two different things. As soon as that split occurs we have a symbolic system at work, where one thing stands for another. The same holds true for all language systems, all musical systems, all dance systems, anything which can possibly communicate on any level whatsoever. These are all symbolic systems. Language is a symbolic system. All computer programs are symbolic systems. It is important to remember that in any symbolic system this split, the doubling of consciousness, the hypothesis of consciousness which is actually prosthesis, obtains something which is outside the body, and which can act in the world. In the history of religion, this desire for lost intimacy, this desire to recapture unified consciousness, is the cause of yet a further split. We see the whole idea of sacrifice that is meant to heal this wound in the cosmic structure. Sacrifice appears very early in human religion, at least as early as agricultural systems in the Neolithic Age, if not sooner, and it is violent. Initially, it probably involves human sacrifice. Whatever is religious is also inherently violent, because it's based on the split. The split consciousness, the act of splitting is violent, and so the act of repairing the split is also violent. In fact, the word religion, *religio*, in Latin, means to relink, which is really the same as the word in Hindi *yogo* which means yoke, as the yoke that connects two oxen. Religion itself, at its very base, is about this relinking of consciousness. It is an attempt to overcome the split of consciousness and to unify what was doubled and make it one. This is a very violent process throughout human

history, and it is not an accident that religions were associated with violence.

Most religions are systems of death consciousness because they posit a radical split between body and spirit, but they are no longer upset about it. They are not interested in reconciling the body and the spirit anymore. They are interested in eliminating one of those factors, the body, and perpetuating the other, the spirit, or mind, or perhaps information. So you have spirit and heaven at the top—and nature, body, and earth at the bottom. It becomes associated with the feminine; the catatonic, the chaotic, the uncultured, the uncultivated. It is associated with tribal societies, with hunting and gathering, with everything primitive, with everything despicable. Mind or spirit, which is now separated from the body, is associated with maleness; with power, with structure, with culture, with civilization, and with religion itself. What is in between is now only a technology of the sacred, the actual workings of religion itself. The ritual, the sacrifice, the priesthood, which is now a completely privileged closed off class; you now have class structure.

We now have the pyramidal structure, we now also have cyberspace. We have the concept of the virtual. Heaven or paradise, the mind principle, separated from the body, becomes cyberspace. Cyberspace is a version, paradoxical, or even a parody, of heaven. It's a place where your body is not present, but your consciousness is. It is a place of immortality, of not being mortal, of having overcome death. There is a view that cyberspace is a salvational reality, that it saves us from our crude, shit-filled, rotting bodies, and that we will transcend into an angelic sphere of pure data where we will download consciousness and never die. If you have read William Gibson, the image is very clear: you have the hacker, who is jacked in, literally jacked into the computer. The body is rotting, but the cyberpersona is clearly immortal. The problem is that what we have been promised is transcendence through technomediation. It is a false transcendence. If we have a god, as in some forms of paganism, that has a material nature, the god is a rebirth. We will call that a eminent form of deity, as opposed to transcendent. What we are being offered in the net is not eminence, not a true eminence, but a false tran-

scendence. It is a dangerous, Gnostic fallacy. Cyberspace is spurious immortality.

This brings me to the point of the military aspect of the net, because the net is actually a war in heaven. What else would the phrase "information war" mean than a war in heaven? A war that would take place in this spurious heaven, this false transcendence of cyberspace. We know that the net originates as a military space. The original ARPAnet was designed in order to avoid the physical disruption that would have been involved in atomic explosion. The net itself is a very Gnostic invention since it transcendentalizes matter in a very rapid and effective way. Basically, we are looking at a war in heaven. Kevin Kelly likes to say that this technology is out of control. This is bullshit, it's not out of control. It's something very different and much more interesting. A brilliant French anthropologist, Pierre Clastres, wrote one book called *Society Against the State*, and another, *The Archeology of Violence*. I follow his thinking very closely on a number of points. He makes a distinction between two kinds of warfare in human history: there is primitive war and classical war. These are not at all the same thing. It cannot even be said that the classical war is a development of the primitive war, it's rather a betrayal of primitive war. If the sacred is violent, then violence is not always negative, unless we believe in pacifism. There are certain kinds of violence which are positive, and primitive warfare is positive in this one sense. Clastres uses the metaphor of centrifugal and centripetal. The centrifugal machine is one that pushes out from the center, and the centripetal machine is one that pulls in toward the center. Clastres believed that this was a chosen path on the part of these societies. Consciously or unconsciously, these societies developed certain social functions to centrifugalize power, they don't want power, they refuse power. They want a society, but they don't want the state. They don't want the centralization of power, they don't want class structure, they don't want economic hierarchy. They want egalitarianism, they want democracy.

Some explanations have given the switch over of the hunting, gathering societies that are egalitarian without exception and do not practice sacrifice, with agricultural societies that are nonegalitarian and almost invariably do practice sacrifice. We are

still living in the neolithic age. We are still basically living in the agricultural-industrial period and we still practice sacrifice. If you don't believe it, come to New York State, where they just reintroduced the death penalty, a symbolic sacrifice. At some point primitive warfare turns into classical warfare, and here is the interesting thing about the net. The net is born much more like a primitive warfare structure than a classical one, because of that strange Gnostic necessity to avoid atomic disintegration. The net suddenly turns into a space in which power is dispersed rather than centralized. They thought this was a brilliant strategy. It turned out that they lost control of the net almost instantly. That recentralization of power is going to have to come from outside the system.

This is my point about Kelly's thesis. That a technology, which is out of control as long as you study only the technology, is nothing new. The postal system is out of control. I can get much better security with snailmail now than I can on the net, that is one of the reasons I still don't own a computer. If somebody proved to me that I can really get top security by using a computer and I can send my evil revolutionary messages everywhere with complete safety, I would do it. All the people I knew in the sixties and seventies who were phone phreaking have moved on to the net. The telephone is so old-fashioned, it is just like hot and cold running water. No one is thinking about it at all, there is no mumbo jumbo in the telephone. There is no magic left in the telephone. The magic is all in the net, so that's what everybody wants to control. Mumbo jumbo is power, and if you control the base of a basic symbolic exchange system, you have power. Those who control the definition of words have power. Those who control the means of communication between you and me have power over both of us. Where is this control going to come from, if the system itself, the technology itself, is out of control. Because it was designed to be out of control, then the control has to come from outside the system. The internet is not heaven, the internet is not paradise. The internet is not safe, in terms of control, simply because as a closed system it represents the decentralization of power structures. That power can just reach in from outside, and that's exactly what the Church of Scientology can do. For

example, the Church of Scientology can kill you, or disperse all your secrets, they can track you to your house and break in and smash your computers. And if you think that the Church of Scientology is powerful, wait until you hear from the U.S. government. And if you think that the U.S. government is a little outdated, and that as John Perry Barlow says, that governments are not the corporate entities ideally designed to control the new technology, then wait until you hear from AT&T, because they are designed to control. It is far worse.

Since 1989, there is not an ideological struggle in the world. The night the Berlin Wall fell, I turned on the television and I heard that the Cold War was over and we won. History itself, which involved the dialectical struggle, according to Hegel, is now over. The Cold War is over and we, the capital, won. There is now only one ideology that disguises itself as nature. Once again we have a false transcendence of bringing together culture and nature, in a totally phony way, where you can establish a more efficient control mechanism. The net can be controlled from outside, through fear, through terror. The net is extremely susceptible to terror, because the net is a religious phenomenon and religion is inherently violent, the sacred is inherently violent, and invariably both are involved in fear, in terror. That's why the net is perfect ground, *Grund*, in German, for the passion play that is going to occur within five years, maybe within the next five minutes. The net can be controlled from outside, and therefore, resistance must be organized from outside.

So far, we've only had virtual resistance, and actually that is no more than a spectacle of resistance. If we don't organize on the basis of politics, and of economy, then the net has no future as a space for human freedom. No future. So far, I don't see that organizing going on. I see that the most brilliant minds that are involved in the net are all involved in cryptography and PGP, and various kinds of mechanisms, which are meant to protect the net from takeover from within the net, but that's not what the danger is coming from. Sooner or later, some body will figure it out and it better be us because if it isn't, then it's going to be AT&T with six hundred channels and a hundred home shopping networks. Or riskier, are those heavy-footed, jack-booted gov-

ernments, or the Church of Scientology. So the net is not heaven, the body must be present. I love Heath Bunting's point that, without the presence of body, this whole thing is just a curious form of metaphysical schlock with cream. Whoever understands the net as religion, whoever understands the problem with body and reembodiment, will have a tremendous edge, or at least gain an edge in the struggle of whether the net remains a space of potential freedom, or whether it doesn't. Whoever can understand this, whoever can understand the reason why the state will be the first to lose control of the net?

I would like to think about the economics for a minute. We see that money is also going to heaven. Billions of billions of billions of billions of billions of whatever units of money are there, floating around in cyberspace. Money is now a purely transcendental principle, it's a symbolic system, it's a *symbolon*, just like any other symbol. It is broken into two halves and has meaning only if the two halves are reunited. That's where money begins, precious metal, which has no inherent value whatsoever. The relationship between gold and silver, from the start, is based on the lunar solar cycle. It is pure symbolism. The first coins were temple souvenirs. This is historically known to numismatics experts studying the history of coinage. The first coins are souvenirs, they are picked up in temples and that coin, that image, becomes valuable as nostalgia. You can take them home and trade one of them for a cow, because it's like mumbo jumbo. It's called JuJu. *Mumbo jumbo* and *JuJu* are African words for mysterious power. The coins themselves, which still have a memorable, *valuata* aspect, are made out of precious metal, which is gradually added to less precious metal. Presume coins are largely symbolic, they could change to paper which represents the coins. Then in 1933, in America, the link between the paper and the precious metal is cut, paper is now floating free. It's a reference without any referent, and we now have purely abstract money, ready to jack in. Ready to ascend to heaven, to the heaven of cyberspace, and that's exactly what's happened. Ninety percent of all commercial transactions are electronic and do not involve any form of paper. They are in a world where imagination and electricity interrelate in some strange and meta-

physical way. Coins become papers become absence. Finally, there is an absence itself, valued as a form of money, in a kind of a reverse alchemy, changing precious metals into nothing.

In this regard, my favorite story is about the alchemist, Paracelsus, who was traveling through Germany and was invited into the court of one of those petty German princes of the fifteenth century, who said, "Oh, Mr. Paracelsus, great to meet you. We've heard so much about you. You're such a great scientist, we'd like to set you up with your own laboratory here." I don't remember the details, but Paracelsus says, "Oh you must set me up in a laboratory! What do you want me to do?" The king says, "Oh, you had this lead into gold thing. This base metal and precious metal experiment...We are very interested in that." Paracelsus says, "Oh, your Majesty, your Majesty, I am just a Puffer. You, your Majesty, you are the real alchemist." "Why?" "This is because all you have to do is give a license to a bank to lend money. That is gold out of nothing." That was in fifteenth century. It took another couple of hundred years for the Bank of England to be established on that basis. Now all banks in the world can lend up to ten times the amount of money that they have in the vault. It's probably just a hard disk somewhere, so you can take ten times nothing and call it a dollar and change it into a dollar. That's alchemy. Whoever understands that money is also religion, will also gain in the struggle. This lecture was meant to be called "Islam and the Net," I should say something about that. First of all, you probably remember that the Iranian Revolution was entirely based on the cassette tape recorder. If you don't know yet, I'm going to tell you. Khomeini would not have held power in Iran without the cassette tape recorder. He was in exile in Iraq and sent recordings of his sermons, which attacked the Shah, to Iran. The tapes were spread around in a network from mosque to mosque and from cassette recorder to cassette recorder. That was the chief weapon of the Iranian Revolution. There was very little blood involved in that revolution. A very serious revolutionary movement was carried out entirely through communications technology. Just think what they can do with the net. Just think what terrorists can do with the net. The net, to answer the questions of our friends from for-

mer Yugoslavia, The net will never reach this world in time. There will always be lag time. The net, the marvelous miracle of communication which might be some utopian reading of the situation, will never reach the other 99 percent of the world in time. The reason that it will never come to save the world, like a miracle, is that terrorists will invade the net. They will be representative of all of the outside, and the outside includes all the countries where the people don't even have telephones. This is all the outside, the outside is all demonic for the inside, and therefore the technology will not be transferred, because that would be asking angels to transfer their technologies to devils. It's not going to happen unless religious power itself is deconstructed or overcome. Because it's religion that has prevented the net from arriving in time to save.

It's a religious problem. We can deconstruct the religious aspect of technology. We can stop reifying technology, and worshipping it. This is a religious paradise, you can't save your soul from technology, unless you know that technology can't save it. An act, even more paradoxically, the process of overcoming, can only be to understand and even more paradoxical, this process of overcoming can be carried out through religious means. In other words, we have to understand the power of the imagination to create values. It is, in fact, through imagination and only through imagination, that values are created. If we understand that, we are free. We, at least as individuals, then are free in some meaningful sense. Maybe not free of incompetence, but in some sense we are free. Communication doesn't communicate. Communication as noise. Communication as cognitive dissonance causes separation. Mediation causes alienation. You can't mediate beyond a certain extent. All forms of communication are mediated, even if I speak with you. It's moving through the air and the molecules of the air are carrying sound to your ears. Simple conversation is already mediated, but you can carry that mediation, you can exacerbate to a point where it becomes alienation, where you are actually violently separated or split from other people. Mediation which becomes alienation is then reproduced in the media, so the television, newspapers, the internet, all forms of communication, as a media, in the usual sense of that word, simply increase alien-

ation, and of course, wherever advertising comes in, it is very easy to see how this happens. It is very easy to understand how the net itself has become a source of horrible alienation, once advertising has taken it over, once the ones in Rubeca have moved in, once Disney and CocaCola have moved in and taken it over. We even have to go back to language itself. We have to work on language, this is the job of the poet, to clarify the language of the tribe, not purify, but to clarify. We still need ideology in some sense, in that we need ideas, and that we need a *logos*, or a word, or an expression of those ideas. I would prefer to end by referring these problems to Mikhail Bahktin, the Russian critic, who uses the word *dialogics*. I like this word because it doesn't bring in any ideological frame. It's a new, fresh word. It means conversation—it means high value relating. We call it dialogics because it sounds like something we haven't thought of before.

To me, it's just a good, old nineteenth-century American word, communicativeness. Communicativeness is not necessarily the same thing as simple communication. It implies warmth, a human pres-

ence, an actual desire, a pleasure, a joy, a jousance, if you like, of communication. Communicativeness is erratic, essentially, and festive. This is what Bahktin wanted us to remember, that the spiritual path of the material, the body of principle, this is something real. The material body itself, is in effect, a symbol. It is a spiritual principle, and that, if you going to overcome the religious problem, which is to split the body off from the mind, forever. What we need more than anything else, is a spirituality *of* the body *for* the body. A re-enchantment of the natural. Re-enchantment means singing, music. I am not proposing any kind of dialectical materialism or reductionism here. Actually, I am interested in a remytholization, in re-enchantment, in magic, in action at a distance. I am interested in technology because it is magical, it is magic, it is action at a distance. What I want to see is this technology used to reenchant nature, and finally, hopefully, to sacrifice the violence of the sacred.

[Transcript of a lecture given at MetaForum II, Budapest, 1995.
Transcribed by Pit Schultz. Edited by Diana McCarty.]

SUBJECT: FROM *FAMA* TO INFORMATION SOCIETY: OF PROPHETS, GODS, AND THE NETTIME SERVER DEMON

FROM: FLORIAN CRAMER

DATE: FRI, 25 SEP 1998 17:28:16 +0200

The concept of information society not only focuses new media prophecies, politics and business. It also seems central to “net criticism” and “net culture” as they are discussed in Nettime. In the archives of the mailing list, “information society” is typically referred to as an either present or emerging reality: a reality to be reassessed with alternative, critical or at least noncorporate visions.

As a social utopia, information society however predates the Internet and its prophets and critics. In the seventeenth century, the Protestant scholars Johann Valentin Andreae, Jan Amos Comenius, and Samuel Hartlib developed a general program to inform mankind. Their project was outlined in Andreae's 1619 pamphlet *Turris Babel* (“The Tower

of Babel”), a dialogical satire on Rosicrucianism. The Rosicrucian reformation of mankind had first been proclaimed five years earlier in the *Fama fraternitatis* among whose anonymous authors had been Andreae himself. He soon had to witness how his fiction took up a life of its own. More than 150 replies appeared until 1619 whose authors sought to get in touch with the hermetic brotherhood. With *Turris Babel*, Andreae joins the debate and mocks the craze he had created. But instead of declaring himself the author of the *Fama*, he brings up seventy-five allegorical protagonists who each pronounce their own opinion about the Rosicrucians. In chapter sixteen, three characters enter the scene, the “reformer,” the “deforma-

tor,” and the “informer.” While the deformer wants to do away with all traditional ties and institutions including church and state, the reformer hopes for their restoration through the Rosicrucians. The informer finally supersedes their debate by demanding to “inform” mankind so that “the divine law will be saved from the deformer’s corruption and the reformer’s eagerness and become the constitution of this world.”

“Information” refers to its Latin root here; it reads as “impregnation,” “shaping,” or “instruction.” The informant is an agent of a new *Christiana societas*, which the final chapter of *Turris Babel* and Andreae’s subsequent writings proclaim. The Rosicrucians give way to the Christian Society, and fama is followed by information, or, education. In the ideal state of this information society, Andreae’s utopian republic, all knowledge is denoted in public mural paintings. The information and impregnation of society follows, one could say, the logic of a push channel. Pedagogics becomes the master discipline of this project because it provides the programming tools. In 1620, Andreae writes his educational treatise *Theophilus*; but it were his disciples and confrères Comenius and Hartlib who succeeded in rewriting pedagogics into a new universal science. With the plans of the *Christiana societas* failing last in England, Andreae’s followers rescue the technologies of their information utopia into public education. Comenius turns the “view houses” of Christianopolis into an *Orbis pictus* (“The World in Pictures”), the first illustrated children’s primer. Until the late eighteenth century, the *Orbis pictus* remains the canonical schoolbook in Europe.

What does the post-Rosicrucian information society have in common with the postmodern information society net prophets and “net critics” describe? Defined against deformation, reformation and fama, Andreae’s information is not only loaded with pedagogics and theology; more than that, its definition is radically performative. It implies that information is only what has an impact, reaching and impregnating its recipients. This notion is surprisingly modern in its affinity to Shannon’s definition of information as anti-redundance. Here, information is not a self-referential plaything. It implies a vertical power relation between informants and the informed, between source and receivers. Infor-

mation comes from the source, it is radically original. To speak originally, the informant must avoid redundant overlapping with the knowledge of the informed; he must speak from a remote place and dwell outside society. Unlike other information societies, Andreae’s *Christiana societas* makes no attempt at concealing this place, but labels it “heaven” and calls the informant “God.”

Andreae’s information society does not inform itself, it is being informed. But is this also the case in contemporary information societies? Can an information society be made a society of informants, instead of a society of the informed? According to the Latin etymology of the word, society is a body of companions (*socii*) who follow (*sequi*) each other. Society thus rests upon smoothed out paths. If smoothing out implies redundancy whereas information translates, according to Andreae and Shannon, as anti-redundance, it follows that information and society are contradictions. Andreae’s Christian information society resolves this contradiction by secluding the informant from itself. A society founded upon its self-information however—that is, a society founded upon radical originality instead of redundances or a remote informant—cannot communicate. It would not be a society.

Perhaps those who speak of information society today don’t use the word *information* in Shannon’s or Andreae’s rigorous sense, but identify “information” with “signs.” As “signs,” “information” would comprehend noise as well as signals, fuzziness as much as focus. But in this case, “information society” would no longer make a difference. It would not describe any departure from the habitual signal-noise economics of “society”; it would exhaust itself in a buzzword. But perhaps the question is not whether “information society” is only a buzzword or whether a self-informing information society would be a contradiction in itself. If one acknowledges that the concept of “information society” has political impact nevertheless, then the more relevant conclusion is that no “information society” which is more than a buzzword can do without transcendental informants.

When presupposing information society as a present or emerging reality, “net criticism” and “net culture” do not only operate with the same theoretical dispositive as net prophecy. They also partici-

pate, nilly-willy, in the political theology inscribed into its very concept. "Net critics" and net prophets coincide where they pretend to do without transcendental informants, but continue to employ them. When Geert Lovink and Pit Schultz presented their concept of "net culture" and "net criticism" in a panel speech for a congress that accompanied Documenta X in summer 1997, they defended "the net" against traditional academia all the while calling upon academics to go online. Given the academic surrounding and sponsorship of the event, the audience interpreted this as undeserved polemics. It failed to recognize that, instead of a university lecture, it had witnessed a perfect re-enactment of the Rosicrucian *Fama*, its bold rhetoric, its general critique of culture and its final appeal to the scholars of the world. The speakers

had furthermore observed the Rosicrucian rules of curing everyone without charging money, wearing innocuous clothing and speaking the local idiom in each country they visit in order to keep their theological mission under the hood.

The next logical step after the *Fama* is Nettime writing itself as a dialogical satire of its own discourse. When the discourse of "net criticism" generates the very critical "net culture" it reflects, and when the discourse of net prophecy generates the very affirmative "net culture" it reflects, and vice versa, it seems as if the "information societies" addressed both in "net prophecy" and "net criticism" are, first of all, self-descriptions. They emerge as romantic symbols: demonic and divine hieroglyphs, shining bright in the rigorous sun of Telechristianopolis.

SUBJECT: THE MANIFESTO OF JANUARY 3, 2000

FROM: BRUCE STERLING <BRUCES@WELL.COM>
DATE: WED, 23 SEP 1998 10:54:04 -0700 (PDT)

The rapidly approaching millennium offers a unique cultural opportunity. After many years of cut-and-paste, appropriation, detournement and, neo-retro ahistoricity, postmodernity is about to end. Immediately after the end of the fin-de-siècle, there will be a sudden and intense demand for genuine novelty.

I suspect that a group that can offer a coherent, thoughtful and novel cultural manifesto on the target date of January 3, 2000, has a profound opportunity to affect the zeitgeist. (On January 1, everyone will be too hung over to read manifestos; on January 2, nobody's computers will work. So naturally the target date must be January 3.) In this preliminary document, I would like to offer a few thoughts on the possible contents of such a manifesto. The central issue as the new millennium dawns is technocultural. There are of course other, more traditional, better-developed issues for humankind. Cranky fundamentalism festers here and there; the left is out of ideas while the right is delusional; income disparities have become absurdly huge;

these things are obvious to all. However, the human race has repeatedly proven that we can prosper cheerfully with ludicrous, corrupt, and demeaning forms of religion, politics, and commerce. By stark contrast, no civilization can survive the physical destruction of its resource base. It is very clear that the material infrastructure of the twentieth century is not sustainable. This is the issue at hand.

We have a worldwide environmental problem. This is a truism. But the unprecedentedly severe and peculiar weather of the late nineties makes it clear that this problem is growing acute. Global warming has been a lively part of scientific discussion since at least the sixties, but global warming is a quotidian reality now. Climate change is shrouding the globe in clouds of burning rainforest and knocking points off the GNP of China. Everyone can offer a weird weather anecdote now; for instance, I spent a week this summer watching the sky turn gray with fumes from the blazing forests of Chiapas. The situation has been visibly worsening,

and will get worse yet, possibly very much worse. Society has simply been unable to summon the political or economic will to deal successfully with this problem by using twentieth-century methods. That is because CO₂ emission is not centrally a political or economic problem. It is a design and engineering problem. It is a cultural problem and a problem of artistic sensibility.

New and radical approaches are in order. These approaches should be originated, gathered, marshaled into an across-the-board cultural program, and publicly declared—on January 3rd.

Global warming is a profound opportunity for the twenty-first-century culture industry. National governments lack the power and the will to impose dirigiste solutions to the emission of carbon dioxide. Dirigiste solutions would probably not work anyway. It is unlikely that many of us could tolerate living in a carbon-dioxide Ration State. It would mean that almost every conceivable human activity would have to be licensed by energy commissars.

Industry will not reform its energy base. On the contrary, when it comes to CO₂ legislation, industry will form pressure groups and throw as much sand as possible into the fragile political wheels. Industry will use obscurantist tactics that will mimic those of American right-wing anti-evolution forces—we will be told that global warming is merely a “theory,” even when our homes are on fire. Industry is too stupid to see planetary survival as a profit opportunity. But industry is more than clever enough to sabotage government regulation, especially when globalized industry can play one government off against the next.

With business hopeless and government stymied, we are basically left with cultural activism. The tools at hand are art, design, engineering, and basic science: human artifice, cultural and technical innovation. Granted, these may not seem particularly likely sources of a serious and successful effort to save the world. This is largely because, during the twentieth century, government and industry swelled to such tremendous high-modernist proportions that these other enterprises exist mostly in shrunken subcultural niches.

However, this doesn't have to be the case. With government crippled and industry brain-dead to any conceivable moral appeal, the future of decen-

tered, autonomous cultural networks looks very bright. There has never been an opportunity to spread new ideas and new techniques with the alacrity that they can spread now. Human energy must turn in some direction. People will run from frustration and toward any apparent source of daylight. As the planet's levees continue to break, people will run much faster and with considerably more conviction.

It's a question of tactics. Civil society does not respond at all well to moralistic scolding. There are small minority groups here and there who are perfectly aware that it is immoral to harm the lives of coming generations by massive consumption now: deep Greens, Amish, people practicing voluntary simplicity, Gandhian ashrams, and so forth. These public-spirited voluntarists are not the problem. But they're not the solution either, because most human beings won't volunteer to live like they do. Nor can people be forced to live that way through legal prescription, because those in command of society's energy resources will immediately game and neutralize any system of legal regulation. However, contemporary civil society can be led anywhere that looks attractive, glamorous, and seductive.

The task at hand is therefore basically an act of social engineering. Society must become Green, and it must be a variety of Green that society will eagerly consume. What is required is not a natural Green, or a spiritual Green, or a primitivist Green, or a blood-and-soil romantic Green.

These flavors of Green have been tried, and have proven to have insufficient appeal. We can regret this failure if we like. If the semiforgotten energy crisis of the seventies had provoked a wiser and more energetic response, we would not now be facing a weather crisis. But the past's well-meaning attempts were insufficient, and are now part of the legacy of a dying century.

The world needs a new, unnatural, seductive, mediated, glamorous Green. A Viridian Green, if you will.

The best chance for progress is to convince the twenty-first century that the twentieth century's industrial base was crass, gauche, and filthy. This approach will work because it is based in the truth. The twentieth century lived in filth. It was much

like the eighteenth century before the advent of germ theory, stricken by septic cankers whose origins were shrouded in superstition and miasma. The truth about our physical existence must be shown to people. It must be demonstrated repeatedly and everywhere.

The central target for this social engineering effort must be the people who are responsible for emitting the most CO₂. The people we must strive to affect are the ultrarich. The rentiers, the virtual class, the captains of industry; and, to a lesser extent, the dwindling middle classes. The poor will continue to suffer. There is clearly no pressing reason for most human beings to live as badly and as squalidly as they do. But the poor do not emit much carbon dioxide, so our efforts on their behalf can only be tangential.

Unlike the modernist art movements of the twentieth century, a Viridian culture-industry movement cannot be concerned with challenging people's aesthetic preconceptions. We do not have the nineteenth-century luxury of shocking the bourgeoisie. That activity, enjoyable and time-honored though it is, will not get that poison out of our air. We are attempting to survive by causing the wealthy and the bourgeoisie to willingly live in a new way.

We cannot make them do it, but if we focussed our efforts, we would have every prospect of luring them into it.

What is culturally required at the dawn of the new millennium is a genuine avant-garde, in the sense of a cultural elite with an advanced sensibility not yet shared by most people, who are creating a new awareness requiring a new mode of life. The task of this avant-garde is to design a stable and sustainable physical economy in which the wealthy and powerful will prefer to live. Mao suits for the masses are not on the Viridian agenda. Couture is on the agenda. We need a form of Green high fashion so appallingly seductive and glamorous that it can literally save people's lives. We have to gratify people's desires much better than the current system does. We have to reveal to people the many desires they have that the current system is not fulfilling. Rather than marshalling themselves for inhuman effort and grim sacrifice, people have to sink into our twenty-first century with a sigh of profound relief. Allow me to speak hypothetically now, as if this

avant-garde actually existed, although, as we all know, it cannot possibly come into being until January 3, 2000. Let's discuss our tactics. I have a few cogent suggestions to offer.

We can increase our chances of success by rapidly developing and expanding the postmodern culture industry. Genuine "culture" has "art" and "thought," while the culture industry merely peddles images and information.

I know this. I am fully aware of the many troubling drawbacks of this situation, but on mature consideration, I think that the culture industry has many profound advantages over the twentieth century's physically poisonous smokestack industries. Also, as digital technologists, thinkers, writers, designers, cultural critics, *und so weiter*, we Viridians suspect that the rise of the culture industry is bound to increase our own immediate power and influence vis-à-vis, say, coal mining executives. This may not be an entirely good thing. However, we believe we will do the world less immediate damage than they are doing.

We therefore loudly demand that the culture industry be favored as a suitably twenty-first century industrial enterprise. Luckily the trend is already very much with us here, but we must go further; we believe in Fordism in the culture industry. This means, by necessity, leisure. Large amounts of leisure are required to appreciate and consume cultural-industrial products such as movies, software, semifunctional streaming media, and so on. Time spent at more traditional forms of work unfairly lures away the consumers of the culture industry, and therefore poses a menace to our postindustrial economic underpinnings.

"Work" requires that people's attention be devoted to other, older, less attractive industries. "Leisure" means they are paying attention and money to us.

We therefore demand much more leisure for everyone. Leisure for the unemployed, while copious, is not the kind of "leisure" that increases our profits. We specifically demand intensive leisure for well-educated, well-heeled people. These are the people who are best able to appreciate and consume truly capital-intensive cultural products. We Viridians suspect that it would require very little effort to make people work much less. Entirely

too much effort is being spent working. We very much doubt that there is anything being done in metal-bending industry today that can justify wrecking the atmosphere. We need to burn the planetary candle at one end only (and, in daylight, not at all).

As much time as possible should be spent consuming immaterial products. A global population where the vast majority spend their time sitting still and staring into screens is a splendid society for our purposes. Their screens should be beautifully designed and their surroundings energy-efficient. The planet will benefit for everyone who clicks a mouse instead of shoveling coal or taking an axe and a plow to a rainforest.

The tourist industry is now the number one industry on the planet. Tourists consume large amounts of prepackaged culture. We believe tourism to be a profoundly healthy development. We feel we must strongly resist the retrograde and unprofitable urge to make migrants and migration illegal.

We believe that the movement of human beings across national boundaries and under the aegis of foreign governments is basically a design problem. If guest workers, refugees, pleasure travelers, and so forth were all electronically tracked via satellite or cell repeaters, the artificial division between jet setters and refugees would soon cease to exist. Foreigners are feared not merely because they are foreign, but because they are unknown, unidentified, and apparently out of local social control.

In the next century, foreigners need be none of these things. Along with their ubiquitous credit cards and passports, they could carry their entire personal histories. They could carry devices establishing proof of their personal bona fides that would be immediately obvious to anyone in any language. A better designed society would accommodate this kind of human solidarity, rather than pandering to the imagined security needs of land-based national regimes.

We believe that it should be a general new design principle to add information to a problem, as opposed to countering it with physical resources (in the case of migrants, steel bars, and barbed wire). Electronic tracking seems a promising example. While the threat to privacy and anonymity from electronic parole is obviously severe, there is nothing

quite so dreadful and threatening as a septic refugee camp. We consider this a matter of some urgency. We believe it to be very likely that massive evacuations will occur in the next few decades as a matter of course, not merely in the disadvantaged Third World, but possibly in areas such as a new American Dust Bowl. Wise investments in electronic tourist management would be well repaid in stitching the fraying fabric of a weather-disrupted civilization.

For instance, we would expect to see one of the first acts of twenty-first-century disaster management to be sowing an area with air-dropped and satellite-tracked cellphones. We believe that such a tracking and display system could be designed so that it would not be perceived as a threat, but rather as a jet-setter's prestige item, something like a portable personal webpage. We believe such devices should be designed first for the rich. The poor need them worse, but if these devices were developed and given to the poor by socialist fiat, this would be (probably correctly) suspected as being the first step toward police roundup and a death camp.

Replacing natural resources with information is a natural area for twenty-first-century design, because it is an arena for human ingenuity that was technically closed to all previous centuries. We see considerable promise in this approach. It can be both cheap and glamorous.

Environmental awareness is currently an annoying burden to the consumer, who must spend his and her time gazing at plastic recycling labels, washing the garbage, and so on. Better information environments can make the invisible visible, however, and this can lead to a swift re-evaluation of previously invisible public ills.

If one had, for instance, a pair of computerized designer sunglasses that revealed the unspeakable swirl of airborne combustion products over the typical autobahn, it would be immediately obvious that clean air is a luxury. Infrasound, ultrasound, and sound pollution monitors would make silence a luxury. Monitor taps with intelligent water analysis in real-time would make pure water a luxury. Lack of mutagens in one's home would become a luxury.

Freedom from interruption and time to think is a luxury; personal attention is luxury; genuine

neighborhood security is also very much to be valued. Social attitudes can and should be changed by the addition of cogent information to situations where invisible costs have long been silently exported into the environment. Make the invisible visible. Don't sell warnings. Sell awareness.

The fact that we are living in an unprecedentedly old society, a society top-heavy with the aged, offers great opportunity. Long-term thinking is a useful and worthwhile effort well suited to the proclivities of old people.

Clearly if our efforts do not work for old people (a large and growing fraction of the G7 populace) then they will not work at all. Old people tend to be generous, they sometimes have time on their hands. Electronically connected, garrulous oldsters might have a great deal to offer in the way of managing the copious unpaid scutwork of electronic civil society. We like the idea of being a radical art movement that specializes in recruiting the old.

Ignoring long-term consequences is something we all tend to do; but promulgating dangerous falsehoods for short-term economic gain is exceedingly wicked and stupid. If environmental catastrophe strikes because of CO2 emissions, then organizations like the anti-green Global Climate Coalition will be guilty of negligent genocide. Nobody has ever been guilty of this novel crime before, but if it happens, it will certainly be a crime of very great magnitude. At this moment, the GCC and their political and economic allies are, at best, engaged in a risky gamble with the lives of billions. If the climate spins out of control, the twenty-first century may become a very evil place indeed.

The consequences should be faced directly. If several million people starve to death because, for instance, repeated El Niño events have disrupted major global harvests for years on end, then there will be a catastrophe. There will be enormous political and military pressures for justice and an accounting.

We surmise that the best solution in this scenario would be something like the Czech lustration and the South African truth commissions. The groundwork for this process should begin now. The alternatives are not promising: a Beirut scenario of endless ulcerous and semicontained

social breakdown; a Yugoslav scenario of climate-based ethnic cleansing and lebensraum; a Red Terror where violent panic-stricken masses seek bloody vengeance against industrialism. Most likely of all is a White Terror, where angry chaos in the climatically disrupted Third World is ruthlessly put down by remote control by the G7's cybernetic military. It is very likely under this last scenario that the West's gluttonous consumption habits will be studiously overlooked, and the blame laid entirely on the Third World's exploding populations. (The weather's savage vagaries will presumably be blamed on some handy Lysenkoist scapegoat such as Jews or unnatural homosexual activities.)

With the Czech lustration and the South African truth commissions, the late twentieth century has given us a mechanism by which societies that have drifted into dysfunctional madness can be put right. We expect no less for future malefactors whose sly defense of an indefensible status quo may lead to the deaths of millions of people, who derived little benefit from their actions and were never given any voice in their decisions. We recommend that dossiers be compiled now, for the sake of future international courts of justice. We think this work should be done quite openly, in a spirit of civic duty. Those who are risking the lives of others should be made aware that this is one particular risk that will be focused specifically and personally on them.

While it is politically helpful to have a polarized and personalized enemy class, there is nothing particularly new about this political tactic. Revanchist sentiment is all very well, but survival will require a much larger vision. This must become the work of many people in many fields of labor, ignoring traditional boundaries of discipline and ideology to unite in a single practical goal—climate.

A brief sketch may help establish some parameters. Here I conclude with a set of general cultural changes that a Viridian movement would likely promulgate in specific sectors of society. For the sake of brevity, these suggestions come in three parts. *Today* is the situation as it exists now. *What we want* is the situation as we would like to see it. *The trend* the way the situation will probably develop if it follows contemporary trends without any intelligent intervention.

THE MEDIA

Today: Publishing and broadcasting cartels surrounded by a haze of poorly financed subcultural microchannels.

What we want: More bandwidth for civil society, multicultural variety, and better-designed systems of popular many-to-many communication, in multiple languages through multiple channels.

The trend: A spy-heavy, commercial internet. A Yankee entertainment complex that entirely obliterates many non-Anglophone cultures.

THE MILITARY

Today: G7 Hegemony backed by the U.S. military.

What we want: A wider and deeper majority hegemony with a military that can deter adventurism, but specializes in meeting the immediate crises through civil engineering, public health and disaster relief.

The trend: Nuclear and biological proliferation among minor powers.

BUSINESS

Today: Currency traders rule banking system by fiat; extreme instability in markets; capital flight but no labor mobility; unsustainable energy base.

What we want: Nonmaterial industries; vastly increased leisure; vastly increased labor mobility; sustainable energy and resources.

The trend: Commodity totalitarianism, crony capitalism, criminalized banking systems, sweatshops.

INDUSTRIAL DESIGN

Today: Very rapid model obsolescence, intense effort in packaging; CAD/CAM.

What we want: Intensely glamorous environmentally sound products; entirely new objects of entirely new materials; replacing material substance with information; a new relationship between the cybernetic and the material.

The trend: two design worlds for rich and poor consumers; a varnish on barbarism.

GENDER ISSUES

Today: More commercial work required of women; social problems exported into family life as invisible costs.

What we want: Declining birth rates, declining birth defects, less work for anyone, lavish support for any-

one willing to drop out of industry and consume less.

The trend: More women in prison; fundamentalist and ethnic-separatist ideologies that target women specifically.

ENTERTAINMENT

Today: large-scale American special-effects spectacle supported by huge casts and multi-million-dollar tie-in enterprises.

What we want: Glamour and drama; avant-garde adventurism; a borderless culture industry bent on Green social engineering.

The trend: Annihilation of serious culture except in a few non-Anglophone societies.

INTERNATIONAL JUSTICE

Today: Dysfunctional but gamely persistent war crimes tribunals.

What we want: Environmental Crime tribunals.

The trend: justice for sale; intensified drug war.

EMPLOYMENT

Today: MacJobs, burn-out track, massive structural unemployment in Europe.

What we want: Less work with no stigma; radically expanded leisure; compulsory leisure for workaholics; guaranteed support for people consuming less resources; new forms of survival entirely outside the conventional economy.

The Trend: Increased class division; massive income disparity; surplus flesh and virtual class.

EDUCATION

Today: Failing public-supported schools.

What we want: Intellectual freedom, instant cheap access to information, better taste, a more advanced aesthetic, autonomous research collectives, lifelong education, and dignity and pleasure for the very large segment of the human population who are and will forever be basically illiterate and innumerate.

The trend: Children are raw blobs of potential revenue-generating machinery; universities exist to supply middle-management.

PUBLIC HEALTH

Today: General success; worrying chronic trends in AIDS, tuberculosis, antibiotic resistance; massive mortality in nonindustrial world.

What we want: Unprecedentedly healthy old people; plagues exterminated worldwide; sophisticated treatment of microbes; artificial food.

The trend: Massive dieback in Third World, septic poor quarantined from nervous rich in G7 countries, return of nineteenth-century sepsis, world's fattest and most substance-dependent populations.

SCIENCE

Today: Basic science sacrificed for immediate commercial gain; malaise in academe; bureaucratic overhead in government support.

What we want: Procedural rigor, intellectual honesty, reproducible results; peer review, block grants, massively increased research funding, massively reduced procedural overhead; genius grants; single-author

papers; abandonment of passive construction and the third person plural; "Science" reformed so as to lose its Platonic and crypto-Christian elements as the "pure" pursuit of disembodied male minds; armistice in Science wars.

The trend: "Big Science" dwindles into short-term industrial research or military applications; "scientists" as a class forced to share imperilled, marginal condition of English professors and French deconstructionists.

I would like to conclude by suggesting some specific areas for immediate artistic work. I see these as crying public needs that should be met by bravura displays of raw ingenuity. But there isn't time for that. Not just yet.

SUBJECT: THE GREAT TIME SWINDLE! EUROPEAN HISTORY A FAKE! A PATCH FOR THE MILLENIUM BUG PROBLEM?

FROM: EL IBLIS SHAH <ELIBLIS@TO.OR.AT>
DATE: TUE, 04 AUG 1998 16:52:51 +0100

There has been quite some media attention in German-speaking countries on discoveries of large scale medieval forgeries of scriptures, official documents and codices. Especially in twelfth-century Europe they were widely used as instruments of political legitimization and psychological propaganda. A large amount of "anticipatory" forgery raised questions: documents that were supposedly faked in the dark ages (sixth–ninth century) but with too many details on later events to be explained as self-fulfilling prophecies. A cultural time-warp based on symbol manipulation?

A recent book on "The Invention of the Middle Ages, or the greatest forgery of time in History" (1) is widely discussed and has made it to the circuit of cultural magazine formats on TV (H. Illig, *Das Erfundene Mittelalter die grosse Zeitfaelschung der*

Geschichte, Düsseldorf, 1996 <<http://home.ivm.de/~Guenter/illig.html>>). The controversial thesis of this publication claims that the dark ages were so dark as to be practically non-existent. Especially for the period between 611–914, there is no hard evidence that anything ever happened within that time. According to the author, the assumption of an invented time is supported by the fact that the Gregorian calendar reform in the sixteenth century only corrected ten days, instead of the necessary twelve, seven, or thirteen days for the three centuries in question.

Those of us who felt a deep unease about the new millenium can cheer up—according to this research we are just about to enter the eighteenth century, its approximately 1695.

In our fast-paced time the accumulated wealth

of an extra three hundred years on a time-bank could prove extremely valuable. This is not only an instant cure for Millenium Madness, but also a simple solution for the Millenium Bug in computer operating systems.

At the center of research is Charles the Great, Charlemagne, the unique emperor of European unity in the eighth century.

The larger-than-life tasks ascribed to Charles the Great, from his physical qualities, to his intellectual capacity, his financial power, military success, and spiritual status clearly belong in the realm of the fantastic and truly superhuman.

Many of the wondrous accomplishments seem to be totally incompatible with the reality of an economically weak and poorly developed Europe with an undeveloped trade and an inadequate communication and money system. The rather bleak scenario shows hardly any urban centers within the ruins of the roman developments.

A huge collection of circumstantial evidence is brought forward to prove that his grand empire is really fictional and a detailed archeological analysis questions the authenticity of all assumed eighth- and ninth-century architecture.

Charles the Great, the supposed descendant of “the House of David” (yes, that’s Jesus supposed bloodline, the messianic legacy) is debunked as a mythological figure and indeed as an only legendary “God-king.” In short—the greatest historical figure of the middle ages is about as real as Father Christmas.

A tongue-in-cheek Egon Friedell is quoted on the book cover saying: “Groundbreaking revelations are much less to be expected in recent history than in ancient history because of the long time span involved.” Obviously he did not know about the millenium bug and a world where operating systems are in a delicate balance of instability.

Needless to say the research of this group of deep time-warp historians is challenging the foundations of all canonical works on the origins of the European world. Accordingly it is getting responses from the scientific community that range from blank hostility to ornate ridicule—but most of all they are trying to ignore it.

A historical example of the disinformation society? Martin Bernal, in his controversial book *Black*

Athena, The Afroasiatic Roots of Classical Civilization, shows the large scale of deep spin and historical disinformation in the work of European scholars of the last centuries and touches many relevant issues regarding the cultural background of the so called middle ages.

Black Athena is an analysis of the systematical distortion of historical evidence on the part of classical scholars. Based on racism and combined with political interests (“The Fabrication of Ancient Greece 1785–1985”) they are tilting the perspective toward a Eurocentric gridlock of ideological hegemony in the interests of a white, male power elite. The ignoring, denying, and surpressing of the crucial role of African, Semitic, Moorish and other non-European influence in western history amounts to censorship. (Bernal’s analysis also uses some major corrections of timetables like the realization that the volcanic Thera eruption, thought to have destroyed the Minoan civilization of Crete in about 1500–1450 B.C., actually happened two hundred years earlier, in 1628 B.C.)

Naturally Bernal has encountered immense opposition to his thoroughly documented research. (One might just have a revelatory experience that everything you learned in school about his-story is terribly wrong.)

AN ELECTRONIC TIME-CODE CATASTROPHY?

While it becomes increasingly clear that disinformation, black propaganda and symbolic domination are very much part of our history and the oldest media, the exponentially increased possibilities of social control and mind control through the manipulation of the electromagnetic spectrum and the new media have not yet been fully realized.

It has been demonstrated that artificial empires can be skillfully created so it should be much easier to make civilizations disappear. Strata of digital data to be rediscovered by future archeologists could lead to a future where digital archeology will selectively reconstruct the past from buried layers of bits and bytes as electronic witnesses. Even the use of time-machines by explorers of the future might result in ambiguous results and could lock into some arbitrary echoes of virtual realities.

Our past/future will then be based on a computer

artifact, possibly some random futuristic wargame of the future/past. A barely reconstructed ancient CD as the blueprint of our lost civilization? A total recall of trashed memory?
The broken timelines of European culture could

get lost in the dark ages of a disturbed electromagnetic space-time continuum.

SUBJECT: ASCII ACID: RE-COLLAPSE OF SHELTER

FROM: VLADIMIR MUZHESKY <BASICRAY@THING.NET>
DATE: MON, 26 OCT 1998 21:02:40 -0600 (EST)

NEUROSPACE AFTERNET: FIRST GENERATION

“Monism in science is predefined by the structure of the cosmos.” —K. Tziolkovsky, 1925

The most thrilling and advertised part of cyberspace has nothing to do with its gadgetry but with the resemblance of its architecture to the structure of neural networks and their constant intertranslatability. Exactly this intertranslatability became an avatar for escape and enabled some skillful holo-nauts like Leary to migrate into the electronic shelter when the chemical shops closed down. They became living landmarks of neurospace.

On the basis of its perceptual and economic platform, neurospace can be defined as an autonomous hypernetwork of inner-outer inferences of informational discourses. Whether biologically or electronically realized, it theoretically establishes the same conglomerate of protomodel space niches levelled by the modes of perceptual intensities and, hence, correlated with the extent of perceptronic transformation.

Neurospace is a highway for bots. Somewhere they can realize their restricted but powerful mental velocity. Bots are not guests from the future and they are not an isolated case. First-generation communal bots are here: mostly evolved BBS systems like The Thing, or gravitations toward this direction like Ada'Web, or Word they provide navigational and referential support for content manipulation and, as such, lay down their “magestral's” into the wilderness of neurospace for the content industry using chat, search, game and other func-

tion-specific bots as enforced software labor power. These sites are results of the same translation processes that witnesses the closeness of another collapse of shelter. Through concentrating and alienating mental workpower in a close proximity to Heidegger's *technê* they, in turn, desubliminate translation. On a mental plane, this, to use Marx's words, means digging your own grave. The tangled navigation of the already-dead Ada'Web was a good example [see Markets, “Ada'Web,” in this volume]. However, being involved in the translation, they, unlike many other virtual organs, retain the capacity to mutate into the second generation of bots-out-there. Finally, they are the first to fill the metavelocity of shelters.

AGGREGATE: SHELL IN THE SHELL

“Results of the separation of symbolic-theoretical and real cultural activities are...futile...”

—V. Muravjev, 1923

Bots in general move without moving within the spatial-discursive tension. Hyperspace is a phase-space of content tension. Its technological facade corrupted, riven with multiple cracks through which the proto-architecture is visible. Cyberbuildings rot. Under these extreme conditions it is not difficult to forecast the aggregate nature of the second generation of bots. In order to survive every new collapse they should provide an architectural perspective and a semiotic showcase for content formatting reality-spaces based on the old rotten nodality. They have to arrange state of content affairs in their own sovereign velocity.

They should become aggregate worlds that functionally replicate and tweak into human informational processing.

In 1988, Alexander Chasen, the founder of the technocerebrum idea, wrote, "Humanity develops an artificial computer-based cerebrum which it primarily associates with deductive analysis. However, the development of the technocerebrum in the direction of artificial intelligence requires the involvement of inductive logic, which will cause a specific autistic computer syndrome...in as much as the technocerebrum is separated from the biochemical emotional basis of the human brain which plays a crucial role in the regulation of conscious.

In a certain way, the consciousness of an individual user is different from the consciousness of in-network-users. The latter constitutes a shelter with the above-mentioned field of mental escape of the technocerebrum. However, an individual user expands his/her consciousness into the network, turning it into another extension of social or political instrumentals. Bots are being designed to fight network one-dimensionality in the same way as psychotropics were designed to fight one-dimensionality in human psycho-social representation. Same structure. Same code. Probably the same destiny.

Paradigmatically, we can imagine this evolution as a semiotic zone located under the code of social communication. (One of the possible biosocial foundations could for example be spurious memories: cognitive events that imply the classification of imaginary situations and objects as real. This phenomenon is inherent in human dreams, when we think about chimerical cities as real. However, they were proven to be a basis for the formation of new languages in neural network studies. Spurious memories find no vehicle of interaction in post-industrial society). We can see some current in this direction in the growing online porn industry, which desublimizes spurious translation mechanisms through providing live-streamed extrapolated body-space content.

At another pole there is augmented reality research which, to quote Katashi Nagao and Jun Rekimoto, two of its apostles from Sony Computer Science Laboratory Inc., "Has as its main theme the overlay of computer-synthesized images onto the user's real-world view. Augmented reality covers interac-

tive systems that can informationally extend the real world." If we look at this statement through the prism of metamute it basically means that AR develops an in-built module for the individual biological carrier. Live-feed that translates the architecture of shelter into the architecture of reality by means of incorporating all the same mutual aid principle: a "real world" agent can support the user's tasks in the "real world" environment.

We are used to architecture's linear polynomial progression from construction to gradual decay. Unlike its provision of shelter, its evolution as architecture of reality is nonpolynomial in its nonlinear state. It is there and not there at the same time because time itself becomes dependent on the translatability of the users' task.

Taking all these factors into consideration we can conclude that the digital or cyberspace commonly referred to as virtual or synthetic locality is, in reality, a conceptual placebo. The epistemological aggregate or defined status of spatiality that is implicit in locality as a concept is either channeled via semiotic zones of references to the real, or memorized as real situations in the virtual environment. Before we are able to define the pattern of interference emerging from the mediated life streams of real worlds and rendered objects and the interrelated neurological, perceptual, semantic, and economic contextual aspects of spatiality we can say nothing about evolving shelter, hence nothing much about its "real" control points and politics.

SUBJECT: "INFORMATION," "SUBJECT," AND "BODY": FROM METAPHYSICS TO THE PRESENT (A CYBERFEMINIST PERSPECTIVE)

FROM: ALLA MITROFANOVA <ALLA@ALIA.SPB.SU>
DATE: MON, 26 OCT 1998 16:03:10 +0100 (MET)

INTRODUCTION

1) The general motive for my work is to discover how to be happy and to work well, liberated from compulsory coding, normative images, and from prescribed and limiting functions—in order to be able to achieve your goals in a productive fashion. In other words, I am going to dig through a few connected topics in order to raise the following questions: How could we distill a database of information from structuralist and phenomenological positions? How to free the transcendental subject in ourselves, who still have a dominant position in understanding the world. S(h)e demands an order in an identity system, in structures of representations, and perceptions. (S)he fights for a stable ontological surface, when descriptive and operative models are determinant. And, finally, how could we install an embodiment/disembodiment problem that favors embodiment into theoretical discourse organized around consciousness?

The problem is to dig up the body in discursive practices, to embody technodiscourse for the sake of cyberfeminism. Cyberfeminism is an ideological speculation that serves as a browser for viewing and navigating through current cultural changes and historical heritages. A good thing about the label is that it is a provocation—as a conceptual mess it makes emotional noise. It is a fake ideological interface. Cyberfeminism is a useful term in feminist philosophy for its radical impact on body and technology theories.

Hacking is becoming a common operative term for an outsider's way of reaching a quick result in

economy, culture, politics, and theory. We have to redefine a problem, to reduce or rethink tools and terms. Looking for shortcuts in philosophical heritage for explicit directions means using the operative model of hacking. Hacking provides a functionally quick model; it helps us to safeguard our own interests. Any good descriptive or analytic discourse has a predatory power inside itself: it is very easy to step into and difficult to run away from an order in which everything looks rational and connected. "Hacking philosophy" means to analyze concepts taken from specific traditions into actual contexts, to purify their operative models, and to reinstall them in current situations in order to get theoretically functional positive tools.

1. I propose to follow along a historical passage. There is a danger of getting lost and using too many historical terms. But the benefit is in making a few terms stronger and more operative.

It is methodologically possible to divide the philosophical tradition of the last three centuries into three parts, in a linear manner, on the basis of an academic historical classification and critical evaluation of tradition: x) the Kantian recuperation of metaphysics, y) the poststructuralist recuperation of Kantian tradition, often called transcendental philosophy, and z) my own experiments in cybertheory. We will try to show a tradition on three control levels: first, how terms are defined to operate; second, what reference system serves the terms and what is taken as immanent; third, how it serves needs. Here, the body is the point of reference.

| METAPHYSICS | TRANSCENDENTAL | OPERATIVE |
|--------------------|----------------------------|--------------------------------|
| <terms> | | |
| ESSENCE | DATA THING OBJECT | EVENT EGO |
| TRANSCENDENTAL | SUBJECT AVATAR or HUMANISM | SERIAL SUBJECT |
| <reference system> | | |
| UNITY | CONSCIOUSNESS | KEYWORD LOGOS |
| INTERACTION | CATEGORIES | HYPERLINKS |
| | | STRUCTURE REPRESENTATION |
| <immanent> | | |
| ETERNITY | * | DATABASE EXISTENCE-EMBODIMENT) |

The immanent plan is beyond the model—it could be full of surrogates like Power, Knowledge, or Death of the Transcendental Subject.

1. Classic metaphysics (after Aristotle) insists on the identity of things and equity of Reason. Ego is obliged to recognize adequacy through doubt. Metaphysics creates a mysterious order on the plane of eternity. A Thing is presented by its essence and could only be questioned to show its essence. The essence of things is a shared essence of nature. A nature is already completed as Universe and Eternity. The Essence is unchangeable. A metaphysical body is already complete—as a container of subliminal and brutal things, it could be misrepresented, but a correction should bring essence back. The Body is a mirror of the Universe, a microcosm of eternity. A power is done as an order of things.

2. The tradition of transcendental philosophy can be traced from Kant to Husserl, and basically concerns making the foundation of ontology analyzable. Transcendence is taken now not to mean an interface to Eternity or God, but as a gnosiological and ontological problem. It is not a thesis of beliefs in the plan of eternity and unity, but a problem of building on identified tools of philosophical reflection—what became a consciousness.

Object is an identity term to represent Being outside of the Subject. Observer and observed, object and Transcendental Subject are becoming an ontological duality. In this way we take consciousness and perception to be a concrete dominant operative machine. Here we should reinstall a plane of immanence from nature to consciousness, from the union of being to transcendental reason. It affects the whole story: if immanence is shifted from nature to

consciousness, from essence to representation, we exclude Being, which is not represented in accepted forms—as objective forms. Reflection and practical reason are tools to operate with objectified forms.

A self-referential system is a hierarchy of categories from casual to abstract, from local to universal. The moral state is incorporated into consciousness. It should control the identity of the Subject and the modality of formal appearances or representations. Everything becomes a heavily connected and controlled system. A system can represent itself as a structure (totalitarian) or as a phenomenon (liberal/open). Time becomes the internal foundation or time dimension of Phenomenon. Subject trapped itself by installing a system of immanent operative tools: What is a consciousness supposed to be? Cognizant police is a Sense as a hyper significance. The Sense represents the deep structure of representations. Sense doesn't apply to nature, but it is a basic method of understanding, the result of cognizant operations. Sense applies to the human subjective ability to represent the world as a structure with a concrete identity of objects. Consciousness is always reducible to itself and its own circumstances—the total recall of consciousness.

3. A cyber paradigm reduces consciousness from transcendental ability, which was a self-referential system, to an operative term and renames it as an intelligence. If the Subject lost its generic position, its dual component—object—lost its guarantee of identity becoming data.

01) Perception, Representation, Transcendence, and Data For Aristotle, material is presented as form. In classical metaphysics the thing is equated with essence. There is no problem of subjectifying or alienating a form or a thing. But for transcendentalism the traditional world is possible as a product of a Subject-based operative system: perception, transcendence, representation. In current (cyber)culture, we have a quite different operative model:

–The order of representations, which was organized as a system of knowledge, is reduced to information as an unstructured catalogue of data. When knowledge became information it translated into a self-referential system, which up to now was

called consciousness, was lost together with the perception of a unified subject, which worked as a filter in making objects.

–Transcendence became an empty menu; there is no way to transcend or generalize information in hierarchy and unity. We use information without attempting to organize it as a system, to follow a genesis of data. A datum is an operative unit of the catalogue. Data refers to itself or to other data excluding a subjective referential order. The transcendental subject simply retires upon meeting data.

–Perceptions, as personal empirical foundations of objects, are not usable with data. We use data without controlling it with our perceptions. Data normally passes thru a filter of perception. There is no question about whether it is perceivable, or what is reality. Any existing data has its own rights—it is leg- islated because it exists.

So there is the adventure of data becoming more and more controversial. Data was born in a transcendental paradigm to be a specific kind of intentional object (like a picture or a sculpture in transcendental art), also controlled by perception. This was a very limited position. But soon data escaped the control of perception and intention. Data applied for a new status: as neither subjective nor objective. Data refers only to the database, and the database belongs to the plane of immanence.

02) From Data to Database Coincidence (Event) of Data Streams

A database is an uncounted sum of local catalogues; even though some of them are rigidly organized, the sum can only be a pool of data. Different streams of information don't even cross each other, but go in different directions without knowledge of each other. They don't recognize a dominant stream. A database is hardly an alienated cultural heritage; it belongs to the plane of immanence, not to the order of the subject. There is no subjective reference system in the order of data. Let's take as a conclusion the following: a database is a pool of information organized locally or discursively, which could be imagined as Bodies without Organs (thanks to schizoanalytic discourse). Bodies without Organs

reside in a certain locality, but are presented and could be used as unlocated data (deterritorialised). But the functional status of a database is as an archive. How could it be revitalized? Supposedly, by merely linking data we produce a kind of data event. A coincidence (event) or hyperlink of data could produce the Event, could animate data, and could deliver or revitalize the Body without Organs. (In the case of Power: It could be produced in any nook and transmitted on any level of social organization.) Hyperlinks of databases neglect an order of localities. The Body without Organs is a body prepared for cutting. It could be a data Frankenstein, but the process of conserving the baby and baby delivery is strictly immanent and cannot be manipulated. We cannot manipulate an Event—we can only desire it and help the Event to happen. (As opposed to this, the transcendental subject can manipulate events because the main part of it—cognition and description—is a priority of the Subject.)

Data could be revitalized only by being coupled with intensities (subjectively or discursively generated)—the productive forces of revitalization.

03) Subjectivity and Reference System A concept of Subjectivity always has been combined with reference systems (the transcendental subject was made an operator of the transcendental act). *Subjectum* as a term (as Heidegger recovered it) consists of “what is already done to us” and “how we are going to take it”: world and tools. In the transcendental view, *Subjectum* is only possible as personality, and its tools belong to consciousness.

The Superhuman (superman) of Nietzsche is offered in different discussions as a breaking point into consciousness-based philosophical tradition from one side and as an anthropology-based theory (as it was shaped by Foucault) of the subject. The Superhuman is an embodied consciousness—it could mean the end of self-consciousness service. If subjectivity is embodied, it should take as a reference point not the transcendental hierarchy of categories, but the complexity of body functions. If it is embodied as superhuman, it should ignore the limitations given to human as social and historical dimensions grasped in structure and phenomenon. The Superhuman highlights hypercultural links in opposition to the human condition of materiality and

locality within a concrete situation—the condition which (s)he is dependant upon. That is why the superhuman is a scandal—discursively it is not possible for transcendental humanity or anthropology. A process of phenomenologically reducing consciousness to its foundations, shown by Husserl, was a way to reduce the transcendental subject to nonexistence. It seems to be a turning point for Heidegger in developing a fundamental ontology of existence. *Dasein* is a kind of self-reference scheme for the Heideggerian Subject. It is a way to deliver the Subject to the immanent plane, to install subjectivity into an open scope of existential possibilities. *Dasein* proposes to process a multitude of possible individual realizations, as a kind of system operator. (This is how it is used in post-Heideggerian psychiatry by M. Boss in “The influence of Martin Heidegger on the birth of the alternative psychiatry,” *Logos* 5, Moscow, 1994). The main character of *Dasein* is temporality, not only in the sense of mortality, but also as a temporal process and the finitude of any identifications.

In that discourse, Subject is hardly connected with Event (Co-being). Event produces Identity, but event cannot be represented as a chain of identified objects. In Event, Identity is temporal and cannot produce identity orders. Heidegger, Nietzsche, and Deleuze gave us a notion of process identification which is (1) coexistence, (2) Event, and (3) activity, which are only places for subject to be presented. Event is temporal, unstructured, local, personal. Event constructs from meanings (database) and meaninglessness: existence, Being, intensity..

The Being, viewed by Heidegger as an open stream of existence, is limited and functionalised by Deleuze into intensity as a preformal force vitalizing Event and operating the Body without Organs.

04) EMBODIMENT AS A POSITIVE NECESSITY

The body is presented in culture as a different structure of concepts of what the body is + images + functional models of how the body should act. Our task is to put the body into a flexible controlling position and to liberate the body from compulsory prescriptions of what it is. A connected issue is whether the body is either for the sake of perception or is a location for personalized Being (existence) to happen. In the latter case a body

could be equated with Nothingness. Anyway a personal body should be generated on the field of existence, intensity, but not on the field of regulated descriptive concepts. What is an existence, intensities (energy/drive)? Is it opposed to information? It is not desire; desire on the microlevel, as Foucault showed, is still arranged by cultural coding; desire helps in switching from one designation to another. Body is not a form, has no meanings, has no exact borders, it is not a concept (data), but a field where concepts (data) could recreate a function. In other words, we could say that skipping immanence now is folded into the body.

Embodiment includes hyperdimension as a controlling instance, to function as a singularity above the formal compendium of catalogue. We could take a body as a positive functional temporal model in which permanently changing being is equalized with permanently changed forms (information): desire = ability = possibility + unlimited (or satisfactory) Database of information (concepts) and formal expressions and images. If the balance is not achieved, if the operative system has bugs or another dysfunction, then wrong concepts disorient existence and existence becomes destructive, even self-destructive. If we are embodied correctly, we feel the freedom to live. If not, we have some fields of activity blocked for us (as when compulsory gender divisions came to a traumatic end in Europe in the sixties).

Embodiment is a hot issue for contemporary culture, comparable to what the “soul” or “god flesh” was for medieval culture, and to what organs and anatomy were for classical European culture. So embodiment is an intensive cultural process (micropoesis), and is new for every culture (formal catalogue). Even in talking about disembodiment, we install some concepts for the process of embodiment. *Embodiment* as a necessary task of creation.

SUBJECT: ARTS AND APPARATUS: PLEA FOR A DRAMATICS OF DIFFERENCE IN INTERFACE (23 ITEMS)

FROM: PROF. DR. S. ZIELINSKI <REKTORAT@KHM.DE>
DATE: MON, 7 SEP 1998 16:35:06 +0200

1. The (division, *die Schnittstelle*, that we call in English an) interface is something that separates one thing from another. Otherwise the term would make no sense.

2. The *Schnittstelle* denotes a difference and a connection.

3. The phenomenon of the *Schnittstelle* appeared when the concept of a unified world gradually developed into the concept of a world that is at least a duality. (The English noun *interface* dates from 1882; the verb *to interface* from 1962; the adjective *interfacial* (used in crystallography) from 1837.)

4. That which a *Schnittstelle*/interface both separates and connects is, in the most general sense, the One from the Other.

5. How we handle the interface and its shaping is therefore preeminently both an aesthetic concern and also an ethical one. Ethics binds the arts and the sciences (and are binding for both).

6. Through the interface, the Ones define their relationship to the Others, those different to themselves, that is, essentially unknown, and vice versa: over the interface the One manifests itself to the Other, but in those aspects that are understandable.

7. For example, in the Baroque period the crystal chandeliers with their myriad light refractions functioned as an interface through which the cosmos became imaginable outside of the constraints of the private and personal sphere.

8. In telematics, as in any technology-based communication, the interface separates and connects the worlds of active people, on the one hand, and

the worlds of working machines and programs on the other. (How far machines may command the character of subjects I shall not go into here, but I presume that in many dimensions active people are a part of the inner world of machines and programs.) The interface separates and connects media-people and media-machines. It is the boundary where the medium formulates itself, where the aesthetic praxis takes place.

9. The pragmatic task of the telematic interface is to provide media-people with a particular access to the Other by means of machines and programs. At the end of the twentieth century, telematic machines and programs are themselves a prominent part of this Other.

10. Current efforts in telecommunications, particularly the world wide web, aim to make the differences between media-people, media-machines, and media-programs imperceptible. This represents a special case in the trend toward eradicating the boundaries between production and reproduction, between work- and nonwork-time, in a common system of communication-based consumer and service relations. We are now just at the beginning of this process. With regard to the interface, this process will really take off when the symbolic hindrances to perception and usage (particularly the alphanumeric keyboard) that still exist are no longer prerequisites for using a computer, and when the interface between media-people, media-machines, and media-programs assumes the character of an environment in which media-people will act as they would in non-machine-based communicative relationships (see, for example, the "interactive Filmplanner" by Georg Fleischmann and colleagues). A slightly different but analogous

problem concerns the computer scientists themselves: with increasing digitalization, and due to the speed of microelectronics development, the machine as hardware has become ever more inaccessible to them. Computer science has practically become a pure software science, without access to or intervention in the machine that lies beneath it.

11. The most important, all-embracing device in this hegemonic strategy is illusionization—not in the sense that anything specific is at stake, but rather in the sense of a no-risk identification with the world of icons, symbols, and relations just as it appears on the monitor. At present, the praxis of this illusionization takes two directions: either using concepts of a primary spatial orientation in the tradition of the *ars memoriae*, or using concepts of a primary temporal orientation, as in classical Aristotelian dramaturgy. In adventure games we find both concepts combined, and in the best examples, they are multilineal concepts of a dramaturgy of memory and empathy.

12. The goal of this essentially double strategy is: The Ones (that is, the media-people) are to operate under the illusion that they are totally in the Other (media-machines, for example)—this is called virtual reality or telepresence. Via illusionization, the Other turns into the One, takes on its identity. This is above all the world of metaphors.

13. In this world of metaphors, the allusion to life is central; the discipline of biology maintains its leading function.

14. There is a long tradition of taxing this interrelationship of life and machine. The body perceives that it has passed through various phases of excorporation and incorporation. Many of the first automatons were copies of living things, either in whole or in their details. In his philosophy of technology published in 1877, Ernst Kapp called this “organ projection.” Already at this early date, he vehemently critiqued this concept: the “Idea of the organic as a model, involuntarily and unremarked, tinges the mechanical copy and vice versa when the mechanical is used to explain organic processes; in the excitement of experimentation the

mechanical swings over into the organism unremarked, so that apart from these metaphoric explanations of the how, why, and wherefore, also obvious confusions that are inadmissible under usual circumstances, are inevitable.”

From the mid-nineteenth century onward, the idea behind this was above all the idea of man as slave laborer, a perfect symbiosis of live and machine production (“Avery’s Cotton-picker” of 1857 as an image anticipates perfectly what McLuhan formulates a century later as media theory: “The wheel is the extension of the foot”).

At the high point during the new media’s foundation in the nineteenth century, the dominant technology of the time—mechanics—was internalized: the individual life, as well as that of the species, was imagined and interpreted as a mechanical process and/or cycle. Heavy-boned mechanics served as a model for the explication and description of social, cultural, and life processes. Behind this was the idea of man as a machine, as a system of conduits, pumps, circuits, as an internal media apparatus. Not only scientists and engineers but artists, too, were fascinated by this idea that both the body and the life system function in similar ways; both were viewed as subject to manipulation and repair like technical systems. Both mechanical systems and life were conceived of using rigorous analogies.

This ranged from simple comparisons such as—the structure of nerve cords and cabling—electrical contacts and nerve contacts to the idea of the structure of neurons as a complex of wiring and relays; and went as far as the description of a complex process like the act of seeing as a simple succession of mechanical, mainly media-mechanical, processes of film recording and projection apparatus; and the linguistic articulation of that which is seen, again as media processing (mechanical typesetting; organ pipes for sound production); culminating in the direct analogy of human sensory processes and the functioning of a radio receiving station including the listener; and positing of a complete correspondence between the construction of an automobile’s driving mechanism/car engine and the processes involved in hearing (identity of petroleum/air, flywheel/ear drum, gear system/auditory ossicles, rear wheel/cochlea).

15. In these founding years of the computer-centered telemedia, life is being externalized in the machines and the programs. These are constructed and computed after the naive model of the organic and its evolutionary dimensions. The underlying idea of this allusion is that life is something that is continuous, flowing, growing, in constant motion (also harmonious). With regard to the concept of evolution, we are dealing here with Darwinian, or at best Neo-Darwinian models, that is, with an extension of the Darwinian principle of the (informationwise) fittest that takes into account recent research in genetics, according to which selection operates at the cellular level and not first at the level of individual organisms and their relationships with one another.

16. From the perspective of being concerned about the aesthetics and ethics of the interface deriving from the autonomy of Others/the Other, both metaphors must be confronted critically—to instruct and inform—and with alternative models: this applies both to life as a leading metaphor and to a concept of biology and evolution which is reduced and of shallow dimensions.

Why? Please allow me to digress briefly into the world of the concept of metaphors and their meanings:

“For why, the senseless brands will sympathize, The heavy accent of thy moving tongue, And in compassion weep the fire out; And some will mourn in ashes, some coal-black, For the deposing of a rightful king.”
—Shakespeare, *Richard II*

Metaphors are comparisons. However, not all comparisons are metaphors. To the phylum of comparisons also belong the symbol, the riddle, the allegory, the image... In their function for expression (and its possible meaning), metaphors hover between image, symbol, and enigma. Metaphors originate from the needs and the power of thought and feeling, “Not to be satisfied with the simple, familiar, and unsophisticated but rather to place oneself above it in order to depart for the Other, to linger awhile with the Various, and to put the Twofold together into one” (Hegel). Metaphors are constructed with the intention of augmenting, deepening,

increasing something; or they simply wallow in the fantasy of their constructor. This “something” is either mental or physical. Metaphors are constructed in order to ennoble the physical with the help of the mind or through the comparison with the physical to convert the mental into experience, to make it profane, to reify it.

17. The telematic networks are connections of technical artifact and complex material systems with political, cultural, and aesthetic structures, that is, they are already connections of the “Twofold.” The net itself is already a comparison, a trivial image. Not only in the ongoing net discourse is this connection of complex physical and immaterial units and structures once again being compared/connected to life or aspects thereof. This comprises not only the intention of elevating the profane (the technical, the political...), but also the realization of that which is nontransparent, or opaque, and structural (that is, essentially of the mind).

18. On the other hand, the world of machines and programs is a systematically constructed and calculated world. Everything in it has been produced by numbers and the logical and systematic relations between numbers. In this sense it is a coherent and consistent world, in spite of all the complexity that playing with numbers enables. The world of living organisms does not possess a system of such reliability. The decisive factor: this world is irreversible. Due to external disturbances and inherent variations, the many different physiological rhythms that are linked in a living organism never lead back to the same starting point. Organic systems fluctuate around stasis. Digital machines and programs cannot have a state (Otto Rössler). It is precisely their inherent variations that are to be got rid of through digitization and precision in computation. For the artists and students of the Academy of Media Arts in Cologne, in the meantime it is less of “a problem of precise computation, but more a problem of how to teach all the now low-noise machines to make noises again,” as our colleague Georg Fleischmann put it in his contribution to our new yearbook on arts and apparatus. “Aren’t there any interesting lines of questioning around, where the aforementioned irregular fluctuations are not the

weakness but the strength of the system?" Technological, social, and cultural systems alike are discontinuous to an extreme degree, both in their genesis and in their present extent. All metaphors that promise the free flow of information, that invoke the ocean as a navigation field, that want to make us experience communication structures like trees or roots, are doomed to failure because of this. The archetypal basic structure of technoid and civilization development is the rigid gradation of the staircase. The archetypal basic structure of life is the spiral. The visual proof, that the genetic code (of DNA) is formed like a double helix, like a twofold spiral staircase, was presented by biology at the same time as cybernetics arrived as a new discipline. The image of the double helix succeeds in uniting both discontinuity and continuity, bending out and turning in, standstill and motion... As yet there is still no better example of the exciting mise-en-scène of this complex relation of space and time, including the body in free fall, than Alfred Hitchcock's *Vertigo*.

19. If we admit biology as the leading discipline of the outgoing twentieth century, the very least we should demand with regard to the interface is that the many and varied constructions of evolutionary theory that this century has seen should be taken into account. (Evolution is a theory of the history of life and not life itself). Darwinism and Neo-Darwinism have been supplemented and modified by theories of mutation, synthetic theories, saltation, and punctuated equilibrium, among others. For example, the two latter, although with different emphases, propose that the pace of evolutionary change in species is episodic rather than smoothly gradual.

20. Conclusion: I would like to make a plea for an experimental interface based on contingencies rather than virtual reality, on feasible individual events rather than on a homogeneous, calculated, continuous, illusory world—one

- that is nevertheless recognizable as a constructed world, through which we gain access to the Other

- that enables a relationship of critical appraisal toward itself

- that is less of a cleansing by catharsis and more of a provocation by epic means

- that nonetheless remembers that the world of communications is a world of sensations and that without these, no one would bother to enter into relationships with Others/the Other.

What we need is a language (of text, images, sounds, and their connections) that does not cover up the technical and political/cultural character of the artifact, materials systems, and structures of expanded telecommunications but instead displays this character, in its usage refers to it, and reminds one of it('s existence). Discontinuity, dynamics, circuits, contacts, controls, pulsions, interruptions, power, distribution...the possibility of allusions is as rich as the technical and political/cultural spheres themselves are. Recent history of the media alone suffices as an example of a rich tradition: Think, for instance, how some filmmakers attempted to break free of the aesthetically cumbersome models of the novel or the theatre by moving into abstraction, rhythm, multidimensional narrative: Brecht's *Short Organum for the Theater* (1948) would do very well as a didactic exercise for today's interface specialists; or, for example, the materialist film—the staging of the material as something that possesses an autonomous power of expression... Why do we always think that we have to start everything from the very beginning again and to re-invent the whole world every day?

23. This plea openly insists on the dualism of media-people and media-machines, media-programs. Dualism is necessary in order to reach any kind of clarification. It may represent a transitional stage, but I am convinced that the dramatization of the interface as a boundary between the One and the Other is the only possibility to achieve qualities of the connection that will differ from a simple decision for the One or for the Other.

No to monopolization of technology by narcissistic subjects—for a dramatics of the difference!

Subject: Knowledge's Redemption

From: Michel Serres (by way of Patrice Riemens
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Date: Mon, 12 Oct 1998 10:23:12 +0100

Revue Quart Monde: What is your opinion of the new information and communication technologies, such as the internet. Do you see them as an opportunity or a threat to the poor?

Michel Serres: What is unprecedented here is that concentration of knowledge no longer obtains. Up to now, any form of education consisted, for every one of us, in the bridging of not one but several stretches of distance, between one's place of birth, or point of departure, and that particular place where the elements of knowledge happened to be localized: the local libraries, universities, labs, natural science museums, and so on. That was already the case with the great library in Alexandria or Plato's academy; and after that you had universities, schools, and so on. One was always separated by geographical distance from the place of knowledge. But one was separated by social distance also: if you were not born to the right class, or were stuck with a linguistic barrier because your parents did not speak the proper language; or there was a financial barrier. Even a 'mindgap' may be postulated, as when one would not dare to come near these places of knowledge. And yesterday's educational system was a race of attrition on the bumpy road to the sources of knowledge. So what is new about the world we live in is that the people do not have any longer to move in order to obtain knowledge: thanks to the communication networks knowledge comes to them. And despite lingering fears to the contrary, the opportunity for certain people or certain classes to monopolize these assets has radically decreased. Up to now, knowledge used to be concentrated and accumulated according to the rules of capitalism, even if it was never analyzed in such terms. In building the 'Tres Grande Bibliotheque'(2), France today enacts a return to a past world in the era of the internet. Here we have a building that fences knowledge in precisely at the

time when the networks enable one to tap into whatever document, wherever it may be located on earth...

RQM: In *Le Prémier homme* ("The First Man"), Albert Camus describes how his primary school-teacher not only instructed him in the curriculum but also bridged the gap to knowledge by going to his grandmother and convincing her to let her grandson pursue further studies. The very first hurdle deprived people must surpass consists in regaining confidence in their own powers of intelligence.

MS: That is what I just have called the *mindgap*. I do not want to convey the impression that the net is going to abolish every and all distances. It will not obliterate the kind of human relationships described in Albert Camus's book. But it will bring the possibility of knowledge to all. In the end we turn out to have been democrats in everything, but not as far as knowledge was concerned. Knowledge was behind a bulwark, not only of distances but also of other barriers as well. It was the hallmark of *merit*, of the idea that one had to be smart to attain it. Now there is nothing that stands in our way if, for instance, we would like to set up an internet server for the 'Fourth World' association, and make it freely available to the people.

The novelty of it is as great as when printing was introduced. Before then, knowledge was the preserve of very few people. But subsequently it came the way of those people who could afford to buy books. And now, it will reach everybody, everywhere, and this is a truly great promise, a promise of the democratic kind...

RQM: Yet there remain another aspect of knowledge, its embedding in social life, in community. The "capitalist" appropriation of knowledge is

something that stems not from the nature of knowledge itself but from a way of living in society...

MS: This way of living in societies has determined a number of social bonds, of hierarchical bonds, of commercial bonds, of monetary bonds... But—apart from exceptional cases, such as with small schools or monasteries, there were no bonds stemming from knowledge or information. Today, a social bond may well be based on these things. Nowadays, the unemployed person is provided with professional schooling, whereas the excluded person is supposed to be fed with information in order to become a citizen again. (Re)integration, professional schooling, and education are three problems that must be tackled together. For instance, education now comes to grip with society as a whole, not only by way of scientific and professional schooling, but also in imparting the “togetherness” of all citizens. From now on, education is going to be an evolutive feature, which will be last through a lifetime, and the information bond is going to embed itself ever-more profoundly in the social bond itself. We used to have a society where knowledge was retained rather than disseminated. That is why so many people were excluded from it.

RQM: And why would this change?

MS: Because today, we have the technological means to do it. A hundred years ago, when some small paper plant lost in the woods went bankrupt, its workers had no other recourse than to pack up and take on the various distances I was talking about...on foot. Today, those same workers should be able to go to the town hall, or to their former school, which would of course be open after office hours, and avail themselves of all data necessary to change their life. On the negative side, there is this huge crisis we are facing regarding unemployment and a lagging economy—but on the positive side, we have this technology. Everybody knows by now that the only way out of the crisis is to develop further information and education technologies...

RQM: But you've got this fierce competition out there, and the scarcity of jobs is surely not going to diminish it. Sharing knowledge with my neighbor

in these circumstances might not be in my best interest...

MS: The economy is predicated upon exchanges, which in their turn are predicated upon scarcity. Now, suppose you have got two francs in your pocket and I have zero. If you give those two francs to me, I'll have two francs, but you'll have nothing... This is what you call a zero-sum game. Knowledge operates from the opposite principle. Let's say that Pythagoras' theorem is something I know but you do not. If I teach it to you, you will obtain that knowledge, and yet I will still retain it. This is not a zero-sum game.

Knowledge is the realm of non-scarcity, as opposed to the economy. True, knowledge has always been classified as a rare good. But who says that the knowledge necessary to fix a scooter is less important than knowledge about quantum physics? In a society where garbagemen are more in demand than natural scientists, knowledge is on an equalization trajectory. Of course, not everybody agrees. Dissenters will try to throw obstacles into this dissemination of knowledge in order to keep it to themselves. For them, knowledge must remain linked to privilege, to “merit”... I believe that with the advent of the Net, all knowledge will be at everybody's disposal. And I pledge to work for it, it is now the time to do so. Knowledge will no longer be for sale. Today one buys a book and one buys all sorts of knowledge. Tomorrow nothing of all that will be for sale.

RQM: There remains nonetheless the problem of secrecy: trade and manufacturing secrets, and things that remain secret because they are not understood.

MS: Once information spreads and circulates there can be no longer dearth of it anywhere. The Net is the place where you cannot hide anything. My great hope for the Net is that true hackers will be truth hackers, meaning hackers going for full disclosure. Twenty or even ten years ago, nobody could imagine that total secrecy would disappear. Even to this day, big corporations are buying up scientists, they are buying up unpublished knowledge,

trade secrets, and this is one of the major difficulties faced by scientific research. Tomorrow hackers will show up in labs, and they will be throwing all secrets to the net. Knowledge will no longer be in specific locales, in those places of scarcity consecrated by society. Knowledge will be an ocean, a pervasive environment in which society will plunge but also lose itself. Scarcity will turn into an overload of information, but correctives will be found by working on ever-more powerful search engines. In fact, there will be a new approach to knowledge of which we have no idea yet. It is the human mind that is going to change, just as it changed radically with the Renaissance. Are you aware that the traditional transfer of knowledge is currently crumbling in entire sectors of academia? Prestigious universities in the U.S. see the number of sophomores in mathematics dwindling, because, as things now stand, there is no need any longer for that type of reasoning or that particular brand of mnemonic techniques.

RQM: It is because this type of reasoning is already inherently present in all information that's available, and hence it is no longer necessary to master the reasoning oneself. What would you say?

MS: That is partially so. It is still completely impossible to gauge exactly what is going to disappear, but it seems to me that the epistemological shift is going to be even more profound than in the Renaissance. In this mass of information volume, in which society will swim, or "surf", there will be opportunities for democratization which were unfathomable until now. This (evolution) is surely not going to be detrimental to today's least-educated classes.

Ask yourself, which book would you probably find in the homes of people with little much money to spend? It is a dictionary, a small Webster's. Is this a book that teaches you maths, or history, or economy? Not really. It is a book for which the chief enjoyment consists browsing through it, "surfing" the mass of data provided. The internet is nothing but a massive dictionary, a gigantic space in which the body travels.

Intelligence is not about knowing axiomatically how to reason... The French sixteenth-century philosopher Montaigne already had dismissed the

concept of a "well-stuffed head." The advent of the printing press made the memorization of Ulysses' travels and of folktales—the basis of knowledge at that time—redundant. Montaigne saw no use in memorizing a library that was potentially infinite. But does not the internet ask for a "well-endowed head"? Won't the best surfer be a "jack of all trades"? The fastest surfer is not going to be your typical Ivy-league supertitled philosopher—that guy's head will be simply too loaded to sort it out on the net. So there will be fresh opportunities for those who were viewed by society as laggards. It is a clean start with equal opportunities for all. Mankind is going to wander in the mass of information just as you are now wandering in the woods and the mountains exploring the real world. Up to now, knowledge was a space where you would be taught how to reason, and it required that you memorize a great deal. Now it is going to be a space to roam around. That has never happened before.

RQM: But do you think that today's schools are an obstacle to these changes?

MS: Absolutely so, and I would say *all* schools. We are now at the threshold of the biggest revolution in education in all of history. We will have to radically change the whole education system. Every time humanity switched the carrier of knowledge, schools changed. The carrier is independent of the education system, but the education system depends upon the carrier. The biggest revolution in an education system occurred with the introduction of writing among the Greek. And all those big civilizations that arose upon scrolls for instance, as among the Jews, or hieroglyphs among Egyptians, also came up with the biblical school, the scribes...

RQM: For generations, children were learning their parents' trade, and learning was an immediate thing. Is this not the case with the school as well? It is the local context that lends relevance to what one learns. Local lore imparts meaning to the locally acquired knowledge. Now, if there is no longer a place of knowledge, where will meaning be found?

MS: When the carrier changes, the method of

transfer is interrupted. That happened in the West in the years 1960–80, and it constitutes one of the greatest upheavals of that period. Parents no longer instilled in their children sexual morality, religion, morality in general, or civism... That's the shakeup at this end of the twentieth century. Meaning depends on the platform. In past days, people spoke but did not write. When writing appeared, the world changed: a system of transfer of knowledge took shape. The drawing-up of contracts, the basis of law, became possible; so did stable forms of exchange, the basis of trade; as did institutions, the basis of politics. And thus it became possible for groups of people to live alongside each other, and this formed the basis of cities. Hence we speak of "history," and of what came before that as "prehistory." When the printing press appeared, the preceding centuries became illegible to us; we called them the "Dark Ages." A whole new sensation of meaning came to us with the advent of Renaissance, with people such as Montaigne, Erasmus, Rabelais... The Reformation heralded the liberty of thought, something unimaginable in a tradition grounded in a transfer of knowledge not based on the printed word. Today, a new platform appears, and thus a new meaning will appear as well. It is not something inherent to the channels through which this meaning will flow. The channels are there before the meaning, they make the meaning, and suddenly everybody's going to be astonished that a new meaning is there. Do not look for it today: it is simply not in our world yet. You won't find it, only your children, or your grandchildren...

RQM: Thus, the challenge today is about providing access to these new channels to all kids.

MS: In theory, access is cheap and unrestricted. The estimated budget for a "distance learning" university on a campus opened by the previous French government in an outer suburb of Paris was a mere 1 percent of that of a traditional academic institution... So with sixteen times less money than was spend on the four towers (8 billion Francs each...) of the *Tres Grande Bibilothèque*, all knowledge concentrated therein could have been made available to sixty million people. And they would even have saved on the trainfare to reach Paris from some dis-

tant province...

As you may know, the energy that is going about on the networks does not even reach entropy scale. For all practical purposes, these kind of things come for free.

RQM: The falling price of software and the drive toward sophistication in the computer industry are not negligible forces. But you yourself have stated that access time to a database is hundred times faster for a U.S. researcher than it is to her/his African colleague, whose machines and connections are so much less effective.

MS: That is true. For the time being, technology advances profits mostly for the rich, as usual. But things could be different. Of course, the Americans are trying to retain their predominance, but we, the French, are more democratic, more "republican," more inclined to share, and this could make a lot of difference. I am an optimist, a born optimist...

I am thinking of • Claire Hébert-Suffrin. Fifteen years ago she set up, without computers, a "knowledge exchange" network. She put a number of people together who were willing to swap their respective skills, whether the Russian language, repairing scooters, nuclear physics, anything you wanted, as long as money was kept out of the loop. It has become a web of 25,000 people almost all over Europe. She had a true intuition of what knowledge is about: sharing, gift economy, exchanges, and space. If you put all these elements in a computer system, you get a full-fledged university.

RQM: This idea thrills and baffles us at the same time. Father Joseph Wrésinsky, who is our movement's founder figure, always asked those of us who were academics to try convince their colleagues that we needed their knowledge.

MS: Well, at that time Father Wrésinsky was probably right. But today, you don't need academics anymore. Their knowledge is available to you, period. That's the big difference.

RQM: On the other hand, Father Wresinsky made a distinction between different types of knowledge. In his opinion, the knowledge of academics and

that of “fieldworkers” was not the same. The latter is an empirical kind of knowledge, rekindled and established by practical experience. Father Wresinsky used to say to academics: “Bring in your knowledge, but for God’s sake don’t prevent those on the other side from gathering their own!”

MS: That’s exactly what I am fighting for. I am totally opposed to the way politicians in France are now dabbling with information technology in their bid to wire up all the schools. What they want is a top-down approach, starting with experts, school inspectors, and so on, and then making their setup compulsory... It is a carbon copy of the old world pushed into the new world: dinosaurs plus the internet.

My idea would be not to begin from preconceived ideas about knowledge, education, and diplomas but, rather, to bring people into contact according to their needs and abilities. People who are excluded will be less so if they are brought together, and out of this gathering of people an effective demand will emerge. Today’s educational system is a supply system without a demand function. It makes egg-sellers set up a shop on the village square when there are no buyers around. As things stand now, teachers couldn’t care less about what pupils really want.

The premisses of the education system must be turned on their head. Empowerment must be the key element. Empowerment means giving to those who are excluded from society’s mainstream: first, the possibility to form a true community and, then, to open a dialogue among themselves and talk about their needs. Then, you will have an effective demand for “eggs.” These people will learn fast, and will before soon know where to get hold of the knowledge they want. Meanwhile, the supply side, like the National Centre for Distance Learning, the universities, and so on will have set up free servers. That will be a real revolution, which will not have been started at the top, for once.

With this change of platform, everything is going to change: knowledge, meaning, the human mind, just as when the printing press was introduced.

When the brain rids itself of certain kind of loads, it makes room for others. When printing began to

spread, the amount of memory that was “liberated” made possible the invention of physics, just as mathematics became possible at the time of writing. You may compare that with the evolution of the human race toward an erect position. The forelegs, which became available for seizing things, became hands, and liberated the mouth from that task in the process, which enabled humankind to start speaking. This shift could not have been anticipated beforehand.

So I do believe that the current evolution of technology is not something historical but inherent in man. It is not in the order of history, but in the order of evolution.

RQM: We’re dazzled! All these developments are going to land us in a position of great responsibility. Allow us to quote Father Joseph Wrésinsky again: “We are not going to wait until the great changes in society will have taken place...to align ourselves on the side of the poorest, the more so since these changes are taking place without them, and without any thought being given to their experiences, and they will not benefit them afterward. Structural poverty is not going to fade away as by magic while we are setting out toward a new society: we take it with us. We will have to voluntarily get rid of it as we are building the new society, otherwise poverty will remain as if it was incrustated in its wall themselves.” You have just spoken to us about the history of the big shifts in society. Yet the poverty of the olden times is still with us, incrustated as it were in the (new) walls of the Renaissance. But these new channels of communication are going to bring forth a “new man” of sorts. We are witnessing a “grace period,” where the deficit of knowledge, or of its absence, is going to be made good. But will “new man” also, ipso facto, be less unequalitarian?

MS: The fact is that the circulation of information is a principal parameter that changes everything. Not to make a berth for the poor in this new world would be foolish and bloody-minded. It would be a blueprint for a world even more cruel than this one. If we do not make that turn, we will risk plunging the world in an even worse kind of poverty.

Today, a lack of knowledge is no longer a handicap. We’re in a new ballgame now. There has been a

“moratorium on the debts” a you said, it is period of grace for knowledge. But this fresh start must profit the weakest members of society. For them there is a fresh chance, opportunity beckons. Time is up. And time is now!

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