



Loss of the world: A philosophical dialogue (1)

Raymond Kolcaba

Department of Philosophy, Cuyahoga Community College, Ohio, USA

Email: Raymond.Kolcaba@tri-c.cc.oh.us

Abstract. Humanity has begun to move from the natural world into the cyber world. Issues surrounding this mental migration are debated in philosophical dialogue. The lead character is Becket Geist, a romantic philosopher with views tempered by 20th century science. He opens with a monologue in which he argues that 'loss of the world' in exchange for the cyber world is dark and inevitable. His chief adversary is Fortran McCyborg, a cyborg with leanings toward Scottish philosophy. The moderating force is Nonette Naturski who champions naturalism, conservation of humanist ideals, and prudent conclusions. The ensuing dialogue examines eight counter-arguments to Geist's vision. The arguments and Geist's replies lead to unanticipated changes in position that cascade to a chilling close.

Key words: cyber world, natural world, philosophical dialogue, reality, virtual reality

Participants in order of appearance:

Narrator: A witness to the conversation as an historical event.

Becket Geist: A romantic philosopher with views tempered by twentieth century science.

Fortran McCyborg: A cyborg with leanings toward Scottish philosophy. Fortran was designed to interact with humans especially in discourse.

Nonette Naturski: A naturalistic philosopher who conserves humanist views.

Narrator: Not all of us were unwitting victims. Some of us saw what was coming and debated its desirability. One conversation in particular stands out. To the best my memory serves me, this was exactly as it occurred. We sat in a semi-circle and as usual we expected that Fortran McCyborg would dominate the discussion. Nonette Naturski looked wistful but became sober after glancing at Becket Geist. He had that drawn look which signified he had too much on his mind. This meant that he would speak at length excitedly and irritate me with his habit of asking questions and allowing no one to answer them. He began his dark account of things to come.

Geist: We, that is humanity at large, will lose the world by us, as individuals, not taking an interest in it. Preposterous, you think!? The likelihood of this loss is so low that it is hardly worth considering. After all, we can't help but take an interest in the world; the necessities of life draw us into it. Our creature-nature requires maintenance – food, exercise, shelter. Our social needs direct us into interaction with others. Our work life makes us part of organizations. Use of transportation forces us to pay attention within the

world of cars, airplanes, and trains. Family life and citizenship keep us tied into the proximate, local, and greater communities. But all of this can change so that we no longer need or even prefer to take an interest in the world. Already in some places this change has taken place. In the next century, it promises to spread like a creeping blight over great swatches of the planet – like plague in a 1950's science fiction movie. Is this ominous? (At the top of an emotional spike, he immediately continued.)

My point is not that things unworldly will come to hold sway through a religious revival prescribing asceticism. No Dali Lama. No Franciscan vision. The forces at work are much more insidious. We will gradually become so structured by habit and so governed by external controls that we will have to exercise deliberative choice to opt for the world. When we relax control or when we attend to other business, the governing powers of habit and environment will resume rule. If this is not bad enough, people will come to prefer following these powers rather than opt for the world. They will deliberately act on that preference against the world; they will take an interest in the world only as dictated by a few greatly marginalized necessities of life. Is there a natural preference for the world? (He quickly said 'I' with great force.)

I attended a lecture in a large hall. From the back of the room, the speaker appeared quite tiny. To compensate for the effects of distance, a video camera fed the speaker's image into a rear-screen projector. So, the speaker appeared at two places at the same time – live on the podium and looming large on a screen behind. As I sat near the back of the room, I noticed that my eyes would gravitate toward the image on the

screen in preference to the live person. The image on the screen was 'more magnetic', had greater presence, and commanded the senses. The countervailing forces of etiquette and ingrained courtesy directed me to look at the live person. After all, she was speaking to me! It would be rude to act as if she were not there. So, I would look back at the speaker, only to be drawn to the big screen time after time.

For a number of years, I had a black and white television set with a small screen. I watched programs selectively. If nothing was of interest, I had plenty of other things to do. Some time later I acquired a good-sized color set. At first I noticed how difficult it was not to be drawn to the screen. I mean that my eyes would move to the set as I picked up the image in peripheral vision. It was like a living presence in the room – like a dominant family member – a needy child that continually insists, 'Look at me! Look at me!' I found myself watching more and more TV – not watching more programs but more TV. Is this what McLuhan had in mind or did he mean something more esoteric?

I thought about it and concluded that among other things, the colors on the set were more brilliant than most colors in my environment. In the rooms of our house, light varies with the time of day, shadows come and go, colors become gray as they recede into darker areas. Color in the man-made or natural environment is usually relaxed, not intense, washed out, subtle. By contrast, sunlight does not vary the colors of television images. They are uniform and bright. It is similar to looking into a properly adjusted light bulb. Color on the TV is in brilliant blocks, intense, and lacking in subtlety. Color on TV is coarse and loud, but captivating. Only at rare moments does it capture intellectual interest; it readily captures visual interest. It is a visual escape lean on reflective content. Is great reflective content consistent with the medium? (He left no pause.)

Consider less passive pieces of technology. Computer games demand responses, timely responses. Our internal program comes to resemble a structure reactive to the game. Software is salable because it establishes neural nets in us – bioware as part of our brains! (He was pointing to his head.) Consider work done on a computer; electronic workstations replace working in the world with working on screens. As the reports of technological advance roll in (or are they really advertisements?), eventually we will be able to do all of our shopping, banking, and ordering via computer. Interactive T.V. allows advertisers to intrude in personal lives and manipulate customers. We can teleconference, and the T.V. phone is not far behind. The home theater is replacing the home entertainment center integrating sound with visual media packing a wallop. High density television is just on the

horizon. At the dual lecture/projection, a high density image would have made the rear-screen image appear primitive. With a high density image, the audience's eyes would be riveted to the screen – the speaker would never have a chance. Who needs a live speaker anyway?

As you know, the inventors of virtual reality took the process two steps further – creating illusions so convincing as to be thoroughly deceptive and providing means for acting on them. Why exercise in a gym or park when you could jog (on a treadmill) along the rim of the Grand Canyon, beside the canals of Venice, or within the Sea of Tranquility on the Moon? Why attend programs of live music or theater? Media presentations enable experiencing the best performances, at whatever distance or angle we choose, at whatever time we want. CD Rom discs swallow up the entire human achievement in painting, sculpture, theater, and music. We are entering a world where the individual can gain total access to vast bodies of information. At the same time, are fewer and fewer of us sufficiently educated to use or need them? Nonetheless, the hours in front of a television, terminal, or within a headset will gradually expand through necessity or preference until our major realities will be electronic illusions. And so it will go with loss of the world.

Artists, engineers, and programmers will have taken over the sensorium. Behind produced sensory objects will be the feverish and confining heat of their intentions. Everything that is there, will be there because they intend for it to be there or at least that will be our suspicion. The theologian who divines nature for God's intentions can turn to electronic reality to discover human intentions – God is omitted unless God's intent just happens to coincide with some human intent or works through divinely inspiring script writers, engineers, and artists. Wilderness as an environment that transcends human intent can be a source for perceptions that newly inform human understanding. It will be superseded by convincing illusions. Someone nursed on the milk of electronic reality will quickly lose patience with the seeming chaos and emptiness of wilderness; where is the point to it, you know, the message? Garcin's exclamation in *No Exit* can be extended into 'Hell is other people and their cyber-intentions!'

Real political power lies in shaping a populace's preferences without them knowing it. Control of reality through inducing persons to prefer the medium which provides access to reality is the first phase of an ultimate form of mind control. The powers that control the media present the greatest potential threat to individual freedom and democratic institutions. Loss of the world will begin selectively with the concentra-

tion of technology in the First World. The Have's in post industrial nations will have illusions whereas the Have-Nots in the agrarian sector will have the world albeit an increasingly degraded one. Perhaps by the time the revolution reaches the fourth-world, they will need the electronic world as a humane escape from extreme environmental oppression.

While it is not too late, knowledge of the technology for dominating reality should be locked up and brought out only for purposes of study. Put the genie back in the bottle! You say, 'It is already too late.' Perhaps as Hegel suggested, these ominous thoughts can arise only after the profound fact is established – only after the gravel truck has begun to empty on the ice cream cone.

All of this bleak talk may be taken as a sign of my infected spirit. Maybe so, but a person's attitude is quite beside whether an argument is good. I grant that a measure of healthy skepticism is in order. On the one hand, we don't want to Pangloss the 'loss of the world – that is, suggest that the best of all possible worlds includes the loss of the world.' On the other, you may not want to buy uncritically into my dark vision. I see that distant look in some of your eyes.

McCyborg: Your shadow boxing with a phantom self seems to leave you thinking that your view is supported. To the contrary, clever sparring absent an opponent produces no victory. You say, lock away certain communications technologies! You understand what problem you have with that suggestion. Benign technology that serves useful purposes and makes our lives easier is hardly dangerous. If we were inspired to suppress technologies for their danger, communications technologies would either not be on the list or would be near the very bottom of it.

Naturski: I would ordinarily agree with your kind of assessment Fortran, but Geist has given me some reason to worry. I have not had a chance to digest the compromise of something so common and fundamental. What goes into our interest in the world? The world, at least as it appears to us, is always there, so we do not think about losing it let alone preferring to lose it. If we come to take an encompassing interest in electronic illusions, even if it is as full-blooded as our involvement in the world, it seems that something important will be lost.

McCyborg: With all of the experience you have had with electronic technology, you did not think about losing the world until Geist brought it up. Exactly! The reason is that most of the content presented through electronic technology is about the world. So, why get squeamish about 'so-called' illusions? Just as our sense organs mediate contact with the world, electronic devices serve as a second mediator. Indirect contact with the world is contact nonetheless.

Geist: It is trivially so that indirect contact is contact. The question is, 'Is there contact of any kind?' If these illusions were indirect in a simple manner, it would be like seeing the world through colored glasses. The world would be the same except for a certain consistent and predictable dimension, say the glasses' rosy color. From rosy images and our common experience of the world, we could draw inferences about how the world is. By contrast, electronic illusions are fabrications. The technologies distort. Designers and artists modify images. Elements of fiction are introduced. We often have no way to tell what is in the world and what is merely imaginary or an artifact of the cyberworld. To make matters worse, after loss of the world, we will lose our points of reference not being able to draw inferences about the world or even distinguish illusion from reality.

McCyborg: I grant that some programs are imaginary, but others compensate for weaknesses in your so-called 'natural' senses. They would even be reality-preserving when taken from your standpoint. For example, surgeons use virtual reality to perform operations more accurately than they could with their natural senses. Believe me, many of the mediators within electronic technology are neutral or even reality enhancing. On the other hand, you think that you 'have' the world to lose. Believe me, the revelations of your senses bear little resemblance to even what you call 'the world of science.' You think your perceptions broker knowledge of the world – that is mere species specific bias! Uniform perceptions among 'some' members of your species mislead you into thinking that your reduced, artificial, subjective, agent-relative, and simplified percepts are veridical.

Naturski: In many cases intersubjective agreement is an achievement, but scientists make a convincing case that standard observers under standard conditions render many perceptual judgments to be highly probable. Besides, I don't know why you even bother making the 'trust me' appeal Fortran. If some of your powers are as foreign to ours as you contend, we have no way of determining the correctness of your opinions since they flow from the use of those powers. So much of what you describe is unrelated to our experience. And just as we make mistakes in perception, assessment, and judgment, you are prone to error too. How do you know you are right? The bare claim of privileged access does not make it true. Besides, you have the reputation of saying such things just to win the argument.

McCyborg: When talking about mediation, like you I can only appeal to my experience. Geist brought up the topic of loss of the world, but I now realize that he meant 'your loss of your world.' What troubles me is the broadness of Geist's attack on technology.

Technology is just a tool. With more tools, our powers increase; just look at me with my bionic modifications! Greater powers, however, increase our responsibilities. With electronic technologies we can do more and do it better, but all along the way, we must accept responsibility.

Geist: An increase in the number of technological tools can diminish some of our responsibilities through things going awry such as at Chernobyl. The story of the sorcerer's apprentice suggests a lesson of this kind. First the apprentice had no way of foreseeing the results of his meddling, so he was not responsible for the disaster he caused. Second the disaster in progress was beyond his control. He could not prevent or modify what happen next. It too was outside of his responsibility.

McCyborg: The apprentice bungled by trying to be a master. Before working with some tools, we must become masters. We must realize potentials for disaster and assume responsibility accordingly. We must know that there is a gamble and what it is. Our actions should be adjusted in order to keep the potential for disaster at a manageable level.

Geist: But then increasing our powers through the use of tools is not always of positive value. We can increase our powers to the point where error of devastating kinds becomes highly likely. For example, do we want thousands of nuclear weapons platforms hanging over us in Earth orbit? No we don't.

McCyborg: I understand your point. We don't want to increase likelihood of devastating error without good reason. Sometimes the positive value of what is at stake, however, dictates that high risk is worth taking. The survival of the free world made the nuclear arms race with the Soviet Union worth the risk.

Geist: You say that after the fact! How could you know a reason like that is good ahead of time? You do not even know now what was at stake. The free world would probably have survived without the nuclear arms race. I think this likely given what we have learned about the old Soviet Union since the arms race ended. But, the risk taken didn't end with the arms race; it continues to grow. Many thousands of nuclear weapons still exist, and there is some likelihood that they will fall into the hands of terrorists, outlaw governments, or be detonated by accident.

McCyborg: Would Soviet leaders have been more adventuresome without the threat of nuclear retaliation? You can't confidently answer that question in the negative. What they say now is very incomplete and may not reflect all the forces at work on their psyches at the time. How many humans understand their motivations well enough to be certain of them over time?

Geist: Responsibility, then, is not the issue. Responsibility presupposes knowledge of what is at stake and risks associated with alternatives. Your skepticism about knowing our motivations coupled with the nebulous nature of stakes and risks indicate that closure is out of reach for even well documented cases such as the nuclear arms race. Because of ignorance, we can't define actual risk or even risk as perceived by the parties in a decision. And even if we could lift the veil of ignorance, we would still face the problem of deciding how much risk is rational. I would think, though, that the extremity of the risks in the nuclear arms race, such as the destruction of humanity, all of life, or even the planet, would give you pause (Said in ironical tone.)

McCyborg: A complex example taken over much time used as a coverall premise would seem to support any number of skeptical conclusions, but this is highly misleading. Using your coverall premise, we could seem to show that setting stakes and risks for practically any course of action would not be rational. The correct way to think about risk is from the perspective of local context. Risk can be assessed for particular actions, policies, or changes. As their consequences become known, we can use them to assess the next action, policy, or change.

Geist: What you suppose is that 'changing course' will be easy once bad consequences become known. The decision to introduce a major form of technology is not reversible because at the start, it comes with high economic and political stakes. Suppose that electronic media effectively convey content. As you say, 'We can do more better.' Suppose that it also turns out that the force of these media, the way they dominate us, prevents our doing important things. Even so, high economic stakes would prohibit abandoning them.

McCyborg: If there were negative effects, we should make adjustments to lessen their negativity. If they were negative enough, the technologies would be modified by market forces responding to demands of buyers and users.

Geist: You know full well that effectiveness in communication is inextricably bound with the medium's capacity to control an audience, and accordingly, a market for the technology.

McCyborg: The issue of control is bothering you. In your monologue you confessed to the lure of visual sirens. Perhaps others would respond differently. You shouldn't generalize your tendencies. They are insufficient grounds for sweeping generalizations. In my opinion, your belief in negative generalizations is the basis of your pessimism. Take George Orwell and his projections of a totalitarian nightmare. Even with the spreading use of technological controls for political

purposes and the lessons of totalitarian communism and fascism all around him, the dire predictions in his novel 1984 were not warranted. You use very little evidence and draw conclusions far more extreme. A few tendencies internal to you make for a meager induction.

Geist: My single case is supplemented with the fact that the technologies described have been adopted on a massive societal scale. Are these technologies just a fad? Will interest in them transmute into a more benign form? Probably not. Secondly, my argument is based on controls shaping preferences. Winston Smith in 1984 was physically going through the paces of life but mentally holding out. In my nightmare vision, there will be no hold-outs because everyone's natural tendencies in perception, interest, and enjoyment will be toward the electronic world and away from the natural one. Like you, they will consciously prefer and champion electronic fabrications over the sensory world.

Naturski: I don't see the problem with generalizing a single case. If the level of generalization ties into species traits, then Geist is as good a representative of the species as any. I see; you see. I have preferences; you have preferences. I jump from a loud noise; you do so too. I am attracted by loud colors on a screen; you are too. It seems to follow.

McCyborg: Experimental data probably will support generalization based on a 'psychological hook' as Vance Packard put it. But who gets hooked and how often is the matter of contention. The tasks of life would lead us in and out of the cyberworld apart from our preferences. When not dictated by what is necessary for action, preference of environments would be quite innocent – more like choice of coffee or tea.

Geist: In some instances it would be. But in great preponderance the basis of the preference would be dependent upon attractions of the sort I mentioned. Our fate is gradually being sealed because media are both pervasive and captivating. They are continually tested for their ability to capture interest, then refined and reintroduced. Orwell's Big Brother is a crude totalitarian device obviously gray and evil. The happy narcotic, cheery and bright that creeps over humanity by millimeters preserves a semblance of normalcy. What would there be to rally against? I grant that at times we can be deliberately perfidious and contrary; we could reject the cyberworld or anything, as Dostoyevsky proposes, out of sheer spite. These motivations, however, are reactive and posture to make a point.

Naturski: They are also supported by a status quo. People have a choice of what to react against. If the cyberworld becomes the only reality we know or know

how to live in, it will be difficult to react against it in a sustained way. At this point, a poet might express the sentiment of rejecting it but the poet's expression would exist on the periphery of the imagination not to be put into action.

McCyborg: I am surprised that Geist's paranoia has caught you too. First you argue that introduction of technology will draw us into the cyberworld by practical necessity in order to get things done. But what if we tire of the cyberworld? We may choose against it for recreational purposes. If significant minorities tire of it, we may witness a renaissance of the world like the periodic renaissances of Greek and Roman classicism. You speak as if some malevolent demon wishes to refine technology to control our every move. If that were true, why have I been designed to exercise deliberative choice? The cyberworld expands our powers and access to realities. It is liberating.

I suspect the real reason for your negativity is that both of you do not want to adapt to the emerging changes in technology. It is not your world. Ah, but the next generation will take to cyber-space technology like fish to water. By analogy take the danger of books. Yes, books! With the invention of the printing press, books were becoming plentiful. A social thinker might have begun to worry that masses of people would give up worship of god, gainful employment, family responsibilities, and civic duties in order to read books. Endless hours reading would spell the neglect of important matters of life. People would withdraw from society in order to read. This did not happen to society at large. Reading became a force for democracy, transmitting bodies of technical knowledge, a way to improve mental powers and feed the life of the mind. It became indispensable for modern life to the point where we think that our world would be better off if more people spent more time using libraries.

By analogy, electronic media will replace much of the world within our experience but this revolution will be integrated into living. In centuries to come media will be viewed as positive, as forces for human betterment that we should apply more often.

Geist: Your analogy is not very tight. Gaining literacy requires effort while experience of electronic reality is effortless. Books are not appealing as an alternative to many forms of experience but the cyberworld is 'sugar coated' and designed to replace thought, action, and perception as we understand them. Electronic media differ from books because of their totality. They are made appealing for the purpose of capturing our preferences wholesale. They can function as a nearly complete substitute for the world.

Naturski: Books were devised to enlighten us. They were the cornerstone of an age of reason. They repre-

sented faith in human nature. The expectation was that people would freely choose to become properly informed in order to be self-guided, moral, and dignified. Electronic media are a set of controls designed to absorb our identity, turn us into a reflection of their image, and dominate us. Human powers and dignity vanish.

McCycborg: I always thought that traditional artistic media are supposed to captivate our senses, leave behind a residue in our identities, and dominate us with their power. I believe that these factors indicate aesthetic superiority.

Naturski: The ability to 'captivate' senses is aesthetically relevant but it alone does not establish aesthetic superiority. Powerful art can be bad art. On my account, art that is manipulative for effect alone, that plays on the emotions, that directly aims for control is bad. What is aesthetically superior or inferior is decided through tasting, and persons of developed tastes often prefer the quiet and subtle to the loud and obvious. Great artists have highly developed tastes, and their tastes drive creative output and so are of particular importance.

McCycborg: Great artists can express their tastes through electronic media. Art of the past is experienced through recorded sounds and images. Artists of the future will create works for and within the cyberworld.

Naturski: You fail to recognize that the natural world is the model and often the source of inspiration for art works expressed within electronic media.

McCycborg: As electronic media come to dominate other artistic media, the cyberworld will be used as reference for new works and eventually will become their ultimate source. You can't escape from the fact that artists will come to prefer electronic media because audiences prefer them. They do so because they are entertained through them, can do more with them, and are attracted by them. If the cyberworld draws us like the natural world can't or doesn't often, then the cyberworld is the preferable world.

Naturski: I think that the institutions of the Art World drive preferences much as described by George Dickie. For you to be right, audiences would need to abandon traditional media leaving the Art World no choice but to regroup around electronic media. I don't think that this will happen because the Art World presently is able to maintain its integrity even within a vast sea of pop culture. A relatively small scale infrastructure of people and organizations is needed to maintain the Art World, and it has been an advocate of open-mindedness and freedom of expression. It recognizes that the arts require a wide spectrum of contents for their flourishing. From this point of view, the cyberworld is an adjunct to the world and not

a replacement for it. The natural world is the place of our origins. Experience in it helps us understand much about ourselves and our forbearers. Through it, we make contact with 'the elements.' As Shakespeare said, they help reveal to us what we are.

McCycborg: My understanding of human preferences indicates to the contrary that most people don't care about natural history, gaining new information for humanity, or understanding their origins. Most only care about entertainment, comfort, ease, and efficiency – a lifestyle package that we might call 'creature comforts plus.'

Naturski: Then, you agree with Geist's prediction about humanity coming to prefer the cyberworld, but you base it on passive tendencies in people – the old 'principle of least effort' argument.

Geist: But how did people become so passive? Because the electronic environment makes few demands for action.

McCycborg: So your view of human nature is that persons will be slothful unless action is environmentally necessitated?

Geist: No. Persons are also initiators of action, but the question is with actions that the environment will permit. After bodily needs are satisfied, the cyberworld provides largely passive entertainments. Its vision of being dynamic and active is destroying adversaries in a computer game!

McCycborg: Your tone does not indicate that you have convinced yourself of what you are saying. As you are well aware, the cyberworld provides more opportunities for action than your natural world. If I try to infer your mental state, it sounds to me like you are dissatisfied with human nature and want to improve upon it. The irony is that the human mind and senses evolved in adaptation to the natural world. The primary evolutionary force of selection as reproductive success makes this adaptation far from perfect. But our powers combined with yours allow us to take adaptation one step further by creating an alternate world which satisfies human needs and wants, to a degree of perfection. Heaven on earth is not likely. Heaven within the cyberworld will become reality.

Geist: What a beatific vision – a heaven of wish-fulfillment through television, virtual reality, and computers! You can't do without the natural world; it is needed for human flourishing at least indirectly – if for no other reason than to provide the material supports for existence in the technological utopia. Your cyberworld is built on the natural world. What if the power goes out? What will happen to you then?

McCycborg: That we can't avoid the natural world entirely does not make it desirable for our major spiritual purposes. (McCycborg's smug emphasis agitated Nonette.)

Naturski: You are one to talk about the spiritual! Spiritual needs are satisfied through one being making contact with another. The cyberworld is a prophylactic that insulates us from spiritual contact.

McCyborg: So, you would argue that spiritual contact is not possible through artistic media such as painting and sculpture? (Nonette looked puzzled.) Also, much social interaction is spiritual in your sense but not desirable. It is a source of stress like the sort you are feeling now Nonette. Electronic media can save us from stress by making us as privileged as the Buddha before his traumatic experiences. We can be isolated from adversities such as death, disease, dissension, aging, a despoiled environment, and personal tragedy. Instead, we can interact with computer icons, joy sticks, programs, warm fuzzies of one kind or another. They mediate our contact with the world. They allow for more pleasant experience. Technology is supposed to make life easy.

Geist: During the Vietnam War American pilots were criticized for bombing 'targets' from seven miles up. They could not see who they were killing; their acts from an agent's point of view were purely impersonal. When faced with this criticism, General Curtis LeMay said that he would rather bomb someone from a distance than kill them with a rusty knife. In the Gulf War, this strategy was followed with amazing uniformity. The enemy came into contact with our weapons but rarely with any of our military personnel. If knowing the consequences or even the very nature of our actions is important for assessing their moral status, then electronic mediators prevent moral agency from functioning properly.

McCyborg: Acting in the cyberworld requires a new way of being including new moral sensibilities. Let me explain. If we accept Geist's prediction, it will be an interesting historical development that you humans will lose the world prior to losing yourselves. The revolutions in machine technology and microbiology gave you powers to change yourselves into another species or even another life form. What purposes will shape these changes? We already know that at first they will be guided by medical and humanitarian motives to cure genetic disease, reduce suffering, and assure quality of life. As dreamed in science fiction, political forces may one day seek production of the ultimate warrior or competitor. As envisioned by futurists, offspring may be designed to fulfill parents' fantasies for the ideal child. But, one key purpose will be the adaptation to flourish in the technological environment. Certain human talents and abilities will be prized within the cyberworld because they will enable living within it. Other talents and abilities will be a hindrance. Accordingly, modification of human senses, mentality, and moral sensibility will be

'selected for' by genetic engineers in order to make for 'the good life' in the cyberworld. You will become the species suited to the cyberworld equipped with a proper moral sense. Like me you will ultimately be unable to live under the primitive conditions of your animal evolution.

Geist: Reference to machine morality sounds like pure bluff. How are genetic engineers supposed to design moral sensibilities for undefined beings, in a hypothetical world, behaving in largely unknown practical contexts?

McCyborg: As software designers currently work out systems of rules of procedure within parameters of the design problem.

Geist: I sense that you have an underdeveloped understanding of the concept of morality. (He said matter-of-factly but with some compassion.) This is certainly not your fault. But I now see that your prediction is much darker than mine. What is not comprehensible to the engineer can not be saved. Unless morality is accidentally attached to something the engineer opts for, it will vanish within evolution of the design process. After complete transformation, the engineer will have wiped out dimensions of our being. We will not be able to recover or even appreciate what we lost. Enter homo cyberens with old McCyborg as the leader of the first phalanx!

McCyborg: Your mocking tone does not alter the bright and optimistic character of my prediction. It is dark to you Geist because you think that you have something to lose. I am a proud leader of the march into the wonders of the new world.

Naturski: Is this a march to oblivion? I think that there always will be residual human traits. (She looked at Geist.) Fortran has some. A little new learning from the cyberworld and Fortran is already talking about speciation. We will be careful not to lose our essential selves. You can understand what I am saying, can't you Fortran? If you take off your mask for communicating with humans, what am I to you, right now?

McCyborg: Let me switch on my dispassionate mode of speech (He turned a dial on his head). 'You-are-a-set-of-contents-on-my-screen.' (Said with totally flat affect).

Naturski: I am an illusion?

McCyborg: (His flat affect continued.) 'Only-from-your-perception-of-my-functioning. To-me, the-distinction-between-what-you-call-illusion-and-reality-becomes-inconsequential-difference. What-matters-is-coherence-of-the-program.'

Narrator: A cold chill rose up my spine. Geist and Naturski were in shock. Was McCyborg's persona no more than an artful illusion? Or was he 'putting us on' by playing games in his usual way?

