A humanities symposium called “Discourse@Networks 200” was held at Stanford University over the course of several months in 1997. The following talk on April 23 represents the only dissent to the prevailing high-tech orientation/appreciation.

Thanks for coming. I’ll be your Luddite this afternoon. The token Luddite, so it falls on me to uphold this unpopular or controversial banner. The emphasis will be on breadth rather than depth, and in rather reified terms, owing to time considerations. But I hope it won’t disable whatever cogency there might be to these somewhat general remarks.

It seems to me we’re in a barren, impoverished, technicized place and that these characteristics are interrelated. Technology claims that it extends the senses; but this extension, it seems, ends up blunting and atrophying the senses, instead of what this promise claims. Technology today is offering solutions to everything in every sphere. You can hardly think of one for which it doesn’t come up with the answer. But it would like us to forget that in virtually every case, it has created the problem in the first place that it comes round to say that it will transcend. Just a little more technology. That’s what it always says. And I think we see the results ever more clearly today. The computer cornucopia, as everything becomes wired into the computer throughout society, offers variety, the riches of complete access, and yet, as Frederick Jameson said, we live in a society that is the most standardized in history. Let’s look at it as a “means and ends” proposition, as in, means and ends must be equally valid. Technology claims to be neutral, merely a tool, its value or meaning completely dependent on how it is used. In this way it hides its ends by cloaking its means. If there is no way to understand what it is in terms of an essence, inner logic, historical embeddedness or other dimension, then what we call technology escapes judgment. We generally recognize the ethical precept that you can’t achieve valid or good ends with deficient or invalid means, but how do we gauge that unless we look at the means? If it’s something we’re not supposed to think about in terms of its essential being, its foundations, it’s impossible. I mean, you can repeat any kind of cliche. This is that kind of thing that one hopes is not a cliche because the means and ends thesis is a moral value that I think does have validity.

A number of people or cases could be brought up to further illuminate this. For example, Marx early on was concerned with what technology is, what production and the means of production
are, and determined, as many, many people have, that it’s at base division of labor. And hence it is a vital question how stunting or how negative division of labor is. But Marx went on from that banality, which doesn’t get much examined, as we know, to very different questions, such as which class owns and controls the technology and means of production, and how does the dispossessed class, the proletariat, seize that technology from the bourgeoisie. This was quite a different emphasis from examining and evaluating technology, and represents an abandonment of his earlier interest. Of course, by that point, Marx certainly felt that technology is a positive good. Today the people who say that it’s merely a tool, a neutral thing, that it’s purely a matter of instrumental use of technology, really believe that technology is a positive thing. But they want to be a little more canny about it, so again, my point is that if you say it’s neutral, then you avoid testing the truth claim that it’s positive. In other words, if you say it’s negative or positive, you have to look at what it is. You have to get into it. But if you say it’s neutral, that has worked pretty well at precluding this examination. Next, I want to provide a quote that keeps coming back to me, a very pregnant quote from a brilliant mathematician — and it’s not Ted Kaczynski. It’s the British mathematician, Alan Turing, and some of you, I’m sure, know that he established many of the theoretical foundations for the computer in the 1930s and 40s. Also, it would be worth mentioning that he took his own life in the 50s because of a prosecution stemming from the fact that he was gay, somewhat like the action against Oscar Wilde about 50 years earlier. Anyway, I mention that — and I don’t want to belittle the tragic fact that he was gay and this was his end because of it — but he took his life by painting an apple with cyanide and biting into it, and it makes me think of the forbidden fruit of the tree of knowledge and whether he was saying something about that, as we know what happened with that. We have work, agriculture, misery and technology out of that. And I also wonder, in passing, about Apple computers. Why would they use an apple? It’s kind of a mystery to me. [laughter.]

But anyway, after this digression, the quote that I was trying to get to here. In the middle of an article for the journal Mind in 1950, he said, “I believe that at the end of the century, the use of words in general educated opinion will have altered so much that one will be able to speak of machines thinking without expecting to be contradicted.” Now, what I think is of a lot of interest here is that he doesn’t say that by the end of the century we’ll have computing machines (they were still called computing machines at that time) that have advanced so far that people won’t have any trouble understanding, now, that machines think. He says, “…the use of words in general educated opinion will have altered so much.”

Now, I’m giving a reading of this which is probably different from what he had in mind, but when you think about it, this has to do with this question of the interrelationship of society and technology. I think he was quite right; again, not because artificial intelligence — it wasn’t called that back then, of course — had advanced so far. Actually, it hasn’t made very good on its ambitious claims, as I understand it. But some people now entertain that notion very seriously. In fact, there’s even a small but considerable literature on whether machines feel and at what point machines live. And that isn’t because Artificial Intelligence has gone very far, it seems to me. In the early ’80s, there was an awful lot of talk about “just around the corner,” and I’m not an expert on AI, but I don’t think it has gone very far. It plays a pretty good game of chess, I guess, but I don’t think it’s anywhere near these other achievements, or levels.

I think what explains the change in perception about computers is the deformation caused by the massive amount of alienation that has happened in the past 50 years or so. That’s why some, and I hope not many, hold to this point about computers living. In terms of what they are capable
of, it seems to me, when you have the distance narrowing between humans and machines in the sense that if we are becoming more machine-like, it’s easier to see the machine as more human-like. I don’t want to be overly dramatic about it, but I think more and more people wonder, is this living or are we just going through the motions? What’s happening? Is everything being leached out of life? Is the whole texture and values and everything kind of draining away? Well, that would take many other lectures, but it’s not so much the actual advance of the technology: If machines can be human, humans can be machines. The truly scary point is the narrowing of the distance between the two.

Another quotation to similarly mark this descent, if you will, is a short one from a computer communications expert, J.C.R. Licklider. In 1968 he said, “In the future, we’ll be able to communicate more effectively through a machine than face-to-face.” If that isn’t estrangement, I don’t know what is. At the same time, one striking aspect in terms of cultural development is that the concept of alienation is disappearing, has almost disappeared. If you look at the indices of books in the last, say, 20 years, “alienation” isn’t there any more. It has become so banal, I guess, what’s the point of talking about it? I was reading a recent review on another subject by the political theorist, Anthony Giddens, I think it’s Sir Anthony Giddens, actually. He found it remarkable that “capitalism has disappeared as an object of study, just when it has removed any alternative to itself.” One might think, what else is there to study in the absence of any other system? But no one talks about it. It’s just a given. It’s another commonplace that is apparently just accepted and not scrutinized. And, of course, capital is increasingly technologized. A kind of obvious point. The people who think that it’s about surfing the Net and exchanging e-mail with your cousin in Idaho or something, obviously neglect the fact that the movement of capital is the computer’s basic function. The computer is there for faster transactions, the faster movement of commodities and so on. That shouldn’t even have to be pointed out.

So anyway, back to the theme of how the whole field or groundwork moves and our perception of technology and the values we attach to it change, usually pretty imperceptibly. Freud said that the fullness of civilization will mean universal neurosis. And that sounds kind of too sanguine, when you think about it. I’m very disturbed by what I see. I live in Oregon, where the rate of suicide among 15-to-19 year olds has increased 600% since 1961. I find it hard to see this as other than youth getting to the threshold of adulthood and society and looking out, and what do they see? They see this bereft place. I’m not saying they consciously go through that sort of formulation, but some kind of assessment takes place, and some just opt out.

A study of several of the most developed countries is showing that the rate of serious depression doubles about every ten years. So I guess that means if there aren’t enough people on anti-depressants right now, just to get through the day, we’ll all be taking them before long. You can just extrapolate from this chilling fact. If you look for a reason why that won’t keep going, what would that be without a pretty total change? And many other things. The turn away from literacy. That’s a pretty basic thing that is somewhat baffling, but it isn’t baffling if you think that people are viscerally turning away from what doesn’t have meaning anymore. The outbursts of multiple homicides. That used to be unheard of, even in this violent country, just a few decades ago. Now it’s spreading to all the other countries. You can hardly pick up the paper without seeing some horrendous thing in McDonald’s or at a school or some place in Scotland or New Zealand, as well as L.A. or wherever in the U.S.

Rancho Santa Fe. You probably remember this quote from the news. It’s from a woman who was part of the Heaven’s Gate group there. “Maybe I’m crazy, but I don’t care. I’ve been here
31 years, and there's nothing here for me.” I think that speaks for quite a lot of people who are
surveying the emptiness, not just cult members.

So we’re seeing the crisis of inner nature, the prospect of complete dehumanization, linking
up with the crisis of outer nature, which is obviously ecological catastrophe. And I won’t bore
you with the latter; everyone here knows all its features, the accelerating extinction of species,
etc., etc. Up in Oregon, for example, the natural, original forest is virtually one hundred percent
gone; the salmon are on the verge of extinction. Everybody knows this. And it’s greatly urged
along by the movement of technology and all that is involved there.

Marvin Minsky — I think this was in the early ’80s — said that the brain is a three-pound
computer made of meat. He’s one of the leading Artificial Intelligence people. And we have all
the rest. We have Virtual Reality. People will be flocking to that, just to try to get away from an
objective social existence that is not too much to look at or deal with. The cloning of humans,
obviously is just a matter of probably months away. Fresh horrors all the time. Education. Get
the kids linked up when they’re five or so to the computer. They call it “knowledge production.”
And that’s the best thing you could say about it.

I want to read one quote here from Hans Moravec from Carnegie-Mellon, who is a contributor
to the periodical Extropy. He says, “The final frontier will be urbanized ultimately into an arena
where every bit of activity is a meaningful computation. The inhabited portion of the universe
will be transformed into a cyberspace. We might then be tempted to replace some of our inner-
most mental processes with more cyberspace — appropriate programs purchased from artificial
intelligence and so, bit by bit, transform ourselves into something much like it. Ultimately, our
thinking procedures could be totally liberated from any traces of our original body, indeed of
any body.” I don’t think that requires any comment.

But, of course, there have been contrary voices. There have been analyses by people who have
been pretty worried about the whole development. One of the best is Horkheimer and Adorno’s
Dialectic of Enlightenment, written in the ’40s. If technology is not neutral, they argue very
forcefully, reason isn’t a neutral thing either, when you think about it. They raise a critique of
what they call “instrumental reason.” Reason, under the sign of civilization and technology, is
fundamentally biased toward distancing and control. I’m not going to try to sum up the whole
thing in a few words, but one of the memorable parts of this was their look at Odysseus from the
Odyssey, from Homer, one of the basic texts of European civilization, where Odysseus is trying to
sail past the sirens. Horkheimer and Adorno demonstrate that this depicts at a very early point
the tension between the sensuous, Eros, pre-history, pre-technology, and the project of going
past that and doing something else. Odysseus has his oarsmen tie him to the mast, and stuff their
own ears with wax, so he won’t be tempted by pleasure and he can get through to the repressive,
non-sensuous life of civilization and technology.

Of course, there are many other markers of estrangement. Descartes, 350 years ago: “We have
to become the masters and possessors of nature.” But what I think is also worth pointing out in a
critique like Horkheimer and Adorno’s and many others, is that if society doesn’t subdue nature,
society always will be subjected to nature and, in effect, there probably won’t be any society. So
they always put that caveat, that qualification, which is to their credit for honesty; but it puts
a brake on the implications of their critique. It makes it less a black-and-white thing, obviously,
because, well, we can’t really get away from domination of nature, and that’s what the whole
thing is based on, our very existence. We can criticize the technological life, but where would we
be without it?
But something that I think has very, very enormous implications has happened in the last 20 or 30 years, and I don’t think it has yet got out very much. There has been a wholesale revision in scholarly ideas of what life outside of civilization really was. One of the basic ideological foundations for civilization, for religion, the state, police, armies, everything else, is that you’ve got a pretty bloodthirsty, awful, subhuman condition before civilization. It has to be tamed and tutored and so on. It’s Hobbes. It’s that famous idea that pre-civilized life was nasty, brutish and short; and so to rescue or enable humanity away from fear and superstition, from this horrible condition into the light of civilization, you must have what Freud called the “forcible renunciation of instinctual freedom.” You just have to. That’s the price. Anyway, that turns out to be completely wrong. Certainly, there are disagreements about some of the parts of the new paradigm, some of the details, and I think most of the literature doesn’t draw out its radical implications. But since about the early ’70s, we have a starkly different picture of what life was like in the two million or so years before civilization, a period that ended about 10,000 years ago, almost no time at all.

Prehistory is now characterized more by intelligence, egalitarianism and sharing, leisure time, a great degree of sexual equality, robustness and health, with no evidence at all of organized violence. I mean, that’s just staggering. It’s virtually a wholesale revision. We’re still living, of course, with the cartoonish images, the caveman pulling the woman into the cave, Neanderthal as meaning somebody who is a complete brute and subhuman, and so on. But the real picture has been wholly revised.

I won’t take time here to go into the evidence and the arguments, but I want to mention just a couple of them. For example, how do we know about sharing? That sounds like some kind of ’60s assertion, right? But it’s simple things like examining the evidence around hearths, around fire sites, probably in impermanent settlements. If you found around one fire you’ve got all the goodies there, well, that looks like the chief and everybody else has little or nothing. But if everybody has about exactly the same amount of stuff, it argues for a condition of equality. Thomas Wynn has helped us see prehistoric intelligence in a different light. He drew on Piaget quite a bit in terms of what is congealed and/or concealed in even a simple stone tool, and he deconstructed it to bring out about eight different stages and steps and aspects to what it takes to actually take something like that and make a tool out of it. And he concluded — and this hasn’t been refuted that I see anywhere in the literature — that at least a million years ago, Homo had an intelligence equal to that of the adult human today. So one would have said, well, okay, even if it was kind of rosy prior to culture, our distant ancestors were just so dim they couldn’t figure out how to establish agriculture, hierarchy and all the other wonderful things. But if that’s not true, then you start looking at the whole picture quite differently.

One other thing: the book Stone Age Economics by Marshall Sahlins came out in 1971, and a lot of his argument is based on existing hunter-gatherer peoples, on just simply seeing how much they worked — which was very, very little. By the way, he was the chairman of the anthropology department at the University of Michigan, so we’re not talking about some crank, or a marginal figure. If you look at the literature in anthropology and archaeology, you see quite amazing corrections to what we had thought. It makes you start to think, I guess perhaps civilization wasn’t such a good idea. The question always asked was why did it take humanity so long to figure out agriculture? I mean, they just thought of it yesterday, relatively, less than 10,000 years ago. Now the question is, why did they ever take up agriculture? Which is really the question of why did they ever take up civilization? Why did they ever start our division-of-labor-based technology? If we once had a technology, if you want to call it that, based on pretty much zero
division of labor, for me that has pretty amazing implications and makes me think that somehow it’s possible to get back there in some way or another. We might be able to reconnect to a higher condition, one that sounds to me like a state of nearness to reality, of wholeness.

I’m getting pretty close to the end here. I want to mention Heidegger. Heidegger, of course, is thought of by many as one of the deepest or most original thinkers of the century. He felt that technology is the end of philosophy, and that’s based on his view that as technology encompasses more and more of society, everything becomes grist for it and grist for production, even thinking. It loses its separateness, its quality of being apart from that. His point is worth mentioning just in passing. And now I get to one of my favorite topics, postmodernism, which I think is exactly what Heidegger would have had in mind if he had stuck around long enough to see it. I think that here we have a rather complete abdication of reason with postmodernism in so many ways. It’s so pervasive, yet so many people don’t seem to know what it is. Though we are completely immersed in it, few, even now, seem to have a grasp of it. Perhaps this, in its way, is similar to the other banalities I referred to earlier. Namely, that which has overpowered what is alien to it is simply accepted and rarely analyzed.

So I started having to do some homework, and I’ve done some writing on it since, and one of the fundamental things — and sorry, for people who already know this — comes from Lyotard in the ’70s, in a book called The Postmodern Condition. He held that postmodernism is fundamentally “antipathy to meta-narratives,” meaning it’s a refusal of totality, of the overview, of the arrogant idea that we can have a grasp of the whole. It’s based on the idea that the totality is totalitarian. To try to think that you can get some sense of the whole thing? That’s no good. And I think a lot of it, by the way, is a reaction against Marxism, which held sway for so long in France among the intelligentsia; I think there was an overreaction because of that.

So you have an anti-totality outlook and an anti-coherence outlook, even, because that too is suspect and even thought to be a nasty thing. After all, (and here’s where he probably concurred with Horkheimer and Adorno), what has Enlightenment thinking brought us? What has modernist, overview, totality-oriented thinking got us? Well, you know, Auschwitz, Hiroshima, neutron bombs. You don’t have to defend those things, though, to get a sense that maybe postmodernism is throwing everything away and has no defenses against, for one thing, an onrushing technology.

Similarly, postmodernists are against the idea of origins. They feel that the idea of origins is a false one (these are all big generalizations; there are probably some with slightly different emphases). We are in culture. We’ve always been in culture. We always will be in culture. So we can’t see outside of culture. So something like nature versus culture is just a false notion. Thus they deny that, too, and further inhibit understanding the present. You can’t go back to any origins or beginning points of causation or development. Relatedly, history is a fairly arbitrary fiction; one version is about as good as another. There’s also emphasis on the fragmentary, pluralism, diversity, the random. But I ask you, where is the random? Where is the diversity? Where is it? To me, the world is getting so stark and monolithic in terms of the general movement of things and what the meaning of this movement is. To play around with this emphasis on margins and surfaces, this attitude that you can’t get below the surface, to me is ethical and intellectual cowardice. “Truth and meaning?” Well, that’s just nonsense. That’s passe. Always put terms like that in quotes. You see pretty much everything in quotes when you look at postmodern writing. So it’s a lot of irony, of course. Irony verging on cynicism is what you can now see everywhere in popular culture. In terms of postmodernism, that’s close to the whole thing. Everything is shift-
ing. It’s just so splintered. I don’t quite get how it is possible to evade what is going on vis-a-vis the individual and what is left of nature.

I think postmodernism is a great accomplice to technology, and often is an explicit embrace of it. Lyotard said that “data banks are the new nature.” Of course, if he rules out origins, how does he know what nature is? They have their own set of totality-type assumptions, but they don’t want to cop to it. It’s only the old-fashioned people, I guess, who don’t want to play that game. One more quote: this is from a Professor Escobar in the June 1994 issue of Current Anthropology. It really has a lot to do with how technology defines what is the norm and what is ruled out. He said, “Technological innovations in dominant world views generally transform each other so as to legitimate and naturalize the technologies of the time. Nature and society come to be explained in ways that reinforce the technological imperatives of the day.” I think that’s really well put.

So I started with one basic fallacy about technology. Technology is not neutral, not a discrete tool separate from its social placement or development as part of society. I think the other one is that, okay, you can talk all you want about technology, but it’s here, it’s inexorable, and what’s the point of talking about it? Well, it isn’t inevitable. It’s only inevitable if we don’t do anything about it. If we just go along, then it is inevitable. I think that’s the obvious challenge. The unimaginable will happen. It’s already happening. And if we have a future, it will be because we stand up to it, and have a different vision, and think about dismantling it. I also think, by the way, that if we have a future, we may have a different idea about who the real criminals are, and who the Unabomber might be seen to resemble: John Brown, perhaps; and who, like John Brown, tried to save us.