The Humanities and Telecommunication

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:ABSTRACT

Contemporary technology in the form of electronically managed interactive telecommunications is compatible with the goals and values of the humanities. For Marx, machine-work tended toward being mechanically routine, repetitive, deskilled, and trivialized. In the case of discourse, the same criticism has been made of computerized communication. Immediacy is not authorial presence, but the experience of textuality that is maximized by participation in interactive communication. Bulletin board technology inverts the relationship between the degree of communicative interaction and the number of communicants. It is both mass communication and individualized participation. From the point of view of a theory of discourse, the bulletin board system is unique in that the ratio between the number of participants and the individualized nature of the interaction is directly proportional. One person's voice does not inhibit or repress the voice of another. It is the technological embodiment of the ideal speech situation of Habermas which allows for the maximum of democratic participation and which, by allowing everyone to have a voice, allows for the .greatest amount of dissensus and dialectic

Text of Article

The thesis of this paper is that contemporary technology in the form of digital information, natural language processing, cybernetics, and particularly interactive telecommunications is compatible with the goals and values of the humanities. There has been, however, the criticism that technology is dehumanizing. We will consider and respond to this criticism in light of the thought of Marx, Marcuse, Lyotard and Heidegger.

Only a few years ago the connotations surrounding the terms 'philosophy' and 'computers' were incongruous. One reason for this was the association of computer technology with mathematical computation and the manipulation of symbols in formal programming languages. Since most of us do not use computers for number crunching or programming, but for word processing, text processing, and communication, this incongruity has diminished. The concrete instance of this technology that the paper considers is the electronic bulletin board. A user calling into an electronic bulletin board can read and enter messages, upload and

download files. The messages are usually divided into conferences or discussion groups where messages are listed according to subject matter, date, sender and receiver. The message log is also a searchable database through which multiple discussion threads can be followed. One major technological advantage of the bulletin board is the liberation from the constraints of time and space. Parties to a communication do not need to be at the same location or present at the same time. The number of participants in the discussion can be unusually large. Each caller has an equal opportunity to contribute to the discussion. Because the message log is searchable, messages can be selectively read and answered without having to read through the entire message log. The temporality of the message log constitutes a unique discursive environment. Although the communication is asynchronous, it retains a sense of immediacy. Since the entire message log is available to read, the feeling of walking in late to a conversation does not occur. One of the standard criticisms of the electronic communication is that it is impersonal and lacks "face-to-face" contact, which is said to reduce and compromise the communication. The criticism is similar to the Marxist critique of alienated labor in a highly industrialized and capitalized society.

Marx argued that the machine distanced the worker from the material. A metalsmith, for instance, in using a tool such as a hammer, has direct knowledge of the properties of the metal. The difference in the malleability of copper, silver and pewter are transmitted through the handle of the hammer. The same is true for the leathersmith, the potter, the mason, and the weaver. The tool unites worker with material. In pre-industrial labor, the worker, instead of being alienated from the material, enjoys an intimacy with it. The kind of skill that was required defied complete representation in speech. The limits of speech in the case of these trades was evidenced by the fact that learning required apprenticeship. The worker needed to get his or her hands on tools and materials so that the muscles and nerves of the body could learn the skills of the trade.

The craftsperson in a cottage industry had an essential and indispensable relation to the manufacturing process. The hammer of the metalsmith, the loom, the potters wheel, represents an alternative technology to the machinery of industrialized production. We are inclined intuitively to experience craft technology as humanizing, rather than alienating, and we tend to romanticize it when we think of returning to a simpler pre-industrial time.

The machine, in contrast to the simple tool, for Marx, distanced the worker from the material. The relation was mediated. The worker works the machine and the machine works upon the material. For Marx "machine-work" in the industrial production of capitalistic culture tended toward being mechanically routine, repetitive, deskilled, and trivialized. It had the effect of

dividing mental from manual labor and breaking apart traditional social ties and associations. Furthermore, instead of the product of the work being the goal of production, secondary features of the production process become, from the point of view of the value to the worker, the focus of attention, such as efficiency as measured by cost and input-output ratios.

In the case of text production, the same criticism, at different times, has been made of writing, the printing press, and the typewriter. Literacy, although we may not think of writing as a technology, in contrast to orality, removes the inflection of the spoken word. The printed text in contrast to the illuminated manuscript inserts the machine between producer and product transforming art into commodity. The expressiveness of the movement of the hand in a handwritten letter is lost when the letter is typed. In the same way it is argued that the computer makes the relationship between meaning and sign more mechanically mediated.

We must ask whether it is our experience that text technologies such a typewriters, printing presses, copiers, and computers are alienating? Or is it the case that the analogy between signs and texts, and the materials of wood, leather and metal, fails when describing the relation of the producer to the product when the work at issue is the production of signs and the generation of texts.

What else would be the material that the mechanization and computerization of the sign alienates us from, but from meaning? The criticism, therefore, is that just as the expression of the worker is lost in mass produced, assembly line commodities, meaning is lost in the computerization of writing and communication.

The criticism makes assumptions about the nature of language and meaning which underlie the way in which we speak and think about knowledge and learning. The classical view of meaning, that has its roots in dualistic thinkers such Plato and Descartes, treats meaning and sign as two distinct kinds of realities. Signs consist of concrete entities such as particular visual marks and sounds that are the conventions of a specific culture. Meanings, by contrast, are mental entities that exist in minds and perhaps correspond to essences in nature, and are that of which language is the outer expression. There are, for example, triangular things, but triangularity, that is the object of study of the mathematician, is grasped by the mind and not by the bodily senses. Meanings, unlike the signs that express them, are universal.

The anthropology associated with this view is also dualistic. Just as triangularity is a timeless essence outside what is material and corporeal, so also is the faculty that comprehends it, namely, the human mind. Meaning and mind are ennobled by being placed beyond the realm of physical particulars. The sign, in this classical view of meaning, receives little attention. It is a means of transmitting meaning, a conduit for communicating ideas. It is not the substance of

communication, but its means. The goal of communication, in the classical sense, is agreement in the same shared idea, that is being of a common mind — being like-minded. The acquisition of knowledge in the classical view of mind was quasi-religious. Pythagoras, after all, believed the study of mathematics was a means of separating the immortal soul from the mortal body and thereby gaining salvation.

However, much of contemporary philosophy, takes signs to be the substance of communication and not the means. Instead of meanings residing in mind, and mind having an admittedly problematic relation to the corporeal person, meaning is understood as the function of the sign in social interaction. Language is not the outward expression of an inner universe of meaning, but the source of meaning, the location where meaning occurs. Classical Western anthropology is dualistic, contemporary Western anthropology is not. Classical anthropology perceives language as the product of authorial intention, contemporary anthropology regards language as arising out of the interplay of signs governed by social practices.

The criticism of telecommunication technologies is that the communication is not face-to-face, or what less metaphorically can be expressed by saying that the source of meaning is not present. This makes sense only when the location of meaning is imagined to reside outside the sign in the "mind of the person", and the mind within the body, notions that have been perennially problematic for Western thought. On the other hand, when we regard meaning as a function of the sign in a system of signs, then the presence of meaning is the act of participating in the linguistic practices of a discursive community, whether it is oral, written, or symbolic as in the case of art. What is the nature of the participation? It is essentially hermeneutic. It is the act of interpretation. It is appreciating the systemic changes that occur in a system of signs when one or more of its terms is redefined. The immediacy of meaning and intention is not a corporeal presence of face and hands, which are after all opaque surfaces, but a consciousness of semantic difference of alternative interpretive strategies. Immediacy is not authorial presence but the experience of textuality that is maximized by participation in interactive communication. Bulletin board technology is unique in that it inverts the relationship between the degree of communicative interaction and the number of communicants. It is both mass communication and individualized participation. The more people that participate, the greater the amount of individualized interaction. The more the interaction, the greater the appreciation for the similarities and differences of semantic practices, and the less alienating the communication. The less alienating the communication, the more humanized the discursive environment. If meaning resides in the interplay of signs and not in bodies occupied by minds, then interactive, asynchronous telecommunication technology brings us into a more

intimate relationship with the material and substance of language. Therefore the criticism that Marx makes of industrial technology does not apply to computer managed telecommunication .technology

Marcuse

Not unlike Marx, for Marcuse, modern technology and the political and economic power that depends upon it, are exploitive and repressive. Technological thinking fosters what he calls the "happy consciousness" for which the real is rational, and for which rationality is capable of solving whatever problems technology creates. However, according to Marcuse, technological rationality represses irrationality, denies the tragic, and systematically ignores the absurd that surfaces in the form of concentration camps, ethnic cleansing, serial homicide and Chernobyl-like bureaucratic irresponsibility and mismanagement. For technological rationality, the tension between appearance and reality, fact and interpretation, and the dialectic of pro and contra disappear. This kind of thinking Marcuse calls "one-dimensional" because it lacks the reflective and dialectical power to transcend the presupposition and values on which itself is based. It is the technical mind that asks how, but never asks why.

We find in public discourse the clearest symptoms of one dimensional thought expressed in ritualized analytic phrases and formulae like "welfare reform", "budget cuts", "contract with America", "pro-life", "freedom of choice"," "war-on-drugs" and political god-talk sanitized of anything that would hint of otherness. Marcuse writes that,

"In the universe of public discourse, speech moves in synonyms and tautologies; actually it never moves toward the qualitative difference." (P.88 ODM)

For critical and dialectical thought, by contrast, there is no strict identity or synonymy. There are differences in the use of the same words in different contexts that displaces and disrupts linear one-dimensional thinking . There is always the opportunity for dissent and movement toward oppositional points of view. The tendency toward identity and tautology for Marcuse was apparent in cold war slogans like "clean bomb" , "harmless fallout", "father of the H-bomb", which contained conflicting and contradictory semantic elements never acknowledged by the discourse. It was, in fact, the function of the discourse to repress the felt contradictions. Marcuse speaks of a discourse that is "immune against the expression of protest and refusal" (p.90 ODM), that "speaks in constructions which impose upon the recipient the slanted and abridged meaning..."(p.91 ODM). Marcuse sees this in what he calls the "abridgement of syntax" that is ubiquitous in technological jargon. Marcuse writes that acronyms like UN "dispenses with undue emphasis on "united", AFL-CIO entombs the radical political differences which once separated the two organizations"(p.94 ODM). He says that the "transcending

connotation is removed."

Technological rationality manifests itself in the operationalizing of concepts in the social sciences. Marcuse takes as an example a worker's complaint that "Wages are too low", or "The job is dangerous". For the social scientist, the operational meaning of such statements made by a particular worker can be translated into statements about not being able to pay a particular dental bill or about a railing removed from a loading platform. The operational translation changes the meaning of the general proposition which would otherwise have universalized the worker's complaint. The genus has been removed from the proposition and what is left is only the particular. There is no relationship between part and whole. It is only in generalization that the particular is transcended and the proposition placed in a broader arena of meaning. Operationalism, which for Marcuse is the technologizing of epistemology, has eliminated the kind of understanding that is cultivated in the humanities.

What is uniquely different about bulletin board technology compared to other communication technologies is the degree of interaction. Unlike the telephone, radio and television, the computer managed bulletin board system is both at once individualized communication and mass communication. It maximizes both quantity and quality. No participant has a privileged position and each caller has equal opportunity of effecting the direction of the discourse. From the point of view of a theory of discourse, the BBS is unique in that the ratio between the number of participants and the individualized nature of the interaction is directly proportional. One person's voice does not inhibit or repress the voice of another. It is the technological embodiment of the ideal speech situation of Habermas which allows for the maximum of democratic participation and which, by allowing everyone to have a voice, allows for the greatest amount of dissensus and dialectic. It is the opposite the unidirectional radio, film, and television broadcast of one to many of which Marcuse complains. It is a social environment in which the participant to the discourse becomes aware of the pragmatic power of semantic differences. It the opposite of what Marcuse called " the abridgment of meaning". The caller learns to write with influence and persuasion in order that his or her voice be heard. What we have is a mass tutorial, not by one speaking to many, but many speaking to many. It is an ideal polylog in which no voice is repressed. Marcuse criticized a technology of centralization which leads to greater autocracy and repression, whereas the BBS represents a technology of differentiation where part and whole are mutually integrated and maintained. These features translate pedagogically into the possibility of teaching large numbers of students without compromising the quality of education. Because of the increased possibility of dissensus and dialectic and the equalizing of voices, the student is transformed from passive recipient into

.active learner

Heidegger

Technology for Heidegger has a special place both anthropologically and metaphysically. For Heidegger, technology logically precedes and is more fundamental than science. The instrumental view which treats technology as merely a means misses the essence of technology. It is a view which regards technology as neutral and as something subordinate to values that have been arrived at independently of it. In such a context the solution to the problems of technology are sought in trying to control and master technology. Heidegger asks, "But suppose now that technology were no mere means, how would it stand with technology?" (TQCT p.5)

In order to explicate the non-instrumental conception of technology, Heidegger introduces the Greek words "aletheia" and "poesis". By "aletheia", Heidegger understands bringing into the light, revealment, seeing and interpreting in a new way, and as transvaluation. The act of bringing to light is also art — poesis. It is not merely a making, but a making that reveals value which had been previously concealed. The Greek word "techne" is also aletheia and poesis. The essence of technology does not lie in making and manipulating as an instrumental means to an end. Heidegger's analysis of Van Gogh's painting of the peasant shoes illustrates the different attitudes toward technology. For the peasant who relates to the shoes in an instrumental way the shoes disappear as means to an end, but for Van Gogh, the peasant shoes reveal the life and world of the peasant. We see this in the encrusted mud and in the cracked and worn surfaces of the shoes depicted in the painting.

The power of technology to reveal value and truth was understood by the ancient Greeks according to Heidegger. He writes that,

"Once there was a time when the bringing-forth of the true into the beautiful was called technology... And art was simply called techne. It was a single, manifold revealing. It was pious, promos." (TQCT,p.34)

In such a time Heidegger tells us that,

"The arts were not enjoyed aesthetically. Art was not a sector of cultural activity." (TQCT, p.34)

He means that one did not look for art in art museums and galleries but in the objects of daily life. He asks,

"What then was art-perhaps only for that brief but magnificent time?" (TQCT, p.34)

Heidegger answers that it was techne. The problem with machine technology of the industrial period was that it revealed nature as what Heidegger calls "standing reserve". As standing reserve, the forest is lumber, the Rhine is hydroelectric power, the land is mineral resources, the

worker is labor, and the worth of the product is entirely defined by exchange value. However, for Heidegger even this is art in so far as industrial technology has defined man's Being-in-the-world. The danger for Heidegger is that we misunderstand technology by believing that it is something that we can bring under control rather than as a power that is capable of defining our values and beliefs.

The metaphysical rather than the instrumental understanding of technology is at work in thinkers such as Baudrillard and Lyotard. For both, the period in human history marked by computerization and information technologies is a radical break with Enlightenment values. For Lyotard, the postmodern period is marked by a "incredulity toward metanarratives"(TPC,p.xxiv). This is not only true of religion and politics but of science as well. The function of the metanarrative was to legitimize modes of discourse. Lyotard asks,

"Where after the metanarritives can legitimacy reside?"(TPC, xxv)

His answer is that "The operative criteria is technological..." The technology of which Lyotard speaks is communication technology. Not communication leading to consensus governed by universal reason, but a proliferation of language games born of dissension and a sensitivity to difference. It is where invention and toleration of the incommensurable, rather than agreement, are the criteria for acceptable discourse, and where autocracy and ideology are seen as the cause of discursive opacity. For Lyotard the postmodern period will see a dissociation of knowledge from the "training of minds". It is an epistemological environment in which knowledge is a commodity and produced in order to be sold. It is a period in which,

"Knowledge ceases to be an end in itself, it loses its use value." (TPC,p.52)

What replaces "use-value" is exchange-value and what Lyotard envision as the commodification of knowledge. Information will increasingly be seen as essential to productive power. Lyotard invokes the image of groups fighting for information in the same way nations previously fought for territory, natural resources, and cheap labor. Lyotard intends his description of the postmodern period to be neither utopian nor pessimistic. In the Postmodern Condition Lyotard speaks of the computer as the "dream machine" in which information, and we will add "communication", can be managed "exclusively governed by the principle of performitivity." To the terror caused by ideologies and metanarritives, Lyotard contrasts an environment of heteromorphous language games in which the public has free access to memory and databanks. Communication networks, not only in the form of global systems such as Internet, but in terms of more localized networks supported by private bulletin board systems are instances of the communication technologies of the kind of which Lyotard speaks. It can be argued that it is, in principle, impossible for any totalitarian regime to control

such distributed and differentiated communication systems.

Both Lyotard and Baudrillaud are introduced into our discussion as instances of thinkers who in Heidegger's terms are sensitive to the transvaluating potential of computer managed telecommunication technology. Clearly neither sees technology as a neutral instrument. Baudrillaud regards cybernetic technologies as imploding the distinctions between ontology, art and science by means of the hyperreality of the simulacrum. He writes, "The cool universe of digitality has absorbed the world of metaphor and metonomy. The principle of simulation wins over the reality principle just as over the principle of pleasure." (Postmodernism,p.186).

In cybernetically projected virtual reality, Baudrillaud sees art and nature, unconscious and conscious united, nature humanized and humanity naturalized.

Finally, we will offer one further reason for why asynchronos, interactive telecommunications is an ideal medium for the humanities. It is because it is a hermeneutic medium which promotes a plurality of interpretations and readings of a text. The emphasis on hermeneutic is one of major distinction between science and the humanities. Learning in the sciences relies almost entirely on secondary source material. Few students of science are given the opportunity in institution of higher learning to read the original writings of Newton, Galileo, Faraday, Einstein, Poincare, etc., and therefore being able to critique hermeneutically the relation between primary and secondary sources. Why is that so? Because there is a fundamental naivete concerning the relationship between fact and interpretation, meanings and signs, perhaps because of the pervasiveness of formal symbolic languages that abstract from semantics. It is an attitude in the sciences which relegates philosophy, art and history to a secondary status epistemologically. Scientific truth is not something that appears to lend itself to interactive dialectic. It can be empirically tested, verified or falsified, but it is not thought of as something, whose meaning and significance can be explored like the words of a poem or events of history. The BBS is one of the few pedagogical environments that leads to critiquing the science as a form of literature.

The essence of the computer is not electronic. Computers can be made from toothpicks and bottlecaps, or toilet paper and pebbles. The essence of computer machine resides in its ability to encode and decode different systems of sign. In short, its essence is linguistic, and whether it is electrical, optical, mechanical, or hydraulic is incidental. The most important issues associated with digital machines, and the operations that they make possible, are matters that have been traditionally treated by the humanities. In computer managed communication we are again seeing a technology, like the technologies of writing and printing, that is seamlessly

.compatible with the goals and values of the humanities

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