There is a recent book by Jacques Ellul. It is called Propaganda. Ellul's book has as its theme that propaganda is not ideology; it is rather the hidden, but complete, image of a social way of life that is imbedded in the social technologies and social patterns just as it is imbedded in, say, the English language. Ellul would say that the action of the English language or the action of the image in a new environment is propaganda. That presents a total psychic and environmental image to men, whereas the ideologies, explicit verbalized messages, are relatively insignificant compared to this overall environment. Ellul's theme in a word is this: Propaganda consists in using all the available means of one's society to shape a way of life. Whatever that way may be, it is a propaganda—that is, an action that is total and invisible, and invincible.

This is another mysterious feature about the new and the present electronic environment we now live in. The really total and saturating environments are invisible. The ones we notice are quite fragmented and insignificant compared to the ones we don't see. The English language, for example, as it shapes our perceptions and all our habits of thought and feeling, is little perceived by the users of the English language. It becomes much more inscrutable. We switch suddenly to French. But in the case of environments that are created by new technologies, while they are quite invisible to themselves, they do tend to make visible the old environments. We can always see the Emperor's old clothes, but not his new ones.

I want to use this theme a little bit here for my purposes. If the new environment is invisible, it does serve to make very visible the preceding environment. The obvious and simple illustration of that is the late show. On the late show on television we see old movies. They are very visible; they are very noticeable. Since television, the move form has been reprocessed. The form of move which once was environment and invisible has been reprocessed into an art form, and, indeed, a highly valued art form. Indirectly, the new art forms of our time have received an enormous amount of encouragement and impact from the television form. Of television, a television form has remained quite invisible—only become visible the moment that television itself becomes the content of a new medium. The next medium, whatever it is—it may be the satellite environment or the extension of consciousness—will include television as the content, not as its environment, and will transform television into an art form; but this process whereby every new technology creates an environment that transforms the old or preceding technology into an art form, or into something exceedingly noticeable, affords so many fascinating examples I can only mention a few.

In 1953, Eric Havelock published a study called Preface to Plato. It is a study of what happened in Greece before Plato. "Preface" means how did the Greeks educate each other before writing? What were the processes by which they educated their young people before Plato? He calls this process that proceeded Plato the "trivial encyclopaedia." The young memorized the poets. The poets were oral educators. They were specialists in oral wisdom and counsel. Homer, Hesiod, and the rest actually provided the young people with modes of perception and modes of behavior and strategies for overcoming all sorts of difficulties and obstacles. The great Odyssey was above all a Greek text. Because of his reference lines—he has unfailing initiative and skill in every type of opaque and threatening situation. Havelock first describes this educational process that went through the poets, and then describes the advance of writing and the complete change that came over education as a result of that. With the coming of writing, education shifted from the memorizing of the trivial encyclopedia that made education a sort of "singing commercial." With writing came the classification of knowledge, the ideas, the categories. Plato's destruction of the poets was not a petty cruelty but a rational mode of thought—his unifying principle and skill in every type of opaque and threatening situation. Havelock then goes on through the poets, and then describes the advance of writing and the complete change that came over education as a result of that. With the coming of writing, education shifted from the memorizing of the trivial encyclopedia that made education a sort of "singing commercial." With writing came the classification of knowledge, the ideas, the categories. Plato's destruction of the poets was not a petty cruelty but a rational mode of thought—his unifying principle and skill in every type of opaque and threatening situation. Havelock then goes on through the poets, and then describes the advance of writing and the complete change that came over education as a result of that. With the coming of writing, education shifted from the memorizing of the trivial encyclopedia that made education a sort of "singing commercial." With writing came the classification of knowledge, the ideas, the categories. Plato's destruction of the poets was not a petty cruelty but a rational mode of thought—his unifying principle and skill in every type of opaque and threatening situation. Havelock then goes on through the poets, and then describes the advance of writing and the complete change that came over education as a result of that. With the coming of writing, education shifted from the memorizing of the trivial encyclopedia that made education a sort of "singing commercial." With writing came the classification of knowledge, the ideas, the categories. Plato's destruction of the poets was not a petty cruelty but a rational mode of thought—his unifying principle and skill in every type of opaque and threatening situation. Havelock then goes on through the poets, and then describes the advance of writing and the complete change that came over education as a result of that. With the coming of writing, education shifted from the memorizing of the trivial encyclopedia that made education a sort of "singing commercial." With writing came the classification of knowledge, the ideas, the categories. Plato's destruction of the poets was not a petty cruelty but a rational mode of thought—his unifying principle and skill in every type of opaque and threatening situation. Havelock then goes on through the poets, and then describes the advance of writing and the complete change that came over education as a result of that. With the coming of writing, education shifted from the memorizing of the trivial encyclopedia that made education a sort of "singing commercial."
easy to banish that mistake as one might wish. But one of the most bizarre growths in this development occurred when railways and factories came in. The content of this new industrial, mechanical environment was the old agrarian world, and there was the essence of an association of delight in the old agrarian environment of arts and crafts—the pastoral world. This discovery of the preceding age was called the "romantic movement."

The sudden discovery of nature was made possible by the railway and the factories which were so very different from nature. The romantic movement was a product of the mechanical age by way of a contrapuntal environment, and it was not a repeat of the mechanical age; rather it was the content of the mechanical age, and the artists and poets turned to processing the old agrarian world into delightful landscapes and delightful pastoral poems. This was in turn altered by the rise of electric technology which went around the old mechanical world of a few decades ago. When the electric technology packed the machine world, when circuitry took over from the wheel, and the circuit went around the old factory, the machine became an art form. Abstract art, for example, is very much a result of the electric age going around the mechanical one.

In our time we can see that pop art consists in taking the outer environment and putting it in the art gallery, or icons somewhere, suggesting that we have begun to process the environment itself as an art form. We may be catching up with ourselves. When we begin to deal with our actually existing new environment as an art form, we may be reaching that stage the planet itself seems to have reached. With satellite and electronic satellite images, the planet came in a way to be the human environment, and becomes an old nose-cone satellite itself—a probe into space, creating new space and environment for us. If the planet itself has thus become the content of a new space created by its satellites, and its environment, as it were, the universe, and not the environment, then we can confidently expect to see the next few decades devoted to turning the planet into an art form. We will caress and shape and pattern every facet, every contour of this planet as if it were a work of art, just as surely as we have put a new environment around it:

I think the computer is admirably suited to the artistic programming of such an environment, of taking over the task of becoming the environment itself as a work of art, of programming the content as a work of art. This situation suggests the most profound changes in the human state. It suggests that the role of art in the past has been not so much the making of environments as environments of environments or anti-environments. Flaubert, a hundred years ago, said: "Style is a way of seeing." Ever since that time the painters and the artists have been quite conscious of their job as teaching people how to perceive the world they live in. "It is above all that you see," said Conrad, and it is the meaning of his work. The training of perception upon the otherwise unhedged environment became the basis of experimentation in what is called modern art and poetry. The artist, instead of expressing himself in various patterns and packages of message, turned his senses and the work of art to the business of probing the environment. The symbolists, for example, broke up the old romantic landscape into fragments which they used as probes to explore the urban and metaphysical environment. Then they turned to probing the inner life of man with the same vehemence, and the artists modern man by the scene and the interior. The psychiatrist took over in the same pattern and began to be dissociated. The unconscious has become almost an impersonal and interchangeable function in human affairs, we had best look to it; it is being exerted at a furious pace; it is being invaded by clairvoyant and shamanistic insights, and we could quite easily reach a stage in which we had no unconscious. This would be like dreamless sleep, the paleness and the somnambulistic meaning of Finnegan's Wake by James Joyce. His idea was in that book, among many others, that tribal man lived a sleep called a dream, and modern man is "like a dream in Finnegan's Wake," the cycle of the triad, but at the time this is true. This possibility that we are actively engaged in liquidating the unconscious as the function of the first time in history, bewails us to pay some attention to how it is structured and to what function it serves in human affairs. It may prove to be indispensable to sanity.

One overall consideration for our time is to consider how, in the past, the environment was invisible in its operation upon us. Environments are not just containers, but are processes that change the content totally. New media are new environments. That is why the media are the message. One related consideration is that world environments, or counter-environments created by the artist are indispensable means of becoming aware of the environment, in which we live and of the environments we create for ourselves technologically. John Cage has a book called Silence in which, very early in the book, he explains that silence consists of all of the unintended noises of the environment. All the things that are going on all the time in any environment, but that were not programmed or intended--that is silence. The unheeded world is silence. That is what James Joyce called the "Waste." In the "Waste," all the consequences of social change—of all the disturbances and metamorphoses resulting from technological change create a vast environmental roar, but, that is not yet completely audible. It is like the rust in an organ or other systems creates "noise."

If the environment or process of change gets going at a clip consistent with electronic information now, that we have turned to processing and detaching social patterns for the first time in human history. In the pre-electric age patterns were imperceptible because they were too slow. The changes are so fast that it is hard to see where to scream. The pattern recognition that it is quite impossible during processes of slow change, become quite easy when the same changes are speeded up even to move to any elemental level.

So, the artist, as a creator of anti-environments or counter-environments, created to permit perception of environments, holds a very peculiar role in our society.

The artist as a maker of anti-environments becomes the enemy in society. He doesn't seem to be very well adjusted. He does not accept the environment with all its pressures, with any passivity whatever. He just turns upon it and reflects his anti-environmental pattern. Without it, life within the last century, has increasingly fused or merged with the criminal in popular estimation, as he has become anti-environment. Since Baudrillard, the artist, the sketch—the Sherlock Holmes type, the Bond type, the Raymond Chandler Marlowe type—seems to have turned to a vision of society that is very anti-environmental, very self-conscious, and the artist has mysteriously become a major part of society. The artist, the delinquent child is often a very bright, and keenly perceptive person. It is not lost on him that the kinds of overwhelming, traumagical forces of his environment really call for a little anti-social or artistic and exploratory activity. The child, by delinquent behavior, is exploring the environment he is aware of in Crime and Punishment. He was the criminal as a sort of crisis between the saint and the artist.

Our newspapers create an information environment, yet without crime as content we would not be able to perceive the environment. The newspapers have to have bad news, otherwise there would be no newspapers, but only ads, or good news. Without bad news we could not reach the ground-rules of the environment. This does not necessarily mean the environment is bad, but it means its operation upon us is total and ruthless. The environment is always a brainwasher, so that the well-adjusted person, by definition, has been brainwashed. He's adjusted. He's had it. There is a book by Erich Fromm recently which throws new light on Pavlov's operations (the Russian psychologist). He didn't get his conditioning effects by means of stimuli or signals to his experimental subjects. Rather he did it by environmental controls. He put his subjects in environments in which there was no sound, in which the heat and other sensory controls were very carefully adjusted and maintained. Steadily, Pavlov discovered that if you tried to condition animals in an ordinary environment, it did not work. The environment is the real condition, not the stimulus or the content. So the Pavlov story needs to be turned around in order to be observed, but the role of crime as a way of
perceiving society is a mysterious one. I am not going to make any moral observations on it whatever. It has increasingly pushed the artist and the scientist into the role of being an enemy.

Let me resume a moment. We have, in the Electric Age, come suddenly to the end of the Neolithic Age. After several thousands of years of specialization resulting in an abundance of ready-mades, we are engaged in the process of a new age, which is being called the Electric Age. This new age is the result of the discovery of electricity and its subsequent development and use. The discovery of electricity has led to the invention of a new type of wireless communication which has revolutionized the way we communicate with each other. The discovery of electricity has also led to the invention of a new type of computer which is called the microcomputer. This new type of computer is capable of performing a wide range of tasks and is capable of communicating with other computers over long distances. The microcomputer is capable of performing a wide range of tasks and is capable of communicating with other computers over long distances.

Xerography is bringing a reign of terror into the world of publishing because it means that every reader can become both author and publisher. It decentralizes the long-centralized publishing process. Authorship and readership alike can become production-oriented under xerography. Anybody can take any book apart, insert parts of other books and other materials of the author's own interest, and make his own book in a relatively fast time. Any teacher can take any textbooks on any subject and customize a different one by simply removing a chapter from this one and a chapter from that one. The problem is copyrighting, and Congress is now pondering these problems—how to protect the old technology from the new technology by legislation. They will not succeed. There is no possible protection from technology not yet by technology. When you create a new environment with one phase of a technology, you have to create an anti-environment with the next. Xerography is electricity invading the world of typography and it means a total revolution in this old sphere, or this old technology, a revolution which is being felt in the classrooms itself.

I invite you to consider that perhaps the best way of extending the impact of any new environmental technology is to notice what happens to the old technologies. You can never perceive the impact of any new technology directly, but you can do so in the manner of Peter Drucker's looking at the Gugenheim in the mirror of art. You have to perceive the consequences of the new environment on the old environment before you know what the new environment is. You cannot look at it in the rear view mirror. You have to see it in the side view mirror. You have to see what it does to the old one. The read, however, to understand the processes and changes brought about by the new technology, the strength of the old technology.

We are engaged in the process of a new environment just as a motor car does, as the railway did, as radio and airplanes do—any new technology changes the whole human environment, and environment changes the old technology. It turns these old environments into "empty forms": old Motel T's become precious art objects, as do old coach lamps, old anything. The world of Camp, for example, is the world of the nursery of thirty years ago being turned into a conscious art form. By simply looking at the rear view mirror of the mysterious new archetype, the new environment is always creating new archetypes, new art forms, new environments. This process can provide invaluable information for those who want to have some autonomy in controlling their destinies and their environments. I think we are rapidly moving toward a time when we might say, with full awareness of cause and effect: "In our present sensory condition I don't think we could properly accommodate 200 more lines on T.V." Colored T.V. will considerably change the whole sensory life of the public. It is a much more tactile form than black and white. For the latter is seen only with the periphery of the eye. But what would happen to the North American child if we did as the French and Germans have done: if instead of 450 lines on our television, we put 800? The results might be most gratifying to the educational establishment. If we raised the visual intensity this would be possible if you knew in the first place its present sensory thresholds and, second, if you had established what kinds of sensory effect a given technology like radio or television had upon sensory life as a whole.

On this continent the sensory levels have changed drastically since television. The visual component in cursive has been dropped the screech of the violin, the kinetic, the auditory modes of response have shut up to compensate for the drop in the visual axis caused by television. This sensory shift has changed the taste in design, the packaging, in the very form of entertainment, as well as in every form of vehicle, food, and in clothing.

The "Basils" state in this with eloquent messages of changed sensory modes for our whole population, and yet people merely think how...how...how...how...this...the Beatles are trying to tell us by the anti-environment they present just how we have changed and in what ways.

To repeat, and to make toward a conclusion, every new technology creates a new environment just as a motor car does, as the railway did, as radio and airplanes do—any new technology changes the whole human environment, and environment changes the old technology.

The reader is the co-creator. In a newspaper as in a detective story in which the reader has to make the plot as he goes. The detective story was one of the very first anticipations of electronic technology.
Suppose we were to brief 50,000,000 people on some extremely difficult problems facing top-level scientists. Immediately, some dozens, hundreds, of the 50,000,000 audience would see instantly through any type of copse problem, even on the highest scientific levels. Robert Oppenheimer is fond of saying that "There are children playing here in the street who could solve some of my top problems in physics, because they have modes of person perception that I lost long ago." There are enormous possibilities for using an audience as work force in scientific research, in any other type of research. It is simply that we insist on bearing instruction at them instead of allowing them to participate in the action of discovery.

For example, when printing was new, it created what was known as the Public. In the 15th Century and after, Montaigne’s phrase “Je publie,” came into use. The 16th Century created the concept of an audience and an audience, and altered all social arrangements in education, in work, and in every other area. Hence as the adult world changed, it created the mass, meaning an environment of information that involved everybody in everybody. Now, to a man brought up in the environment of the public, the mass audience is a horror; it is a mass. In the same way, the public was a many-headed monster to a feudal specialists. He never bothered to study its structure any more than we study the mass. Circuits bring people into relation to each other in total involvement which creates the possibility of dialogue and discovery on an enormous scale. The structure of the public has lost in both possibility. The public consists of fragmented separate individuals with separate points of view. The public is an add structure. The mass audience is a quite different structure, enormously richer—enormously more capable of integrated creative activity than the old public was. All the old public could do was to erase private points of view which they clashed into each other ‘dutifully.’ At the present moment in Canada, if you want a D.E.W. site, the public is the only one interested. There is no involvement because the old political forms do not permit participation. You simply register a fragmented, unrelated to anything, vote. The population has dropped out of the political setup. Yet when we consider changing structures are studied they yield enormous meaning.

Let me suggest that it may be possible to write programs for changes not only in consciousness but in the unconscious in the future. One could write a kind of science fiction story of the future of consciousness, the future of the unconscious, the future of an erosion. The future of consciousness is a story assuming a very different pattern, a very different character. The future of the child is changing beneath our gaze. The child as a separate social fact was an invention of the 17th Century, according to the historians Philippe Ariès: Historically the child came out of the 17th Century and did not exist, so to speak, in Shakespeare’s day. The child had, up until that time, been so completely merged in the adult world that there was nothing that could be called childhood in our sense. Now, with the family, another 17th Century discovery, Suddenly today the child is merging with the total adult environment under electric information processing and is disappearing from the scene as child. The future of child may resemble the future of the city...