



Yale University, School of Architecture

The Invisible Environment: The Future of an Erosion

Author(s): Marshall McLuhan

Source: *Perspecta*, Vol. 11 (1967), pp. 161-167

Published by: [The MIT Press](#) on behalf of *Perspecta*.

Stable URL: <http://www.jstor.org/stable/1566945>

Accessed: 15/10/2014 17:37

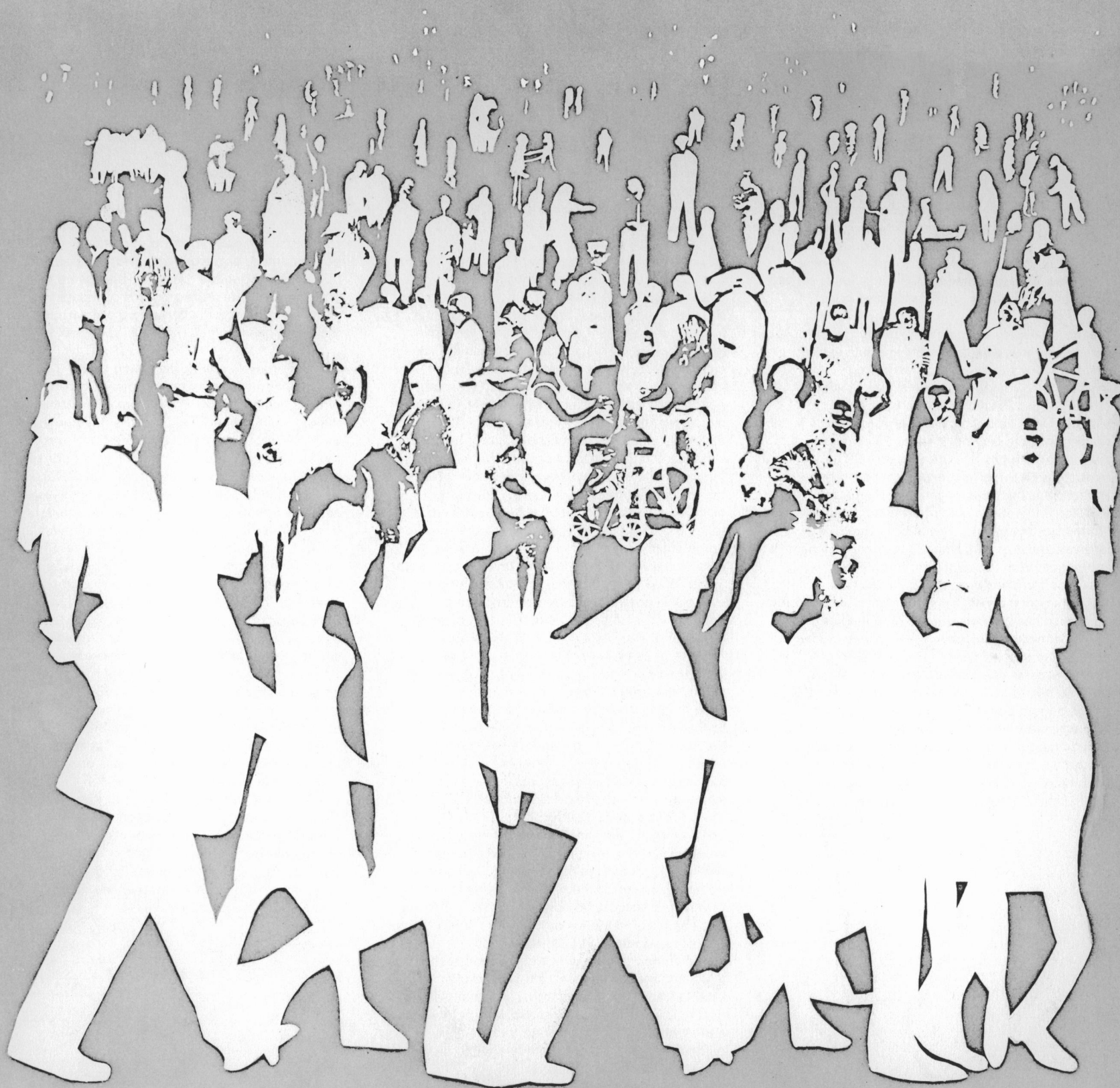
Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <http://www.jstor.org/page/info/about/policies/terms.jsp>

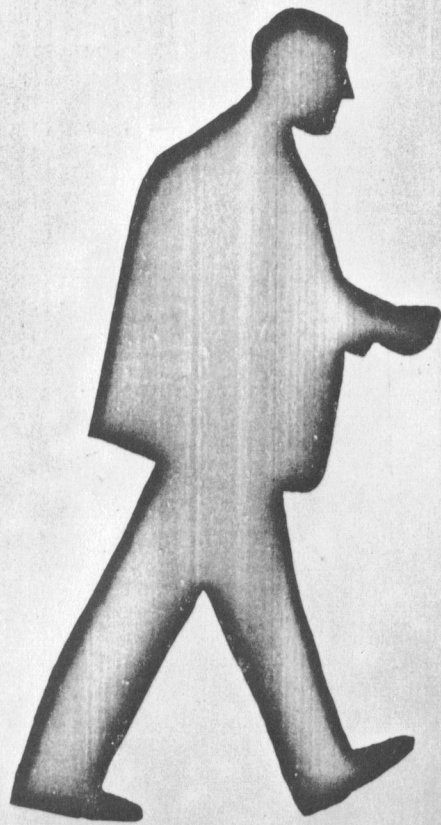
JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.

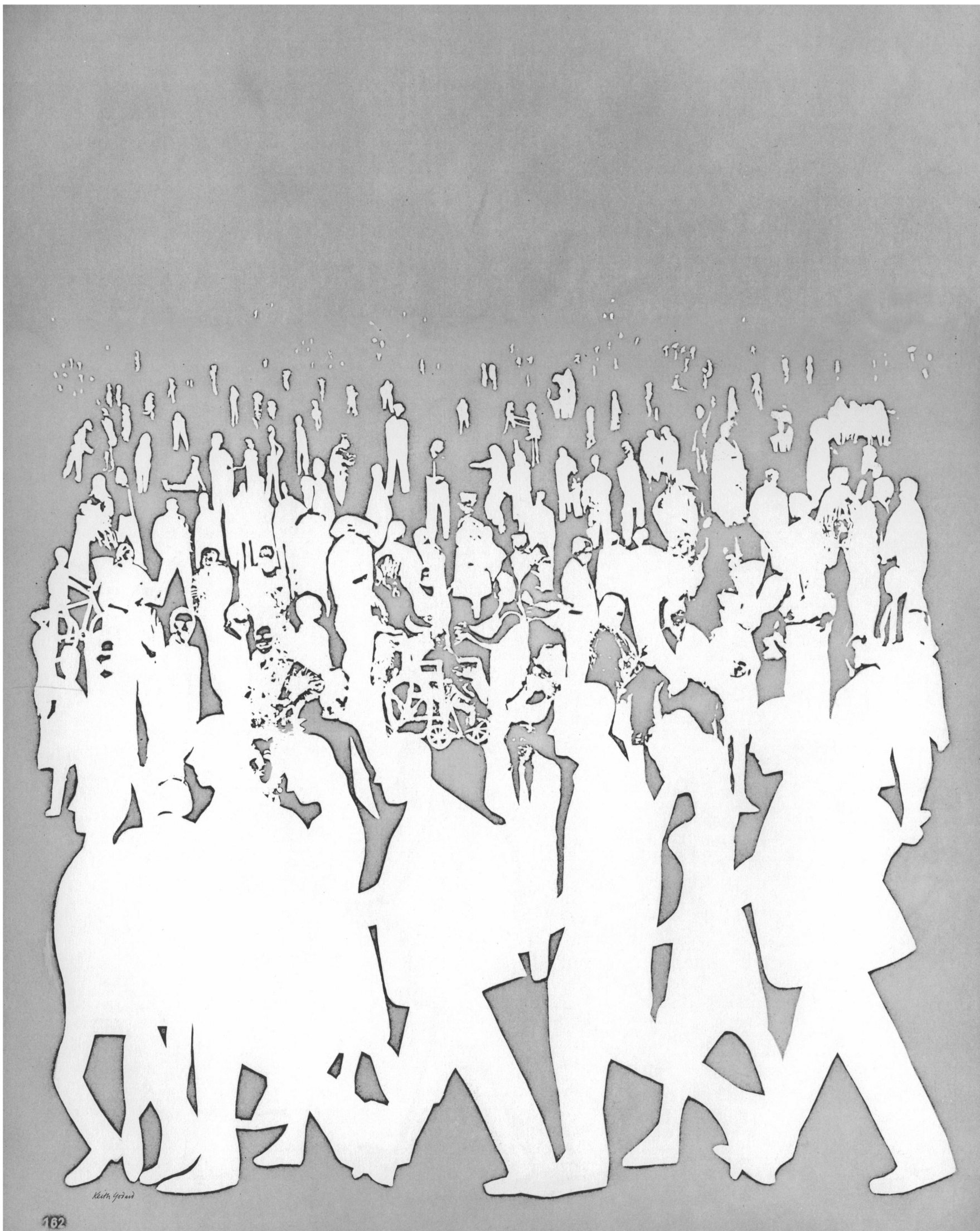


Yale University, School of Architecture and The MIT Press are collaborating with JSTOR to digitize, preserve and extend access to *Perspecta*.

<http://www.jstor.org>







Keith Godard

There is a recent book by Jacques Ellul. It is called **Propaganda**. Ellul's book has as a 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 French language—that 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 image. Ellul's theme in a word is this: Propaganda consists in using all the available means of one's society to create a way of life. Whatever that way may be, is propaganda—that is action that is total and invisible, and invincible.

This is another mysterious feature about the new and potent electronic environment we now live in. The really total and saturating environments are invisible. The ones we notice are quite fragmentary 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 perceptible if we switch suddenly to French. But in the case of environments that are created by new technologies, while they are quite invisible in 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 for my purposes here. 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 movie form has been re-processed. The form of movie which once was environment and invisible has been re-processed into an art form, and, indeed, a highly valued art form. Indirectly, the new art films of our time have received an enormous amount of encouragement and impact from the television form. The television form has remained quite invisible—will 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 its content, not as its environment, and will transform television into an art form; but this process whereby every new technology creates an environment that translates 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 1963 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 preceded Plato the "tribal encyclopedia." The young memorized the poets. The poets were operative purveyors of practical wisdom and counsel. Homer, Hesiod, and the rest actually provided the young people with models of perception and models of behavior and strategies for overcoming all sorts of difficulties and obstacles. The great Odysseus was above all a Greek hero because of his resourcefulness—his unfailing initiative and skill in every type of opaque and threatening situation. Havelock first describes this education that went on through the poets, and then describes the advent 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 tribal encyclopedia that made education a sort of "singing commercial." With writing came the classification of knowledge, the ideas, the categories. Plato's detestation of the poets was mainly a rivalry between the new and the old educational establishments. The poets had naturally failed to come to grips with the new technology of the written word.

Havelock's book has a fascinating quality, because it really tells the story of what we are going through right now. We are playing that tape (the situation he describes) backwards—the change from tribal man to individual man. **As we move into the world of integral, computerized knowledge,** mere classification becomes secondary and inadequate to the speeds with which data can now be processed. As data can be processed very rapidly we move literally into the world of pattern recognition, out of the world of mere data classification. **One way of putting this is to say that our children today live in a world in which the environment itself is a teaching machine made of electric information.** The young person today is a data processor on a very large scale. Some people have estimated that the young person, the infant and the small child, growing up in our world today works harder than any child ever did in any previous human environment—only the work he has to perform is that of data processing. The small child in 20th Century America does more data processing—more—work than any child in any previous culture in the history of the world, according to Jacques Ellul, among others. We haven't really cottoned to the fact that our children work furiously, processing data in an electrically structured information world; and when these children enter a classroom—elementary school—they encounter a situation which is very bewildering to them. The youngster today, stepping out of his nursery or TV environment, goes to school and enters a world where the information is scarce but is ordered and structured by fragmented, classified patterns, subjects, schedules. He is utterly bewildered because he comes out of this intricate and complex integral world of electric information and goes into this 19th Century world of classified information which still characterizes the educational establishment. The educational establishment is a 19th Century world of classified data much like any factory set up with its inventories and assembly lines. The young today are baffled because of this extraordinary gap between these two worlds. Perhaps we feel now a confusion similar to that which preliterate used

to experience on making contact with the mechanized societies of the West.

Paul Goodman has a book recording one aspect of the situation. It is titled **Growing Up Absurd**. To grow up today is to be absurd, because we live in two worlds, and neither one of them inclines you to grow up. I have a friend who once pointed out to me something that struck me with great force. He said, "You know, the only work that royalty has to do is to grow up, and for a young prince or princess growing up and acquiring all the types of knowledge and language necessary for survival is a fantastically difficult job." It would seem that we have paradoxically created on a democratic scale a situation of education for royalty. Our youngsters today are mainly confronted with the problem of just growing up—that is our new work—and it is total. That is why it is not a job; it is a role. Growing up has become, in the age of electrically processed information, the major task of mankind. We still have our eyes fixed on the rear-view mirror looking firmly and squarely at the job that is receding into the 19th Century past. The job, which we feel we should have by rights, belongs to the old mechanical technology of classified data and of fragmented tasks. Yet we are now surrounded by a new environment, of integrated tasks, integrated knowledge, and that demands pattern recognition. The kind of contrast between those two situations creates an absurdity that has launched the theatre of the absurd. The theatre of the absurd itself is postulated on this kind of dichotomy between these two cultures that never seem to get any closer together.

I have started then with the theme of the imperceptibility of new environments, and that what is perceptible in typical human situations is the old environment. It is plain that the content of Plato's work, of his new written form, was the old oral dialogue. The content of the print technology of the Renaissance was medieval writing. For 200 years after printing there was hardly anything printed except medieval texts—think of poor Don Quixote! Don Quixote was the victim of the current Renaissance craze for medieval comic books or medieval romances. This went on for another century. What got printed in the main, for two centuries and more after the printing press, was the medieval tale, medieval Books of Hours, medieval liturgies, and medieval philosophy. Shakespeare lived in the Renaissance world, and the content of Shakespeare's plays, as Tolstoy complained, is medieval. His politics, his world picture—the Elizabethan world picture. The Elizabethans looked back firmly and squarely at the receding medieval forms. But the middle ages were the late show for the Renaissance. By the 19th Century the Renaissance had come into full view in the rear-view mirror. As the industrial environment formed, this progressive time firmly and squarely confronted the Renaissance. The content of the 19th Century mind was the Renaissance; the content of the 20th Century mind is the 19th Century. We are obsessed with it. It is not as

easy to banish that mirage 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 this upsurge of awareness and delight in the old agrarian environment of arts and crafts—the pastoral world. This discovery of the receding 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. 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 jacketed 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 indoors somewhere, suggesting that we have reached the stage where 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 antennae as probes, the planet ceases in a way to be the human environment and becomes an old nose-cone satellite itself—a probe into space, creating new space and environments for the planet. If the planet itself has thus become the content of a new space created by its satellites, and its electronic extensions, if the planet has become the content 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 programming the environment itself as a work of art, instead of programming the content as a work of art. This situation suggests some considerable 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 making of counter-environments or anti-environments. Flaubert, a hundred years ago, said: “Style is a way of seeing.” Ever since that time the painters and artists have been quite conscious of their jobs as teaching people how to perceive the world they live in. “It is above all that you may see,” said Conrad, apropos the meaning of his work. The training of perception upon the otherwise unheeded 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 metropolitan environments. Then they turned to probing the inner life of man with the same verbal instruments in hand. Instead of using the verbal as a way of expression, they turned it inward for the purpose of exploring and discovering the contours of the inner life. The psychiatrist took over in the same pattern and began to erode the unconscious. If the unconscious has an important and irreplaceable function in human affairs, we had best look to it—it is being eroded at a furious pace; it is being invaded by dazzling investigations and insights, and we could quickly reach a stage in which we had no unconscious. This would be like dreaming awake. Such may well be the prophetic meaning of *Finnegans Wake* by James Joyce. His idea being in that book, among many others, that tribal man lived a dream and modern man is “back again Finnegans” into the cycle of the tribal involvement; but this time awake. This possibility that we are actively engaged in liquidating the unconscious for the first time in history, behooves 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 anti-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 technically. 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 things that were never programmed or intended—that is silence. The unheeded world is silence. That is what James Joyce calls thunder in the “Wake.” In the “Wake” all the consequences of social change—all of the disturbances and metamorphoses resulting from technological change create a vast environmental roar or thunder that is yet completely inaudible. It is like heat that in organic or other systems creates “noise.”

If the environment or process of change gets going at a clip consistent with electronic information movement, it becomes very easy to perceive social patterns for the first time in human history. In the pre-electric age patterns were imperceptible because change occurred just slowly enough to be invisible. Was it Bertrand Russell who asked if we were in a bath whose temperature rose half a degree an hour, how would we know when to scream? The pattern recognition that is quite impossible during processes of slow change, becomes quite easy when the same changes are speeded up even to movie or cinematic levels. So, the artist, as a creator of anti-environments or counter-environments, created to permit perception of environments, has 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 brainwashing functions with any passivity whatever; he just turns upon it and reflects his anti-environmental perceptions upon it. The artist, for the past century, has increasingly fused or merged with the criminal in popular estimation, as he has become anti-environment. Since Baudelaire, the artist, the sleuth—the Sherlock Holmes type, the James Bond type, the Raymond Chandler-Marlow type—these men have turned a vision onto society that is very anti-environmental, very self-conscious, and the artist has mysteriously been hybridized with the criminal or the anti-social figure. By the same token, crime has become obsessive in our society as a form of artistic expression. This is not lost on children. The delinquent child is often a very bright and keenly perceptive person. It is not lost on him that the kind of overwhelming, brainwashing forces of his environment really call for a little anti-social or artistic and exploratory activity. The child, by delinquent behavior, is aping the exploratory artist. Dostoevski was aware of this in *Crime and Punishment*. He saw the criminal as a sort of cross 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 not be any newspapers, but only ads, or good news. Without bad news we could not discern 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 the brainwasher, so that the well-adjusted person, by definition, has been brainwashed. He is adjusted. He's had it. There is a book by Erwin Strauss 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 conditioner, 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 specialized habits and technology and fragmentary tool-making, we discovered the electric circuit. It is the circuit that has ended the Neolithic Age. The Neolithic Age, just like its ultimate phase, the factory age in the 19th Century, was dedicated to specialism, fragmentation, and extensions of this or that limb of man. **With circuitry we have, instead of extensions of hand or foot, or back, or arm, a kind of involvement of the whole nervous system, an extension of the nervous system itself, a most profoundly involving operation.** The form and function of the telegraph press can help our observations here. One of the mysterious things about newspapers is that the items in them have no connection except the dateline. The only connecting factor in any newspaper is the dateline, and it is this dateline that enables us to enter the world of the news, as it were, by going through the looking glass. Just as Alice in Wonderland went through the looking glass, when you enter the world of the telegraph or of the circuit, you really become involved in the information process. When you enter through the dateline, when you enter your newspaper, you begin to put together the news—you are producer. And this is a most important fact to understand about the electric time, for it is an age of decentralism. It is hard to face this. We still like to look in the rear-view mirror. We still tend to think of the electric age as a mechanical age. It is in effect organic, and decentralist. But the reader of the news, when he goes through his dateline apertures, enters the new world as a maker. There is no "meaning" in the news except what we make—there is no connection between any of the items except the instant dimension of electric circuitry. News items are like the parts of the symbolist structure. 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 electric technology. Edgar Allen Poe was a considerable innovator in the matter of anti-environments for the electric age. The newspaper is also very much like the world of the delightful films of Stan Vanderbeek; the world of multi-screen projection is the world of the newspaper where umpteen news stories come at you without any connection and without connected themes. So, what the new film is doing is stripping off the story line in favor of this mosaic pattern of simultaneous projections, which is very much in accordance with electric technology. It is the film world receiving its baptism by electricity. This hybridizing, this crossing of one technology with another, goes on all the time. The internal combustion engine was a wedding of the old machine and the electric circuit. Perhaps the most startling and most upsetting electric innovation is coming in the matter of xerox and xerography.

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 his own interest, and make his own book in a relatively fast time. Any teacher can take any ten textbooks on any subject and custom-make a different one by simply xeroxing 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 except by technology. When you create a new environment with one phase of a technology, you have to create an anti-environment with the next. But 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 classroom itself.

I invite you to consider that perhaps the best way of estimating the impact of any new environmental technology is to notice what happens to the older technologies. You can never perceive the impact of any new technology directly; but it can be done in the manner of Perseus looking at the Gorgon 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 tell what it is until you have seen it do things to the old one. The need, however, to understand the processes and changes brought about by the new technology gets stronger as the technology does.

We are engaged in Toronto in carrying out a unique experiment—it is far too big for us—we need a lot of help and a lot of collaboration. We are carrying out an experiment to establish what are the sensory thresholds of the entire population of Toronto. That is, we are attempting to measure, quantitatively, the levels at which the entire population prefers to set its visual, auditory, tactile, visceral, and other senses as a matter of daily use and preference—how much light, how much heat, how much sound, how much movement—as a threshold level. Anything that alters a sensory threshold alters the outlook and experience of a whole society. The sensory thresholds change without warning or indications to the users thereof, for it is new technological environments that shift these levels. We are concerned with what shifts occur in a sensory threshold when some new form comes in. What happens to our sensory lives with the advent of television, the motor car, or radio? If we can establish this sort of knowledge quantitatively, we will have something which the computer can really bite into. A child is a genius till he is five because all his senses are in active interrelation. Then his senses specialize. The computer will be in a position to carry out orchestrated programming for the sensory life of entire populations. It can be programmed in terms of their total needs, not just in terms of the messages they should be hearing, but in terms of the total experience as picked up and patterned by all the senses at once. For example, if you were to write an ideal sensory program for Indonesia or some area of the world in which you wanted to leap-frog across a lot of old technology,

this would be possible if you knew in the first place its present sensory thresholds and, second, if you had established what kind of sensory effect a given technology like radio or literacy had upon sensory life as a whole.

On this continent the sensory levels have changed drastically since television. The visual component in our lives has been dropped dramatically and the visceral, the kinetic, the auditory modes of response have shot up to compensate for the drop in the visual component of our culture. This sensory shift has changed the taste in design, in packaging, in every form of entertainment, as well as in every form of vehicle, food, and in clothing.

The "Beatles" stare at us with eloquent messages of changed sensory modes for our whole population, and yet people merely think how whimsical, how bizarre, how grotesque. 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, or as radio and airplanes do—any new technology changes the whole human environment, and envelops and includes the old environments. It turns these old environments into "art forms": —old Model 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 taking into the shop window old toys, old ornaments, and the things Mom used to wear thirty years ago, you turn them into art forms and you have CAMP, this mysterious new archetype. The new environment is always creating new archetypes, new art forms, out of the old environment. 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 effects: "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 world if we did as the French and Germans have done; if instead of 450 lines on our television, we were to put 800? The results might be most gratifying to the educational establishment. If we raised the visual intensity

or the visual component of the T.V. image, it might serve enormously to ease the transition from the old mechanical age to the electronic age. What would be the chances of getting an experimental study of such a change in our time? I don't know. Lindegren would say the chances were not good. Anything that is serious is out of bounds. I think it was David Riesman who said no social scientist would ever study anything important. To be scientific you must study the fragmental, the insignificant. How else can you give assurance of your precision and concentration? Perhaps this attitude explains why, in our world, we tend to substitute moral indignation for observation. Moral vehemence is proof positive of superior perception. For example, we now experience simultaneously the drop-out and the teach-in. The two forms are correlative. They belong together. The teach-in represents an attempt to shift education from instruction to discovery, from brainwashing students to brainwashing instructors. It is a big dramatic reversal. Viet Nam, as the content of the teach-in, is a very small, misleading Red Herring. It really has nothing to do with the teach-in as such anymore than with the drop-out. The drop-out represents a rejection of 19th Century technology as manifested in our educational establishments. The teach-in represents a creative effort to switch the educational process to discovery, from package to probe. As with the Hawthorne experiment, its strategy is to use the audience and the student body as work force—one of the great things that is happening under electric conditions. As the audience becomes participant, involved in the total electric drama, it can become a major work force; and the classroom, as much as any other place, can become a scene in which the audience can perform an enormous amount of exciting discovery. The audience as work force has unlimited possibilities.

Suppose we were to brief 50,000,000 people on some extremely difficult problems facing top-level scientists. Inevitably, some dozens, hundreds, of the 50,000,000 audience would see instantly through any type of opaque 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 sensory perception that I lost long ago." There are enormous possibilities for using an audience as work force in scientific research, or any other type of research. It is simply that we insist on beaming 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 16th Century and after. Montaigne's phrase "le publique," came into use. The 16th Century created the public as a new environment. This completely altered politics and altered all social arrangements in education, in work, and in every other area. Electric circuitry did not create the public; 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 mess. In the same way, the public was a many-headed monster to a feudal aristocrat. He never bothered to study its structure any more than we study the mass. Circuitry brings people into relation with each other in total involvement which creates the possibility of dialogue and discovery on an enormous scale. The structure of the public had less of such possibility. The public consisted of fragmented separate individuals with separate points of view. The public was an additive 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 enunciate private points of view which they clashed into each other furiously. At the present moment in Canada, if you want a DEW line warning, we are having an election in which no one is 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 these 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 already 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 historian 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 at all. And so it is 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 city. The city—

under conditions of very rapid movement—takes on a totally new meaning. The motor car has served to destroy the city as it existed under the railway conditions. The future of city may be very much like a world's fair—a place to show off new technology—rather than a place of work or residence. It is also fascinating to consider the future of language. We know right now some very important structural things about language that are new. The future of language will not be as a system of classified data or meanings. The future of language, as a complex structure which can be learned without learning the words at all, is a possibility that the computer presents increasingly. A child does not learn language as a series of classified meanings. He learns language as he learns to walk, or to hear, or to see. He learns language as a way of feeling and exploring his environment. Therefore, he is totally involved. He learns very fast because of this enormous sensuous involvement and the resulting depth of motivation. It will be possible in this generation, I hope, to program the environment in such a way that we can learn a second language as we learned our mother tongue, rapidly and totally, as a means of perception and of discovery. The future of language presents the possibility of a world without words, a wordless, intuitive world, like a technological expression of the action of consciousness. E.S.P.

I had a friend visiting from Harvard the other day who said: "You see, my generation does not have goals." (He was a young architect.) "We are not goal-oriented. We just want to know what is going on." Now that means not a point of view but total ecological awareness. I was reading aloud from *Finnegans Wake* for a moment, and he said: "When you take LSD, the whole world takes on a multi-dimensional and multi-sensuous character of discovery, and when I listened to *Finnegans Wake* I got the same experience as LSD." (Perhaps *Finnegan* would be safer, and also more rewarding.)

The point this person was making was that it is absurd to ask us to pursue fragmentary goals in an electric world which is organized integrally and totally. The young today reject goals—they want roles—ROLES—that is, involvement. They want total involvement. They don't want fragmented, specialized goals or jobs. Now that is not easy to explain nor to prescribe for. I have touched upon the future of language, the future of consciousness, the future of the city, the future, perhaps finally, of work.