

Living in an Acoustic World

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Public Lecture
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One of the big flips that's taking place in our time is the changeover from the eye to the ear. Most of us, having grown up in the visual world, are now suddenly confronted with the problems of living in an acoustic world which is, in effect, a world of simultaneous information. The visual world has very peculiar properties, and the acoustic world has quite different properties. The visual world which belongs to the old nineteenth century, and which had been around for quite a while, say from the sixteenth century anyway, has the properties of being continuous and connected and homogeneous, all parts more or less alike. Things stayed put. If you had a point of view, that stayed put. The acoustic world, which is the electric world of simultaneity, has no continuity, no homogeneity, no connections, and no stasis. Everything is changing. To move from one of those worlds to the other is a very big shift. It's the same shift that Alice in Wonderland made when she went through the looking glass. She moved out of the visual world and into the acoustic world when she went through the looking glass.

Now to explain a bit about the implications of this rather large shift: It concerns the whole problem of learning, teaching, social life, politics and entertainment, and I'm going to try to tie it into some of those places. First I will try to illustrate how we became visual in the first place.

There is only one part of the world that ever did go visual, and that is the Western Greco-Roman Hellenistic world. About 500 B.C. something happened which made it possible to flip out of the old acoustic world, which was the normal one of the tribal Greek society, the Homeric world. Something happened which flipped them out of the old world of the bards into this new, rational, philosophically logical, connected, private, individualistic, and civilized world. And that thing is called the phonetic alphabet. The origins of the phonetic alphabet are by no means clear. All we know is what it did to people. The phonetic alphabet has a very peculiar set of characteristics which are not shared by any other alphabet on this planet. The phonetic alphabet, the one we all call the ABCs, has a very peculiar structure. It is made up of phonemes—that is, bits that are meaningless. The twenty-six letters of our alphabet have no meaning at all. They're called phonemes because in linguistic terms that word means the smallest possible meaningless bit. All

the other alphabets in the world—the Hebrew, the Arabic, the Hindu, the Chinese and so on—are morphemic. The bits they are made of have meaning—some meaning, however small.

One of the peculiar things that happened with the phonetic alphabet was that the people who used it underwent a kind of fission. Their sensory life exploded and the visual part of it was cut off from the kinetic, acoustic and tactile parts. In all the other parts of the world where writing is employed, the visual life has always remained associated with the acoustic, tactile and kinetic life. The Chinese ideogram is a wonderful instrument of unified sensations. It is so richly unified that people in our twentieth century have begun to study it carefully as a corrective to our Western highly specialized alphabet. One of the results of the use of the phonetic alphabet was that Euclid could indicate the properties of visual space in his geometry. Visual space, unlike any other of the sensory spaces, is pretty well taken care of by Euclid, who explored most of its dimensions. In the electric age, however, the non-Euclidian geometries have come back, and Euclid has been put aside. But with the arrival of Euclid and visual space we got a very strange possibility which Plato seized upon. Plato developed his highly systematized philosophy, one even more systematized later by Aristotle, of the idea of rational control of the passions and the world of nature.

This Platonic universe of abstract truth and abstract ideas is inconceivable without the phonetic alphabet. This alphabet gave people some very strange habits too. It filled people with the idea of imperial domination. Western man with his alphabet has always felt it mandatory that he impose it on all other people. He must spread civilization by spreading literacy in all directions. The Romans were the great implementers of this technology. They seized on this form of writing to codify their laws and to make them uniformly applicable to all men. The idea that civilization—a visually organized set of rules and laws for men in general—should be spread to all nations coincided with the rise of Christianity. As far as I know, Christianity has nothing to do with the Greco-Roman idea of civilization. So it is very mysterious that Christianity should have undertaken the job of spreading the Greco-Roman alphabet. At the present time, the church is doubtful about the matter of spreading Greco-Roman ideas any farther than they've gone, and the Third World doesn't want them. The Third World doesn't want Greco-Roman Hellenistic institutions, the Third World being the non-literate world.

It's helpful to know the origins of the alphabet and of civilization and of rationality in that sense because we have come in the twentieth century to the end of that road. And it's a considerable revolution to have been through 2500 years of phonetic literacy only to encounter the end of the road. Right now, the people in this room are making the decision whether or not we're going to have any more literacy or any more civilization in the twentieth century or whether it's going to stop right here.

One of the strange implications of the phonetic alphabet is private identity. Before

phonetic literacy, there had been no private identity and only the tribal group. Homer knows nothing about private identity: his world is that of the acoustic epic, the tribal encyclopedia of memorized wisdom which Eric Havelock reported so ably in his Preface to Plato. The Homeric epics were part of this acoustic wisdom that preceded literacy and were phased out by literacy. Homer was wiped out by literacy, even though he had been the educational establishment of the Greeks for centuries. An educated Greek was one who had memorized Homer, who could sing the poems to his guitar or harp and perform them in public. He was a gentleman and a free man. Along came the phonetic alphabet, and Plato seized on it and said: "Let us abandon Homer and go for rational education." Plato's war on the poets was not a war on poetry but a war on the oral tradition of education.

Today everyone in this room is being subjected to a new form of oral education. Literacy is still officially the educational establishment, but unofficially the oral forms are coming up very fast. This is the meaning of rock music. It is a kind of education based on oral tradition, an acoustic experience, which is quite strangely remote from literacy. I will be glad to come back to the whole problem of rock and its relation to the modern city and the modern society. It's a very big subject, and it is not very much studied. Rock is not something that is merely stuck onto the entertainment card as an extra item but a kind of central oral form of education which threatens the whole educational establishment. If Homer was wiped out by literacy, literacy can be wiped out by rock. We're playing the old story backwards, but we should know what the stakes are. The stakes are civilization versus tribalism and groupism, private identity versus corporate identity, and private responsibility versus the group or tribal mandate. This shift naturally is going to affect our political life, and I'll come onto that shortly.

I want to mention, by way of explaining my own approach to these matters, that my kind of study in communication is a study of transformation, whereas information theory and all the existing theories of communication that I know of are theories of transportation. All the official theories of communication studied in the schools of North America are theories of how you move data from point A to point B to point C with minimal distortion. That is not what I study at all. Information theory I understand and I use, but information theory is a theory of transportation, and it has nothing to do with the effects which these forms have on us. It's like a railway train concerned with moving goods along a track. The track may be blocked, may be interfered with. The problem in the transportation theory of communication is to get the noise, get the interference off the track and let it go through. Many educators think that the problem in education is just to get the information through, get it past the barrier, the opposition of the young, just to move it and keep it going. I don't have much interest in that theory. My theory or concern is what these media do to the people who use them. What did writing do to the people who invented it and used it? What do the other media of our time do to the people who use them? Mine is a transformation theory, how people are changed by the instruments they employ. I wish there were a lot more people in this field of transfor-

mation, but there are extremely few, and I would be embarrassed to mention more than two or three.

One of the peculiar flips that goes with the change from the visual to the acoustic is a change in joke styles. First I'll tell you a couple of old-fashioned jokes to show you what I mean. A friend of mine went to Kennedy Airport a few months ago to pick up an Irishman who was coming into New York. On the way in from the airport, the Irishman was enjoying the advertising and was especially attracted by a sign which read, "Be Younger. Use Ex-Lax." "How about that?" he asked. "What is Ex-Lax?" His friend replied, "We're coming to a drugstore right now, and I'm going to get you some." He popped in and brought out a cake of Ex-Lax, which the Irishman proceeded to gobble down—and with relish. About half an hour later his friend said, "Are you feeling any younger?" The Irishman said, "Well, I'm not sure, but I've just done something very childish." Now that's an old-fashioned joke—it's got a story line.

Another one on that pattern concerns a Newfoundland chap who was sitting in an airport waiting for a plane. He was sitting beside another man and, gradually, they began to talk. The man asked the Newfoundlander, "What do you do?" And the Newfoundlander replied: "I'm a rancher. I have 40 acres in Newfoundland, and I grow a great variety of things there. It keeps me very busy." And he turned to the other chap, a Texan, and said, "What do you do?" The Texan replied, "I'm a rancher too." "How big is your ranch?" inquired the Newfoundlander. "Well," said the Texan, "if we got in my car about now and drove till sunset, we'd still be on my ranch." And the Newfie said, "You know, I had a car like that once." Now that's the old style.

The one-liner joke, which has taken the place of the story line, has no plot at all. It's instantaneous, "easy glum, easy glow." That's the whole point: you're not supposed to have much attention span anymore. "If Nixon had been the captain of the Titanic, what would he have said to the passengers? 'Ladies and gentlemen, we're stopping for ice.'" These jokes are one-liners. "The British Empire is the empire on which the sun never sets because you cannot trust an Englishman in the dark." One-liners are everywhere, and they have taken the place of the old story line.

It's the same way with music. Melody has given place to the new rock forms. Instead of the tune which goes on and on, we simply have the broken and fragmented harmonics and juxtapositions of rhythm—abstract music. Abstract art or abstract music is art in which we pull out the connections. I understand that you're going to have a sculpture by Picasso on this campus. Abstract sculpture or abstract art is an art in which there is no visual component. All you have is the acoustic, tactile, kinetic form. Le Corbusier, the great architect, said that architecture is best appreciated at night, in the dark, where you can feel the thrust and the forces at work in the building. This experience is not visual.

Cubism is an art form in which we are given, simultaneously, the underneath, the out-

side, the top and the bottom of an object. To have all sides simultaneously is not visual. It is acoustic and tactile. So abstract art is an art in which they have pulled out the visual connections. And that began about 1900.

It's about the same time that the physicists pulled out the connections in matter. Quantum Mechanics 1900: Max Plank pulled out all the connections in matter and gave us quantum theory. Quantum theory is simply physics minus the connections, and it's quite easily understood, even by scientists. Don't think they don't have their troubles: one of the problems of Western visual man is that he tries to translate everything into visual terms. It is very difficult for Western man to take things except in a visual, connected, rational mode. Modern physicists report all their findings in Newtonian terms, which are the old-fashioned visual language. One of the peculiarities of modern physics is that it still uses the old Newtonian language. Newton was all visual: everything was classified, connected, continuous. Modern physicists have many troubles with the visual problem and the acoustic problem. They don't know whether, for example, to have a particle theory or a wave theory of matter. A particle theory of matter tends to be visual, and a wave theory tends to be kinetic. But modern physics is divided into the different sensory modes of man, and many members of the top physics world are quite unable to understand some of the non-visual aspects of their own field. They're very good at maintaining the general decorum and the conventional respectability of their clan, but, in fact, they are divided by severe strife within.

Speaking of the flips, there's a story that exists somewhere between the story line and the one-liner—the Norman Mailer story at Berkeley. A few months ago he was addressing a Women's Lib group and he said to them, "Everybody in this hall who regards me as a male chauvinist pig, hiss." When they all hissed very loudly, he turned to the chairman and said, "Obedient little bitches, aren't they?" Well, there are two things that joke raises: the new journalism versus the old, and Women's Lib. The old journalism used to try to give an objective picture of a situation by giving the pro and the con. Objective journalism meant giving both sides at once. Strangely, everyone assumed there were two sides to every case. It never occurred to anyone that there might be forty sides or a thousand sides. No, just two sides, pro and con. Suddenly this form of journalism disappeared, and the new journalism arrived represented by Truman Capote, Norman Mailer, Tom Wolfe and many others. The new journalism doesn't give us any side: It just immerses us in the feeling of the whole situation. It plunges us into the feeling of being at the convention or being at the fire, being somewhere, and it began with that famous phrase, "Something funny happened on the way to the forum." A happening is not a point of view. A happening is all sides at once with everybody involved in it. Mardi Gras is a happening. We cannot have objective journalism about a Mardi Gras: we just have to immerse. Mailer was one of the authors of the new journalism of immersion without any point of view—no objectivity, just subjectivity—and he subheaded his *Armies of the Night* fiction as history, history as fiction. The new journalism quite frankly regards itself as a form of fiction, with no objectivity at all.

The new politics is in the same position. The old politics had parties, policies, planks, opposition. The new politics is concerned only with images. The problem in the new politics is to find the right image. So search committees are formed to find the candidates who have the right image. Man-hunting has become a big business in the military world, the commercial world and the political world. Image-hunting is the new thing, and policies no longer matter because whether your electric light is provided by Republicans or Democrats is unimportant compared to the service of light and power and all the other kinds of services that go with our cities. Service environments have taken the place of political policies, or so it seems. I should always add that anything I say is the way it seems at the moment.

The Mailer story apropos of Women's Lib has this large implication: Women's Lib is not like the old suffragette movement about votes for women. Women's Lib is not an attempt to find a better, more just set-up for women to be employed in. Women's Lib concerns a tremendous change that's taking place in the entire nature of work. Just as education has undergone strange changes, so has work.

The Japanese SONY plant years ago developed a system whereby all the workers could bring their children to the plant and send them to school. If they were infants, there was daycare; and if they were school age, they went to school. The SONY plant in Tokyo educated them not only as children but at the university level too, and any of the workers who wished could also go to university. The plant itself became a kind of playground, and learning, play and work became one seamless thing. It's not difficult to arrange such a system in Japan because they are a tribal people and live according to family rule. Nobody ever got fired from a Japanese plant; everyone is part of the family. This tribalism, which they took for granted, is now something they are trying to get rid of, and something toward which we tend to be moving.

The Japanese today are introducing Western literacy into their own culture and spending \$6 billion to get rid of their own alphabet and put in our alphabet. Little do they know what is going to happen to them or to us as a result. But the alphabetic man is very aggressive and very specialized. The Japanese world is likely to manifest an enormous increase of energy and aggression when they get our alphabet installed. It will also wipe out their whole culture—their ideogrammatic forms of writing and culture will be destroyed. If China follows the same course—and it appears to be about to do that—then the transformation of the Chinese world will be very rapid. They will flip out of their culture, wipe off their whole ancient culture in twenty years, and become incredibly aggressive, specialized and goal-oriented, because the specialized man always has a goal. The visual man has a goal in life. The acoustic man never has a goal; he just wants to do his thing wherever he is. So if the Chinese or the Japanese were to take on our alphabet seriously, they would be in great trouble, and we would too. I don't think they understand what's involved.

At present in our own world of work, jobs are giving place to role-playing. Job-holding is giving way to role-playing because, at electric speed, it is impossible to specialize. That is one of the problems in education. As subjects become dubious as a form of learning, the interdisciplinary takes on more and more meaning. Media study is interdisciplinary study. Isolated subjects in the curriculum have become almost a menace to education. In the same way, the specialized job has become impossible in a big plant or in a big business of any sort. It is increasingly necessary to know the overall pattern of the operation.

In Japanese plants like Sony, workers are consulted on the kinds of innovation, on the kinds of products, on their pricing and marketing, and on any new developments in the manufacturing process. Everybody in the plant is consulted, resulting in total participation on the part of the workers in the whole operation.

Apropos Women's Lib, the electric world, because it does not favour specialization, favours women. Men are naturally specialists compared to women. Men are very brittle and inadaptable people compared to women. Through the centuries women have had to adapt to men rather than vice versa.

Specializing, which used to be taken for granted in modern industry, has now become very shaky, and role-playing has taken over from job-holding in big business. Role-playing means having several jobs simultaneously, or being able to move rapidly from one job to another. A good actor can play many parts. So Women's Lib is really a reply to the new electric conditions of employment in which huge information is available simultaneously to everybody. In the electric world, the simultaneity of information is acoustic because it comes from all directions at once. We hear from all directions at once, and so we are living in an acoustic world. It doesn't matter whether we're listening or not, the fact is we're getting this acoustic pattern.

When people become acoustically affected, they no longer have goals. They settle down into role-playing. Some of you may have seen this TV show called Upstairs Downstairs in which you go down to the servants' quarters. Upstairs is The Forsyte Saga; downstairs the servants' saga. In the servants' quarters, people are playing roles. Upstairs, in the Forsyte world of literacy, they are pursuing goals. In England at that time, the servants had no goals; they just had a role, which was static but very dramatic, very involving, and very fulfilling.

Role-playing is a very different thing from goal-seeking, and in the electric time we are moving very much in that direction. The reason that most of you in this room find it difficult to imagine a goal in life is simply that you're living in an electric world where everything happens at once. It's hard to have a fixed point of view in a world where everything is happening simultaneously. It is hard to have an objective in a world that is changing faster than you can imagine the objective being fulfilled. Women's Lib, therefore, has very deep roots in the new technology and is not just a matter of votes for wom-

en. It means that the work being performed by men today can in many cases be done better by women.

Another strange effect of this electric environment is the total absence of secrecy. What President Nixon refers to as the confidentiality of his role and position is no longer feasible. No form of secrecy is possible at electric speed, whether in the patent world, in the fashion world or in the political world. The pattern becomes obvious before anybody says anything about it. At electric speed, everything becomes X-ray. Watergate is a nice parable or example of how secrecy was flipped into show business. The backroom boys suddenly found themselves on the stage. Political support for election purposes ceased to be confidential or quiet or secret. There's no way of having any form of secrecy in these matters. With the end of secrecy goes the end of monopolies of knowledge. There can no longer be a monopoly of knowledge in learning, in education, or in power.

I'm not making value judgments. This development would seem to many people a very good thing, and it may well be so. I'm simply specifying the pattern or the form that occurs when you have instant speed of electric information. You cannot have a monopoly of knowledge, such as most learned people had a few years ago. This point applies to all professional life as well as to private life.

Ivan Illich has a book called *Deschooling Society* in which he argues that, since we now live in a world where the information and answers are all outside the schoolroom, let us close the schools. Why spend the child's time inside the school giving him answers that already exist outside? It's a good question, but his suggestion to close the schools is somewhat unnecessary. Instead of putting the answers inside the school, why not put the questions inside?

I should mention here a little scheme I have for what I call organized ignorance. I've often been puzzled by the fact that the greatest discoveries in the world, when you look back at them, are perfectly easy. They can be put in a textbook. However, the same discoveries when you are looking forward at problems seen to be impossible. Why is knowledge so easy backwards and so hard forwards? It's because there isn't anything that has been discovered that can't be taught easily. Why, then, is it so hard to discover? My first thought was to suppose that the cancer experts came to the studio with their problem, set up a model of their experiments and their procedures in studying cancer, and said, "We have got to this point, but we cannot get any further." When they broadcast this segment to a million people at once, one person among them would see no problem at all and have the solution. The real problem, then, is how you reach this guy who sees the absence of any problem.

Now let's ask another question. Why is it that this person, one in a million, says there is no problem? Inevitably, this person has not been taught and is ignorant of science and all scientific procedures. The scientist has great trouble looking forward past his prob-

lem because his knowledge gets in the way. It is only the very ignorant person who can get past that problem because he is not fogged over by knowledge. When you're looking for new answers to new questions, it is knowledge itself that blocks progress. It is knowledge that creates real ignorance, just as wealth creates poverty. Every time a new discovery is made, enormous new areas of ignorance are opened up.

One of the greatest human discoveries, the automatic cybernetic governor on the steam engine, was made by an eight-year-old boy who had the job of pulling the steam cock. Every time the big wheel went around, he pulled the steam cock to let the steam out. He wanted to play marbles, so he tied the string to the wheel and made one of the greatest inventions of all human history. The engineers who made the steam engine could not possibly have seen this simple gimmick. Only an ignorant kid who wanted to play could see such things. The greatest discoveries in human history are of that kind.

Another strange circumstance attending all discovery and all investigation is that the effects come before the causes. Without any exception, in every human development and in every discovery, all the effects come before the cause or the discovery itself. So when the discovery is finally made, everybody says, "Well, anybody could have seen that." In fact, though, the time was ripe. About the time somebody discovered the telephone, there were a thousand people who invented the telephone, and then the law courts were filled with suits for generations. Charles Darwin and Alfred Russell Wallace both discovered evolution at the same time, without any personal acquaintance.

Currently, one of the effects for which no cause has yet appeared is anti-gravity. We have an enormous amount of anti-gravitational effect and activity—helicopters, airplanes, and astronauts—but we don't have the cause; we just have the effects. Within our lifetimes or your lifetimes, the cause of anti-gravity, a simple gimmick, will present itself, and all things will levitate instantly. The problem will be how to hold things down on the ground. The effects are here now, and the causes will be here shortly.

The bicycle presented all the effects of the motorcar just before the motorcar itself appeared. The bicycle paved the way for the motorcar—the tires, the chains, the ball-bearings, everything. All the manufacturing problems were solved by the bicycle before the motorcar was ever thought of. The roads and the services all arrived first, and the motorcar arrived last. At the present moment the motorcar is on the way out, not because of an oil shortage, but because of something quite different. The motorcar as a vehicle had an enormous function to perform in American life: it provided the ultimate form of privacy and the means of going outside to be alone. North Americans are the only people in the world who go outside to be alone and inside to be with people. In every other country, including the Eskimo world, people go outside to be with people and inside to be alone.

Why did the Americans ever hit upon this weird reversed pattern? Americans came to this continent to subdue nature, fast and furious. They tamed it; they subdued it; they crushed it. They turned it into the enemy. We can read about it in *Moby Dick* or in Haw-

thorne or in other books in our literature. Americans regard the outside as the enemy and the inside as the friend, whereas all the other continents in the world regard the outside as a friend and the inside as a place for defence only. All doors are closed in the European house: the European family lives in seclusion and privacy inside. There is no privacy in the American home. That is why you have to get a grant if you want to study so you can leave home. It's a weird pattern, and it's very important to understand it because it isn't over yet. The motorcar provided this superior means of going outside to be alone. As a corollary, Americans have a great dislike for public transit because public transit is where you go outside to be with people.

The motorcar as the supreme form of privacy has been threatened, and in fact superseded, by television. Television brings the outside inside, and it takes the inside outside. It pulls the highway out from under the car. It deprives the car of its rationale and its meaning. If the car had not lost its real meaning in our lives, there would be no oil-price hikes—nobody would even dream of allowing the oil-price hikes to occur. The rise in oil prices is, of course, a promotional deal. But it is something that could not have happened if the car had not already been obsolescent.

The car has lost its place in the heart of the people. That doesn't mean it's going to disappear overnight—not at all. All it means is the effects of the car are disappearing, and privacy and service environments are part of the effects.

When I say the medium is the message, I'm saying that the motorcar is not a medium. The medium is the highway, the factories, and the oil companies. In other words, the medium of the car is the effects of the car. When you pull the effects away, the meaning of the car is gone. The car as an engineering object has nothing to do with these effects. The car is a figure in a ground of services. When you change the ground, you change the car. The car does not operate as the medium but rather as one of the major effects of the medium. So "the medium is the message" is not a simple remark, and I've always hesitated to explain it. It really means a hidden environment of services created by an innovation, and the hidden environment of services is the thing that changes people. It is the environment that changes people, not the technology.

To come back momentarily to the problem of Illich and the problem of organized ignorance: Illich says we must close our schools, because the answers are now outside, and let the kids go back to work, run around the community and get an education. I'm suggesting that the answer is not that, but to put the questions in the classroom and to start a real dialogue there.

Organized ignorance as a way of bypassing the problem of knowledge as confusion and as a block to discovery brings me to the subject of Sputnik and the laws of the media. When Sputnik went up on October 4, 1957, it put the planet inside a manmade environment for the first time. Spaceship Earth has no passengers, only crew. Sputnik trans-

formed the planet into Spaceship Earth with a programmed problem. Ecology became the name of the game from that moment on. Nature ended. The planet became an art form inside a manned capsule, and life will never be the same on this planet again. Nature ended and art took over. Ecology is art.

We now have to confront the need for an ecology of media. It's not just raw materials but the manmade materials too that now have to be harmonized and resolved in their interaction. Tony Schwartz, in his book *The Responsive Chord*, explains this very tricky problem about television as a new environmental medium by saying that the TV image uses the eye as an ear. It's a way of drawing attention to the fact that the TV image has a very different effect on our psychic life than the movie image. Therefore, educationally speaking, TV has very strange consequences and could never be used as a mere transportation device.

The laws of the media, which are like the Medes and the Persians, are quite simply that every medium exaggerates some function. Spectacles exaggerate or enlarge or enhance the visual function. They obsolesce another function; they retrieve a much older function; and they flip into the opposite form. The simplest form I know to illustrate this principle, which works for all media whether it's a teaspoon, a corset or a motorcar, is money. Money increases transactions; it obsolesces barter; it retrieves potlatch or conspicuous waste; and it flips into credit cards, which are not money at all.

Now every medium starts off by exaggerating something that we all have before finally flipping into the opposite of itself. The motorcar flipped into an airplane, but first came the bicycle. The Wright brothers were bicycle men. The gyroscopic principle of the bicycle made possible the airplane. The hula hoop arrived just before the mini-skirt; the hula hoop was a tribal dance which preceded the tribal costume. The effects come first; the cause is later. The laws of the media I simply mention in passing; I could spend a long time on them because they are at least a hope that we can reduce this confusion to some sort of order.