

The purpose of this paper is to suggest that the revolution in communication we are passing through may affect our lives even more profoundly than we generally suspect. Of course: we are aware of the impact which the cinema, TV and advertising is having. But what is meant here is a far more radical impact. In fact, this paper will suggest that the entire meaning of the world and of life in it will be reformulated under that impact. Now this is a outrageous statement, to put it mildly. This paper will nonetheless try to sustain it. It will do so by pointing to one single aspect of the revolution: to codes. It hopes that this will suffice to convince the reader that there are processes underway in the field of communications which it is at least as urgent to understand as it is urgent to understand the economic, social, technological and political upheavals of the present.

One way to grasp the revolution in communication is to compare our situation to the one immediately before the Second War. What strikes us if we do this is the relative lack of color in the pre-war surroundings. Architecture and machinery, books and gadgets, clothing and food stuff, all seem relatively grey. By the way: this is one of the reasons why we have the impression of returning to the thirties when visiting Socialist countries. The color explosion which marks the present is far less violent over there. In our surroundings colors call for our attention from all sides and all the time. They do it screaming and whispering, day and night, in public and in private. Our stockings and our pajamas, our tins and our bottles, our shop windows and billboards, our books and our maps, our drinks and our ice creams, our films and our TVs, everything is in technicolor. We are being irrigated by color. Now obviously this is not only an aesthetic phenomenon: a new "style". The colors around us mean something. The red traffic light means "stop!", and the screaming greenness of peas means "buy me!". The colors around us are messages, mostly imperatives. We are being informed and programmed by the colors around us. They are an important part of the codified world we live in.

Colors are how we perceive surfaces. If an increasing proportion of the messages which program us now comes in color, this means that the surfaces of the things around us, are becoming progressively the bearers of meaning. Walls, screens, sheets of plastic, of paper, of glass, of aluminum, those are some of the most important "media of communication". The situation before the War was relatively colorless, because surfaces of things were then less important for communication. The dominant codes at that time were linear: letters of the alphabet, numbers and so forth. The meaning of such symbols is not greatly affected by color. A black "a" and a red "a" mean the same sound, and this text would change

its meaning very little, if it were printed in yellow. Thus the present color explosion implies that two-dimensional codes, codes composed of symbols which are surfaces, are becoming more important. And it implies of course that one-dimensional codes like the alphabet are becoming relatively less important.

The fact that mankind is being programmed by two-dimensional codes, by images, cannot, of course, be considered a revolutionary novelty. On the contrary: it seems to mark a return to "normalcy". Before the invention of writing images were important media of communication. It is mostly through images, from Lascaux on and up to the Mesopotamian tiles, that we must try to decipher the meaning of the deeds and sufferings of our ancestors, because other codes like speech, music, dance and gestures, (which are probably as ancient as image codes), are ephemeral and have left almost no traces. And even after the invention of writing two-dimensional codes had a more important role within the codified world than the alphabet, up to the invention of printing: frescoes and mosaics, tapestry and church windows, and so forth. This is the reason why the Middle Ages, including the Renaissance, were so much more colorful than Modern Age proper, in which the printed message dominated. In this sense it may be said that the present situation of the codified world is a return to the one existing before the invention of printing. So to speak a return to "avant la lettre".

But this would not be a very happy effort to understand what is happening: to say that we are returning to illiteracy as it prevailed before printing. Obviously the images that now program us are not of the same sort as were the images before the alphabet became a more or less universal code of communication. TV programs are not like the windows of a Gothic cathedral, and the surface of a tube of tooth paste is not like the surface of a Renaissance painting. To put it simply: the images that programmed pre-modern men were the products of artisans and artists, while the images that program us are the products of technicians. The difference being that there is a scientific theory behind the product of a technician, but not necessarily behind the product of an artisan. Pre-modern man lived largely in a world of images, and he deciphered its meaning through imagination, while we live largely in a world of techno-images, and if we are to decipher it, we must take recourse to what may be called "techno-imagination". This is a revolutionary new situation.

To show that there are no parallels in the past for the challenges this situation poses, an effort must be made to grasp the function of codes. A code is a system of symbols, and its purpose is to permit communication concerning something, (for instance: the world). Now

the use of symbols, of phenomena which represent other phenomena, implies that the user has lost immediate contact with what he "means", (the original phenomenon), and therefore needs a symbol to mediate between himself and his meaning. In other words: the use of symbols implies alienation of its user. The only alienated animal we know of for certain is man. He must make symbols and order them in codes, if he is to give meaning to his life, because he has lost contact with what may be called "the real". He has lost that contact, because, although he lives in the world like any other animal, he sees himself living in the world, unlike any animal we know of. Therefore the presence of codes, (for instance of regularly ordered circles of bones and stones), is the best criterium for the distinction between a hominide and "true man", better still than even tools. Wherever anthropologists find a systematic arrangement of objects, they can conclude that these objects mean something, (are symbols), and that therefore the animal who ordered them was alienated: true man. (It is true that the terms "code" and "symbol" are sometimes used in a different sense, for instance "genetic code" or "symbolic dance of bees", but this seems to be a metaphoric use, an undue anthropomorphism.)

It would be futile to ask what the circles made of bones of bears and antélopes "meant" to those who made them in Africa hundreds of thousands of years ago: we have lost the key to that codified world. But to ask for the meaning of the paintings that cover the walls of paleolithic caves is less futile. Those images mean scenes, (of hunting, of animals grazing, and so forth). Of course: this is certainly not the entire meaning these symbols had for their painters. Still: we know that these paintings mean scenes, because we still use similar codes. Two-dimensional codes reduce the space-time events of the "real world" they mean to fixed scenes. This is the strict meaning of the word "imagination": the capacity to write down the world of events as a series of scenes, and then to read this scripture. To make maps and to be able to use them.

Although we do not know the situation in which Lascaux or Altamira man found himself, (the tens of thousands of years that separate us from him have efaced almost all of his codes except painting), we do know that the world meant for him a series of scenes. And this scenic structure of the world implies a specific way of life, one that is characterized by terms like "ritual" and "magic". We know this, because we know how to read images. An image is a surface which represents a scene, and its message can be grasped at a glance. It "synchronizes" the event it means by transforming it into a scene. But after having grasped the message at a glance, one must analyze it, in order to un

derstand it more fully. This analysis is made by the eyes as they wander about the surface, as they "read" the image. And this implies a very specific experience of time; it is being experienced as an analysis of a synchronizing image, as a series of paths within a scene. For a man whose codified world consists of images, time flows within the world as a circular flux which orders the elements of the scenes that compose that world. It is the time of day and night, of summer and winter, of birth, death and rebirth, of recurrent feasts, the circular time of eternal return. It is a time to which magic and ritual are the appropriate form of living.

For tens of thousands of years, through the paleolithic, mesolithic and neolithic periods, this is how people lived: in a world of images, in a world composed of scenes, and they led a life ordered by ritual and magic. They lived in a solid, secondary world, the world of imagination, and that codified world meant, for them, the "real world". And then a tremendous revolution destroyed this form of existence: the invention of linear writing. We usually say, without always realizing the tremendous thing we are saying, that with writing history began and pre-history ended. Although this happened three thousand years ago, we can still observe this breathtaking step into nothingness, this "transcendence", this taking of a distance with regard to the world of imagination, if we consider the first cuneiform texts, as they appear alongside the images of scenes on some Mesopotamian tiles.

The cuneiform linear code is a system of symbols which mean the scenes that are represented on the tiles. They "explain" them. The linear code dissolves the surface of the image into point-like, cuneiform symbols, and it orders these symbols in lines. This is what "explaining" means: unrolling a surface into lines, to render explicit what was implicit. But by thus translating from surface to line, the new code provokes a revolutionary change in the codified world. It stretches out the scene into a process. It "tells a story". And to "tell" means to count and to recount, ("raconter", "erzaehlen"). It orders its point-like symbols like small stones on a thread, like "calculi", it calculates the scenes it explains. This we can observe if we watch the Mesopotamian tiles, and even after three thousand years we feel the incredible impact.

It is important to note the linear writing was not, at first, alphabetical (a transcription of spoken language), but pictographic, (a transcription of images). It dissolves scenes into processes, images into letters. This function is obscured by phonetic codes, but becomes obvious if we consider other linear codes like numbers or the symbols of logic. The linearity of written texts is therefore totally different from the linearity of codes like spoken language or music. It is a resolution of surfaces, or, if one wants to call its point-like symbols "concepts", it is a way to conceive imagination.

If one wants to decodify linear texts, if one "reads" in the strict sense of that term, one must follow the lines along which the point-like symbols are ordered, usually from left to right and from top to bottom. This is a process opposed to the one by which images are "read". Instead of analyzing a synchronized message, one must, in linear codes, synthesize a diachronical message. The message is received progressively, step by step, and only after having followed the line does one possess it. The time experience one gains is opposite to the one during image reading. Time is experienced as a flux through which the world floats and develops. It is irreversible, (every instant lost is an instant definitely lost), progressive, (the message develops along its line), and dramatic, (it is the time of a tale, an action). This is the experience of time which is called the "historic consciousness". The world meant by written texts is a process, (it becomes), and life in it is an active project, (a biography).

Historical consciousness did not triumph over the magical one easily. The whole of history proper may be seen as a slow dialectical process during which the contradiction between surface and line, between image and concept, developed in the sense of an ultimate absorption of image by concept. In the beginning linear texts served only as commentaries to images (like on the Mesopotamian tiles, in church windows), and in the end images served only as illustrations of linear texts, (like in Medieval manuscript and in newspapers). The process of learning how to write took hundreds of years: it was not easy to free linear texts from images and learn how to translate scenes into images, how to tell stories. Greek philosophy and Jewish prophecy were, of course, first attempts of Western civilisation to render writing independent on image making and to create a codified world in which books, (for instance Homer and the Bible), would become the decisive media to program the lives of people. This is why Plato despised the "figurative arts", and why the prophets abhorred "image making", (idolatry). But during most of history writing was the privilege of a small élite of clerks, and the vast majority continued to be programmed by the two-dimensional codes of imagination. Or, to put it differently: historical consciousness, during most of history, was the privilege of a literate élite, while the masses continued to live in ritual and magic.

The invention of printing made books cheap, which permitted the rising bourgeoisie to penetrate the literate élite during the 17th and 18th, and thus acquire historical consciousness. And the Industrial Revolution, which tore the mass of peasants from their roots and accumulated them as proletarians around the machines, tried to absorb this uprooted mass through universal public schooling and military service, which taught the mass to read and write, and thus gave them a sort of historical consciousness during the second half of the 19th and the first half of the 20th century, at least in the so-called developed countries. Thus the

specific existential climate of historical consciousness, of the irrevocability, progressiveness and drama of the world and of life, became the climate of Western civilisation during the last three or four generations. And its purest expression is, of course, scientific and technical progress.

If what was said in the first paragraph of this paper is true, that climate is at present rapidly evaporating. As surface codes substitute linear ones, as images substitute the alphabet, time is no longer experienced as an irreversible, progressive and dramatic flux from the past toward the future. The codified world we live in no longer means a process, a becoming, it no longer tells a story. To live no longer means to act. Science and technology no longer represent the purest expression of our existential interests. This fact is called usually our "crisis of values", (or by some similar doubtful terms). It is the fact that the codified world which now programs us, provides us with our models of knowledge, of experience and of behavior, is no longer predominantly coded linearly. The linear codes of the alphabet, of mathematics, of the natural sciences, are losing their relative prominence which they held in the first half of the century. Techno-imaginary codes now program us more intensely, they tend ever more to dominate our codified world, and we do not as yet know what sort of meaning they will project upon the world.

This ignorance of ours as to the impact of the present revolution in communications is not surprising. It took hundreds of years before people realized the virtualities of linear writing, before they achieved historical consciousness. It will take long before we realize the potentialities of techno-images, before we achieve what may be called "post-historical consciousness through techno-imagination". Before we learn how to codify and de-codify the world in codes like photography, films, videos, holograms, analogical computer programs and so forth. At present we are using those codes as commentaries to written texts, (we try to tell stories through photographs or films), just like the early Babylonians explained scenes through cuneiform writing, instead of telling stories. But although we are ignorant of the future impact of the new codes, one thing is already certain: the invention of photography, and the subsequent techno-imaginary codes, is a revolution comparable in its radicality only to the invention of writing.

Writing was a step back from imagination, because it permitted to analyze images into concepts. By this step mankind discovered that the world of imagination, the codified world it had lived in, was its own product. Writing permitted men to see that the world of images was a mediation between man and the "real" world, an instrument to map the world. This was the end of magic and of ritual, and the beginning of science and technology. The codes of techno-images are a new step

back, but this time back from the linear world of concepts. They permit to imagine concepts. A photograph is not an image of an event, as is a traditional image, but it is the image of a concept the photographer has concerning an image. By this step back we are becoming aware, painfully that the codified world of concepts, of theories, of explanations is nothing but a mediation between ourselves and the "real" world, our own product. That it is a world of "models", and that to have faith in science is the equivalent to having faith in magic. Now this discovery, forced upon us by the new codes, will be the end of philosophy, of science and of technology as we now know it. It will be the beginning of a new type of consciousness, but we cannot even suspect what it will be like. This is, according to the thesis here suggested, the fundamental reason why we "are in a crisis".

Techno-images are not like the traditional ones. Some of them move some of them talk, some are fluorescent. This type of novelty impresses the naive observer. But this is not what is revolutionary about them. They are the products of science, and therefore they do not imagine even but concepts. They are apparently "objective", because they are produced by apparatus, instead of human imagination. But in reality they are just as much products of men as are traditional images, but this time they are not the products of imagination, but of the scientific capacity to conceive imagination. They form codes for which there is no parallel in the past, and although we ourselves invented them, we must learn how to use them. (Just as <sup>we</sup> are still learning how to use mathematics, although it was ourselves who invented that code).

The purpose of this paper was to suggest that what is usually said about the communications revolution does not touch the center of the problem. No doubt: it is important, and even essential, to analyze the media as to their psychological, sociological and political impact. No doubt the effects of the press, of TV, of publicity and so forth on the values and the behavior of the masses are important, even brutal. But those are only epiphenomena of a more profound revolution. This paper tried to point to one aspect: the emergence of new codes. But this is sufficient. If we consider the decline and fall of the alphabet, and the rise of techno-images, and nothing else, the suspicion that history as we know it is over becomes plausible, and we begin to admit that we are entering a new form of existence which we cannot yet even intuit, but the manifestations of which already abound around us.