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The new space of communication, the interface with culture and artistic creativity

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Introduction

Information Society
Towards another "Brave New World"?

Today, we are witnessing the rapid installation of the complex systems which will become the technological and commercial foundations of a "global information infrastructure". This new, interactive communication space will doubtlessly function as a powerful tool in the service of the economy, but it will also be at the centre of radical and far-reaching changes in our societies. From this point of view, the simple admiration of what are merely technical advances, coupled with present-day justifications of a primarily economic nature, presents serious risks of prevailing over the higher interests of the cultural life and the social functioning of the peoples of Europe. Among the indeniable responsibilities of public authorities are to protect essential community functions against possible encroachments, and to promote the enormous potential of these new technologies for the cultural and social development of all our societies.

A. Present-day monopolistic trends in the future multimedia market

The observation of the world's financial markets shows transactions of vital importance in all sectors of the cultural industries. Economic experts already predict a planetary market of several thousand billion dollars by the year 2000. For the first time in

human history, the cultural sector which, by its nature, is not preoccupied by the race for raw materials, is promising profit earning capacities which will exceed those of the traditional material-based industries.

The market is developing exponentially and is marked by the cut-throat competition between strategic alliances and mass buyers at the centre of a rapid convergence of three previously separate sectors audio-visual, computer technology and telecommunications. The situation today is already characterised by a very small number of world-wide corporations, all impatient to reap profits from their huge investments by setting up the technical, legal and commercial norms best suited to their own involvement in this future world market.

At the same time, in the movement towards the creation of ever more powerful trusts, these same groups manage to take advantage of the discrepancies between national legal frameworks. For several years now, a handful of giants in the computer and communication world have already acquired a status of "global players", dominating the activities of the other, weaker competitors in the market. The absence of international law in this field, coupled with the scale of financial investment necessary, encourages this tendency towards concentration.

In view of the imminent liberalisation and probable homogenisation of this world market, it is impossible not to see that the main objective pursued by these cultural industries is nothing other than the most profitable exploitation of their audio-visual products and future on-line services. The recommendations of the main representatives of the cultural industries of Europe, Japan and the United States at the February 1995 G7 conference, held in Brussels, already gave clear warning of this single minded interest. Alongside the demands for a speed-up in the de-regulation of the markets, and the conclusion of agreements as to certain technical norms, much concern was also expressed as to the public's confidence in this information society. Without this confidence, according to these recommendations, the extraordinary gains to be won from the information revolution could not be completely realised.

In the context of the multimedia industry's concern about public mistrust, it is worth quoting Gerald Levin, president of one of the world's leading multimedia giants, Time-Warner, who argues that "the consumer has never known what he wanted before the industry made him an offer" (Spiegel special, March 1995, p. 31).

Promoted then by an essentially economic discourse, the result of this crusade on a world-wide scale will be the undermining of all sorts of social and ethical norms and the rapid evolution towards a new society, already baptised the "information society".

Although today no one can yet measure the scope of the impact of new technologies on cultural life and the on functioning of our societies nor predict the physiognomy of this "information society", by making us accept its purely technical logic, the promises associated with this illusory vision already outline its marvellous advantages: the creation of tens of millions of new jobs by the year 2000, the availability of an educational tool of tremendous significance, a more democratic society, the perspective of free access to information by anyone and everyone, both as consumers and producers, and, last of all, the imminent arrival of a better standard of living for Europe, Japan, the United States and subsequently - to quote the industry's own recommendations for the G7 Brussels conference - for "the other regions of the world".

B. Information highway projects

The investigation of the means of distribution which will bring all these advantages reveals a multitude of different techniques, including cable transmission, fibrer optics and satellites, all of them however coming down to the concept of a high band-width inter operational, global network, generally termed the "information highway".

Constructed by the powerful partners of the telecommunications industries and, in order to reap a return on the gigantic investments necessary, the infrastructures of this new interactive communication space will serve the same investors, now in their capacity as

producers and distributors, in the practically unlimited transmission of information and the exploitation on a planetary scale of a multitude of new services, generally classed under the somewhat vague term of multimedia: tele-working, tele-shopping, e-mail, instant video, access to administrative services, even electronic voting.

This conception of the information highway, suggesting universal and free access for each and every one of us as consumers, has a necessary pre-requisite: the user must dispose of the adequate cultural capital and the financial means to acquire the technical devices implied and to access the different services offered, which can only be pay-services, and probably expensive ones at that.

It goes without saying that the essential applications foreseen by the technicians of the powerful industrial groups will go far beyond the present-day and often libertarian experiments in the use of Internet. As a fantastic instrument of free and individualistic exchange in the fields of science and artistic creation, Internet cannot really be considered as foreshadowing the information highway projects, except in the limited sense of its acceptance by a specialised public and in its technical operating modes.

In the face of today's clear trend towards an oligopolistic market, it is necessary to distinguish between the "cyberspace" myth, a vision of a virtual, cosmopolitan and liberal universe, and the industrial project of the "information superhighway", a powerful instrument in the advanced marketing of audio-visual products and other pay services. Contrary to the democratic pretensions that the information and image industries would have us believe, the info-cracy may also have an inherently totalitarian tendency. In the case of their progressive monopolisation, the new technologies may also turn out to be an instrument for the worst of totalitarianisms, that of a "brave new world" in which everyone will be content, well-informed of all he or she should know in order to play a useful role, but ignorant of the rest, which need not be known, and amused permanently, to even satiety.

Before leaving the field of action open to a purely economic discourse, it is necessary then to adress some of the major issues in a

more precise approach, associating cultural dynamics and the new interactive communication spaces in Europe.

C. Identities and cultural expressions

From whatever viewpoint, a fair appraisal of the reality of the European situation must respect the extraordinary cultural richness of the countries of Europe as the product both of an ancient and shared historical evolution and of an extraordinarily large range of regional traditions. The essential characteristic of this shared culture is its spirit of openness. There is no doubt that European culture has profited from the selection, the interpretation and then the assimilation of external and older cultural evolutions, which are impossible today to dissociate from its own specific identity. Generally, this appropriation was the result of acts of conquest which led to domination and even the suppression of other cultures. But, by the same token, other cultures have evolved thanks to the intense enrichment brought to them by European cultural values.

Conscious of the composite and fragile nature of its own cultural identity, Europe must today show exemplary responsibility where its own cultural heritage is concerned, and with regards to its present-day and future cultural life. This responsibility must involve a greater sensitivity in its contacts with other cultures. Inescapably bound up in permanent exchanges with other evolving cultures, the dynamics of European culture could only be impoverished and compromised by misguided protectionism.

Yet, at the same time, faced with the enormous initiatives launched by the United States and by Japan, we also feel deep concern, and justifiably so, where the preservation of cultural expressions and identities in Europe is concerned. Waiting for the wave of multimedia products to unfurl, products of more or less limited value, designed, fabricated and homogenised to be easily sold on the world market, this concern anticipates the threat of a profound upheaval in the European media landscape; thanks to the powerful instrument which the information highways represent, this landscape could be submerged by an ocean of images of which only the smallest proportion has any redeeming artistic content.

D. The specific interest of European heritage in multimedia creation

Today, in the multimedia world, European backwardness, compared to the United States and Japan, is often bemoaned. But the main question here should not be the preoccupations of European industries, unable to profit fully from the vast potential of a future market. Everywhere in Europe the traditional cultural sectors are threatened by budgetary cuts, while at the same time there is a scramble to invest in the multimedia sector, in order to stand up against the gigantic economic investments of the Americans and the Japanese.

By its deep roots, its enormous diversity and its extraordinary richness, the European heritage constitutes the main cultural treasure which, on the world scene, is at the centre of the specific interest of the multimedia industry. The new interactive communication space will enlarge our horizons: but the price to pay for this incredible mass of ever up-dated information, may also be a loss, a loss difficult to appreciate, in the direct and sensorial contact between ourselves and reality. The rapid evolution of the global multimedia market, pushing the traditional arts and media into the background, may compromise the values and contents of the European heritage, levelling them down to a lowest common denominator. In the long term, the result of this globalisation may be an irreversible loss of the European cultural identity.

As the information revolution accelerates, calling on ever-greater financial investments, only a vast intensification of the creative approach, throughout Europe, can succeed in counterbalancing a total commercialisation of the cultural sector. Yet the creative participation of all the cultural actors can only be initiated by a cultural policy directed in common at the European level. And the European multimedia industry, by accepting a larger share of responsibility for multimedia artistic creation, can only profit from this engagement in its own field.

E. Mobilisation of the cultural actors of Europe

If the public authorities of Europe leave the field open to the economic interests of the "global players" in the vital sectors of information and communication, they must also accept responsibility, in order to preserve the cultural identity and expression of our societies, for establishing norms not merely for the inoffensive use of the new technologies, but, even more, for these uses to be beneficial. In order to avoid an irreversible impoverishment of European culture, the control of content and of its communication cannot be left to the sole ambitions of the industrial and commercial parties.

Without encouraging alarmist Euro-scepticism, the guarantee of a better promotion of the enormous potential of new technologies for the cultural and social life of all our societies can only be realised through a concerted harmonisation of cultural and economic policies, taking into account and respecting the cultural richness and diversities of all the societies in Europe and encouraging the creative participation of all its cultural actors.

This necessary mobilisation of creative resources could be based on a growing number of initiatives in the artistic domain. In anticipation of the promising results to be expected from the association of art and new technology, research centres and centres of artistic experimentation have been in existence for a long time now in art schools throughout Europe. For several years, there have been exhibitions and festivals in this same field. Along with these initiatives, which are often of an institutional nature and which denote a growing acceptance of these new media by the concerned public, we also see the emergence of a large number of "private" cultural initiatives in the field of electronic networks such as Internet.

The aim of these initiatives is the study of specific techniques and the realisation and presentation of total multimedia works of art. They aim to promote innovations and also to criticise blind enthusiasm for the new communication technologies. In order to preserve the identity and the cultural diversity of Europe and bring

new life to it, it is precisely in this direction that the concerted efforts of the cultural and economic policies in Europe should be oriented.

The New Space of Communication, the Interface with Culture and Artistic Creativity

Development

Evolution of an Interface, Art and Technologie

A. Beyond Technological Determinism

The development of new communications technologies affects directly or indirectly a great number of aspects of the life of our society. There are numerous ways of analysing the problems tied to the emergence of these technologies, by studing case by case their impact on education, liberty and human rights, the economy, politics... The approach can be based either on the impact of the technologies on the methods of operation of a certain practice or on the existance of society itself, or can concentrate on the content of the communication they propose. We would like to suggest another possibility, more global, by discussing the articulation between the two approaches. It seems to us that the social value of any content is intimately tied to the social effects created by its means of communciation. The notion of the impact of technology on an aspect of society, which is usually referred to when discussing these problems, seems to us misplaced and even dangerous. It creates a relationship too linear, too causal, and associates impact with a logic too closely related to technological determinism. It is extremely important to undo the effects of this determinism (as we will see further down, one determinism can hide another). For us, it means placing ourselves in an epistemological perspective regarding the complexity created by the new communications technologies and their effects on the interaction between a technical logic and a social logic.

The question of the relation between culture and communications technologies is not easily broached. The difficulty lies even in the term culture itself and we do not wish to discuss the many different meanings people give to the word culture. On the other hand, in considering the principal different meanings of the word, we hope to articulate the complexity of the issue more clearly without reducing it to some of its more obvious aspects.

We think that it would be useful to begin with a certain number of remarks about the different levels of culture, the differences between technique and technology, the specificity of artistic creation, and about applied art in the field of culture.

B. The Two Meanings of the Term "Culture"

Any discussion of media or communications and culture inevitably runs up against this problem of definition. In order to define our terms and expand on the differences already proposed, we can start with the Webster's Dictionary definition of culture; 1. the integrated pattern of human knowledge, belief and behavior that depends upon man's capacity for learning and transmitting knowledge to succeeding generations, 2. the customary beliefs, social forms, and material traits of a racial, religious, or social group. The first definition is Culture with a capital "C", and the second, culture with a small "c". The first has to do with knowledge and the transmission of knowledge and traditionally involves the arts and sciences. The second is concerned with values and comportment and the agreed upon rules governing people's behavior and relationships. The arts and sciences can affect the behavior of a group to the extent that "knowledge" influences the "customary beliefs". This is not always a one-to-one relationship in society and the extent of definition one influencing definition two depends on the systems of communication available and in use and the content of those forms of communication.

When we speak of cultural channels on television it is in the first sense of the word culture. On the other hand, when we talk about the cultural effects of televison or of the communications

technologies in general, it is the second sense but can also include elements of the first.

In the second sense, for expample, we talk about the manner in which televison modifies the interactions between individuals. In the first, we talk about the manner in which television (or the coming new communications technologies) favor artistic or scientific knowledge.

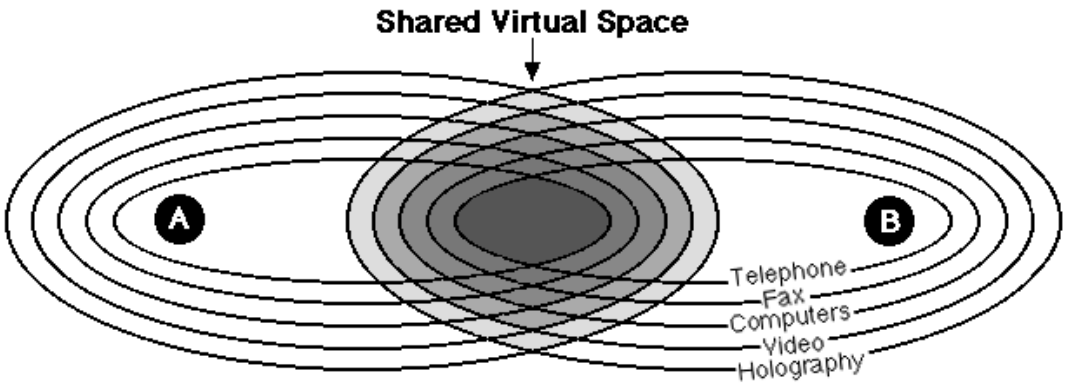
Communication technologies maintain a relation with culture in the first as well as the second sense. They communicate and, through the new means they offer such as interactivity and networking, modify the communication of the cultural content. They affect the general conditions of human exchange and, thereby, cultural functioning in the anthropological sense of the term. It is important to understand the types of relations which can develop between the two levels of culture and the technologies of communication. We will come back to culture later. Let us now look more closing at communication and the new technologies expanding its potential.

C. Two Forms of Communication

Interactive Communication

All communication is based on the concept of shared space. Under normal circumstances when communicating we share the same physical space with someone and create an interactive system with the other, a cybernetic process involving the two persons communicating and the method of communication used, in most cases a common language. Modern telecommunications technology attempts to expand the shared space electronically, as the surest way to guarantee genuine communication over long-distances, assuming the elimination of the physicality of space. We do this regularly with the telephone. We have a shared audio space, where two people can converse as though they were in the same place. They can interrupt each other and speak normally because at least their voices, and therefore their minds, are sharing in some fashion the same space. The space is interactive, virtual because it does not exist physically, but real because communication functions.

Imagine that same space enlarged by the addition of new communicative dimensions. The most common is the fax which adds written texts to the space, either in real time, or, more generally, deferred. Computers linked by phone with shared screen possibilities add instant text and image to the voice, expanding again the range of direct communication. Video connections provide a real-time presence for each correspondant and we become actively engaged in a real-time interactive virtual space. The diagram below adds other avenues of experimentation that will expand even further the dimensions of this new communications space. They are not science fiction, but technologies that exist in experimental form. This, coupled with a growing number of inter-connected data banks, is the information highway that is garnering so much press today.



Increasing the shared space of communication over long distances through applying the new technologies. A and B will never be in the same space physically, but will approach each other in a virtual representation of it.

Mass Media - A One-Way Street

Another aspect of communication is mass communications, usually understood as radio and television, which differ in function from telecommunication in that they serve a distribution function and are generally one-way. Mass communications, or media, which can include cinema, have become a major part of today's visual environment. That is, they occupy an important part of each person's communications space, his interface with the outside world, but do not permit any kind of participation in return.

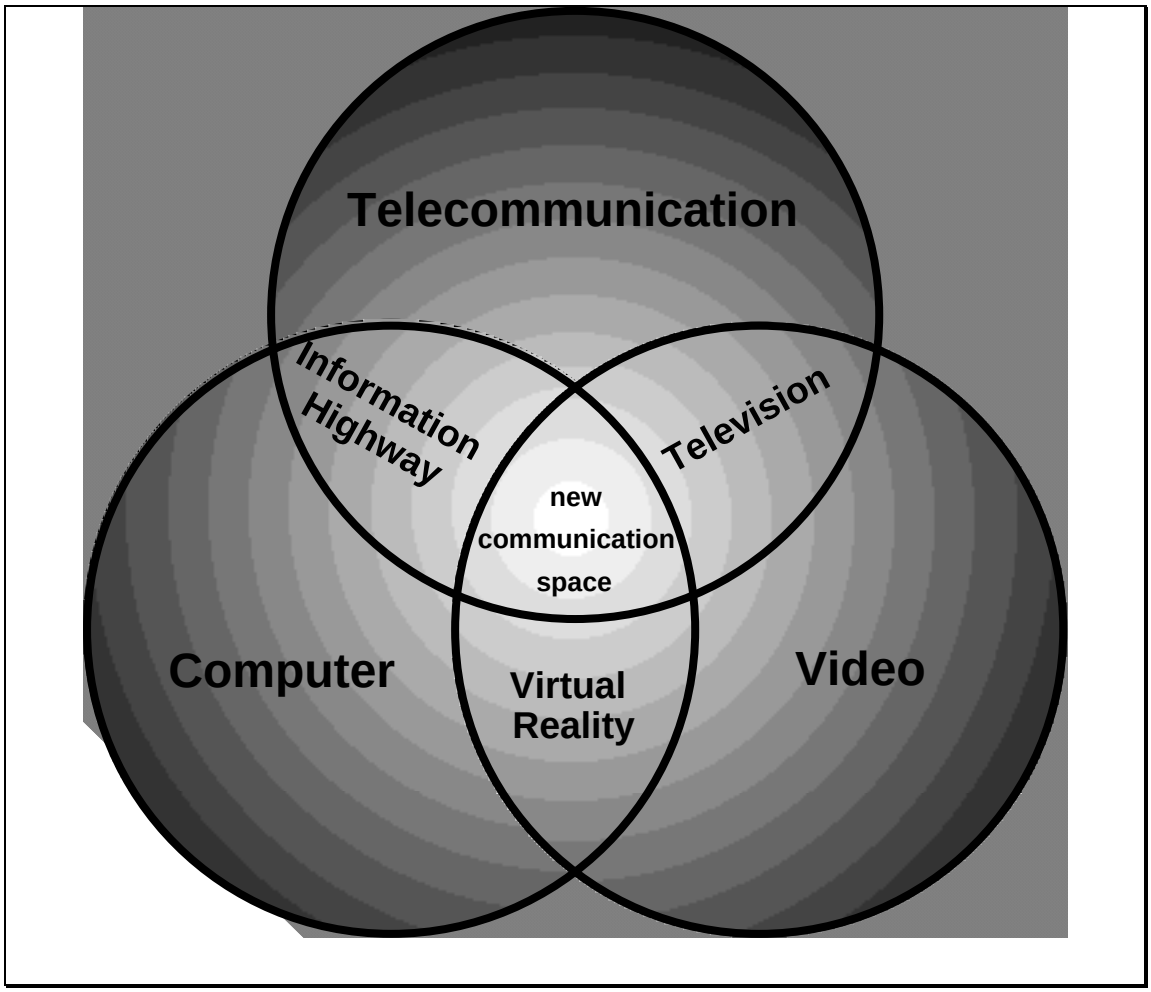
Television is such a powerful medium because it enters daily the personal space of the viewer. It shares that space and creates the impression of intimate contact. People who are familiar on television, become almost members of the family for those who accept the medium with a naive openness. This accounts for the artifical intimacy that mark many television programs today where broadcasters play consciously or unconsciously on the impression of shared space. The shared space of broadcast television is completely illusory because of the lack two-way contact and thus exchange or interactivity. However, the impression remains strong. The same misinterpretation is beginning again today with networking. The current "in" word is "cyber", from cybernetic, meaning interactive. Internet is an very important communications tool but very little about it is interactive. Most activity is deferred and the current level of real interactivity is limited to text exchange with some crude attempts at real-time video. In the various "cyber-cafes" that are openning all over the planet, the use of the network is for passive consumption rather than genuine interactivity, much to the regret of the uninformed public. This, of course will and is changing, but in designating everything that happens on a network as cyber, people, the media and industry, are corrupting the original and central concept of the term, usually with a commercial objective in mind.

Interactivity means one individual talking to another. For industry, and very often industry working in the new technologies, interactivity means man and machine. So-called interactive television, CD-ROM's, video games, only allow interactivity with some pre-designed process, a series of predetermined givens and not with a real human being on the other end. This is false interactivity and will only add to the frustration of a public looking for real exchange. All these types of so-called interactivity are short term and will inevitably add to the problem of communication in our society, the problem of personal expression and of the evolution of the identification of each of its members. Communications technologies in these instances will increase the alienation of individuals and not overcome it.

Much of the discussion today about the information highway, cyberspace, and the information society avoids these issues and is basically more concerned with the evolution of the technology or commercial benefits to be dereived from it. There is some discussion of the educational potential of the info-highway, but the same arguments were used at the beginning of television to justify its acceptance by the public. It is obvious that, world-wide, the actual use of televison for education is ridiculously small even if we allow a generous definition of information programs. Culture is alluded to as something which will benefit from the new communications revolution, but the content of that culture is usually never defined.

With the expansion of telecommunications potential and its eventual merger with the media, we are witnessing the creation of a new space which will inevitably grow in importance and occupy more and more of the personal space of each of the citizens of, first the developed world, and eventually the entire globe. That this space will be important educationally and will contain much of what we call culture, is highly probable. How it will function, what its cultural content will be, how the average person will interact with it, is far from being determined, and should concern us deeply now. The new space of communications will change our way of communicating with each other, the preception of the world around us and how we relate to it and to others

Technically, the new communications space can be imaged as the synthesis between three current and broadly defined technologies, telecommunications, computers, and video. Telecommunications plus video is television, telecommunications and computer technologies give telematics and computers and video are merging into what is now called virtual reality. All three will eventually create a new communications space whoes specificity is yet to be defined.


Telecommunication
Information Highway
Television
new communication space
Computer
Virtual Reality
Video

D. Internet as Prefiguration

As a special case of the new communications space, Internet can be regarded as a prototype. It is a 30 year-old telecommunications network established by the American and European academic community to support scientific exchange. It was developped with help from the US military who had obvious reasons for supporting a scientific network working extensively in the field of nuclear physics. The system itself soon suggested and provided an alternative command structure for the military in the advent of war. This, in itself, was a strong endorsement of the potential organisational capacity of networking.

Internet is technically a telematic network, the interface between computer and communications technologies functioning through a combination of electronic mail and data sourcing. It is an open network, inexpensive, allowing extensive exchange of information, the first important step in a world-wide interactive communications system that will eventually become the most important exchange mechanism ever invented. At this point in time, very little of its activity is directly interactive. This situation is changing rapidly and an expanded Internet with upward to 30 million users world-wide, is becoming an important part of the new communications space, particularly with the addition of video technology providing real-time live imaging. As a precedent-setting first step toward the new communications space, Internet is worth examining more closely.

Once Internet went beyond its scientific objective and became more generally available, it became more widespread and much less structured. The mass of contact possible, the overwhelming amount of information available, and the lack of interactivity has prevented Internet from becoming a viable institutional format at this time. While many attempts have been made to use Internet as an extention of other human activities, the results have generally been a pale shadow of the actual content of those activities. The communications possibilities lack dimension and depth sufficient to allow the network to be a reflection of the full human being, nuanced, profound and real. Network identity and much of its content is superficial, uni-dimensional and often artifical. Today the

network is more of a collection of individuals speaking at the world at large, rather than a participatory process of interactive project-orientated activities. As a mover of information, it is

communication, but also pooled anarchy, which pleases many of its users as an expression of its creative freedom and artistic license. The net does have certain prototypical organisational elements to it, but the absence of social procedures giving it an organisational structure prevents it from being a real social space. Returning from a short trip to find 300 messages, most of them unwanted, is not an institutionally useful phenomenon. This is changing and the necessary protocols, procedures and formats will be found through use as people sort through the potential of the network to find uses that respond to definite and real needs. The network will then begin to assume its future role as an organising principal. For this reason the network must be open to the widest variety of experimentation to premit it to function at its fullest potential replying to the entire spectrum of human activity. Only in this way will genuine needs be identified, real in-depth communication encouraged, beyond the fadish phenomenon of being connected.

The commercial potential of the network has already been recognized and is provoking a massive response throughout the developed world as companies maneuver and merge, hoping to find their place in the huge market beginning to open. Of course providing access to Internet, on-line services, information through databanks, is all important to the future expansion of the network and sufficiently profitable to encourage further development. But this is still more or less in the area of consumption, less passive than television, but still the individual is a user or buyer of services. In this sense the network continues to feed the individual rather than help him fashion his identity and cultural presence.

There is another parallel to television, in that many of the coming future players are studying the network as a carrier of advertizing. The network would become another billboard cluttered highway operating under a mass audience mentality, pushing out anything of real value from the communications space to make room for hucksterism. We will find ourselves on the same road as television where the demands of advertizing will eventual dictate what is seen. The desire for short-term economic return could deform the space forever.

From the International Herald Tribune, July 19, 1995, page 11:

.... Reebok International Ltd. for instance, has a Web site that runs profiles of winners of its annual human-rights awards. There is also a section called Sole Differences that lists volunteer opportunities around the United States.

"What they're doing is not selling shoes but a notion, a lifestyle, a bit of counterculture. You post a passionate note on the Reebok bulletin board about an experience in the mountains. You say you were wearing Reebok sneaks. And maybe you were and maybe you weren't. The customer doesn't care who is sponsoring this."

Many editors disagree, maintaining that consumers want information that is independent and not promotional. These editors say advertiser-sponsored material is the equivalent of "advertorials" in magazines and that the consumers can tell the difference.

Instead of allowing this slide into consumerism, Internet affords us an excellent experimental space to tests ideas permitting this new form of interactivity to find its potential and become a genuine tool in the long-term evolution of European culture. Various forms of cooperation between industry, the arts and sciences and the public can and must be found to permit the maximum amount of technical innovation and cultural invention. This is research and development at its highest level since we are talking about much more than technology, more than commerce, but also about the interaction of the two with culture in its broadest sense. This is the future of our relationship with the knowledge of our times - our way of knowing, with each other as individuals and as members of society - social intercourse, with the future of artistic creativity - Culture with a captial "C", with the models of comportment and the multiple identities which will be part of the future spectrum of European identity, culture with a small "c". Briefly, this is the future of an important part of what will be the institutions of tomorrow's Europe.

<u>Defining the New Communications Space</u>

In order to define this new communications space in the way most amenable to society and its members, it is important to think of it with the following qualifications:

1. Easily accessible:

technically - not limited to specialists, a closed club of initiates, mystifying the general public through technological slight of hand,

financially - not limited only to those who can pay, or to distorted systems whereby the wealthest multinationals pay less than educational or cultural institutions because of the weight of their business,

intellectually - not limited to a priviledged few where information becomes a guarded commodity available only through rank or riches.

2. Genuinely interactive (with no political or economic intermediaries):

between individuals
between individuals and groups
between groups
between individuals and institutions
between institutions

3. Genuinely diverse: avoiding reducing all models of culture and comportment to a few social, cultural and political sterotypes answering other political or economic agendas.

4. Related to contemporary culture and not a substitute for it: allowing new forms to emerge from the interface of contemporary culture and the new space. To be avoided is the deforming process of fitting contemporary or traditional culture to the new space. Artistic creation with the new tools must be encouraged to permit the new space to be defined by that creativity in order to discover the specificity of its language and the depth of its communication potential.

5. Relevant to education and accessible to it: again investigation is necessary to find how to apply the tool to education not just as access to information, but as a series of interactive, international connections permitting the development of culture from the point of view of the individual, defining and deriving his culture from the extensive pool of information and contacts around him. The new space is not an extension of the classroom but a different space with an educational vocation to be discovered and developed through

experimentation. Part of the challenge will be to not confuse entertainment with education and to assure intellectual depth and to avoid creating one more media playground.

6. Experimental: open to new ideas, procedures, processes and uses, determined by their cultural, social or political utility, not just by their commercial return. The key word is again depth.

E. Communication, Culture, & the Individual

Just as man individually has always needed to make sense of any group of sensual givens in order to act and to survive, so by communication he creates other concepts by which he lives with his fellows. Each society constantly recreates itself through communication by continually redefining its collective reality, its culture.

We have already seen communication as shared space and the extension of that shared space through technology. We have also discussed the creation of a new communications space through the interface of video, computer and telecommunications technologies. Culture can be described as the individual possession of each of us, a cultural space inhabited by the person made up of the ensemble of his experience, education, etc. We must now look at the interface between the cultural space of the individual and the communication techniques of the group to define the process of acculturation of the individual and the feedback to the group which delineates cultural evolution. Culture is memory, collective memory, dependent on communication for its creation, extension, evolution and preservation.

A model of a group and its culture can be imagined in drawing lines connecting each member to all others. The lines connecting them are the paths of communication and the conduits of the group's culture, the collective beliefs, customs, behavior... In describing this century's changing view of natural science, the physicist Werner Heisenberg found the metaphore, ".....one has now divided the world not into different groups of objects, but into groups of connections". Those connections represent both the pipelines of the culture as well as its content.

Culture is the means by which each one of us creates his own identification vis-à-vis the group. It is also our means of participation in the group. This is not contradictory, but completely complementary. We draw from the group those definitions offered that correspond to our evolving self, through that process modify them and in turn reflect them back to the group in their altered form. In this fashion we continue the process of individualization,

creating our own identity reflecting in some fashion the values and tastes taken from the group and then change somewhat the group by transmitting our version back. This is the cultural dynamic which exists between the individual and his group.

Many times throughout human history society has confused the pipeline for its content. The mode of communication becomes more important than its content. Customs, institutions, all forms of social mobilization lose their meaning, their governing values, but retain their form. Inevitably, the form of any message will influence perception of it and there is an unavoidable relation between form and content. Problems arise when the form predominants and the content is ignored, or worse, the content is subjucated to the form for reasons having nothing to do with its social objective. We see this today in television which is our most powerful form of social communication whoes objective has been transformed into a way for private individuals to make money.

Cultural models today result from media familiarity, presence on television irrelevant of content. A media star exists uniquely because of his or her frequent appearances and the goal of any theatrical agent is to assure those appearances at any cost. In this sense even criminals become important personalities through this media transformation. Familarity breeds status, breeds marketability. What they do or who they are is considered incidental to media programers. That information does, however, get communicated to the public and, since these are the rewarded people, they are the models of success. A media star, a sports hero for instance, offered up to the adulation of the public, turns criminal, criminality is what is communicated. The media identity is what counts above all, but the values implied by that identity are also in the mix.

We are already in many ways a nascent world culture. Within our own homes, we live with a wide variety of cultural expressions from around the world, in film, television, radio, through records and tape, both audio and video. No other time has had this quantity of riches available to it. Through communication we are enlarging our view of the world by accepting into it more models of reality, changing ever subtly the definition of our own. Artists,

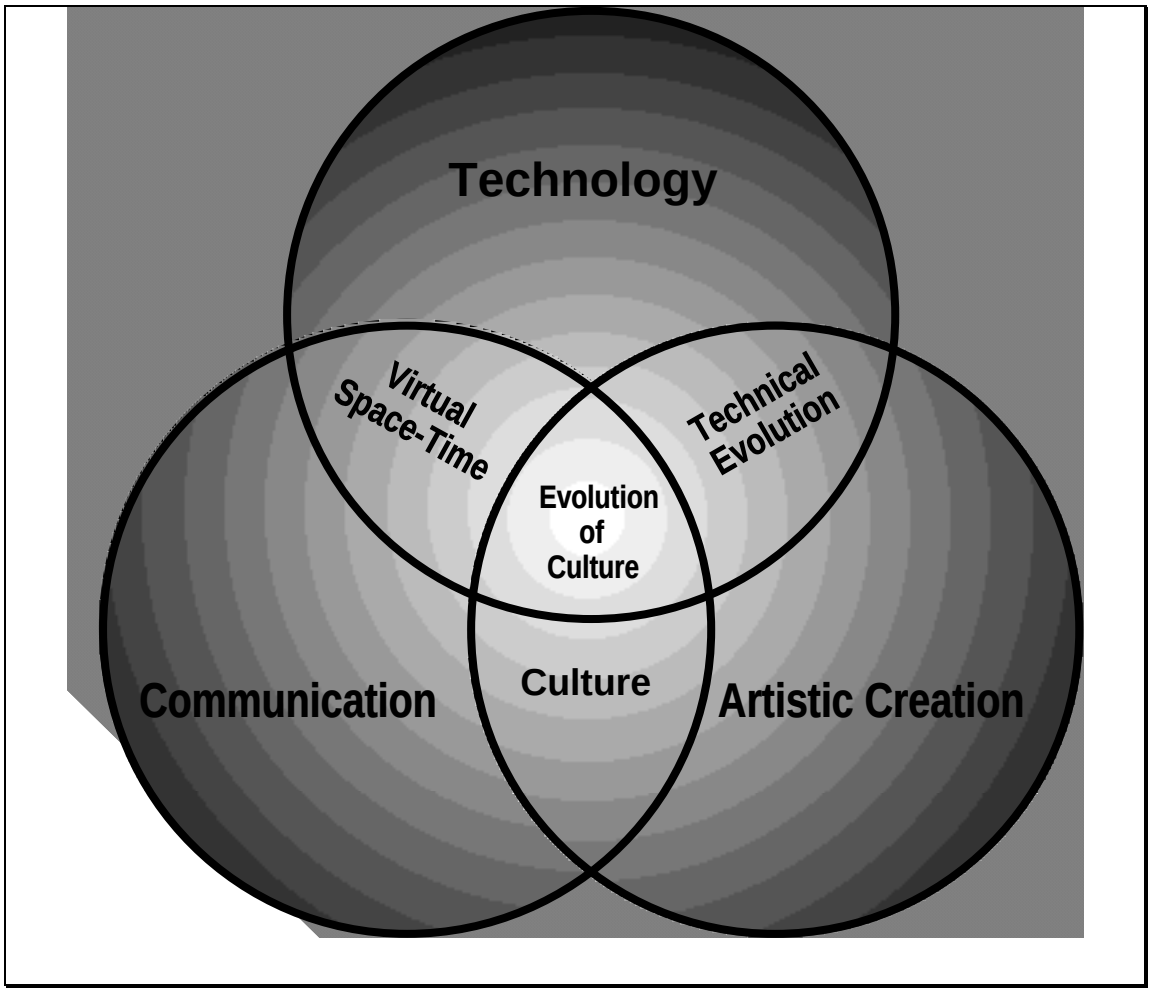
particularly those who work through the media, are conscious of the meaning of those changes more that most of us. They are more and more international, in that they hold a planetary view of humanity, and see cross-cultural exchange through communications technique as the norm. Communication, as we have seen, has

always defined our socio-political paradigm and therefore, our institutions. Technology is extending that interaction to larger and larger groups of people, and we are beginning to witness the creation of institutions on a global scale.

Formerly, the proximity which permitted the ferment that was cultural evolution, was geographically limited, growing from small villages to cities, from regions to nations, and finally to continents as communication systems grew. The shared intellectual space of communication need no longer be limited to shared physical space.

The functioning of the new communications space as a new operational schema involves three interactive areas, the technical evolution of society, the world of creativity, cultural and artistic, and the idea of communication between people.

Between technology and creativity there is the evolution of the tools of society in direct relation to the needs of the users. Between creativity and communication is culture, in the sense of the ensemble of representations that man creates of himself and his relation to his environment at a given moment. The meeting between technology and communications creates a new space-time, virtual and shared as we have seen, in which we will more and more work and live. The evolution of the new tools applied to culture in the new communications space-time leads us to the social integration of the new technologies and language and symbolism of the coming contemporary culture.



Communications systems in themselves have no language. They have technical parameters which influence the form of any language invented, but a language itself develops solely through real use by human beings expressing real needs. As we build the new communications space and begin to interact regularly with all corners of the planet, serious attention must be paid to the form and content of communication, since it will develop into the global language that will become our common possession. Content will dictate form and form will influence the perception of content, in another expanding spiral of increasing sophistication. If the content is not intellectually substantial, the form will never rise above a shadow of its potential. The language will remain simplistic and incapable of intelligently communicating the subtlty of human thought. This is where society must be vigilant. This is where the slippage can take place, where civilization and culture begin to be ground down and disappear. Education, in its instituional sense, is not enough to overcome the drift into barbarism that this could represent. This is the responsibility of society as a whole and all

sectors of society must take up their role in responding to that responsibility.

Television, as a result of exclusively economic objectives, has reduced what has been the most advanced of communications media to near emptiness, with little intellectual content, no contact with any real and therefore complex human situations, and no apparent personal commitment. Pride of craftsmanship in the creation of something of real value has disappeared. All that is left is a bland amalgam of homogenized images with no personality or statement, formula programs with low production values, repeating the same cliches to audiences more and more numbed by their mindlessness. Programs have become what they are in order to attract larger audiences to make more money selling advertising space. Their revenue-making potential is the determining value displacing all others. The primary goal of making television programs of whatever quality has been replaced by the secondary goal of making money. Advertising is becoming the sole arbiter of what gets seen today, and this, it must be recognized, is the down side of liberalization. The pendulum swing from public service usually is in the direction of brash commericalism. This is not only true of television. We see the same forces at work in all areas of public exposure. The immediate financial return for producers or sponsors is the only standard by which things are judged, and financial return is in direct ratio to advertising potential. No one can seriously deny the need for financial support, especially in the production of major events, exhibits or television series. But once the objective of production has shifted, from the creation of something deemed important, to the making of money, even indirectly through advertising, there is little hope that the final product will express anything of real value.

The new international communications space will include a form of television, interactive television combined with the network as we have described it. All of today's means of communications are coming together into a system which is rapidly finding its own logic and creating an already identifiable cultural, social and political envelope. This new world of instant communications has grown up in a haphazard fashion responding to the needs of governments, the military, to short-term consumer demands, and the multinational

commercial and industrial sector. The electronic and communications industries have created this new communication landscape in a linear and evolutionary fashion, by responding to perceived needs and market demands. This was appropriate in providing new and better services for everyone as well as the means to pay for it. We have now reached the stage where the existance of all these various services, systems, technologies, when pulled together in a logical pattern, have created a new means of cultural expression available on a world-wide basis. It is time for all of us to realize what has been created and take responsibility for it, and to develop it positively for better human understanding and creativity.

The public already senses that need because an individual needs to feel a part of the communication process in order to feel that he belongs to the society it represents. As we have pointed out, his identity is in the process. This is seen in the need of the average person to have some kind of media existance. I've been on television, therefore I exist. The reality of television replaces all other realities, not because it is escapism, but because the predominant form of communication in a society is where the reality of that society is to be found. Bereaved parents arrive at the ceremony for the dead from the Oklahoma bombing dressed as though going to a New Year's Eve party. They will be seen on the tele and are about to acquire a social identity. All the pathetic races people pursue for image recognition with no thought to who is their person - adolescents jumping up and down in front of the television reporter's camera. Andy Warhol's five minutes of fame for everybody that television affords, with broadcasters more and more proposing program formats cynically modeled on that desire. The new interactive space will make that even easier and more a daily occurence.

The public is interested in any exhibit or experiment dealing with interactivity, and any event in Europe that proposes to explain interactivity is an instant success. This is clearly a sign of the frustration of being left out of the communications loop and the hope that they will be let back in. People have been saturated with small screen and now want to talk back. Children have done so by turning to video games which gives them the mistaken impression of being in control. Television stations are playing with ideas of

interativity, knowing that it is the natural and necessary next step. The new communications space is potentially interactive, which why people respond so positively to any initiative taken in that direction.

We cannot impose a value system on the media, old or new. We can propose media content more closely aligned to the knowledge we wish to have transmitted. We can work in directions that define the new space with the kind of openness and interactivity proposed earlier. We can invent systems and methods leading to the creation of a richer communications space to see what art can bring to these new means of communication as they evolve. We can find new forms of collaboration between various social partners in order to achieve those goals. We must assure that the cultural space of tomorrow will be a step forward for humanity and not the reverse.

F. Technique & Technology

It is necessary to make the difference between technique - the tools - and technology and to apply that difference to the two levels of culture that we have proposed. This is a difference that works better in French than in English, but for argument's sake we will eventually redefine the two in a way useful to the development of our ideas. In placing ourselves in the anthropological perspective of culture, we can define technique as that which permits man to transform his relation with nature. Technique is the ensemble of tools that permits man to reverse the domination of nature over him. By the use of tools man places himself in the position of master. In the relation to the object nature, man becomes the subject. Technical history is the history, never completely realised, of man's slowly becoming autonomous. We feel that technique is not, in itself, synonomous with alienation. It is, on the contrary, intimately associated with the emancipation and thus the evolution of mankind.

Briefly stated:

1. technique is an essential dimension to culture in the anthropological sense.

2. technique, at least in its first objective, gives man a certain autonomy vis-à-vis his environment.

Indeed, the emancipation aspect of the ensemble of tools we call technique is seen in the opposition between nature and culture, opposition in the sense of the natural environment dominating man's environment. The more that the human environment is structured, ruled and organised technically, the more the autonomy dereived from technique becomes paradoxical. Technique which justifies itself in freeing mankind, functions in an environment itself organised technically.

We have reached this stituation whereby man is dominated by his tools and have grown into it during the course of the 20th century.

Can technique free us from technique, can our tools be used to free us from the domination of our tool? To so ask the question puts us in the middle of the paradox. It is important to distinguish between different techniques and to understand them geneologically. As an example, we can consider that the technique of electricity freed us from the limitations of mechanical techniques. That the internal combusion engine freed us from the limitations of the steam engine, etc. In other words, one technical stage frees us from the restraints of the preceding stages.

We can say that we have arrived at a technical level where we can consider that our technical environment constitutes for human nature a "second nature".

We propose to differenciate between these two terms by refusing all forms of technical determinism. What becomes what we call technique and what becomes of the relation between human beings and technique is not necessarily written in the nature of technique - again, our tools. If computer technology today proposes the technological systems it has developed, it is not because they are inscribed in its logic. The actual form of computers and the organisation of software programs emerged from the interaction of a certain technical comprehension mixed with a form of learning, appropriating and using those tool, which is something more of a social order. Whether these interactions are translated into

commerical terms or not, the evolution of computer technology is nothing less than the result of a "permanent and collective negotiation" between the social and the technique. This is not deterministic, but rather the productive exchange, feedback, interaction between the tools and human beings, the first modifies the comportment of the second and the second orients the development of the first. It is this logic in the technical/social interaction that we call technology.

In order to understand the complexity of a technology we should talk about its relation to the economy, to industry, government, to other catagories of social organisation and, of course, with culture.

To speak of the technologies of communication and information, in our opinion, is forcibly to speak of the social dimension of technique. If things are the way they are, it is not because a certain technological destiny is unfolding. The process is irregular, non-linear and complex which develops through reciprocal demands between, on the one hand, certain technical forms and, on the other, social formulations.

This double process, the implication of technical logic in the social sphere and the social logic in the technical sphere is at the heart of the technological dynamic and its relation to culture.

It is important then to never discuss the problem of culture and its relation to the tools of communication and information without thinking at the same time of how the tools have rooted themselves in and modified culture with a small "c" - culture in the anthropological sense.

If we take the statement, "technique, tools, free man from his technical second nature", by introducing our notion of technology we can resolve the paradox. The statement then becomes, "the technology frees man from his technical second nature". In other words, a particular approach to the relation between technique and humans, can become a way of liberating human beings from the domination of their tools. The problem rests with that approach, that is, in what way technique become a social question or project. The term project is particularly important because it is the result of a

decision to take action and therefore the willingness to bend reality. The idea of a project implies a position of responsibility. At the institutional level that concerns us here, that responsibility suggests a political will. It is no longer sufficient to follow a supposed technical destiny, but rather to take responsibility, to make the choices between the various consequences of the several possible developments of the techniques of communication and information.

We should emphasize that today, the idea of a technical or technological determinism is closely allied to another determinism, that of a economic kind. Institutional decisions, the political responsibility, have a tendency to appear as the result of this double determinism, economic and technical, presented as a way of thinking and acting pragmatically. In the name of this so-called pragmatism, any arguments falling outside the grand design of this economic-technical determinism is disqualified as "idealistic".

In response, we should look at two attitudes not necessarily complementary. The first is the recognition of market forces as a principal of reality. The second is the promotion of economic determinism by the wave of liberalism sweeping us today. According to the first, the functioning of the economy is one of the forms of logic operating within the social dynamic. According to the second, the economy is the dominant logic in society which determines the future of all other social dimensions.

Far from separating the logic of the economy from our argumentation on the relation between culture and technology, we think it is necessary to think about the dynamic relationship between technology, culture and the economy.

G. Cultural Richness & Technology

At whatever level of meaning, the idea of culture refers us to two different processes, integration and differentiation, uniting and separating.

1. Culture has an integrative function. It assures the conditions of a life in common within the framework of a collective unity. The

growth of urban violence is a sign of crisis in the integrative function of urban culture. We speak of social disintegration.

2. Culture has a differentiation function. It assures the difference between one group of humans and another. The phenomenon of fundamentism shows that when culture can no longer assume the function of peaceful differentiation, violence will take on the job. The violence of many of the fundamentalists is a sign of cultural dysfunctioning, whoes causes are complex, but not without a relationship to the development of communications technology. Parabolic antennas are anathema in Iran.

These two aspects are indissociable, the integrative function operates through the process of distinguishing. The differentiation function operates by integrating. We have already discussed the relation between the individual and his culture. Communications technologies have an ambiguous relation with these two functions. Given that their development is part of a process of globalisation, the function of differentiation could appear to be contradicted by the actual operation of a network. The integration function could be countered by the introduction of the difference between individuals who are on line and those, who for financial or educational reasons, do not have access to the network or the tools of communications.

According to this pessimistic scenario, we find both the integrating and differentiating functions in tact but following a form of segregation either finanacial or educational. Exactly those aspects we alluded to in our presentation of the qualifications of an ideal communications space.

From the development of this process will emerge logically a new culture. But is it necessarily desireable? In reality, this simplistic and pessimistic scenario allows us to put the problem of the relation between culture and communciations technologies on the level of institutional responsibility. Whatever is done, the development of these techniques will give birth to a new cultural form. The problem is not to reintroduce culture into the technical question, it is already there by definition. The problem is to know how that culture might avoid being the consequence of some blind technical

destiny but would instead be the result of human will and decisions.

The question of the relation, again ambiguous between the new communications technologies and culture in its anthropological sense is particularly pertinent to Europe and its cultural diversity.

The cultural diversities are tied to:

1. the difference of level, defined in terms of scale, for example Spanish culture is included in European culture, but also is part of Western culture and, by the same title, part of the culture of the Americas.
2. the overlap such as Mediterranean culture which groups the countries of the Mediterranean basin, European or not and a part of France.

This confusion is evident geographically as well as historically and normally we talk about the constrast between Eastern and Western cutural as well as ancient and modern. This double cultural determination, geographical and historical, spatial and temporal, allows us to better grasp the complexity and depth of the cultural richness of Europe.

The development of the new technologies of communication follow a logic that tends to favor new catagories of time and space. Using a computer could form a behavioral set that an American, a European or a Japanese could have in common. Another example, the users world-wide who connect on Internet have in common a number of practices, beliefs and values that permit them to communicate and that constitute the beginning of a limited form of social organisation. That set of givens can be called technological culture. To this comportment are linked forms of representation relevant to the shared paradigm. Thus we see the development of a cultural form cutting across the ensemble of geographically or historically based cultures. This is no problem if it means the addition of another layer to the cultural base which we feel is an essential foundation to the European space. But we fear that this new layer, this new technological culture, will have a tendancy to replace all other forms of culture.

Technology is driven today by a rapid evolution, which, as we have mentioned above, can increase the effect of cultural differentiation between those who have access and those who don't. This exclusion affects individuals, something which will engender social segregation, and communities, a risk which will lead to cultural exclusion. There are those who are excluded (to one degree or another) from the technology and those who are included in this culture. Today, to be excluded from the the new communciations space is to be excluded from modernity.

But after formulating that idea we should not, in turn, succome to the temptation of the same kind of technological determinism that we have condemned. We don't think we have to. To say that the communications technologies are intrinsically linked to modernity is not to predict their function or their role. It is simply to state that such a link exists and that it is necessary. The element which seems important is the conjunction between the temporal question and the economic question. If a group of individuals is excluded from the technological culture constituting modernity, that means there are whole sectors of entire cultures that risk being excluded from that modernity. A doubly dangerous phenomenon, because on one side cultural groups that will no longer be represented will in fact disappear, and on the other because of the impoverishment of the rest by that disappearance.

We should keep in mind that this impoverishment is the sign of cultural dysfunction which we have already referred to with the examples of urban violence and fundamentalists.

The risk is therefore simple to identify, if we slip into a process of cultural impoverishment, we create the conditions for a violent implosion of our societies.

Let us look in some detail at the relation between the new communications space and the idea of cultural richness.

<u>That cultural richness is related to two aspects:</u>

1. <u>cultural diveristy</u>, in Europe the quantitative aspect

2. cultural density produced by layers of history, the qualitative aspect

As we have seen, the technologies of communication are, on these two aspects, particularly ambivalent. We can identify that ambivalence in two ways:

1. By favoring exchanges the functioning of communication could produce an effect of uniformity through two mechanisms:

a. The hegemony of one culture over all others. In this light, diversity would disappear to the advantage of one dominant culture. It goes without saying, for reasons we will examin later, it is linked to an economic hegemony.

b. The bastardisation resulting from a cultural mix. In this second case, diversity would be reduced to a cultural ensemble much like tepid water being a mixture of hot and cold.

2. The same intensification of communication could, on the other hand, favor knowledge of and the recognition of cultural differences by bringing them into the dialogue. This possibiliy opens the way for the emerging of, not one, but several intermediary cultural forms resulting from mixing.

It is true that the actual situation is not oriented toward one or the other of these possibilities, but rather toward a complex situation revealing irregularly one or the other. We could use the example of music. The growth of exchange in styles tied to the development of commercial exchanges has favored the expansion of rock music. From this point of view, we have seen since the '50's a mechanism of cultural hegemony, and at the same time, the emergence, from the encounter with culturally different rock musicians, a fusion of styles without precedent.

We must therefore ask the question about which side we wish to favor in this ambivalence between uniformity and diversification.

We will propose a formula for this subject, but it is certain that the qualitative and quantitative aspects are intermixed. In order to avoid the elimination of that cultural diversity through favoring a particular cultural hegemony, the qualitiative dimension of this new culture must be maintained. Cultural depth can not be maintained artificially. There is even a contradiction between the idea of cultural quality and the notion of conserving it. Culture only preserves its quality, it density, by living.

In keeping that culture alive artificially its density dims and decays. Why ? Because only a culture that is dense is alive. A culture is dense from the moment that it operates in life in a real sense, or is active in that it is productive. Productive of what ? First and foremost, productive for the lives of those who belong to that culture. In other terms, a culture is living when it can produce patterns of living that are adapted to the evolution of its environment.

Now, as we have discussed, all technologies, particularly those which concern us here, the technologies of communication and information, intervene in the human environment, not to conform to it necessarily, but rather to modify the very conditions of existance of different cultures, and in a sometimes radical way.

Thus logically, a living culture today is a culture that invents forms (of living, of comportment, of expression....) from the new technologies of communication and information. It is therefore not a question of reducing the problem of technology versus culture to cultural diffusion by the new medias arising from those tools. It means rather to understand culture as the means to integrate those technologies to it own dynamic.

There is therefore a double wager in the relation between technology and culture; on one hand the cultural integration of the technology and on the other, the technological integration of culture.

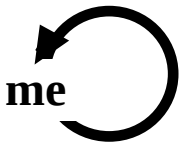
H. Technology, Culture and the Democratic Ethic

Traditional culture functions according to the logic of, "this is how you should act".

Today the logic of the media has become: "this is how you act".

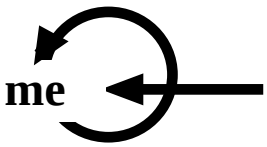
The formulation of cultural directives as reflected in the media has taken the form of certifiying the norm.

Schematically, media culture takes the form of a mirror:



This mechanism is hegemonic (socially speaking, it represents a crisis in the directives coming from culture and the need to redefine them).

The other sense of culture, "this is how you must act", introduces a new contribution in terms of other knowledge between the indivual and himself.



In the example of the mirror, cognition is replaced by recognition. There is, in this method of cultural operation, a risk of the industrial society developing in a demagogic direction. The new technologies could have either a positive or negative effect in this demagogic slippage.

The phenomenon that we describe, a potential political disease of communication technologies, is not a repeat of the classic forms of demagoguery. It will be responsible for the development of a totally new form. Central to the problem is not the passivity of the receiver vis-a-vis the images and information communicated. He is, on the contrary an active receiver. It is the nature of this activity that the demagoguery arrives. It exists in the mechanism in which the transmitter and the receiver form a couple producing the effect

of auto-satisfaction. The first proposes something which the properties of its content and form are designed to promote:

1. the pleasure of reception (example, humour, derision, irony, scandal...),
2. immediate comprehension.

The receiver does not content himself with passively consumming that which is proposed. He accomplishes something through the active recognition of what is proposed and takes pleasure from that recognition. The key to the process is immediacy raised to law of communication. Immediacy is the negation of time for reflection and critical distance.

Thus appears a paradox, the more communication between people is a product of the media, the more it must function instantaneously. In other words, the more technique is introduced between people and what they communicate, the more the technique of communication functions as the direct effect, the effect of contact. We could here refer to Marshall McLuhan and his warning that "the media is the message".

In order to better understand the cultural dynamic of any social system we should look at culture from the point of view of the individual. Culture is the house in which each of us lives. It is made up of the various influences each of us has had throughout our lives and is a continueously changing thing. It has rooms representing education, the origins of the family and the influence of it's various members, the impact of relations with the exterior, and the models which society provides, particularly those presented as worthy for one reason or another. It is built from the content of all our various forms of communication, the totality of information we take from our visual environment. In the absence of the arts and the sciences, our first cultural definition, that house will still exist simply because we exist. Some form of house will be built from whatever sources are available in society. This is why media and media content are so important today. For much of the population in the world, the media provide the major source of the second definition of culture, culture with a small "c".

What is the blueprint the media provide for the house-builders ? What are the models of behavior being proposed ? Are we satisfied with the suggested values for what will undoubtedly be the future European identities ?

Imagine the cultural "home" of a youngster from the underclass, someone who has grown up with TV as his baby-sitter. His cultural structure is made up almost entirely of the small screen - a lot of action films, some corner will hold the cultural dust of his family background, not much space for school, a big room of gang mentality gathered from the streets, etc. It is a structure and a culture, providing "customary beliefs, social forms, and material traits of a group" but what in the way of values. How does it compare and interact with the cultural homes of the rest of society ?

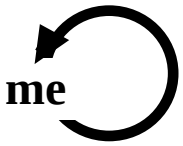
> "Viewers (in the US) see 2,605 violent scenes in a single 18-hour day of random television viewing, the Center for Media and Public Affairs says, a 41 percent increase over the number it counted in 1992."
>
> International Herald Tribune, July 30, 1995

Our social group, in the name of entertainment, seems to have divorced the second definition from the first and allowed a situation to develop where the customary beliefs, social forms, and material traits have nothing to do with knowledge and learning, Culture with a capital "C". This certainly has had a role in the cultural dysfunction we described earlier.

Seen from this point of view, it is clear that the new technologies can not in themselves, simply because they represent something new, brake this mechanism. Interactivity, for instance, will not necesssarily stop all forms of demagoguery. It can, in fact, reenforce the mirror effect by perfecting the mechcanism creating more of it. If, in fact, as we said earlier, the political risk is not due to the passivity of the receiver or spectator, but rather to the development of certain catagories of behavior, then interactivity could open new horizons to the pathologies attacking democracy.

Interactivity can very well be the motor of a superior form of auto-satisfaction by creating the conditions for connections more active, more living and even closer between transmitter and receiver. The formula of auto-satisfaction is so strong that it lends itself fully to economic exploitation. Television today is a good example of that conjunction. It is not our intention to accuse once again the system of program ratings which is nothing more than a technique for measuring and observing the number of spectators watching different television programs. What we can question are the conclusions drawn from that information. What it means is that what we call the dictatorship of ratings, has as its objective to priviledge auto-satisfaction as the major mode of our relation to television.

Catering to that auto-satisfaction has consequences in terms of the development of the possibilities offered by the new technologies of communication and information. Auto-satisfaction produces an effect of restricting the communication potential of the media by imposing a single rule which we have demonstrated by the following figure:



This figure illustrates at the same time the form of reception and the process of media uniformisation.

In accepting this process we can see three risks:

1. an ethical risk; the ancoring of the communications technologies in a process of democratic degradation.

2. a cultural risk; that of the impoverishment of the richness and cultural diversity that is particularly alarming in Europe with one of its ressources being the extraordinary potential of its multiple cultures.

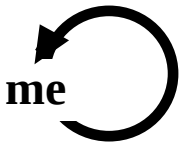
3. an economic risk; the restriction of communication potential corresponding to a restriction of the possibilities of commercial exploitation.

If the first two risks are not sufficient, we can insist on the third. The developmental possibilities of the new technologies are linked to the development of two dimensions:

1. quantitative extension to the public

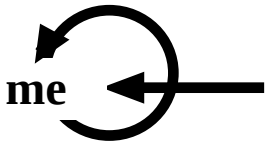
2. diversification of practices

The schema:

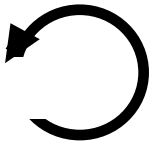


favors only the first dimension, that of expanding the market.

The diversification can only come from a process which includes different contributions represented in the figure:



The second figure is not opposed to the first. It is a more complete version of it. The self-referentiality indicated by the sign

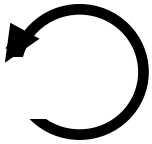


is, without doubt, a rule of operation tied to electronic mass media. We can not deny, that with the new technologies, there will be an acceleration in the possibilities of reception. That would be to deny one of the central characteristics of these technologies, immediacy. We think, on the contrary, that the modification of the conditions of reception are not dangerous in themselves, but become so if they eliminate all other media possibilities.

The contribution, the introduction of differences, indicated by the symbol

← is the potential of the new technologies.

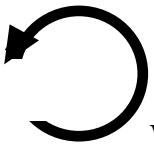
We must then consider

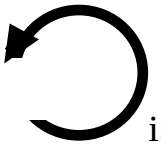


as one of the regulations of reception of the communications technologies. We understand regulation as in "rules of the game". This is not to deny the regulation but rather to act within its own framework. To deny it would be utopic and out of touch with reality.

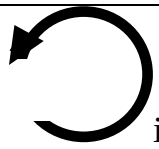
and

as possibilities opened by the new technologies which naturally have not yet been realised.

 without ← represents a danger, economically, ethically and culturally.

 is undeniable.

← is an act of political and commercial responsibility

 is a practical constraint

← is a political and commerical strategy

The persepctive that this logic offers is a way around the impasse of opposing culture, ethics and economy. Here, it seems to us, the question of artistic creation finds its place. That question of art in relation to the new technologies becomes specific in relation to the question of culture.

It would be useful to distinguish between art and culture to better understand their interface.

I. The Dynamic, Art/Culture, Artistic Creation & Applied Arts

If, as we have already said, the idea of culture in the widest sense, means an ensemble of rules of life and knowledge, its nature is then necessarily directive. Culture in the anthropological sense is the ensemble of constraints which produce the possibility of living together. Artistic creation is on the other hand transgressive. It does not deny the constitutive rules of a culture. It simply by-passes them and opens up new perspectives that call for new rules.

Take a pictorial example, Vincent Van Gogh. His work which we can say without risk was innovative technically, introduced a new way of seeing, of leading people to see, and, therefore, a way of understanding subjectivity. Van Gogh developed this form of artistic invention from a cultural apprenticeship copying paintings from museums. Today it is his paintings that are in museums, which was not the case, far from it, during his life. What does that mean? Today the painting of Van Gogh, at least in part, constitutes a cultural given, part of our knowledge which, like all knowledge, helps construct the reality in which we live. The pictures of Van Gogh are part of our patrimony and as such, they have become, among others, a way in which we perceive the world, a rule by which we construct the world. Artistic creation today, painting in one manner or an other, must necessarily break with the rules that the pictures of Van Gogh, Matisse or Picasso proposed as rules for the construction of the world.

We can now distinguish artistic creation, which since the Renaissance has been inventing the space of subjectivity in the

evolving framework of culture (religious, scientific, social...), from what we group under the term applied arts, where the creator situates himself in the universe which artistic creation has invented. Subjectivity is the motor of the transgression of artistic creation, it is the socialising objective of the applied arts.

The codifying logic of the applied arts fits in nicely with industrial logic. By acting on its aesthetic look and its ergonomics, the design of an industrial product favors its commercialisation which in turn reenforces the norms contained therein, both cognitive and comportmental.

That is not the case of the transgressional logic of certain catagories of art which can, under certain conditions, fall in with the speculative dimension of a financial logic (cf Picasso, Salvador Dali whoes name's anagram spelled Avida Dollar, and since the 60's other American and European painters). But it should be noted that that relation depends less on the rapport between artistic creation and a certain financial logic than on dabbling in the art market as a form of speculative investment.

The situation is certainly more complex with forms like cinema where the producers are dependent on a logic, at once, industrial, commercial and financial.

We would not want to schematise too much the opposition between commercial film with no artistic value and artistic cinema with no commercial vocation. From the point of view of either a transgressive logic or innovative approach or the conformist logic of the market palace, we can propose that cinema occupies a position as ambiguous as painting during the renaissance. Through the mise-en-scene of the governing social norm, there is still in cinema a radically new place for the subjectivity of the artist and the representation of a new relation between the individual and the world.

The mixing of the conforming and the innovative, this artistic heterogeneity, is one of the keys to the complexity of the relation between the new technologies of communication and culture. We have to distinguish between culture, artistic creation and the

applied arts. Artistic creation becomes the content of culture but its logic is fundamentally different. Artistic culture is normalising, artistic creation is transgressive.

Applied art is continuity, artistic creation is rupture. Necessarily simplist, these distinctions are used only to help us better understand the complex problem which is the relation between culture and the new technologies.

J. Art & Innovation

Art is an attempt to understand something of the human condition from the subjective world-view of the artist by providing through it new perceptions. The collection of those world-views is commonly called Culture.

The artist reflects the evolution of the psychological atmosphere of his era, often anticipating the changes coming in society. This has been even more so ever since we allowed art to be the personal expression of the artist speaking from his inner self. This psychological climate is a very real fact of society and one observable by others as well as the artist, but of particular concern to the artist because it is his domaine. He needs to understand reality and his personal and subjective relation to it. Art from another era, often has no appeal because we no longer share the same psychological conditions, unless the artist succeeded in striking a universal cord which allowed his work to transcend his time. As nuclear physicist Werner Heisenberg expressed it, "The spirit of a time is probably a fact as objective as any fact in natural science, and this spirit brings out certain features of the world which are even independent of time and are in this sense eternal. The artist tries by his work to make these features understandable..... The two processes, that of science and that of art, are not very different. Both science and art form in the course of the centuries a human language by which we can speak about the more remote parts of reality."

The role of the artist, as the scientist, is thus that of a researcher. At least it has become so in the 20th century. The artist is a kind of

social researcher applying his creative intuition to the condition of man in order to discover, as another scientific great of our century Niels Bohr described it, "the relations between the manifold aspects of our experience". He judges, debates, evaluates, critiques, comments on the human condition -- the analysis of man in his environment from the interior of the creator.

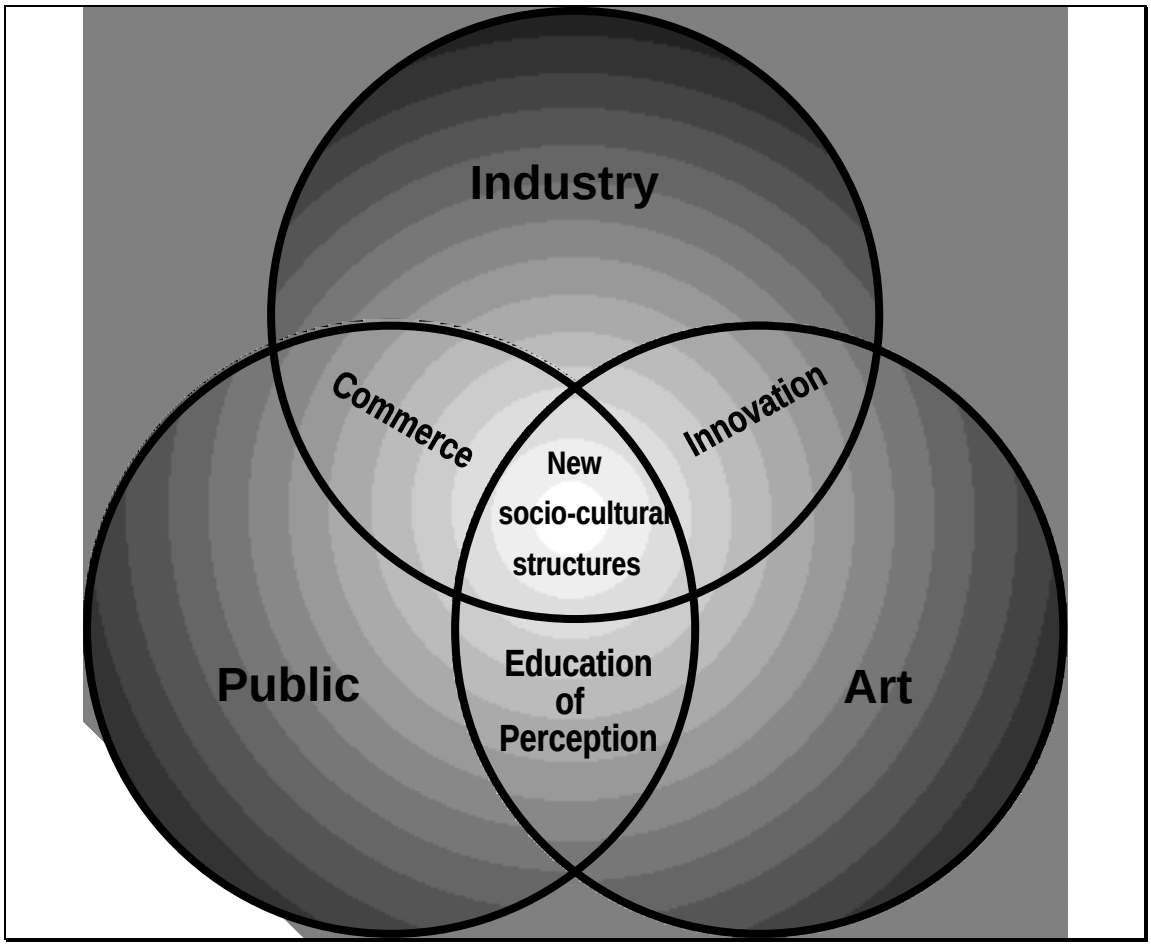
As artists began to use the new technologies, a new kind of art form emerged, so-called technological art, video art or computer art. The names are ugly and misleading, substituting the tool for the topic. The artist simply took up the tools as they became available, and by doing so explored the technologies in ways that were very often far from the intent of the original product. The artist saw in many of the new systems the possibilities of creating that were only dreamt of a short time before. Video effects developed first by artists unknown to the general public make new imagery an everyday television occurance. The manipulation of time and space, process, duration, interactivity, have all become important underlying elements in the art of our century, art using the new technologies. They have become an integral part of art just has they had already become the very heart of 20th century science. Marshall McLuhan described it, "The serious artist is the only person able to encounter technology with impunity, just because he is an expert aware of the changes in sense perception." Artists understood the implications of the new systems because they saw in them their multi-layered application to the human environment, and not a single-purpose tool and in this way they have also helped create the new communications space which concerns us.

Technology creates tools for a specific purpose responding to a specific demand. The artist finds other uses for those same tools by making them do things beyond what they were constructed to do, and in doing so, advances the human application of the technology. He socializes machines and technology by discovering an esthetic use for them, sometimes creating new demands for machines to which engineers must respond. This fact has been demonstrated over and over again in the field of electronics. Artists first entered there in a spirit of play, the safest and surest way of overcoming our natural intimidation to a complex technology. The second step has been the mastery of the technology through experimentation and

production. Finally we find the artist actually inventing, or collaborating on the invention of new systems in order to respond to his creative needs. Each of those stages has its concrete results which clearly identify the different levels of evolution of this form of creativity. In the first phase both the artist and the public are surprised by the results, both amazed by the nearly accidental discoveries of the artist, images and forms never before seen. The second phase demands more sophistication on the part of artist and spectator where the technology is mastered and consciously used by the artist to achieve what he has set out to create. Here he generally begins to understand the limitations of the technology and starts his move to stage three, developing extensions of the technology to satisfy his creative demands. At this point, the artist and his work should become meaningful to industry, since, through the innovation of the artist, the real integration of the technological system into the human environment has begun. It is no longer a passive tool serving predetermined human needs, but an active system evolving as man evolves. It is an integral part of human culture.

This interaction between the creativity of the artist, the evolution of a technological process and the reaction of the public represents a new form of relationship between these entities, providing new experimental potential for exploring the future of these new systems as we attempt to define them.

The interface between the vocations of each sector can lead to the invention of new socially useful structures and processes.



K. Art as Experience of the World

The movement from the art of an individual to the culture of a group is a subtle one, and not easily discernible. Art is the work of one human being, isolated from society though in some fashion reflecting it, a highly personal creation from a singular world view. Culture is collective, at best, the ensemble of world views merged into one. How in fact does the world view of the artist become culture ? The artist's work must first reflect something of that "spirit of the time" referred to by Heisenberg. The spectator responds to something he can identify with, in which he can find himself. When enough of those single observers respond in a similar fashion a critical mass is reached, through communication, and the work subsumed in the reality of the collective. This is consistent with the definition of reality of physicist John Wheeler that reality is joint product of those who communicate. Art is communication and therefore an important part of that totality.

A second part of the dynamic in the movement from art to culture is the role of the artist as educator of perception, McLuhan's definition. This is particularly true in regards to new systems, technologies, functions, definitions that will eventually have an impact on our lives that may not be immediately apparent. In this light, the subject of a work of art is less important the implications behind it. In the painting of Massacio, what was important in the long run was not the content of the work, but the fact that men had acquired an individual identity and inhabited a new space with a different set of relations. This was the beginning of the space of subjectivity which we referred to earlier. These aspects were a radical departure from the representations and therefore the spirit of the Middle Ages. The art of the 20th century represents an equally radical break with the past and artists' work a source of profound cultural change. The new definitions of the human being and his relation to others and his environment are often implicit in the technological processes used. They are the means by which the new ideas are introduced to society and its culture transformed.

From the beginning of the artistic revolution of our times, artists have been anticipating the new communications space we are trying to define. Cezanne, in his still lifes, broke with the perspective of the Renaissance with its imposed single point of view by proposing several different points of views within a single image through multiple angles of view.

Marcel Duchamp proposed this same idea in 1913 in a simple manner with his work, "Trois stoppages-étalon". The work consisted of dropping a one-meter thread from a height of one meter and tracing the line formed to create a new "standard meter". By creating three of them, he suggested that there were several points of view, several ways of measuring something and that each of us carries within his own standard meter. The subjectivity of perception furnishes each individual with his own form of measurement and the communication of these different points of view defines reality in the sense that Wheeler has proposed.

Heraclitus believed that the world was at once one and many and that the tension thereby created was the tension inherent in life itself. The one and the many can be considered as our own

individual world confronted by the exterior world, the sum of all other individual worlds.

Marcel Duchamp seemed to be anticipating or moving parallel with the scientific paradigm changes in almost everything he did. He dealt intimately with art as process more directly than many other artists. Art is process, first in the act of creation and then in the act of appreciation. The spectator, observer, forms part of the indespensable chain that is art. Duchamp regarded a work of art as having two poles, the artist and the spectator, each equally important. Both participate in the definition of a work. This is very close to our definition of the interface between and individual and his culture.

Duchamp also anticipated the shattering effects of the Theory of Relativity. At the same time Einstein was dealing with space-time magnitudes, using a moving train to demonstrate changing bodies of reference, Duchamp was painting "Jeune Homme Triste dans un Train", the movement of a person within a moving train. Somehow, simultaneously, they were, each in his own fashion, dealing with a profound change in attitude toward the environment which was to completely overturn the traditional world-view and transform our understanding of human interaction. The scientist invents new spaces and the artist makes them habitable.

The work of certain artists vis-a-vis the media has continued the process. Nam June Paik, considered the founder of so-called video art in the '60's, through his work brought us to understand and accept certain elements of television in a radical new way. First of all, through the distortion of the image he brought us to see the plasticity of the electronic image and to understand that it was a processed image and not some kind of neutral transmission of reality. It was reality reworked and it could be reworked even further. The same is true of the early work in television image distortion by the Swedish artist Ture Sjölander. Paik's early work, such as "Global Groove", presaged international satellite broadcasting and even zapping on a global scale. Wolf Vostell desanctified the television set by deconstructing it. The work of these and other artists began a long process, far from finished, of reevaluating a communications medium holding an important place

in our lives. Television, because it has generally denied the forms of artistic creativity that could help it find its cultural specificity, is still toying with the idea of rebroadcasting other cultural forms rather than inventing new ones that might more fully express its cultural potential. This is the continuing lesson of video art.

The network artists Kit Galloway and Sherrie Rabinowitz brought our attention to the new space early in their work, when in 1977, for instance, they brought dancers from two different cities into the same virtual space to perform together. Allan Kaprow, the father of happenings, played with communication systems in the '60's exploring the the potential of interactivity with the tool of television. The Time Machine of Piotr Kowalski demonstrates the plasticity of time a new dimension to be manipulated much in the spirit of Einstein. Moholy-Nagy, as early as 1922, was experimenting with the telephone as a tool for image creation.

The fact that the video artists, Bill Viola and Gary Hill, were both consecrated at this year's Venice Biennale, Viola as the artist for the American pavilion, Hill with first prize for sculpture, demonstrates clearly that time-based art has been fully accepted in the art world and has become a part of our Culture.

In general, the work of all these artists has led us to undertand space-time and its potential for interactivity. They have taken us into the new space with which we are now confronted and have helped us assimilate it.

The new technologies of the emerging visual environment presented a particular challenge to the artist; to adapt these tools to the process of artistic expression, to define their content, to develop the visual language which will be their principal means of expression. These evolving technologies are offering us a new communications space that will be virtual, international and interactive. It is the role of the artist to help define that space, to make it livable and a part of contemporary culture. This is equally true of television which has only marginally been tested by the artistic process. While video art exists, with its 30-year history, its recognized practitioners and its presence in a growing number of art schools and museums, its influence is minimal given the

enormity of the medium and its impact on society today. The same could happen with the new technologies and the form of investigation inherent in art would be as absent as it has been with television. The traditional role of art has been to renew the visual environment, to redefine it for each new age, and through doing so, provide society with models of action. What McLuhan and many others have meant by the education of perception by the artist. Simply put, art is a form of questioning and the interface between public and art is culture.

A good part of the mobilization necessary to change the situation has to be in the field of art education where supposedly the people who will create the culture of the future are trained. The continent's art schools should be the most natural laboratory for experimentation in the new media, where at least part of Europe's new visual environment can be researched. Not "media schools" who's objective is to train people for the profession with little questioning of content and it's social role, where training is technical and the acceptance of the quality and content of the industry total. There seems to be a governmental tendency in Europe to push art schools in that direction as a way of increasing their cost effectiveness and redefine their social role.

At the same time, the art schools themselves too often have continued to function in a reactionary manner ignoring those areas of social activity providing the cultural models that people accept. Television, in its early stages, was consciously ignored or even rejected by the art world as something for the masses, unworthy of art. What was happening in society was given other names like "popular" culture, the media, the entertainment industry, words that, in fact, have become walls barring the questioning of art, reserving those spaces for commerce. It is essential to recognize the new world being created around us and recuperate and redirect the tools of communication to make it a better expression of the best of our culture. Schools should not just be pushed into the lap of industry with the short-term objective of making them more commercially viable and less of a state burden. Schools need to enter into a new relationship with industry to create the laboratories needed to explore the new communications space. If Europe is to ever improve its media environment, encouraging the art schools

and industry to collaborate in addressing the problem could be part of a very big step in that direction. It is the work of a generation, but we can not put it off any longer.

The New Space of Communication, the Interface with Culture and Artistic Creativity

Conclusion

Current Initiatives in Europe

Over the last few years, a number of initiatives have been taken in the Arts and the new media technologies. These initiatives aim primarily at studying and experimenting with particular techniques, producing and presenting multimedia works of art, promoting innovation, as well as carrying out an analysis of the cultural, social and ethical considerations provoked by the technological revolution.

Current initiatives in Europe are grouped according to their principal vocations and institutional objectives: on the one hand, art schools and research centres, where the teaching, technological experimentation and artistic expression is to be found, and on the other, the exhibitions, festivals and symposia which provide the backdrop for artists, creators and authors to present their work and to stimulate discussion with a public that is becoming more and more interested. The communicative element that provides the bridge between these organisations, both public and private, is the artists' networks. These represent a permanent source of advanced research and an international platform for interactive virtual exchanges between the organisations and independent researchers and artists. In a number of other networks the general public is also being urged to take part in virtual communities, electronic stages for experimentation and forums for provoking lively discussion on every subject within the political and cultural cosmos.

These organisations have resisted technology for the sake of technology in their multiple activities by actively integrating reflection and discussion on the evolution of the new technologies as well as an awareness of the cultural and social forces involved. In fact, they now represent the only places where the advent of the information society is being productively analysed. It has to be said that in most cases, it is within these centres of creative research, free speech and artistic experimentation that the concepts that provide the basis of a democratic future are being invented, alongside those techniques on which the economic progress of our societies is founded.

Taking into account the vast number and diversity of organisations and initiatives that are burgeoning in the fields of art and the new technologies, it would be impossible, within these few pages, to draw up even an approximate portrait of the current situation or to describe all the existing initiatives. What this paper sets out to do is to give a brief outline of some of the organisations and initiatives that could serve as models, notwithstanding the need for an in-depth study of Europe to be carried out that would include examples of the work being realised in the Baltic states and the countries of eastern and central Europe.

A. Teaching / Training / Art Schools

Although over the last few years more and more art schools have been proposing courses in media studies, the curriculum has restricted itself to the application of the new audiovisual media. This ignores the fact that the advent of the new technology requires future artists and sector professionals to be given a proper grounding in the political and social responsibilities involved.

Without wishing to draw attention away from the efforts being made by other schools within the same field, there are two outstanding examples that give an excellent overview of the impact of the new technologies upon cultural and social life.

<u>The Academy of Media Arts in Cologne</u>

The Academy of Media Arts Cologne, which began its study programme in 1990, is the only art academy in the Federal Republic if Germany embracing all areas of audio-visual media. It brings together several different areas of media which interact in practice, but are generally kept separate at other institutions of higher education. Collaboration with other academies, cultural institutions, broadcasting corporations and the media industry, both at home and abroad, contributes to this process of integration.

At this academiy, the areas of art, technology and science work in cooperation. Different forms of thought are brought together: theory meets practical design and technical training interacts with artistic imagination. Great value is placed on giving students an awareness of the social and political responsibility which they, as future artists, designers, directors and authors assume in their work with the media.

At present, the Academy of Media Arts Cologne offers a four-year undergraduate programme as well as two-year post-graduate and occupational programmes in audio-visual media . In addition it is currently striving to establish an international doctoral programme.

The Laboratoire de Langage Electronique

The Laboratoire de Langage Electronique is an association of French art schools, grouped because of the advanced work they have been doing in the crossover between art and the new creative technologocial fields and for their research and teaching programmes in the Arts with its logical extension into the cultural and social aspects.

By using the Association to pool their resources, the art schools of Bourges, Cergy-Pontoise, Lyon, Nancy, Nantes and Strasbourg together with the Conservatoire National des Arts et Métiers (CNAM) offer students in both Art and Engineering the chance to work in common in a training and research programme that leads to the development of collaboration in the two disciplines. The teaching of the philosophy of electronic creation in a post-graduate programme (DEA) leads to the understanding of the use of

communication networks and the definition of the specificity of multimedia realisations.

B. Research Centres

The last few years have seen a mushrooming of research centres and multimedia laboratories all over Europe. Two distinct kinds are apparent, one using a technical approach to master new technologies so as to give a marketing advantage to their audiovisual products (films, advertising) and the other kind which concentrates on artistic and creative work, based upon a critical analysis of the European media scene. We would like to cite two examples of this latter approach.

The Center for Art and Media Technology (ZKM) in Karlsruhe

The Center for Art and Media Technology in Karlsruhe (Germany) was created as a public foundation in 1989 and is financed in equal parts by the state of Baden-Würrtemberg and the City of Karlsruhe. Bringing together arts and new forms of media, in theory as well as in practice, the ZKM aims at fostering the crative possibilities of a connection between traditional forms of art and new media technologies, to achive results that anticipate the future.

Being composed of five instituts, the Institute for Visual Media, the Institute for Music and Acoustics, the Mediathek, the Museum for Contemporary Art and the Media Museum, the ZKM brings together artists, researchers and technicians to develop new applications in media art. Working in direct cooperation with the Department of Information of the University of Karlsruhe, its closest partner is the State School for Design Karlsruhe, expands the range of ZKM's functions through education and training as well as through a philosophical approach to the field of new technologies and their impact on culture and social life. To achieve its goals, the ZKM works in close cooperation with a multitude of other art institutes and research centers in Germany and Europe as well as in the other continents.

The Institute for Visual Media, one of the five instituts within the ZKM, is creating a research and production environment for artists where they can work in the rapidly evolving image technologies. Its aims are to encourage practical research and development of appropriate media techniques, and to promote the applications of these techniques in an artistic and social context. These activities are placed within a theoretical framework that is based on a critical appraisal of the state of contemporary media culture and the desire to make highly qualitative contributions to the future evolution of that culture.

The ZKM Media Museum, neither a technical center, nor an art gallery in the narrow sense of the word, is not a showcase of technical innovations. As in the other institutions, artistic experimentation and poetic conscience will constitute its centre of interest, a spirit of analysis - necessarily critical - will be a dominating interest of the Museum. By combining the didactic with the imaginative, sustaining the contradiciton between critique and fascination, the media museum has the function of stimulating the awareness of the dramatic process by which new media radically alter our view of the world.

If the technological myth has conferred mythological status on new media realms such as information highways, virtual reality or immersive simulations, the central taks of the Media Museum will be to tackle the deconstruction of this myth. That is why the Media Museum and its Multimedia Laboratory are developing installations based on personal experimentation, which will draw visitors into their own dialog with past, present and future ideas of media and cultural history.

Before opening its doors to the greater public in 1997, the Center for Art and Media Technologie will have shown in four large scale exhibitions, "Multimediale", artistic works and didactic installations, the results of its research work on the transformation of our view of the world brought about by the new media.

The Museo Internacional de Electrografia (MIDE) in Cuenca

Since its inauguration in 1990, the MIDE of the University of Castilla-La-Mancha in Cuence (Spain) has fulfilled its objective of becoming an active center specialising in the new electronic technologies of the image. Fully aware that all the creative fields of contemporary art have opted for the appropriation of these technologies, artists are constantly trying to gain access to them under the best possible conditions. One aspect of vital importance for creative aspirations of multimedia artists is the possibility of electronically generating and manipulating images as a way of transmitting the new ideas of contemporary thinking.

In the five years that MIDE has been functioning, it has tried to give concrete answers to this situation, and has become a center for standardisation and circulation, production and research into the new image technologies. Its rich collection of more than 2 000 pieces reflects the work of artists from Spain and most other countries. Specialized in the application of new technologies, its documentation center allows detailed and methodic study of all types on information related to this artistic field. Through a modern laboratory for study, consultation and research, le MIDE can today propose and promote the development of the scientific and artistic community on both a national and international level.

In its multimedia workshop, the research group carries out research projects related to artistic applications, and in seminaries and courses these technologies are approached with an artistic purpose. Thanks to an important program of grants, the MIDE can make available to student-artists the entire range of technical equipment at its disposal.

C. Exhibitions / Festivals / Symposia

Apart from those major commercially-based exhibitions such as Imagina (Monte-Carlo) and MILIA (Cannes) which provide a showcase for the latest equipment, software and multimedia products and where access is only granted to sector professionals, it is the art exhibitions, scientific symposia and festivals that provide the background for the liveliest presentations and debates on the new technologies and their impact on cultural and social life.

The Ars Electronica in Linz

The longest-running, the most famous and, up to now, the most active of these festivals is certainly Ars Electronica, in Linz, Austria, which has been attracting large numbers of people from all over the world ever since it started in 1980.

The festival is devoted to art, technology and society and has a different central theme each year. It has covered the whole range of subjects concerned with the relationship between the arts, technology and society. In 1995 it featured a highly topical theme: "Mythos Information - Welcome to the Wired World".

The festival features a number of exhibitions and demonstrations showing the latest advances in electronic networks and telepresence, alongside a multitude of selected works that reflect a very high level of artistic thought and analysis. Central to the festival is the series of symposia with debates involving some of the major names in cyberspace and the information highway (e.g. John Perry Barlow, Amy S. Bruckman, Timothy Druckrey, Friedrich Kittler, Geert Lovink, Pierre Levy, Paul Virilio and Peter Weibel). The subjects discussed, ranging from the information myth, democracy within the network, the question of the authenticity of material transmitted through the network, virtual sexuality, to the transformation of our vision of the world, bear eloquent witness to an increased awareness of the impact of the new technologies on our social and cultural life. Most of the contributions to this major event do not reflect the superficial enthusiasm of the media industries, nor the opportunist proposals of certain political figures, but instead represented an in-depth analysis, irrevocably linked to a large number of critical, even inopportune observations.

The Budapest "Metaforum"

This type of festival would have been unthinkable in the old Soviet Union bloc of a few years back. The speed at which debate has flowered and the firm hold it has taken, following initiatives launched in a number of these countries, raises hopes that they will not find themselves drowned under the weight of foreign

audiovisual products that in no way reflect the cultural identity of the receiving countries.

The Metaforum II international symposium, "No Borders - Budapest Networking Conference", will be taking place against the prestigious backdrop of the Autumn Art Festival of Budapest, to be held from 6 - 8 October of this year. Organised by the Hungarian Foundation, Media Research, and the Intermedia Department of the Hungarian Academy of Art, the symposium also enjoys the backing of several European cultural organisations and embassies and also of the Soros Center for Contemporary Art (SCCA), which is particularly active in the world of contemporary art in 15 or so central and eastern European countries.

"New Media in Czech Visual Arts" in Prague

The symposium "The Environment as an Artefact" is being held in the first week of December 1995, in Prague, as part of the "New Media in Czech Visual Arts" exhibition. It takes the same analytical approach as the Budapest model and is jointly organised by the Soros Centre Prague and the Goethe Institute Prague. Once again, the choice of subjects is determined not by notions of non-acceptance or over-enthusiasm, but rather by a level-headed sense of investigation into the responsibility for the future of the social and cultural life of our societies.

"Télépolis" in Luxembourg and "Kulturby '96" in Copenhagen

Recently this feeling has begun expressing itself in many large-scale public events held under the cultural programmes of certain countires. This year the city of Luxembourg, as European Cultural Capital - 1995, will organise the exposition and colloquium "Télépolis" which will underline the subject of the responsiblity of the cultural actors as well as industry for the impact of the new technologies on the cultural and social life of Europe. Next year, the European Cultural Capital - 1996, Copenhagen, in the form of "Kulturby '96", will address this subject in a major part of its 500 cultural projects covering exhibits and international conferences of the highest level.

D. Artists' Networks / Virtual Communities

The Artists' Networks and Virtual Communities make up the communicative elements that bridge all the initiatives, whether public or private. They provide a powerful research tool and interactive virtual exchange sites on an international level, between the organisations, artists and independent researchers. They have so far managed to avoid any sort of commercialisation and have scrupulously kept to the idea of creative access for all.

It is in fact within these artistic, libertarian networks that the concept of a global society, with its doors open to a free democratic exchange of all information, has been invented and is being tested on a large scale. However, the coming of the information superhighway, with its overtly commercial outlook, poses a serious threat to the continuing independence of these initiatives.

Art 3000 in France

Structured and animated as an interdisciplinary network of more than 2000 members, musique, image and theater professionals, Art 3000, created in 1988, is one of the oldest artists networks using the new technologies for creation. With a large technical base and working with an extensive group of structural partners, the creative workshop of Art 3000 helps in the realisation of artistic projects and creative research in the new technologies such as multimedia and virtual reality. Through several different manifestations this group has shown the work of more than 500 artists.

Artists On Line

Artists On Line was set up in 1990 and constitutes an international network of interactive exchange using ISDN connections between art schools, research centres and independent artists. The lively nature of the network communication and the promising results mean that this artists' network now has 19 permanent correspondents in 16 cities over 7 countries: France, Germany, The United Kingdom, Spain, Denmark, the United States and Japan. The number of cities and countries connected to the network will be

continually increasing, reflecting one of the main objectives of its founder, Don Foresta.

The Network uses Numeris, the high-volume telephone network, and the Internet to promote, through artistic and cultural action, the development and use of interactive communication, expression and creation. The Network takes full advantage of technology such as visiophoning, teleworking or screen-sharing, and the exchange of image, sound and text files and all other types of multimedia digital data.

The extremely rapid progress being made in new technologies calls out for considerable thought to be devoted to the subject, something which industry and commerce do not recognise as a priority. Network artists, however, incorporate these systems within the framework of a philosophy of artistic creation and communication. The actual tool used - computer, video or telecommunications - is not an end in itself for the artist-researcher. What is shown by presence of the artist in the technical evolution is the importance of the "end-product" and this goes hand in hand with the awareness of its artistic, social, cultural and ethical connotations.

In the field of new technologies, the cooperation between the artist and industry includes economic factors, particularly for the art schools: the student, as a future professional, needs to be trained in the new technologies and in the vast choice of new work processes. But alongside this technological evolution and the changing codes and routines, there is also a development in terms of expression. What this will lead to is a language that will be better suited to the electronic image. Network artists encourage a joint approach between technicians and artists and other end-users, without of course forgetting the socio-economic reality this approach has adhered to. Student artists who learn creativity with the network in their art schools will be able to prepare for the jobs and the creative processes that the future holds in store, in other words, the sharing of a single interface for creation, expression and work. On this network, cultural and artistic identity depend solely on the activity of the artist. The multi-cultural encounter between art and technology that this implies and the pooling of artistic and teaching

resources are two of the major objectives the network aims to achieve.

The "Electronic Cafe - International"

The "Electronic Cafe - International" was founded by the same team as Artists On Line, and represents the network's communication interface with the general public. The project aims at bringing the public to take part in artistic events and to communicate with artists and other people from the different cities and countries on the network. The site functions according to its acronym, CAFE (Communication Access For Everybody), based on the principle of access to communication for everyone. The artists act as the link between technology and the public, helping the participants to interact and by staging series of artistic events over the various sites of the Electronic Cafe, with its media melting-pot: video, fine arts, information technology, music, dance, literature and performance.

The broad aim of the Electronic Cafe is to open up new means of creative cooperation between artists and the general public. The use of interactive processes to highlight creative activity in a shared virtual site has enabled those involved to set up what amounts to a public test laboratory where in-depth research can be carried out on the processes themselves.

The Digital City Foundation in Amsterdam

Since last year (1994), "De Digitale Stad" has created a new space of communication providing access to public and administrative information from government and community organisations. It aims to broadcast information and to be a center for enquiries and complaints, for discussions and opinions, a "test bed", where the first shoots of an electronic community begin to grow. The total number of visitors averages more than 4 000 per day; around 120 000 per month (December 1994). The Digital City was launched as a joint initiative by "De Bali" and the "xs4all-Foundation". Being supported financially by the Amsterdam City Council, the Ministery for Home Affairs and the Ministery for Economic Affairs, the Digital City Foundation aims to end its dependancy on subsidies within two years.

The major objectives of this electronic community network are its determination to play an important role in the development of the public domain in a democratic electronic society, to provide for the transfer of expertise to citizens and project partners and to fulfill the function of product development in small- and medium-sized companies, serving to strengthen, thereby, the regional economic structure. Its most interesting services are to provide acess for all citizens to public and adminstrative information and to facilitate and renew democratic processes by creating new channels of communication with the government. Thus it can be used as a platform for inter-active participation in the social, political and cultural life of the community.

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The crucial importance of cultural as opposed to commercial initiatives for the conservation of the cultural identity and diversity of societies in Europe has to be stressed, as well as their vital role as key elements in the development of a living culture that counterbalances the commercialisation that is looming over the European cultural scene. These initiatives need substantial support from within a European cultural policy framework, at the same time, respect for their autonomy, avoiding any kind of directive measures.

The New Space of Communication, the Interface with Culture and Artistic Creativity

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