



■ The integration of knowledge: arts, sciences and technologies

■ I. Integrating the Arts and Sciences

*Some remarks about the topic
"Integration of the Arts
and Sciences" itself.*

A. Assuming that we can find a happy definition of the differences and that it is desirable to *integrate* them, firstly we must ask at what level or scale we plan to carry out the integration. At the scale of society as a whole they are already integrated in as much as they coexist within the country's borders. At most universities, they are already *united, integrated, on single campus*; they may even be housed within a single building (here is the building: in big letters *The School of Arts and Sciences*). Now we can ask for more integration or less at these larger scales; we can design curricula that require students to take both science and arts courses (physics and mathematics, say, as well as literature and painting), as is common in high schools and below. But a finer level of integration escapes this sort of —shall I say— bureaucratic thinking. The task of integrating the arts and sciences really becomes a problem worth solving at the level of the classroom, moreover not at the level of the whole course (45 lectures, some about the arts and some about the sciences) but in a single lecture, better, in a single passage, a single thought. After all, the place we want art and science integrated ultimately is in the single human mind, in the understanding every educated person. Having multiple talents, these people would see the world both in its kaleidoscopic richness and in its



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oneness. They would approach the world neither scientifically nor artistically, for both categories, will, for them, have disappeared into a sublime kind of knowing and doing that was both and neither. Laboratories would be as beautiful as art museums, scientific reports would be works of theater, poets would clarify the cosmos, painters would discover new ways to represent viruses...but actually there would nor be any of these roles: no *chemists*, no *writers*, just highly intelligent and educated people, connoisseurs, encyclopedists, going about their business.

This is totally unrealistic, of course. The arts and the sciences, artists and scientists, will always be distinct from each other, if not at odds. Now I should like to go over some of the reasons why, perhaps, this is the case. Let us open Pandora's Box.

B. I have already hinted at the first reason. People are different in their talents, in their types of

intelligence. Howard Gardner in his book *Frames of Mind*, proposes that there are six biologically different modes of mental operation, each with its own kind of intelligence:

(1) Linguistic Intelligence: the ability to manipulate and understand the nuances of language, being the skill of poets, writers, rhetoricians, salesmen, librettists, teachers, philosophers, journalists, historians, etc. etc.

(2) Musical Intelligence, pretty self explanatory, musicians, composers, music critics (who must also have linguistic intelligence, of course).

(3) Logical-Mathematical Intelligence, that of all mathematicians and most but not all scientists, of course; stock brokers, economists, croupiers, chess players, judges and some lawyers....

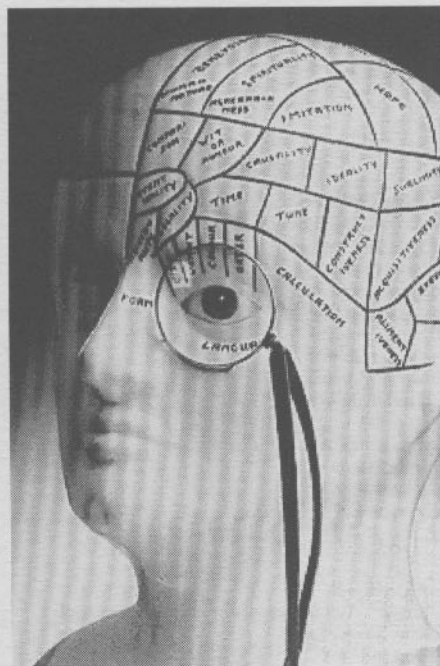
(4) Spatial Intelligence, being the skill to visualize shapes and patterns and their movement and transformation in time.... architects, sculptors, dentists, surgeons, mechanics, navigators, movie makers, painters...

(5) Bodily-kinesthetic Intelligence, the sensitivity and memory and control of bodily movement, as in dancers, athletes and sportsmen, craftsmen, soldiers, boxers and wrestlers, actors, musicians and technicians again.

and finally, probably the most rewarded of all intelligences.

(6) Personal-Social Intelligence, being the ability to understand and work with ones own and other people's motivations and feelings, to remember names and situations and stories; novelists, politicians, lawyers,

Here is a second reason the sciences and the arts might remain distinct. Each operates out of a different attitude towards the world. The sciences are engaged in discovery, the artist in expression. This may seem like a philosophically fragile distinction; after all, many artists use the metaphors of discovery to describe what they are doing, what they are after (exploration, search, solution, inquiry and so on), and a few scientists, especially those of mystical bent, want to say that they create the universe as they express transitory understandings of it. But I think the distinction holds up pretty



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well, unoriginal as it is. Scientists are apt to believe that there is a world out there largely indifferent to what we think, or want, indifferent even to our existence. From atoms of galaxies, the scientist discovers, and uncovers, sheds light and explores and analyzes... disturbing the world as little as possible in the process. The artist on the other hand creates, synthesizes, combines, transforms, gives voice to, gives life to... in short expresses and embodies new forms of life, a little god. Note, the artist need not be interested only in self expression, but also in cultural expression, expression of the times, or expression of the eternal human condition.

And now there is third and related distinction between the arts and sciences: subject matter. The sciences are interested in Nature, the arts in Man. Immediately one finds objections: what about psychology and sociology the two prime human sciences? And what about the many artists throughout history who are inspired by nature?

I would claim that the scientist—even the sociologist—is interested in the nature of Man, Man as nature, where the artist—even one who paints landscapes—is interested in the human experience of landscapes, from the inside as it were, in subjectivity. Indeed, as you know, real scientists (e.g. physicists, chemists, biologists, etc.) are skeptical that the category of *science* can even apply to Man in principle, so great is the complexity and wiliness of the human subject, so impossible is it to carry out conclusive experiments with the human subject, let alone whole societies. Artists are similarly skeptical. They are more than happy to pose Man as an infinitely complex, endlessly interesting and unfathomable creature, and scoff at those who, like economists and psychiatrists, would claim to have a scientific way to understand his feelings or thoughts or actions. No, this is the province of poets, composers, painters, shamans, novelists, filmmakers... who by their uncanny insight are able to prove that we are each not alone in our subjectivity, how other minds are both like ours and not like ours, but if not like ours, different in ways we can re-create only through the artistic experience. Some artists are also fond of showing us that nature is meaningless without us, inexplicable, implacable. With abstraction, they wish to show us the face of emptiness.

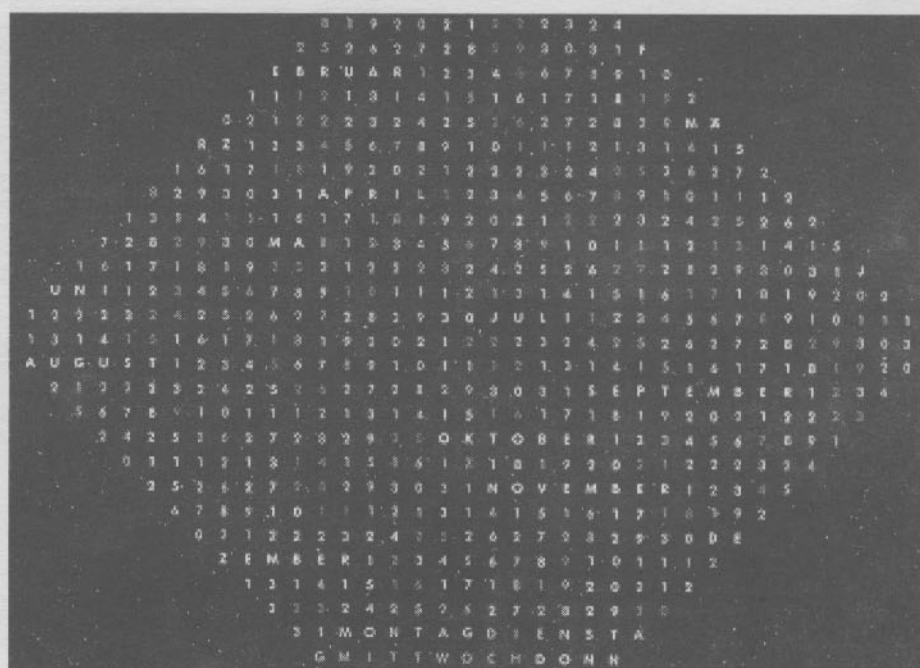
C. I have tried to convey three, rather conventional ways in which the sciences and the arts seem to be constitutionally different. The first was because it seems that we are constitutionally different with regard to types of intelligence; second was because the sciences are happier with the metaphor of discovery and the arts are happier with the metaphor of expression (this although many



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artists like to borrow the prestigious language of science); and the third was a difference in subject matter, divided fairly cleanly between Nature and Man.

Now, let us get back to the question of integration. How to do it? One way —of which I disapprove— is to deconstruct all the distinctions I have just made, à la Jacques Derrida. We would show how they are logically indefensible, collapse into each other, depend on each other, are the false creations of language, or represent certain power relations in society, etc. etc. etc. In the end we will be left speechless, in a miasma of uncertainty, unable to act except arbitrarily and then with painful self doubt. I propose a second way, perhaps because I am an architect with a slightly above average spatial intelligence. I propose that we mix things up combinatorially. What do I mean? We have six varieties of inborn intelligence, two modes of operation, and two subject matters:



the rest, the other 44-odd combinations? Can we study Picasso mathematically? Can we dance in tune with Nature herself, and not us ourselves? Can we create experimental communities that

exist, and certainly the arts and sciences exist, because the society in which they are embedded can produce the surplus —of money, and time— required to sustain them, and second because the society's values are such as to see the value of art and science: their beauty, their long term usefulness. Discovery and expression for their own sake are luxuries, or rather only become necessities when the social-economic system has satisfied people's deeper more urgent needs: for survival, security, justice, mutual respect and approval. Discovery and expression, art and science, the highest development of any of our intelligences, are the fruits of the confidence that life will go on, in health and stability, for every citizen...and this is not the task of either scientist or artist to achieve. It is the task of our doctors and lawyers, our businessmen and politicians, our managers and workers, our designers and engineers and builders and inspectors... the list is endless. Without their integrity, good training, and good will, we shall

INBORN INTELLIGENCE	MODES OF OPERATION	SUBJECT MATTERS
Linguistic Musical Logical-mathematical Spatial Bodily-kinesthetic Personal-Social	Discovery Expression	Nature Man

We can now play a game.... There are 48 combinations.

We can see the quintessential scientist uses only one of these, namely the Logical-Mathematical Discovery of Nature, and the quintessential artist only a few others, the Musical or Linguistic Expression of the Human Experience. What of

discover the nature of Man? If I were in the position of leading a large academic institution with a mind to integrating the arts and the sciences, this is the level and scale at which I would begin the experiment —which is one, I believe, of discovery.

In conclusion, I should like to point out the obvious. Universities



need no *integration of the arts and sciences*. We shall need only entertainment, to distract half of us from our pain, and the other half of us from our shame.

■ II. Living With the New Technologies

Karl Popper, one of this century's greatest philosophers of science, in 1972 sketched a most interesting framework for my topic this morning: *Living with the New Technologies*. The world as a whole, Popper wrote, consists of three, interconnected worlds.

World I, he identified with the objective world of material, natural things and their physical properties—with their energy and weight and motion and rest.

World II he identified with the subjective world of consciousness—with intentions, calculations, feelings,

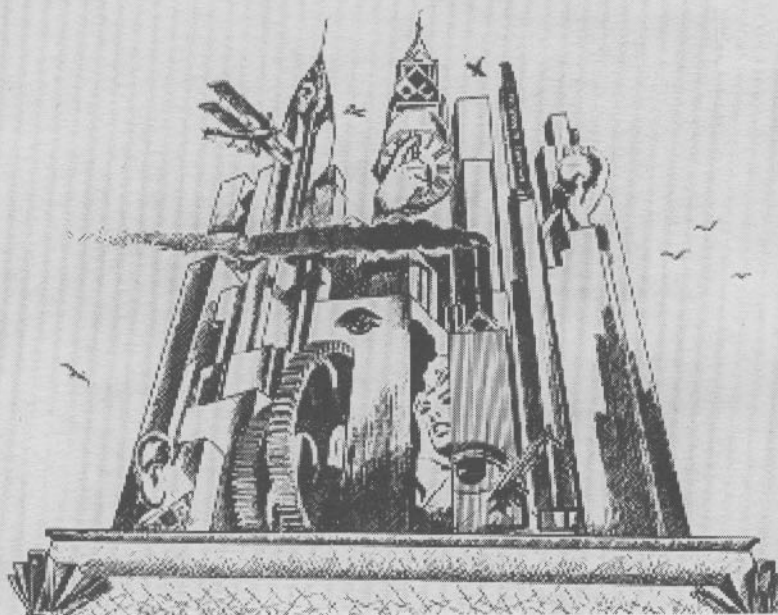
thoughts, dreams, memories, and so on, in individual minds.

World III, he said, is the world of objective, real, and public structures which are the not-necessarily-intentional products of the minds of living creatures, interacting with each other and with the natural world, *World I*. Ant hills, birds nests, beavers dams, and similar, highly complicated structures built by animals are forerunners. For humans, many *World III* structures are abstract, that is, they are purely informational: forms of social organization, or patterns of communication. These abstract structures have always equalled, and often surpassed, the physical structures in their complexity, beauty, and importance to life. Language, mathematics, law, religion, philosophy, arts, the sciences, and institutions of all kinds, these are all edifices of a sort in *World III*, like the libraries we build, physically, to store their operating instructions. Man's developing belief in the objective existence of *World III* entities and

spaces meant that he could examine them, evaluate, criticize, extend, explore, and indeed make discoveries in them, in public, and in ways that could be expected to bear on the lives of all. *World III* could evolve just as natural things do. Man's creations in this abstract realm create their own, autonomous problems too, witness the continual evolution of the legal system, scientific and medical practice, the artworld, or, for that matter, the computer and entertainment industries. And always these *World III* structures feed back in to and guide happenings in *Worlds I* and *II*.

Now we live with many new technologies; some have to do with how we manufacture and transport physical goods; some have to do with how we produce energy, and many have to do with producing new chemicals, materials, medicines, and machines. But arguably the most influential and fecund of new technologies, especially in this century, have had to do with communication and information processing, the very nervous system of *World III*. And it is *information technologies* which I wish mainly to address this morning.

First I will try to give a broad picture of the history of information technologies—which we sometimes call *the media*. I do this in order to demonstrate the continuity of the present situation with the past. Then I will examine how our sense of reality and being *at home in the world*, in the Heideggerian sense, can be strained and distorted by the overreliance and misuse of the media. I will conclude by suggesting ways in which the acceptance of radio, television, computers, video, cellular phone service, virtual reality, and the rest can be moderated, or at least set in productive balance, with the world of nature, buildings, history, and true community.



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Perhaps inspired by spoors in the soil, or weather patterns written in the sky, or the markings on animals, the history of the media best begins with man's conscious co-option of the physical environment for the purpose of preserving and delivering messages, messages between man and man, and man and his descendants. Specifically they used those parts, blank themselves, that best receive markings—such as sand, wood, bark, bone, stone, and the human body. What a graceful and inspired step it was, then, to begin to *produce* the medium on which these marks were to be made, to create smooth plastered walls, thin tablets, and papyrus, and at the same time to reduce the labor of marking—carving, chiseling—to the deft movement of a pigmented brush or stylus. As society elaborated itself, and as the need to keep records and to educate grew, how much more efficient it was to shrink and conventionalize the symbols themselves, then to crowd them into rows and layers, *paper-thin*, in scrolls and stacks.

At this early stage already, the double movement towards the dematerialization of media on the one hand and the reification of meanings on the other was well underway.

What about the great Egyptian and Mayan monuments? These are certainly material. Against the ravages of time and to impress the illiterate masses, only massive sculptures, friezes, and reliefs in stone would do. These are what we see today; these are what survive of ancient cultures and impress us still. But it would be wrong therefore to underestimate the traffic of information in more ephemeral media that must have sustained day to day life: the scratched clay tablets, the bark shards, graffitied walls, tokens and counters, badges, weavings,

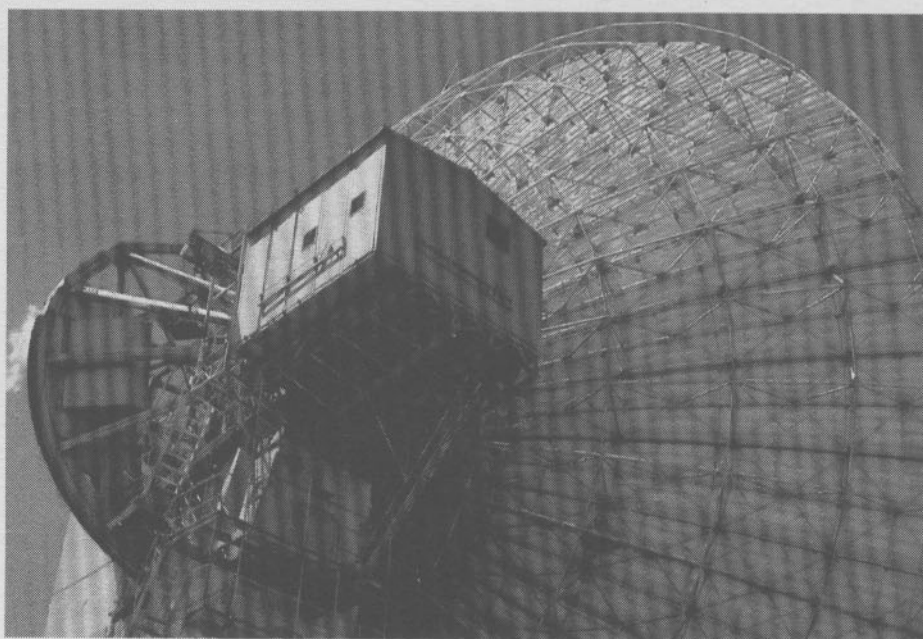
diagrams in the sand, banners in the wind, gestures, demonstrations, performances, and of course, the babble of song, gossip, rumor, and instruction that continuously filled the air and which are lost for ever. Every designed and every made thing, whether it was a house or a trinket, was also the story of its use and its ownership, of its making and its maker.

This world sounds strangely idyllic. It was a period perhaps two thousand years long when physical objects were not empty or ignorable as mass produced *stuff*, but were real and meaningful; it was a period when craftsmanship, consensus, and time were involved in every thing and its physical passage through society. But steadily, with the development of writing and counting and modes of graphic representation, and then, centuries later, with the invention of printing press and the spread of literacy beyond the communities of religious scholars and noblemen, the din of ephemeral communications came to be recorded at an

unprecedented scale. More importantly for our story, these “records” came to be easy to duplicate, transport, and broadcast.

Life would never be the same. One can hardly overestimate the implications of the print revolution and the establishment of what McLuhan called the *Gutenberg galaxy* for technologically advancing societies. Book printing and pamphleteering allowed the steady democratization of the means of idea production and dissemination. It allowed the exponential growth of an objective body of scientific knowledge, and the fact that this body of knowledge, containing both orthodoxies and heresies, could neither be located at any one place, nor be entirely controlled by a ruler or government, once the machinery of production and reproduction was itself reproduced.

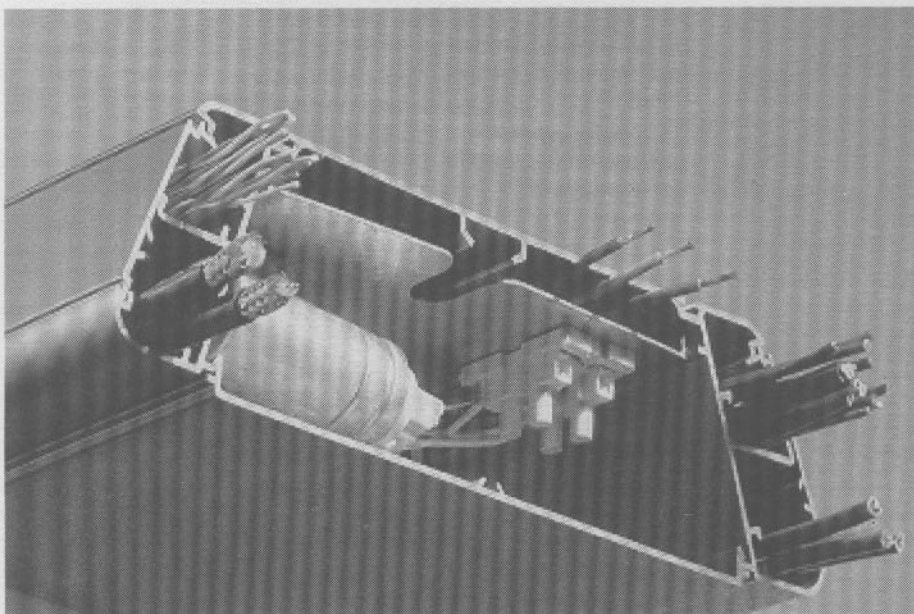
Although *printed matter* from proclamations to bibles to newspapers could, in principle, be taken everywhere a donkey, and



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truck, a boat or an airplane could physically go, the limit began to be not space but *time*. No news could be fresh days or weeks later. The coordination of goods transportation in particular was a limiting case, for if no message could arrive before what the message was to announce, the message was useless. Hence the telegraph, that first *medium* after semaphore, smoke signals, and light-flashing, to connect distant *stations* on the notion of a permanent network.



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Another, related limit was expense: the sheer expenditure of energy required to convey even paper across substantial terrain was enormous. With the introduction of the telephone, both the problem of speed and the problem of expense were largely eliminated. Once wired, energy expenditure was trivial to relay a message, and it was soon widely realized (interestingly only in the nineteen-thirties and-forties) that the telephone need not be used like a *voice-telegraph*, which is to say, for only serious matters. Rather, it could be used also as an open channel for constant verbal exchange amongst business people and family members; While they began as *one-on-one* exchanges, the soon became *many-to-many* exchanges over a period of time. Here was a medium, here is a medium still, whose limits are being extended.

Of course, the major step taken here, technologically, was the

transition from information transported physically to information transported electrically along wires, and thus effectively without resistance or delay. Add to this the ability to *store* information electromagnetically and we see yet another significant and evolutionary step in dematerializing the medium and conquering space and time. The first tape recorder was demonstrated commercially in 1935.

But this was paralleled by a perhaps more significant development: *wire-less* broadcasting, most notably, radio and television. Soon, words, sounds, and pictures from tens of thousands of sources could invisibly saturate the world's *airwaves*, every square millimeter of them and without barrier. What poured forth from every radio was the very sound of life itself, and from every television set the very sight of life: car chases, wars, laughing faces, oceans, volcanos, crying faces, tennis matches, perfume bottles, singing faces, accidents, diamond rings, sad faces, steaming food, more faces... images, ultimately, of a life not really

lived anywhere but arranged for the viewing. Some writers have called television more a medium of *communion* than a medium of *communication* a place and occasion where, nightly, the British, the French, the Germans, the Americans, the Mexicans, the Russians, the Japanese... all settle down by the million to watch and to ratify their

respective national mythologies: nightly variations on a handful of dreams being played out, over and over, with addicting, tireless intensity. Here are Marshall McLuhan's acoustically structured *global villages*. Ubiquitous television provides a medium not unlike the voice-filled air itself. The little world of neighborhood and village does not so much explode as greater world implode, collapse upon, neighborhood and village, reduced to fit.

The very significance of geographical location, at all scales from, house to globe, begins to be questioned when we have cordless telephones and cellular telephones, when we have *remote controls* on our television sets and hand-held computers that can communicating across the world. What does it matter now *where* you are? If the material of our work is information, we can be turned into nomads.. who are always *in touch*, but who never really touch...

All the while, material, print-based media were not standing



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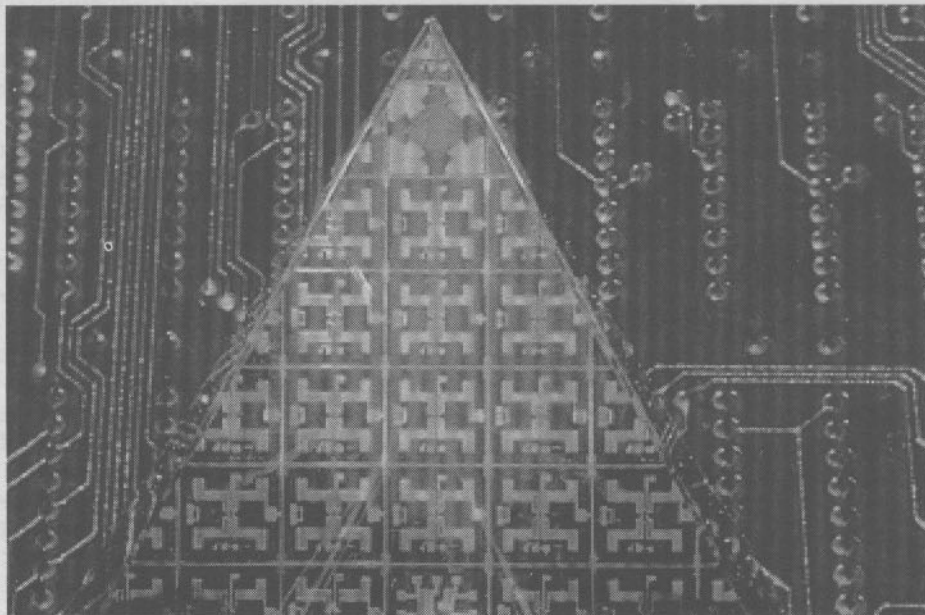
still: *vinyl* sound recording, color photography, offset lithography, cinematography, and so on—the list is long—became not only more sophisticated but more egalitarian as the general public not only “consumed” ever greater quantities of magazines, comic books, newspapers, and movies. They also gained access to the means of production: they also gained access to copying machines, still cameras, movie cameras, record players. Each or these soon had its digital counterpart as well as a variety of hybrids, and cross-marriages: national newspapers printed regionally from satellite-transmitted data, facsimile transmission wherever there are phone lines, digital preprint and recording techniques, and so on. The political ramifications of this need hardly be pointed out.

How far from making marks on stone we have come! With the advent of fast personal computers, digital television, and high bandwidth cable and radio-frequency networks, so-called post-industrial societies stand ready for a yet deeper voyage into the *permanently ephemeral*. On-line

communities, electronic mail, and information services (CompuServe, and scores of others) already form a technological and behavioral beginning of the voyage into the *permanently ephemeral*.

The technology of virtual reality (VR) stands at the current limit of the effort to create a medium that is phenomenologically

engulfing. By mounting a pair of small video monitors with the appropriate optics directly to the head, a stereoscopic image is formed before the *user's* eyes. This image is continuously updated and adjusted by a computer to respond to head movements. Thus, the person wearing the device finds himself entirely surrounded by a stable, 3-dimensional visual world. Wherever he looks he sees what he would see were the world real and around him. In addition, the user may be wearing stereo headphones. Tracked for head movements, a complete acoustic sensorium is thus added to the visual one. Finally, the user may wear special gloves, and even a whole body suit, wired with position and motion transducers to transmit to others—and to represent to himself—the shape and activity of his body in the virtual world of cyberspace. Virtual reality technology is as close as one can come in reality to entering a totally synthetic sensorium. It is as close as one can come to immersion in a totally artificial world sustained by computers, a world which is everywhere and nowhere: *cyberspace*.



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This, I think, brings us up to date. I have taken the time to form a picture of the immense age and momentum of information technologies in a way to convince you that—as tyrants like to say—*resistance is futile*. But I have not answered the question of *why resist*? What is there to lose by adopting these technologies? And anyway, is not something always lost when we make progress? What if we lost our sense of reality itself? I speak here as someone himself fully caught up in the whirlpool of bits and electrons that is the so-called Age of Information, and struggling to find and answer.

A few years ago I wrote a small book called *For an Architecture of Reality*. It was a manifesto of sorts arguing that buildings and places had a peculiar responsibility for maintaining our sense of what is *real*, for exemplifying what one might call *the really real*, especially in our modern, media-soaked age. I tried to say what it meant for buildings to have the quality of *realness*. I did not claim to be speaking of an ultimate

reality in either the technical or philosophical sense, only of our familiar *sense* of reality. Realness thus could be had in a greater or lesser amount; it was not an all-or-nothing matter. A building or place which aspires to having the quality of realness, I wrote, will have four, essential qualities:

First, *presence*; an unapologetic



presence (like a good actor), sharp and clear, fully occupying its site, shining, fully perceptible;

Second, *significance*; more than a mere empty symbolic gesture to a public at large, a living direct significance to the people who build it and use it,

Third, *materiality*; actual mass, strength, tension, resistance, texture, and solidity of substance, no matter how minimal the construction; and

Fourth, *emptiness*: that peculiar double-quality of seeming both indifferent, undesigned, artless—something found rather than contrived—together with a measure of *draw*, or occupy-ability, or self-offering.

Presence, Significance, Materiality, Emptiness... let us see what happens to these things as the tide of information comes in bearing promises of pleasure and riches.

Presence. The media are naturally less finely made than nature. What do

I mean? If you look at a leaf or a rock, a handful of soil or a piece of wood, the detail is inexhaustible; a microscope reveals more and more information, a billion years of molecular evolution is packed into the material. When we look at the works of man in the arts and crafts, they are crude by comparison; even the most glorious stained glass and illuminated manuscripts are rough work. Rougher still are comic books and billboards, movie screens and television screens, all of which must shout their message even louder, like radios with bad loudspeakers. But this does not fully explain why the media so capture and hold our attention, blotting out with their presence the presence of everything slower, quieter, finer and more natural. The media compete for our attention with each other, like sellers on the floor of a market, clamoring, wheedling, seducing, winking... *Listen to me, watch this, you can't afford to miss this, hey there.* And then, your attention having been gained, we are sucked in: to watch television is to be absent from where you are; even to speak on the telephone is to be gone; to put on headphones with a Walkman is to be gone too, beyond reaching, asleep to the world. If by a sense of reality we mean feeling alive in the material here and now, the media, after winning the competition with buildings and sunshine... kidnap and transport us away. Turning *off* the television is like suddenly being dead, or like waking up in a dull grey morgue, or like being stuck in traffic.

Now the quality of *Significance* in constituting the real. The media give us almost nothing of true significance—not TV, not the radio, not newspapers, not the telephone, not the mail, and certainly nothing that can be found on-line with a computer is significant. But we keep



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watching and waiting. Why? For a couple of reasons.

First because they *might*; because they sometimes do give us something of significance—A letter *might* come from your sister; the ringing phone *might* be good news, the magazine this month *might* reveal the secret to everlasting beauty... An event reported in the newspaper or on the radio might involve someone you know, or call for you to make a decision. And so we remain blackmailed, ever vigilant, ever eager to be the first to know, to act in the case of bad news... to save one's family perhaps.

The second reason we remain tied to the world created by the media is precisely because the media creates *worlds*. We become addicts to soap operas and sit-coms, dependents upon daily horoscopes, on weekly movies, and monthly advice in the magazines; we will gossip about celebrities we don't know, follow sports as though they mattered, have opinions about world affairs about which we are deeply under-informed and



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misinformed (and we know so), wear clothes and makeup like the stars... in short, we gaze at the human parade, fiction and non fictional, transfixed, spectators. Why? *Because others do too.* Into this empty funnel of commonality does the content of true community become drained. And we have just seen the immense capability of digital design to create fantastic experiences, worlds impossible by our laws of physics, dream-worlds for millions to visit at a moments notice.

Meanwhile, outside, the weeds grow; the sun sets on garbage and smoke; cheaper and cheaper buildings are thrown up to *just* get their job done, and be done with it. Meanwhile the soil is washed away and pesticides fill the lake; parks become dangerous after dark; children won't learn unless the lessons are made entertaining enough. True, resorts flourish for those who can afford to get away—to unplug— but they take their cellular phones to the pool.

My third quality of reality, *Materiality* is by design simply not



a desirable property of information technologies or communication media. The entire thrust of progress in computers and telecommunication equipment is towards lightness, smallness of size, ubiquity. The aim is complete non-materiality, as I remarked earlier in my history of the media. There is nothing wrong with this, I suppose, except when the trajectory is generalized. For when the property of non-materiality becomes a *model*, then the materiality of everything and anything become a point against it. *Everything* should become lighter, faster, smaller, present or not present at the flick of a switch. Materiality is dirt, materiality is death. What gleams is better than what is matted; what flows is better than what hangs or sits; what flies is better than what lies. Smooth is better than rough; plastic is better than wood, concrete better than stone. Materiality is boring; heavy, expensive, recalcitrant; it burns, rots, crumbles, twists, sheds. Non-materiality is with the angels, and the angels today sing on television.

Finally I shall try to say something about the fourth quality of realness which I identify as *emptiness*. By emptiness I mean two, related things. First, as I said earlier, emptiness has to do with the lack in real things of the desire to *persuade* us: real things just are what they are, like it or not. What is really real has no agenda, because to have an agenda is to have been convinced of the importance of some line of action, and to be in the business of convincing others. Even inanimate objects can be unreal in this way: they can be nothing more than frozen rhetoric, propaganda, demonstrations of something or another— perhaps of some architectural ideology, like Modernism, or of the power of the state, or whatever... Perhaps they want to shock or surprise or make us laugh or cry. Far from empty, they are loaded.



The real, on the other hand, is indifferent to our desires; it seems to bear no mark of man even as we know it may well be the work of man. It stays calm when we panic, ignores us when we find it wonderful or horrible, it is there when we come back. The real knows but does not speak because it *is* what it knows. The real is the sun glinting off a puddle.

The media cannot bring us emptiness. Every phone call, every newspaper article, every bit of e-mail, every fax, every radio show and every TV program has a job to do and is arranged to please you and then to ask something from you. The media take your dreams and then show them to you again sanitized, with commercials. Whatever is brought to you along wires and through the electronic ether is soaked in human intentionality, so that to find reality, one must look away. To the sun, glinting off the puddle; to the sound of oars as you put the boat out into the lake.

Emptiness also exerts a magnetism; not of propulsion but



of attraction. The emptiness in things and events and people requires an environment still enough, quiet enough, to hear its no-sound, smell its no-smell, just as water runs into the valley, just as quiet people make us wonder what they are thinking, and just as mystery seems always to be near at hand for those who seek with a clear conscience. Emptiness is an opening, the gap between things. Emptiness flows from what is missing but not yet missed, and so is the first signal of *potential* to those who live observantly, closely. Nature abhors the vacuum, it is said, but I think this is truer of Man: it is *Man* who abhors *the vacuum*, who wishes to fill it up with chatter and song and beliefs about the purpose and destiny of everything he lays eyes on. Do I need to remark that the banishment of silence and of meaninglessness, at all costs, are the media's first service to modern man?

These then are the four components of our sense of the real. And these qualities —presence, significance, materiality, and emptiness— are exactly what are being challenged in the worlds made by communication media.

To be *at home* is to be in intimate contact with the real, with

the genuine, the authentic (call it what you will...it is all one feeling. More and more of us will never know this sort of home as we run back and forth to work and home telephones ringing, computers humming, television and radio blaring. We face the rise of a new technology of immense power. In the offering us constant distraction and industrial efficiency, its power to disconnect us from where we are and who we are with, to decimate the material arts and crafts, to banish life on the land, to make us ignorant nomads with plug-in brains for the sake of capital... whose power to do all this is unparalleled.

In Mexico you may feel safe from this nightmare; in urban Mexico I know you do not. Ever greater torrents of music and videos, cascades of faxes, and galaxies of financial information, will come washing your way from America and from around the world: computers bearing gifts, cellular phones promising empowerment and fiber optic cables and satellite dishes offering membership in the new age of information. Accept these technologies if you must. What they promise they will deliver: entertainment, the means of financial speculation, and eventually an increased industrial productivity

which will balance the cultural passivity that will come too. But do not dismiss as mere fodder for tourists —your own tourists as well as the world's— do not dismiss Mexico's enormous wealth of what the rest of the world is slowly allowing to drain away: a sense of *home*, of *reality*, of community feeling, of relation to the land, to history, to skin and sun and voice and architecture. Culturally, politically, geographically, Mexico stands at a point where it can choose to live *with* the new technologies and not *in* them, as much of the rest of the industrialized world increasingly does. *With and not in.....*

I am an architect. I would like Mexico to build gloriously, beautifully, romantically again. Let Mexico, everywhere in Mexico, be a place where anyone in the world would want to live—for a week, for a year, forever. Forget the cheap and brutal zig-zags of modern design. Turn off the television; let the wind blow through. Dance in the *zócalo* perfumed with flowers, real flowers, just like the movies and the tourist brochures promise you can. The hunger for these things is so great, and the task of providing them so noble, that prosperity will surely follow.