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INFORMATIONAL ARTEFACT OR

ENSLAVED COMMUNICATION

> "Where is the wisdom
> we have abandoned
> for knowledge? And
> where is the knowledge
> we have abandoned
> for information?"
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> *T. S. Eliot*

Since 1973 the experts of O.C.D.E. have been presenting the development of systems born of computer science and tele-communication as a "second industrial revolution." A year earlier the Japan Computer Usage Development Institute announced for the year 2000 the advent of a "society of information."

The computer, with its data banks, has come to solve the problem of preserving in memory and of the restitution of stored facts. Even more, and more important, it can reproduce an operative process, the program, that has been fed into it. Mana-

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gerial computers, scientific computers, computers with structural functions, computers of modelization or simulation, have undeniable advantages as an answer to the flow of information.

As for general, popular use, if we have reservations about what is still today only an expensive gadget, certain perspectives opened by microprocessors and interactive teledistribution cables give rise to the hope for change in the disintegrating structures of human relationships.

This optimism, though prudent, rests however on a renewed adhesion to the dogma of material progress that the Western world adopted by taking up the wager of industrialization. Today the myth of technology, in the sense of a fundamental belief, is filling up the cracks that momentarily appeared in the system of belief in economic growth.

The informational phenomenon cannot be separated from the ensemble of present techniques, from the technological context whose advantages are immediately seen and whose risks are so greatly underestimated.

This is because the introduction of the machine at the heart of human relationships and the informatory rapports of man with the environment is not harmless. The machine that manages information modifies at the same time the intellectual cadre of man, his way of thinking, his way of life.

In the history of the machine-tool, the appearance of the computer marks a fundamental transformation. During the 19th century, the machine replacing manual work increased to almost infinite proportions the physical strength of man. With the computer, it is no longer this physical strength that is multiplied, but the intellectual capacities of man.

After the mechanization of action, will we see the mechanization of thought? What are the sociological, psychological and pathological aspects that may appear at the level of global mentality before this new aggression of the machine? The question is urgent at a moment when we see the haste of some, guileless enthusiasts or rabid interested parties, to arrange a democratic access (at least, claimed as such) to informatics and telematics.

We will try to insert these questions into the already broad framework of the interrogation on the future of contemporary social communication.

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If mass communication shows the weight of numbers and progress in statistical mentality, if its content, mediatized, artificial, reduced to commonplaces but swollen with sensuality and materialism, nonetheless keeps its connections with man, then the latter is only a simple, consenting object of calculation. Quite different is the relationship generated by the use of the computer and more so by the modern technical approach founded on the mathematization of formalization and manipulatory practices.

The evolution of the concept of information and its present imperialistic imposition are the striking signs of the vacillation in the most abstract phenomenism.

At the dawn of modern times, information was paid for according to its usage value, in short, for its content. Soon, however, with the generalization of postal service and later the telegraph, telephone and wide-spread media, the price was established independently of the information conveyed. This was a veritable revolution that resulted in the 20th century in the cybernetic notion of quantity of information transmitted. Considered apart from its meaning, information is thus perceived as an objectively quantifiable volume. It is measured in *bits*.

If the bits were only harmless elements, adding nothing by themselves to the knowledge entrusted to them, their handling by the computer could appear just as harmless and, even better, could constitute a remarkable check to the disturbing proliferation of information in our day.

Appearances, however, are dangerously deceptive.

Code and Absence

In the wake of technical practices, digitalization of information brings the idea of the real as a mathematizable object.

We live in a universe in which mathematics reigns more and more over the hierarchy of other knowledge and over the distribution of power and rank. To be convinced, we have only to examine the evolution of school and university programs, in all the disciplines, during the past few years. Here we are not

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questioning the excellence of pure mathematics, as old as the world, but the preeminence of its practices in today's society marked with the seal of engineers, calculators of all kinds and information-givers; we like to repeat to the younger generations that that is where the future lies.

Applied mathematical knowledge today assumes an almost initiatory virtue, as is shown by those "rhetorized mathematics that the voice of the media sends through society, with re-enforcement by the printed word, superficial analogies and confusions of meaning, in a litany of ciphered information and obscure graphics, a fragment of knowledge made senseless through decontextualization and the absence of all explanation of production and degree of approximation." (Luce Giard)

Values conveyed by these usages are however those of the rational, the precise and the exact, but to attain them, "it is necessary to accept the loss of the commodious and deceptive ground of reference to the concrete, or imitations of the concrete, abandon recourse to an initial intuition nourished by the common experiences of practical life and substitute after much effort a second intuition, still uncertain but useful and helpful, acquired through the management of abstract forms, in proportion as we see the formation of a rapport of familiarity with these idealities." (Claude Bruter)

However, in this way mathematics, by turns nourished by and nourisher of abstraction—a true proposition belongs to no one, no place nor time—necessarily brings up some problems in its applications to the real: its rigor and universality will be paid for at the high price of reduction.

Here we again find the problem of the informational process whose digital excerpting of the real leaves nothing[1] to the indistinct that makes its complexity and its social and psychological richness.

On the use of data processing in the historiographical field, Michel de Certeau says: "From the elementary level of units to cut out, and for very good reasons, mathematical operation excludes entire areas of historicity. It creates immense waste,

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[1] In spite of recent works that, starting from the notion of "proximity" or "distance" between objects, introduce fuzzy sets into the analysis, computer algorithms are reduced to three or four formulas.

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refused by the computer and heaped up around it."

This affirmation may be generalized; history is only an illustration. Because of atomic excerpting, necessarily integral for precision, of obliged digitalization, encoding is, paradoxically, to limit and approximate the measure of reality. By excluding from its field the "maybes," data processing handles largely formal units and produces a discourse *near* the real.

Of course, all symbolism and all expression exist only in the distancing they effect with the reality they intend to designate. Here, however, the reducing abstraction runs the risk of being unable to reach but a denatured real or, at the most, of no longer representing anything but itself and thus ceasing to be expression! By suppressing the noise in the channel, the encoding of which Claude Shannon speaks at the same time risks killing reality by inaugurating the reign of an informatizing automatic information.

The great danger—which has nothing to do with the fears of some misanthrope, as Arnaud thinks—is to see this abstraction claim to be real or, without making its intention known, being taken for such.

The inscription of this hypothesis in the long run takes nothing away from its acuity, all the more so because computer science also develops a logic of manipulation whose possible effects on mentalities are registered in this sense.

Cold Logic and Real Time

It is understood that technology cannot be taken as an ensemble of technical instruments that it suffices to control. The argument according to which the computer effectuates only the processes that have been prescribed to it in the most minute detail is the answer of a technician unaware of the technical question as it is posed to today's society, and even more, to that of tomorrow.

By proposing "neutral" mental itineraries[2] coded to obtain a

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[2] Here neutrality concerns the procedure of reactivation of meaning, not the fact that the necessary process for knowing this comes up against two barriers that singularly limit its accessibility to all. On the one hand, its complexity excludes a large part of the users who have not acceded to its abstract logic; on

certain result, mathematized information imposes a form of cold logic with strict methodological rules deprived of all circum-stantiality.

Algorithm, that expresses the program of a computer given in a form that is comprehensible to it, well illustrates, by its definition, the impassibility of this process: "specification of a series of operations to execute in a given order so as to solve correctly and without exception all the problems of a given class."

To go from that to "artificial intelligence" is but a step, taken today with the fifth generation of computers no longer manipulating numbers but logical implications—always, however, in a binary expression, reducer of knowledge to the level of the calculable. Useful for a technical society, the type of intelligence that juxtaposes and organizes in classifications totally separates itself from the humanist model founded, as Jacques Ellul writes, "on the questioning, the development of a critical mind, the cultural coherence of knowledge integrated into a thought-out ensemble."

To axiomatize, modelize, program, plan: here is the human mind impelled to take another step on the road of abstraction in which man no longer recognizes himself when faced with co-ordinates that design a foreign universe that belongs to them.

Thus computer science, a structuring technique, today visibly inaugurates in daily life a new configuration of time. Earlier, the clock, by dividing duration into cold units, equal and insensi-tive, profoundly marked the human mind,[3] but this division, even though abstract, remained a mechanism structuring human activity "externally."

The *real time* that the computer puts into place is at the same time much more abstract and much more operative in its bringing human decision into question.

In our civilization of efficiency, real time designates the useful time of information; an information that comes too late loses

the other, we cannot deny the multiple secrets that voluntarily close off the access. If writing brought about identical obstacles in its time, at least it did not hide the fact that it was by and for the elite.

[3] We recall that the first scene in Charlie Chaplin's *Modern Times* showed the face of a clock.

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its utility. The definition of Charles Myers is much more precise and goes much further: "Let T be the time during which the computer could stop its calculations (the "stop" button being pushed) and take them up again without changing anything in the information or results being handled; the smaller T is, the more the system is in real time. An interruption of one second in the calculation of the trajectory of the launching of a missile is intolerable. The information furnished would change, since the trajectory would have changed, and the results would be affected since at the reprise, the program would have to calculate enormous corrections. On the other hand, a delay of three hours in a monthly payment would not modify either incoming or outgoing amounts. We do not qualify a system as a system in real time unless T, the time of an acceptable delay, is around several seconds and even, in general, several milliseconds."

The connection in real time thus permits the handling of the unforeseen in the gigantic contemporary organizations in which interdependent operations are multiplied to the infinite: financial, commercial, scientific, military activities of large countries on whom the destiny of our world depends.

However, this "metaprevision," using the expression of Pierre Levy, owes everything to the striking supremacy of the computer whose time-unit is around a billionth of a second, while the human brain cannot go beyond one hundredth of a second, the latter being able to handle 50 bits per second while the computer can handle a volume that is 20 million times greater in the same amount of time.

Thus, whether he wants it or not, contemporary man, from the scholar to the unskilled workman, finds himself today propelled into "beyond-time." When we hear the sound of airplanes, they are already far away and the attack has been made; we have not had the time to be afraid. This super-speed is "able, by depriving us of the necessary time to reflect, to deprive us definitively of responsibility for our destiny." (Paul Virilio)

Deprived of the time to reflect: "From the clock to the computer, proceeding through the assembly line of the Ford plants, the machine is one of the best aids of synchronous time of organization. Mechanization disciplines industrial processes and obliges management to plan even more carefully. One can only plan what is foreseeable; now, only what is mechanical

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is foreseeable. Chronological mastery entered a decisive phase in 1945 with the construction of the first computer." (Pierre Levy).

Thus we see that, paradoxically, "automatic information, like Taylorism or the other forms of obsession with efficiency and speed, makes us subject to an unreal time in which the past (in the form of program) lives again to communicate its form and content to the future and in which it destroys the only real time: the present." (*Idem*).

The Programmed Myth

That the computer is a remarkable check to the disturbing present proliferation of information is, for a large number of our contemporaries, so obvious that it suffices to legitimate the extension and reign of automatic information.

However, we must ask ourselves if a multiplying effect, linked to the use of the computer, does not contribute to the growth of the cancerous development of information that this use claims to control. Much more, we question the acceptance of this invasion of information that seems to justify its handling by a computer while the idea itself of resistance to information is cast aside, often with scandalized contempt. Finally, it is a human universe placed under the sign of the artificial and sophisticated that is a matter for concern.

The unceasing developments in the field of computers—the techniques of optical fibers and laser to visualization panels that on one page can memorize thousands of pages of text—bring about a radical change not only in the way information is handled but also in the way it is produced.

Until now, numerous bottlenecks existed to slow down free expansion of information. It has not been so long since a telephone center followed the rhythm imposed by the more or less great speed of the operators in manually handling connections. The automation of the telephone system, by increasing the rapidity of connections, considerably multiplied the number of telephonic communications. Later, the advent of telecommunication by satellite put such communications into the space age.

This is only a small example to illustrate the multiplying

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effect of electronic handling. It suffices to show how much the use of new techniques, by increasing the speed of transmissions, was to increase at the same time the volume of information to be handled, that is, to develop the sector of production of information presented as a new value of consumption.

But is it really a matter of a value, of a progress that is profitable to humanity? J. Maisonrouge, international director of IBM, can proclaim that technique is a factor of progress and that it should not be set aside because of the risks it may incur, but his conviction, although shared by a large number of people, is not sufficient to conceal the disorder brought about by the advent of automatic information.

To the hope of the opening of new markets is opposed the uneasiness of millions of unclassified persons, excluded from management and service positions by the computer: for them no perspective opens for a quaternary sector of employment.

If large companies, scientific research and political states need to be in the forefront of technical progress, is the same true for all the people and even, restrictively, for consumers? Who wants to go faster? Who wants to be computerized?

Democracy through generalized information, clarity by means of the computer, happiness due to the thinking machine?[4] As if equality in the face of knowledge were a technical problem; as if translucidity were a synonym for lucidity; as if it goes without saying that all information is "edifying," that is, constructive for man in his social and individual, material and spiritual globality.[5]

The list of problems raised by the resistible ascendance of the information myth could be lengthy. One question, however, particularly holds our attention here: that of a new step taken on the road of the artificialization of thought and behavior.

Dependent on an extraneous time, that of the machine, programmed in his thought and acts by a rational, precise, exact,

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[4] Who does not remember this passage from *The Trial*, by Kafka, in its film version by Orson Welles, in which the uncle of Joseph K tries to convince his nephew that the computer of his company knows the answer to his ontological problem?

[5] Does what we invent in various techniques edify man or is there an accumulation of risk or degradation? (Ellul).

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exterior model, will computerized man have enough taste for risk, enough liberty to dream, enough lucidity to "*marcher lentement jusqu'à une source*"?

Over teaching with the aid of a computer, culture in data banks, electronic games, video-contact, the shadow of "Big Brother" hovers incessantly.

"A mathematician once said that algebra was the science of the lazy—we do not try to find what x represents but work with this unknown as if we knew its value. In our case, x represents the anonymous masses, the people. To be in politics is to work with x without worrying about its true nature. To work in history is to recognize x at its true value in the equation."[6] Now, "a society that is totally computerized, thus programmed, thus predictable, would bring about the end of history." (P. Lévy).

Let us reconsider all this in the more limited field of our interrogation on the future of contemporary social communication.

INFORMATION AND COMMUNICATION

The new approach that today is invading the field of social communication—from its knowledge to its practices—does not throw light on the transformations under way in relationships between men of the age of computer science.

Is social communication in a fair way to being reduced to manipulation, to transport and transformation of quantities of information? The importance given to the physical dimension of information in the human sciences that in the past had mainly, if not totally, ignored it, the imperialistic invasion of this idea in all fields of human thought and activity, is a disturbing observation.

But the extension of the cybernetic model to the dialogue between men shows much more clearly the dark stain of the machine that slowly spreads toward the assembly of conversant men.

Social communication entering into a global cultural system— the total social phenomenon—in which it is the "accomplish-

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[6] Arthur Koestler, *Le zéro et l'infini*, dialogue between Rubachof and Ivanof.

ment of the rules of the cultural code in the permanent process of life in society" (Yves Winkin): will it be irremediably stifled by the irruption and cancerous extension of a reductive language-machine?

An Insensate Imperialism

Defined as something that solves the uncertainty of a receiver placed before an alternative whose two issues are equally probable, the *bit* was at first only a useful tool for measuring material efficiency and an economic instrument for calculating. Guided by these practical prejudices, Claude Shannon considered information exclusively as an observable and measurable volume. Observing from this angle, says Morin, deaf "to the alternations of Isolde's hope and despair, of her emotions and her expectation, of an inordinate love, of the specter of death, while from the infinite sea will appear a sail, black or white, the Shannonian observer will derive: a *bit*! Shannonian information is thus *insensate*, blind to the meaning, interest and truth of the information."

We cannot hold a grievance against Shannon for having imprisoned information in a closed physical universe: the meaning of the information is not at all denied but left to the anthropo-social context "in which not only communication but also the production of meaning takes place."

However, Morin continues, the Shannonian theory of information conceals the anthropo-social substrate that it supposes and in which it has its meaning: "like the inventory in bits only reflects the improbability of the organization (discursive and productive of meaning) and not the organization itself, it makes us incapable of discerning in one improbable group of elements (letters and words) between an organized arrangement (a discourse or poem) and a chance juxtaposition... Blind to meaning, Shannonian information can only be blind to the meaningless."

In spite of its insufficiencies, it is with sufficiency that the physical idea of information conquered human sciences and extended its domain from matter to the mind: "Information claims first place because of its physical nature, second place

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for its psychic nature and both for its universal aptitude to command."

Thus information, born of human communication, is caught up in industrial mentality, recuperated, remodeled, reduced to a perspective of onerous transport and, adorned with the illusory artifices of abstract efficiency, sent back to its native land where it now bleaches out reference to the warmth of the art of communication.

The Cyberneticized Word

Likening information and communication, Claude Shannon and Norbert Wiener published in 1948 their *Mathematical Theory of Communication*. In the same year appeared *Cybernetics*, by Robert Wiener, in which the author makes explicit reference to the theory of information and adds to it the theory of feedback.

In fact, by insisting on the feedback loop, cybernetics took the step leading to programmed information and the computer; it is the organization of the exchange of information by artificial machines.

The criticism developed by Edgar Morin takes its point of departure from the declaration of Wiener: "I have put communication and command together." If cybernetics in fact adheres to the transmission and exchange of information, it is also employed in transforming this information into program, that is, giving the machine the power to manipulate, control and govern the order of operations (stockage, calculations, logics).

In reality, however, instead of putting together or giving priority to communication, cybernetics, as Morin points out, has *subordinated* communication to command; it has become "not the science of communicational organization but the science of command by communication."

Since then the acute problem has arisen of the subjection of man to the artificial machine in the organization of life and society, and more precisely, as far as concerns us, in the area of social communication.

The discussion on the radical difference separating the programming of artificial apparatuses and that of living apparatuses (those genetic and neuro-cerebral of living beings) is not our

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subject except to simply say, but it is something very essential, that in the case of the living apparatus the unity of the being remains intact (aside from the nuances that a simple beginning of analysis could bring) while for the artificial apparatus there is the risk of a deep division that we must elucidate.

We will not dwell longer on the social apparatus—State, administration, army and so on—in which the institutional order, if it rests on restraint, and whatever are the multiple factual derivatives (from the most hidebound bureaucracy to the most cruel legality), has a moral foundation that, as Durkheim has shown, calls upon legitimization and assumes the autonomy of the agents on whom this restraint is exercised.

At the beginning of modern times, the printing machine cunningly inserted itself into the actions of man, hammering into his head, his mentality, his behavior and his relationship with others and the world its principle of automatic repetition. Even though the powers who use it do not aim at the beginning at a standardized production, just the same identical products are found at the end of printing operations.

At the moment when man's sweat appeared derisory when compared with the steam of machines, this tendency was considerably complicated and reenforced with the arrival of mass-media, those intractable means of communication, bearers of anonymous and universal messages that escape from the voluntary control of their authors and are anticipated by all, at the undifferentiated level of each individual-receiver.[7]

Today, the computer does not hide its claim to become and present itself as a universal model. With it grows and becomes specific the danger of seeing human communication conceived according to the automatic information functions of the artificial machine. In other words, the idea of an organizing and creative communication of information, that is, of a communication causing human relations to pass from essence to existence, is menaced by the mechanical schema in which communication is enslaved by information commanded and produced from the exterior, by the physical machine.

Now, in many aspects this schema reveals the inhibiting

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[7] I have studied this evolution in detail in my book *L'Art et l'artifice,* to be published shortly.

effects of the "putting into existence" of human relations. Thus *putting into a memory bank* or *having in a memory bank* tends to obfuscate *memorizing* and the functions of forgetfulness. In the same way, a strictly programmed manipulation leads to ignoring then denying the dynamics of ambiguity, while handling by abstraction irremediably isolates the living part rendered imperceptible and then empty and useless. Finally, the reduction of communication to a process of transmission throws into functional inexistence the positivity of the exchange, the complexity of causes and the uncertainties of finality.

Mass-media made the word anonymous, computer science dehumanizes it: "the word no longer originates with a person; it is the result of an incitement and a mechanism." (Ellul).

But if the subject considered here obliges us to a prospective, we cannot leave on an impression of a very theoretical approach to the rapports of communication/automatic information, seeing that numerous observable indices have already given substance to our Weberian model.

THE COMMUNICATION ARTEFACT

Let us go further into the computerized milieu in which the integration of networks, programs and data banks continues to increase and in which the conjunction between several techniques has brought about the reenforcement and extension of the system. Thus, telematics, the combination of computer science and the techniques of telecommunication, is being rapidly diffused in all the sectors of business enterprises (tele-informatic, telecopy, teleconference and so on) while the residential market sees a multiplication of commercial assaults to defeat its reticences or its inertias.

To claim that it is in a period of uncertainty in economic growth that the attack on this new battlement has developed in public economic sectors as well as in private commercial milieux is in itself of little help to us if we do not see that this context is that of a veritable economic *war* that opposes men and states to the conquest of monopolies. Is this degradation in human relations, parallel to the progress of telematic applications, only an epiphenomenon, a peripheric episode, or the advance sign of dramas born of inadequacy between these new tech-

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nological processes and the integral development of man and society?

If there must be dramas, we must recognize that they are not particularly self-evident to the *entrepreneurs*, convinced of the practical and immediate advantages of the system to handle the mass of their information or forced to use it to remain present on the market.

For their part, a number of young intellectuals are not insensitive to the idealistic argument developed by a certain systemist current and taken up by political propaganda that sees in telematics the perfect instrument of an ineluctable democratization but gives little attention to the fact that it is never automatic and that knowledge and interaction technically put within reach of all could create an abyss as well as establish equality.

The general public, manipulated by a publicity that is often erroneous, centered on exploitation or a gadget, nevertheless sees its fascination opposed by the too-evident reality of unemployment. Directly concerned, it listens to the fears and accusations of the work force and knows that the structural mutation in which the new techniques participate with priority prolongs and aggravates the problem of employment.

However, to reduce the problem to the single, though legitimate concern for job security or to mock the opposition of the masses to anything new by evoking the desperate struggle of the silk-weavers in Lyons is evidence less of a faith in the future than a break in participation with collective roots. Now, it is not certain that we will not find here, at the level of an instinctive perception, a common ground with intellectual approaches on the examples of growing discord between technological beginnings and undeniable results in the field of human relations on the one hand, serious relapses and genetic transformations in sociability and its expressions on the other hand.

Today we have the presentiment, aside from the repercussions on the volume of employment, of the disturbances that the introduction of telematics will bring to work structures: decentralization of production and management units,[8] reevaluation

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[8] It is clear that the aspect of technicity cannot alone suffice to explain such a profound mutation. There are structural changes at the political, economic and

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of team work,[9] working at home (with the risk of confusion between workplace and family living quarters), reenforcement of instrumental power, multiplication of long-distance interactive consultations (telediagnostics, teleconferences, telesurveys, etc.).

Under these new conditions, relations between men will take on a completely different configuration, more artificial because these various sudden changes considerably diminish occasions for meetings, formal or fortuitous, between the various members of a company. What will become of the confidences in the corridors, the transactions that take place during the lunch hour, adherence among the workers, friendship with colleagues, and team spirit? Jean Sur observed that "what is ordinarily called relationships—I simply mean the capacity of men to exchange ideas, feelings, to act together—seems to me infinitely more difficult in the technically-advanced companies than in those using a more classic technology. I do not believe that the novelty is in question as such but rather the style of work that this technology supposes. Let us leave aside the latest discoveries and consider only the societies constructed by classic computers. In this case, we can no longer speak of exceptional techniques. I have noticed, like many other observers, that human relations are terribly artificial and that, much more than in other sectors, people have the tendency to shut themselves up in their own private worlds."

We may fear that this artificiality, this position of forced withdrawal that is isolation and not interiorization, will both appear on the occasion of telematic invasion of person, family or leisure life. Do we need to comment on this enthusiastic and striking observation of the futurologist Alvin Toffler apropos of Oliver, "a personal computer responsible for furnishing information to the individual and making minor decisions in his place: this computer could remind him of his wife's birthday

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social levels that enter into account. Just as writing alone did not create the urban phenomenon but participated in its establishment and acceleration, computer science and telematics cannot be isolated from the general context that creates them and that they create at the same time.

[9] Traditionally, a newspaper is first of all the work of a team in which the tasks are relatively specialized. In computerization the tasks of the journalists, "producers" of information, and typographical workers, the "realizers," tend to be confused, in any case, at the level of the execution of information. Here we recall the serious conflict at *The Times* in London.

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or even automatically order flowers." No doubt plastic flowers?

Among the many programs of electronic games that appear on today's market, the programmed chess game has inspired Dominique Peccoud with the following reflections: chess has a symbolic dimension that is that of the struggle against an adversary. "Why the strong desire to play chess against one's father, to have insisted, as an adolescent, to risk defeat or attempt victory? Why do we see so many young people who do not truly reach a rapport with their parents because they have not been able, with a game, to resolve certain conflicts with their father? How many times have they been able to play with him? How many times, on the other hand, has the father, returning from a trip, overworked but still kind, brought them the most efficient electronic chess game and then declined an invitation to play, saying, "I don't have time!" The continuous combat against a machine that always gives the impression of winning is contained in the conception of an absurd universe with faceless opponents."

It is true, however, that there are a number of electronic games, perhaps even the majority, that appeal to the competitive spirit and to physical dexterity. The observation drawn from the use of electronic chess remains limited unless we consider a more fundamental question: in what concrete way can the dialogue with an electronic machine in itself affect the dialogue between people?

The true difference between the dialogue with the machine and the dialogue between humans is not the one that separates the determinism of the aleatory (a distinction that present technological evolution varies slightly); it even goes beyond the opposition between reductive clarity and complex multivocality that we pointed out at the beginning of this article. Fundamentally, it resides in the question of meaning.

Here we must give a rather long quotation from Dominique Peccoud, who has expressed himself quite clearly in this matter: "The constant goal of human dialogue is to arrive at a symbolic communication that evolves by articulating reconciled opposites in a meaningful dialectic; this symbolic communication aims at the recognition of the other as a man. The computer does not know what a field of resonance between two poles is; it proceeds in the field of the functional, not the meaningful. The choice of such or such solution never will proceed from the

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desire to enter into relationship with the other; it will always be functional. The machine that initiates a dialogue through a well-functioning program does not prepare the meaningful conflict that appears in human relations each time that, going beyond banalities, they want to attain the recognition of Otherness and progress in the dialectic knowledge of the mysteries of life. Manipulating programs all day, the computer operator may not be able to adapt himself to the loss of time necessary for an indepth communication with a fellow-creature. Accustomed to actually having only an easy opposition to reduce from a recalcitrant program, he will be tempted to believe that all opposition is in the same way reducible when it is sufficiently analyzed."

Thus the invasion of telematics into daily life considerably increases the risk of deformation through the vulgarized use of such an efficient tool of functional communication, of the relationship that assumes and recognizes the Other as a totality.

Some think, not without reason, that telematics will help the reinsertion into society of the solitary, the stranger and the handicapped. But will it provide the desire to be so reinserted? And electronic mail service—will it replace the "Hello" of the mailman that it will have made superfluous?

A generalized telematics in the field of social relations and the computerization of mentalities that brings an anarchic and racing diffusion of its practices into a fascinated society mark the end of human communication through the definitive effacement of the Other, linguistic, cultural and ontological.

It is, concretely, on the collective mentality, possessive of information, that we must start questioning, beginning with the curious paradox of a society, our own, possessing highly sophisticated equipment at all stages of the process of information but of which each member feels excluded from the "Secret."

The difference between communication and information is the one that separates being from having and distinguishes a society centered on persons from a society centered on things. If the way of life articulated on the appropriation of information is put into question, the memory bank that has become the exteriorized part of being must be reconsidered. "This invention, by exempting men from exercising their memories, will produce oblivion in the mind; men will search outside themselves, due

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to foreign characters, rather than inside and thanks to themselves, for the means of remembering." These fears, formulated by Plato apropos of writing, take on a singular actuality.

In Western societies with advanced technology, the demand for free access to information has today clouded its ethical functions to the point of completely hiding the necessary obedience to the laws that govern the optimal development of man.

The redefinition of these values, from the angle of communication, would reintroduce the terms of selection, silence and *co-naissance.*

Here, it is no longer the task of the scholar of prospective—that "cold computerized future" (Chaunu)—beyond the reach of the ordinary man preferring a catastrophic future to the sacrifices that he would have to make immediately. This is a task for the humanists, those givers of faith, faith-loyalty and faith-coherence in man, individual and collective.

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