From the Mirror to Post-History

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All societies are made up of members who have a certain number of things in common, by virtue of which they understand, identify and communicate with each other, on the one hand, and establish differences with members of other societies on the other. Among the most important of these things is *language*.

In this regard, let us recall two examples raised by Ferdinand de Saussure. The first: "*Language* is both a social product of the faculty of speech and an ensemble of necessary conventions adopted by the social body to allow for the exercise of this faculty in each individual."[1] The second: "*Speech*, distinct from language, is on the contrary an individual act of intelligence and will … by which the speaking subject uses the code of language to express his personal thought."

Within the problematic under discussion here, a different type of consciousness corresponds to each example, *social consciousness*, on the one hand, *individual consciousness, on* the other. Let us stress that it is not a matter of two consciousnesses, but two types of consciousness, operating on two different levels, while ceaselessly interacting.

Let us further specify that to each type of consciousness corresponds a particular *space*: *social space*, subject to the code, and *individual space*, which articulates the freedom of expression of the speaker through speech.

On the social level, the code is composed of signs, made up of the *signifier* and the *signified*, through which language establishes a precise correspondence between the word (spoken, written) and the designated object, or more exactly, between the word and the *concept* of the object, "by virtue of a sort of contract among the members of a community," specifies Saussure, who insists, to stress the difference, that "language is the social part of speech outside the individual, who can neither create nor modify it alone."

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In other words, the very idea of contract, and the concomitant idea of code, imply modalities which derive from a *social consciousness* (or *collective consciousness*) empowered to fix the terms of engagement. Contrary to what one is tempted to believe, social consciousness is not composed of the sum of individual consciousnesses (we will return to this point). Indeed it is as if, on the one hand, each of us belongs to his own subjectivity and dimension as a unique subject, as an *individual*, and, on the other hand, to the social dimension proper, to the community to which he belongs, as *socius*. In this way our "two" consciousnesses (or levels of consciousness), one individual, the other social, continuously interfere with each other.[2] Whether we like it or not, we are *simultaneously* engaged in the one and the other, with the important difference that our engagement ends with our individual death, while the collective consciousness survives the particular destiny of its members. Individual consciousness and collective consciousness thus constitute a mixed field, in which individuals exert themselves and are destroyed while the *social status* is perpetuated as collective consciousness for centuries and even millennia at times, as was the case during the Egyptian or Chinese civilizations.

Thus, with the appearance of consciousness, society learns to make the ensemble of linguistic, iconic and behavioral signs *correspond* to the idea it has made of reality, and, in the end, to reality itself. The proof lies in the multiplicity and diversity of civilizations and cultures. Nonetheless, whatever the proximity between representation and reality, *the equivalency is never such that there is not a certain distance*, to the degree that this distance, divergence or interval seem to be part of consciousness itself, both individual and societal.[3]

Without pretending to define it, it is possible to specify that the *advent of consciousness* signifies *both* distance and proximity to the living. The object I approach is always, by definition, distant (*object*, etymologically, means "throwing before"), but at the same time I establish a relationship with it which allows me to integrate it (con-sciously: note the *with*). To be conscious thus serves both *to create distance and to draw near again*, a doubly complex process. As much on the individual level as on the collective level, representation (re-presentation) is both a necessity and a challenge. It assumes a distance between subject and object, and converts this

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distance into a subject-object relationship. If one hazards the term "gap" to designate the origin of consciousness, one might say that the action of consciousness is to transform this gaping into the active network of actions and relationships which one finds at work in all societies since the beginning of time with ever diversified means, whose present-day media further illustrate their tremendous reach. But the representation, whatever sophistication it attains, always remains a challenge, since it is never definitively assured of its equivalency with the "real." Is it not the condition *par excellence* of our species, of everyone of us, to be split between the desire to embrace Being, in becoming a disciple of the Absolute, and the desire to live the contingencies of existence while becoming Adventure's companion?

Another no less important distinction deserves to be made here, but I will be brief. Unlike the individual, who has a body with which he identifies himself during his lifetime, *society has no body*. This point is even more decisive since our ways of speaking and thinking combine to create an illusion of such a body. Thus the "social body," which is nothing more than a metaphor, has engendered a rich progeny. One speaks without thinking of the "body politic," of a "corporate body," or its "members," body physical or honorary (without anatomical reference!). Following the metaphor, we do not fail to multiply our "faculties," at which universities excel, just as we love to appeal to the "spirit" with which citizens eagerly endow their "nation," if not their "origins," or even their "homes." This opens the field to numerous "grafts" onto our social imagination, always on the watch for the "true" body it lacks.

Representation: Knowledge and the Mirror

Thus does a beginning society, for want of the organic body it lacks, for want of the brain physiologically lacking, tend to create, instead and in place of the absent heart of flesh, *artifacts* apt to *mimic* nature, beginning with the mirror. As a polished surface, first of metal, then quicksilver, the mirror is supposed to reflect light and thereby to produce the image of beings and things. This concise definition ill conceals the prodigious flowering of avatars

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and interpretations to which this invention will give rise.[4] The mirror is more than an object, more than an instrument; it is not limited to the physical phenomenon of the reflection of rays of light; it sets into play a process of re-flexion, from the observer to the image and from the image to the observer. Even when it pretends to yield as innocently as possible, the mirror never restricts itself to a "passive" representation, of which the simplest form would be the simple reflection. Playing on the complexity of imaginary images engendered by the activity of looking, it requires the "work" of interpretation (just as Freud spoke of "dreamwork," or the "work of mourning"), which by analogy one might call the "work of the mirror." In essence, it is a question of deciphering, based on the "manifest" image, the "latent" content produced during the psychic process taking place between the looker and the image at the moment of their integration in the founding-revealing light of the mirror.

As a result, one better understands not only painting, sculpture, and architecture, but also music, theater, and dance, which constitute some of the significant expressions of the vast adventure undertaken by man for millennia to "capture" the real. It is never, we repeat, a question of actual capture. If the prehistoric hunters indeed invented the first technical devices for hunting, they simultaneously invented the symbolic devices for representing the idea they had of the world and of themselves. Thus the painted and incised animals at Lascaux evoke not only, as has long been believed in the name of simplistic realism, the game our ancestors pursued to nourish themselves; on another level they evoked, or invoked, the type of social and religious organization which was their own. As proof we have Leroi-Gourhan's authoritative analyses which make us grasp, first-hand, how what we call "representations" proceed from a double and conjoint elaboration between the "motif" (horse, bison, pony) and the imaginary, which integrates the members of a community.[5] It is this interaction, revealed by what I called the "work of the mirror," which is at the heart of artistic activity's response to the mirror's "project," that is, to the instances that "carry it forward."

Skipping over centuries, we come to one of the most inspiring such instances, the thirst to know everything, the *encyclopedic*

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instance. From the Middle Ages on, allegorical mirrors, such as the *Speculum Majus* of Vincent de Beauvais, began to flower, exposing through writing and illustration the "perfection of the exact and complete vision of the world." Several centuries later, Gutenberg's printing press cleared the way for the gigantic *Encyclopédie* of d'Alembert and Diderot, which seems, by its very giganticism, to set a limit to knowledge and to the ways to gain it. A century or two later, the electron comes to the fore, and we have the *Grand Larousse*, the *Grand Robert*, and the *Encyclopédie Grolier*, which are swallowed up by the twelve or so centimeters of diameter of a CD-ROM, the equivalent of 250,000 pages per disk! This too is a mirror, no less unexceptionable when light takes hold of knowledge in gigabytes (a million characters or signs), which the laser willingly restores through the power of its luminous waves, monochromatic and in phase.

Collective consciousness, while being made up of individual consciousnesses, as we have seen, is not, however, its sum; it always constitutes, we must repeat, a complex natural system. Inversely, individual consciousness, while benefiting from a certain autonomy, always depends to a certain degree on collective consciousness. Ambiguity is the lot of each. Likewise, both anticipate the threat of distancing, which can lead to rupture by means of *representations* which, on the one hand, re-present society and assure its legitimacy, while, on the other, they provide the individual with the means legitimately to get in touch with the social imagination. One might say that every society establishes a "fiduciary" which, in proportion to the reserve of gold backing its currency, guarantees transactions among its members. Language and images are the first to contribute to this, but so are institutions and, in short, all symbols used in a society (including the plaster effigies of Marianne found in all French town halls). In this way the "space" of a society tends to stabilize itself by creating a harmony between collective consciousness and individual consciousness, with representations shaping reality for each of them. This regulation is durable, but neither uniform nor definitive. And thus it changes.

In this manner the beginning of the Renaissance was prefigured in Leonardo da Vinci's assertion that: "The spirit of the painter should be like a mirror," meaning not a simple copy appearances

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but the "mental" imitation which distinguishes the artist. As proof we have the invention of perspective, a new science perfected primarily by Alberti, Brunelleschi, da Vinci, and Piero della Francesca, to represent objects on a flat surface by creating the effect of depth through the reduction of planes with the progressive distancing of objects. In breaking with the bidimensionality of the Middle Ages, painting opens out like a window onto the world from the central point of view hereafter assured to the spectator. Perspective permits, in the manner of God, the embrace of the universe in a single glance. This glance is doubly unexceptionable, since it is the result of both reflected light and the light of the spirit. In other words, this art, which has become so familiar to us, and which subsequently pushed illusion to the point of trompe-d'oeil, at the time required considerable "distortions," as demonstrated by Alberti's terse and exemplary formula: "The painting is a level intersection of the visual plane," which synthesizes the driving principle of this revolution. Thereafter, the logic of geometry provides the visual symbols by which objects are affected. Far from being "natural," *perspective*—and here again we must stress this point—is a *constructed device*, beginning with Alberti's theory, which is in accord with the consciousness and imagination of the time, which substituted religious concepts, based on the sacred, with Humanism, from which all modern thought proceeds.[6]

But the device is far from inflexible. It can give rise, inside the system, to subtle variations. In this manner *anamorphosis* pushes the principles to unexpected results.[7] Here, the subject is no longer represented with the spectator placed right in front, but scientifically, according to the distortions involved in other viewing points. Frontal vision privileges the contemplation of Ideas dear to Plato; *anamorphosis*, drawing inspiration more from the diversity of points of view, is closer to Aristotelian observation. Philosophy is not, as we still too often believe it to be, a matter of concepts alone; it takes shape in *mixed systems* which, on the one hand, project us into linguistic representations, and, on the other, into iconic representations. Both systems act concurrently through re-flexion and retroaction. Every mirror is this double, and the double it engenders multiplies the doubles to infinity in the complex back-and-forth play of glances. In his famous painting *The Ambassadors*,

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Holbein represents two handsome young men who are ecclesiastical power and political power incarnate. At their feet lies a strange form which, when one moves to the required position, turns out to be a hideous skull. The hidden significance of the scene is thus brusquely revealed. On the one hand, perspective roots power in its unconscious self-sufficiency, on the other, *anamorphosis* denounces its vanity through the topological "monster" lurking in the luxuriance of the decor. In this way, through the "mirror" of the painting, a great artist such as Holbein can succeed in suggesting many levels of identity, magnificence and hideousness, not mixed together, but existing side by side.

Another example can be taken from literature. How can we not bring up, as counterpoint to the preceding anecdote, charming Alice addressing her cat, "Oh Kitty! How nice it would be if we could only get through into Looking-glass House!," and then, "Let's pretend the glass has got all soft like gauze, so that we can get through! Why, it's turning into a sort of mist now, I declare! It'll be easy enough to get through ..."[8] And once the threshold is crossed, the thousand and one adventures begin, one more preposterous than the next. The entire work of Lewis Carroll is inscribed, one might say, in the *anamorphosis* that takes the form of *getting through*. In so doing, the writer reveals, with a charm all his own, how the mirror, so often an accomplice to our adult conformities, can become the enchanted site of a child's game. Humor is not only a frame of mind capable of translating the unusual or funny side of things. Much more profoundly, this disposition is what makes the mirror-reflection of common sense yield the metamorphosis of the virtual, thanks to the author's innovative tale and style. It is and will remain a "construct," but with Lewis Carroll "the looking-glass gotten through" is the accomplice of a shared enchantment, one that is unforgettable.

Marcel Duchamp or the Shattered Mirror

Need we recall, by way of contrast, the attitude of Marcel Duchamp, which produced an entirely different type of enchantment? One might take offense, and indeed some have taken great offense, at

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the *Nude Descending a Staircase*. Never had people seen such a figure, dressed in such a fashion, and worst yet, a nude displaying accordion bellows from one step to the next. But Duchamp's originality, as violent as it may be, lies not in his questioning of the content of painting. Essentially it derives from two things which will revolutionize art down to its very foundations. One consists of the invention of "ready made" art. Whether we are talking about the *Bicycle Wheel*, the *Bottle Carrier* or the (too?) famous *Fountain*, the urinal signed Mutt exhibited at the "Salon des Indépendants" in New York in 1917; what counts is less the "scandalous" character of these objects in and of themselves than the attitude of an artist who arrogates to himself the exclusive right to decide what is art and what is not. By resorting to absurd utensils borrowed from day-to-day banality, Duchamp challenges collective consciousness, which up until that point considered art an activity stemming from a long-standing tradition with set notions of criteria, craftsmanship, and taste, which were the only qualities judged by connoisseurs and experts. By taking exception to this "evidence," Duchamp shattered both the mirror and the classical model to pieces. Henceforth, the choice of subject is no more than a privileged status. The roles may change places; the denomination "artistic" is no more than a residue, or at worst, an alibi! Or rather, it's the end of all roles, subjects, and also taste and style. One could never dream of a more radical upheaval in the world of art, which is undoubtedly the reason why Duchamp's influence has lasted for over seventy years.[9] Is it a coincidence that it has also been for about seventy years that our whole world has been in the grips of a radical upheaval?

Yet the most important aspect of Duchamp's work remains to be discovered. That he broke ties with art, the mirror of reality, that he broke with established models, that he broke with the very conditions of the production and the validation of works of art, this is all part of history now. On the other hand, what must be brought to light yet remains for the most part invisible, is the fact that his actions are a reflection of other changes taking place. Just as, we repeat, his "extravagances" overwhelmed the world of art, other "extravagances"—the innovations of every sort that in the past few decades have accelerated their rhythm—have over-

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whelmed our most deeply rooted ways of life and thought. One can thus give credit to Duchamp for having brilliantly foreseen not only artistic revolutions, but, more profoundly, those that would produce the *new devices, mental, scientific and technical*, currently transforming our reality from top to bottom.

In attempting to synthesize the above, I note that social activities manifest themselves everywhere and always according to typical situations I call *topos* (plural *topoi*)[10], by which I mean the ensemble of conditions which appear during the course of operations, taking into account the cultural context of the "operators" as well as that of the observer. For centuries, painting, sculpture, printmaking, and decorative arts constituted *topoi*, which created and continue to create symbols destined to integrate the members of a society among themselves and the world. Rather than searching for definitions, I find it preferable to describe the complexity of situations by focusing on the conduct of the participants in each case, depending on the object that unites them and the means they implement.

It is clear that a painting—let us take the *Mona Lisa* to simplify things—cannot be reduced to any definition one may give to painting, still less to the image multiplied by reproductions, or even to the most detailed biographical account. The essential visit to the Louvre definitely constitutes an entirely different experience. On the one hand, it is rare, if not exceptional, to be alone in the presence of a painting; other visitors are there, too numerous for my liking (or to anyone's liking). But everyone's behavior is basically the same. I get as close as I can to the work; I contemplate the face of the Mona Lisa, her bust, her hands; I lean forward to discover the landscape visible on either side of the figure. I try to grasp the composition, to follow the play of colors in the grips of light and shadow. I search for the effects of balance and counterpoint. Moving around, I vary my viewing angles; I examine certain details; I evoke other works by da Vinci which in my mind's eye I compare to the work in front of me; in short, I put myself *in the position of a lover of painting. This position*, which I intentionally describe by linking the terms by a common trait, corresponds to the ensemble of conditions in which a specific activity manifests itself, and which constitutes the *topos* of all those who, as art lovers, collectors, connoisseurs and critics, adopt an attitude

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and behavior whose common trait is first and foremost to take stock of the artistic quality of the object.

Very different is the task of the auctioneer (I am no longer speaking of the *Mona Lisa*) whose work consists of trotting the works entrusted to him out before the public in order to accomplish, in a minimum amount of time, the greatest number of sales at the highest prices. It is clear that in officiating in this way, in keeping with his duties as auctioneer, it is necessary for him to set aside his personal tastes. In this *detached topos* the most beautiful works of art are reduced to the level of merchandise. The beautiful and the rare are a matter of dollars, on which the Sothebys and Christies pride themselves! The auctioneer who would forget this, giving himself over to personal preferences, would likewise put an end to his career. But the most "commercial" auctioneer (we know of more than one, and they are prestigious) takes up his role of enlightened art lover once again, with all the refinements of a host, as soon as he leaves the auction house and invites his clients and friends to admire the most beautiful pieces of his collection at home.

In schematizing the above, one may assert, to underscore it yet again, that all human activities in their own ways constitute *topoi*, which in no case can be reduced to dictionary definitions. The abstract approach of the civilization of books, which has reigned uncontested for five centuries or so, must give way to a new approach, one that takes into account situations lived in the density of their concrete dynamic. In essence, one must realize that every means of communication, beginning with language, is a *complex device*, which both transforms something but also shapes something—a message, service, or product—just as it shapes those who participate in the workings of the device. For a long time it has been noticed that English, Spanish, French, Italian, in short, that each language has different modes of expression which influence the way people think. This is all the more true when we compare our European languages to Asian languages such as Chinese, Japanese, or Hindi. But if each language, to a certain extent, has its own distinct personality, and preserves it (for how long?), we are also obliged to note that today the media have an almost universal scope, and thus themselves engender almost universal *topoi*, by setting up *fields of communication and experience* for all users.

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A news item printed in a newspaper is presented in a different manner from one that comes across by radio, and still different when we are made aware of it by television. The first refers only to concepts, which convert the abstract act of reading into conditions proper to this act (in the living room, subway, office, bed). The second takes shape through the voice of the reporter and the transistor that can be carried anywhere and listened to while doing other things, which is not possible with reading. The third offers us a multisensorial aggregate, made up of moving and colored images, voices, sounds, even musical accompaniment, which engage us according to the degree of our attention to the screen, which at times we leave to broadcast to itself! Nevertheless, our minds have been shaped for so long for reading, and by it, that we do not doubt for an instant that these three types of news refer, essentially, to the *sole type* of *written* communication. Is this a Western post-war Humanistic illusion?

The radically new fact of our era is indeed that the media, which never cease to become more developed and sophisticated, have conquered the whole world. This statement borders on banality, but, in the absence of such awareness—and by what means?—we risk prolonging anachronistic behaviors. Whatever their origin and traditions, all societies are in effect obliged, at the risk of perishing, to compose with new technologies, and thereby to adopt the *technotopoi* which rule the change in progress. A country without telecommunications is destined to underdevelopment. One has only to think of the distribution of telephones throughout the world! The hyperdense network of rich countries lies in sharp contrast to the scarcely dotted desert of poor countries. Let us recall in passing the example of the automobile. For barely a century the automobile has most changed the physiognomy of the planet more than anything else, as much in cities as in the countryside. Not only has it almost eliminated traditional means of locomotion, it has imposed its code, its signalization and its requirements everywhere. Long vanished, initiation rites have been resuscitated with the driving permit, which allow one to be part of the "initiations" of traffic, which are countless today. To know how to conduct oneself as a citizen of the world remains a utopia, but to know how to drive a car is a necessity.

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Social practices do not escape change. An international collo-
quium, taking place in Dakar or in New York, brings together so-
called international experts from Europe, Asia and Africa. Whether
the subjects are as varied as medicine or economics, agriculture or
industry, solar energy or gas, in general the organization proceeds
in the same fashion: the transportation of the participants by plane
or train, their gathering at the site of the colloquium (if possible at
a hotel likewise of international caliber), an official opening with
an official speech; then the presentation of *papers* under the direc-
tion of a president or a moderator, and then conclusions and a syn-
thesis, all in English, or, when they have the means, with the
assistance of simultaneous translation. There is nothing that resem-
bles a palaver, even if they are in Africa, nothing that evokes a reli-
gious or political ceremony. The colloquium has become a "genre"
which obeys a now classical protocol. It joins newspapers, radio,
and television, which all participate in what I called *techno-topoi*.
Whatever the subject and diversity of the participants in reality, it
is a fact that the role of technology has become indispensable. As
proof, video or visio-conferences would never have seen the light
of day without the contribution of information networks. One
could say the same of all sports competitions, of which the
Olympic Games are the apogee, and whose impact, so well named,
permits millions of telespectators to follow its exploits directly.
Here technology participates in full; it is, perhaps, to continue with
sport's terminology, the most accomplished "athlete." Does it not
create its own performances, which it measures by means of its
own instrument, the digital universal chronometer?

Let us take a quick look at one of the most powerful technolo-
gies, the one that succeeded in replacing the altar with the set, the
wafer with the screen, communion with television.

Television Against the Reality Principle

Not so long ago, one still spoke of the "TV generation" to desig-
nate the children who, unlike their parents, were *born with televi-
sion*. As proof we have the joke according to which American
children have three parents, the father, the mother and the TV set,

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a joke which nobody laughs at today. And with good reason, for television is everywhere, in the living room, the kitchen, the bedroom; everyone watches it, from infants to grandparents, for hours, if not whole days, year after year. One can just barely still imagine that humans used to live *without* television (poor souls!). Just barely can one remember that once (ten years ago!) hotels prided themselves in offering their guests quiet rooms, with a view. Today, closed shutters, set turned on, the television takes hold of the traveler, never to let him go.

And all this in the name of pleasure. For it is indeed the *pleasure principle*, as Freud defined it, which motivates us[11] in the *sitcoms* that make us laugh, the countless games that entertain us, the films that make us cry, and even in the *reality shows*, which are supposed to make us think. A considerable advantage of the television *topoi* is that everything is presented by proxy. Seated or lying in front of their sets, the television viewers benefit from a participation which, free of all, and all effort, fortifies the pleasure principle to the point of confusing it with our very existence. Even televised news programs encourage this mixture of perception and dream, as if our unconscious or our semiconscious had periodic meetings with them, so that the theater of simulacrum might enact, under the tutelage of the men and women who present the shows as masters of catharsis, the purging of our day-to-day anxieties. The apparitions link together with one another, without our feeling the need or the necessity to confront them, or even to refer them to external reality.

Television thus has the astounding privilege of removing us from the *reality principle*, as manifest, not without pain, in the resistance imposed on us by the outside world. In this way, very early on, the feeling of *Hilflosigkeit* (abandon, helplessness) is produced in the young child, and he will attempt to remedy it throughout his life, to recover the paths of the original pleasure principle.[12] One thus understands why and how television has become so important in our world. In some way it perpetuates the role of the Mother. Always present, always available, always near, it watches over us ceaselessly, brushing aside difficulties, causing us to forget our problems and preoccupations, now and forever forestalling any confrontation with external reality. It legitimizes

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our cowardice when, revolted by what we see, we would like to fly to the assistance of the victims; and we know that our revulsion will end when it is time to pass to the next new item. Such is the mystery of "technomotherhood" which never ceases enveloping us, and which has been perfected by *zapping*, by multiplying the mass-media "caresses" to the point of transforming the set into an instrument of permanent "massage." Or is it just a motherhood ever renewed?

But there is another phenomenon, even less noticeable, at the very heart of the *topos* engendered by television. To explain the formation of ideas in a child's mind, people continue to go back, not without reason, to Piaget's genetic epistemology, with the subsequent "correctives" brought to it by a number of psychologists. But there is a new factor which, to my mind, changes the very foundation of the theory. Whereas children always until yesterday used to manipulate various materials in order to construct ideas of objects, space, and displacement, which progressively opened the paths of reason for them, today they most often shun these practices to give themselves over to three to six hours of television each day, not counting the time they devote to electronic games. It is banal to assert this fact. Yet what it means is quite a different matter. Aside from the usual complaints, have people really considered the radically new nature of our children's experiences? Certainly the objects that surround us and them—tables, chairs, doors, accessories of all kinds—exert their material resistance as before. One gets just as hurt today as yesterday when one bumps into a dresser or the rung of a ladder. But the essential lies elsewhere: it lies in the fact that the greatest part of the child's experience takes place in front of the television, with the television, "inside" the television, one should almost say, whose endless concatenation of effigies never offers any material resistance, properly speaking. As so many cartoons, Westerns, police films, and "disaster" films show, the most frenzied chases, the most spectacular falls, the most murderous collisions remain without material effect on the viewer. This is what I call the *principle of media reality*, which replaces the direct first-hand material perception of objects with the immaterial perception of second-hand simulacrum. Hence the double difficulty encountered by educators today: on the one

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hand, they continue to use the structures and the contents of school *without television*, warranted by a long tradition and sanctioned by exams and diplomas; on the other hand, they cannot *not* take television images into account, for they constitute the complicitous happiness of the pupils once they return home. Outside of manual experience, which is becoming more and more rare, the *topos* of *writing/reading* becomes difficult to maintain. Television sweeps everything away in a *generalized ephemeralization*. Ceasing to evoke the idea of a fixed symbol on a support, televised images melt into the continual flux of emissions in which we literally swim. At this point I ask myself if our consciousness, after four or five millennia of Logos and Discourse, is not about to recover, according to the hypothesis of Julian James, the *bicameral mind* of yesteryear, "in which [the author] shows us how ancient peoples … could not 'think,' as we do today, and therefore were not conscious. Unable to introspect, they experienced auditory hallucinations—voices of gods, actually heard as in the *Old Testament* or the *Iliad*—which, coming from the brain's right hemisphere, told a person what to do in circumstances of novelty or stress. This ancient mentality is called the bicameral mind."[13] Nevertheless, our ways of speaking of Television, Radio, the Press, the State, the Computer, Democracy, (Progress, at one time), World Order, the United Nations, do they not reveal, beyond the abstractions they represent, the types of powers with which we reckon and must reckon? Just as we reckon and must reckon with other powers such as *France, Germany, England, Italy, India, Japan*, in short, all the *Countries in the World*, which periodically engage in single combat under the gaze of the demi-gods Soccer, Tennis, Rugby, Boxing, Hockey, Swimming, Judo, and Fencing, just long enough for their heroes to shine by the light of an Olympic flame beneath the roars of Advertising, which stifle the far-off voice of *Nemesis*.

And inside us the long closed doors of *thumos* open wide. Among the Greeks the term meant the ensemble of interior sensations, most often violent, provoked by situations of crisis, such as preparations for combat: heart beating wildly, blood vessels dilated, blushing and hot-flashes, cries and gestures, in short, the physiological and psychological "disorder" which prevails in the sound and furor of stadium and screen. Television (re)kindles the

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seat of our emotions. The *logos* melts under the assault of the *thumos*. Does the distancing put into play by consciousness return to its original chaos, or does it open into new expressions, which inaugurate (and why not?) a *technological Logos*?

Prediction of the Real and Stimulation by Models

The evolution of the concept of "model" is revealing. For a long time the term has designated, and still continues to designate, *that which merits being imitated*. Situated in the order of values, its frame of reference is both ethical and aesthetic. Since then "model" has been applied, in technical usage, to designate an object to be represented, reproduced, or patented, becoming progressively synonymous with *mock-up*, the construction of an object or machine on a reduced scale. But the meaning we require here is equivalent to its more recent use to designate the simplified representation of a system or a process to which scholars and technicians resort through the combined resources of mathematics and data processing systems. In this case, it is essentially an approximation aiming to establish an ever more refined approach which, when confronted with experience, allows each application to improve both the results and the model. We recall the models of the atom—at first a miniature solar system—which, from version to version, continued to present endless models of matter; or the theory of the Big Bang, the standard model of the universe, whose confirmations were numerous, without ever succeeding definitively in establishing its validity.

In this sense of the meaning "model," tied to technological development, an ensemble of conditions or a new *topos* is revealed. Not only can one elaborate the theoretical image of a phenomenon, but one can visualize it and follow its evolution on the screen. At the extreme, it is as if the simulation can almost attain reality, and in any case come ever closer to it. A twofold phenomenon ensues, practically non-existent beforehand, and which is of capital importance to us today: on the one hand, we see *a* change in our relationship to time; and on the other, a change in our relationship to consciousness.

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Indeed, if one remains in the situation (or the *topos*) of the mirror-model, which has prevailed for so long, the relationship to the real is one of conformity, which implies on all levels an ensemble of bound constraints, which society imposes on its members through normative and prescriptive means.[14] In order for the new meaning of "model" to manifest itself, the *constraints of the model-mirror, the mirror order, must be unbound*, so that "captive" representation can emerge and enter the cycle of ceaselessly renewed approximations which the implementation keeps ever open and flexible.

On the other hand, the change in disposition toward consciousness is no less sensitive. Whereas the "model" inspires us to retrieve the archetype, or paragon, the new meaning implies that phenomena can to some degree be seized in their very movements. From that point on we are drawn into favoring the consciousness to come. The *disposition to anticipate* becomes stronger and stronger, just as the means become ever more sophisticated. The "model" goes from the paragon it once was and the mirror it extended, to an instrument of foreseeing, an *instrument of prediction*. Representations, which correspond to our certitudes, give way to verifiable interrogations through successive simulations. Unbeknownst to itself, science tends to steer away from the priority of consciousness to ally itself with technology, which multiplies the performances. Becoming more and more a *techno-science*, moves into the field of operationality, where research puts itself at the service of businesses which compete to corner the market. Business itself becomes a privileged model, if not *the* model, which combines knowledge, techniques and innovations with productivity, competition and profitability (not to mention aggression!). Business establishes its rules, its functioning, and its means of production everywhere, and it does not hesitate to call them "philosophy," even the excesses of certain advertisements undaunted by ignominy.

It is thus hardly by chance that the computer was born with the new *topos*. Indeed the computer excels at reducing the most complex data into ever more rapid calculations, resolving all problems (or almost all), from the planning of military operations (during the Gulf War, there were over 1,000 aerial raids on some days)[15] to the comfort of washing machines which the Japanese recently

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endowed with the refinements of hazy logic. Simulations of flight are already current fare; soon the stars, after the "stage" of the moon, will be within arm's reach. One can "play" with eveything, as if it were "for real." Governments, the military, economists, and experts in all fields do not deny themselves their use, though this does have its ups and downs, as when for example the computers break down, or, no less redoubtably, when they decide themselves to take the initiative. One example is the famous crash of 1987, when the stock market software threw the brokers into disarray. An irony of fate, an irony of technology, the computers had, according to the same principles of simulation, worked together the orders for combined sales and purchases too well! One does not dare to imagine the outcome of a war carried out entirely through computers! Hence the (re)discovery of a certain human powerlessness, a margin of error, and inefficiency or diminished efficiency, seem paradoxically to favor the form or the degree of *contingency* men and things need to palliate the "necessity" of calculations which could become transformed into destiny. Can the simulation become confused with the predictable? One does not warp our original gap with impunity.

After millennia of bipedism, no one is surprised either at taking a train or an automobile, or even a plane (or should we say that we are not surprised to be "taken" by them?). We are almost at the point of changing organs on command. Hearts and livers emigrate, thereby combining different countries, continents, donors, recipients, and destinations. Lungs and kidneys are put into the freezers already occupied by embryos, some of which, as absurd as this may seem, have already been there for years (the drama of "old" embryos has begun!) Even corpses have become "reserves" for the living in need! Organ banks (so well-named) use *safes*, surgeons in white smocks, and even organ brokers, whose practices are at times near criminal. But at the same time new therapeutics to help with yesterday's incurable illnesses are born. One by one, genes are hunted down. The genetic lottery loses its allegiance to chance. A new "justice"—but should it be called "justice"?—is emerging in the guise of "predictive medicine" with the helping of the chart we are in the process of erecting of the human genome. Without giving too many examples, we can cite *en masse* the

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advent of new materials, or *composites*, such as artificial retinas, and soon artificial skin, and already, to some extent, blood. The distinction between the artificial and the natural becomes ever more hazy, just as the ensemble of our categories and definitions becomes ever more vague.

What is in fact happening before our eyes, and is not easy either to recognize or to follow, *is that a certain idea of reality, such as has been established for a long time, is no longer tenable*. More seriously, our ways and means of conceiving an idea of reality are thrown off track. It is not only a question of changing of definition or content: it is a question of changing a system, in its conception, its principles, and its modes of functioning. Science itself has concluded, as a supreme paradox, that it is no longer possible to agree upon *a scientific idea* of reality. The quest for the Holy Grail has been replaced by the quest for the "Theory of the Great Unification." We know the outcome of the first; what will be that of the second? The Big Bang itself, the standard version, means nothing if it is not unanimous. The knights of science fight under different banners. Some do not hesitate to deny their peers the right to speak sanely of a "beginning," except to give to religious faith. But jousts are no longer fashionable, even if aggression lives on, with or without armor, during the congresses and colloquia that have replaced them. Is it not the same process of fundamental questioning that one sees at work in religions, and which produces, aside from the flourishing of sects, the very thing that we call "fundamentalism"? The conflicts that never cease multiplying and worsening bear witness to the fact that unique religious reality has had its day, which tempers nothing, quite the contrary, of the zeal of those who claim to find and impose it in the "pure and hard" forms of "integralism."[16] Neither have political regimes been able to escape this general questioning. Communism has had its day, but, even if the statues of Marx and Lenin have been overturned, Marx and Lenin are far from being dead. Liberalism, especially when it is confused with an unbridled market economy is not the solution that will establish peace, justice and prosperity on this earth. In any case, the Manicheanism, religious or political, which sets "good" nations against "bad" empires seems to be losing its edge, in essence at least, in spite of the exacerbations to which it still gives rise a bit everywhere.

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René Berger

The World Being Born:
from Technology to "Techno-urgy"

One can thus assert, and a number of signs confirm it, that a *certain* world is nearing its end. It would be a mistake or an illusion to proclaim that it's all over *for* the world. Such boisterous announcements belong to the same rhetoric as those they denounce. All "catastrophism" betrays a kind of complacency toward the media, whose complicity is explained by the revenues that become all the more considerable as either one increases. It would, however, be just as incorrect, we must insist, to define, and more so to predict, what will constitute the new reality, which is what is called for, even demanded, by all those whom the acceleration of technological development frightens, or by those, at the other extreme, who make themselves the devoted followers of a triumphant technology. Without claiming to judge or take sides, there is at least a lesson to be learned. The oppositions to which one continues to yield—progress vs decline, optimism vs pessimism, innovation vs tradition, artificial vs natural, man vs machine—reveal themselves more and more to be factitious, or at least irrelevant. They belong in fact to an epoch during which *culture* was dominated by *language*, itself dominated by *concepts*, which are doubly stabilizers of both language and culture. In other words, if it is true that our world, as stable as it was for a long time, at least during long periods, has been dominated for more than a century by *movement*, which has stretched progressively over the whole world, it is time to see that such oppositions, still valid yesterday according to the modalities of languages and cultures in which they were used, have ceased to have currency.

If words have long been supposed to designate things, to the point that the two have long become confused, we are discovering today that words are, and have always been, *founding devices*: devices because they have always been, from the beginning, as linguists have abundantly demonstrated, the instruments and mechanisms that have as their function, starting with the agreed upon signs and symbols, to establish the means needed by the members of a community to communicate with one another. In

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enlarging the scope of this observation, one might say that *all tech-niques are formed and proceed in general according to the same model*: in every case it is a matter of inventing a coherent system of material and symbolic elements, whose implementation ensures one or two determined functions aimed at best responding to a deter-mined objective and need. And just as language constructs a spe-cific device destined to establish communication among men, so architecture constructs the specific device destined to ensure pro-tection for us against inclemencies, and then a dwelling—beyond this, it reflects our places in society: palaces, chateaux, residences for the powerful and wealthy, subsidized housing, low income housing, not to mention the shantytowns and slums for the under-privileged, or, on the opposite end of the spectrum, the monu-ments destined to magnify the collective memory: temples, triumphal arches, mausoleums.

That leaves the more enigmatic term, "founding," which I asso-ciated with the term "device." Just as all techniques proceed, as we have seen, according to the same model (materials, structure, functioning, objective, need), so all techniques contain—and this is the basis of the theory I'm advancing —an element that is hard to see and is overlooked, or from which one turns away, because at first it seems foreign to the system. Nevertheless, the bringing to light of this element constitutes a decisive discovery, whose influence is all our gain. An example will allow for a better under-standing of my point. One might call it the *paradox of the wheel*—although some might be surprised that I use the term paradox to describe so simple, so widespread an instrument, about which the dictionary tell us, "in turning around a circular axis, the wheel permits the support of a vehicle or the bearing of a mechanical organ (Hachette)." And yet! … "In Vera Cruz, Mexico, before the eighth century, children's games, in particular wooden dogs, were mounted on four wheels turning around two axles," recounts Bertrand Gille in his monumental *Histoire des techniques*. But herein lies the paradox, at least in its first aspect: "In spite of this," observes the author, "the wheel was never utilized by the two Pre-Columbian American civilizations." As for the second aspect of the paradox, he states it in the following terms: "One immediately draws the important conclusions: no pullies, winches, lifting

machines, no lathes, such as there might have been, no ground vehicles, nor, of course, any of what one can make of the wheel: the screw, the fly-wheel, gearing, reduction ratios, the exploitation of hydraulic or wind energy."[17] Anticipating the facile criticism of underdevelopment, Bertrand Gille rightly insists on the fact that Pre-Columbiam America attained as remarkable a degree of civilization as Europe, but one which involved different choices and orientations. No technique thus exists abstractly, even less in isolation. Just like ideas, concepts, feelings, figurative or mental images, techniques are endowed with a *synergetic founding power*. At the same time that they are devices capable of making something exist and function, they are also capable of combining with the other forces at work in the society to create original structures. Transportation using horses, ships, windmills, and steam shaped different civilizations up until the advent of the industrial society, which is in the very process of changing today.

This is because new technologies, stimulated by electronics, are the bearers of a "revolution" which is itself new. It is all taking place, in fact, as if the *homo sapiens*, after having moored his body to the transmortal "social body" by means of the symbols and techniques he invented over the course of the millennia, were today contriving, or attempting to contrive, beyond the "social body," to merge his body with technology, by means of a "techno-logical body," which should rather be called "techno-urgy."[18] This is not merely a linguistic sleight of hand, or yet another neologism. But how can we not see that the term "technology" (etymologically, discourse on technique), if it indeed keeps track of the conditions of the language, as it has been legitimate for it to do for a long time, does not take into account the *sui generis* power of action of techniques, which has become preponderant today. Hence the suffix *-urgy* (from the Greek *ergon*, once *wergon*; cf. the German *Werk*, or the English *work*, to act upon). Once compatible with "stable" societies, societies at least ruled by a stable trend, systems of representation which have for so long obeyed the "project" of the mirror, the reflection and model of the reality-logos, are now being shed, in a *process of trans-representations*, just as "reality," or the images one used to have of it, compatible, we repeat, with "stable" societies, societies at least ruled by a stable

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trend—is shed in a process of *trans-reality*, of *reality* (realities) in the process of becoming. The problem is not to establish new definitions, but to come to terms with the *techno-urgical movement*, which is restructuring our theories, our techniques, our practices—in short, the whole of society.

For a long time now, Prometheus' eagle has lost its beak and talons. Nuclear fusion's purpose is to plumb the fire of the heavens to draw from it an energy that will be inexhaustible until the end of time. The temples of Zeus have been transported to CERN in Geneva, and the Tevatron of Fermilab in Chicago. The oracles have left the oak trees of Dodona and the shadows of Delphi. They now issue from the 27 underground kilometers of the LEP in CERN, in the 85 projected kilometers of the SSC (Superconducting Super Collider) in the United States (which Congress has now stopped). And now the ITER is emerging, the most ambitious international project involving the United States, Japan, the Federation of Russia, the European Community, plus Switzerland and Sweden. In its mature phase, around the year 2050, commercialized nuclear fusion will be able to respond to the needs of a population that will have doubled, and whose consumption of energy will have tripled. The problem is not naively to applaud such performances, nor such "predictions." But how can one intervene if one continues to rely on the "distinguished" ignorance of the Humanists of the *arrière-garde*? Let us be lucid about this: *the era of techno-topoi has begun.* It has been a long time since Faust was put back in the warehouse of romantic accessories together with his confrère, the sorcerer's apprentice, but they are periodically brought back out to feed the alarmist rhetoric of official discourse. As is even Nietzsche's cry announcing the end of God, which is no longer in fashion. Instead of searching for echoes of an bygone epoch, or giving oneself over to nostalgia, it is better to yield to the obvious, and *take the initiative*. The time is over for secular practices based on a Reality held up as *the* Model, of which the mirror and its avatars have for centuries enclosed the myriad reflections. Even while remaining, just like our far-off ancestors, ever enclosed in a mortal body, we never cease to externalize ourselves in all directions, thanks to machines for driving, flying and diving through space and time, through tradition and innovation,

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through the real and the virtual. Even while remaining moored to our brains in their modest cranial abodes, we never cease to branch out into the vast flows innervated by ever vaster, more powerful networks. Rockets and probes have already reached the frontiers of the solar system. A universe of open roads? A universe of open lives? Is a new stage of Evolution under way? Countless are the species which have swarmed together over the millennia; countless those that have perished or become transformed. More vulnerable than all other animal species, men, who emerged belatedly, invented ways to remedy their weakness and in organizing themselves into societies by means of tools and symbols. And so culture was born, which, by removing men in part from their biological destiny, inserted them in the dimension of *history*. And successive civilizations shaped events according to the model of their mirror, which in turn shapes the faces of peoples, empires, cities, states and nations. Mirror, memory and history have been linked together for centuries. But now *technogenesis*, by fusing symbolism and technology, overflows into the secular model. Am I mistaken or is it the advent of the era of *techno-urgy*, of which the ITER project, directly grafted onto the sun, is more than a utopia, more than a superenterprise? Initials and acronym, does not ITER designate the path of post-history?[19]

Translated by Sophie Hawkes

Notes

1. Let us remember that the *Cours de linguistique générale* was first given by Ferdinand de Saussure at the University of Geneva, in 1906-1907, 1908-1909, and 1910-1911, and that the work published under the same title is the result of the students' notes and the synthesizing work of Charles Bally and Albert Séchehaye, who published the *Cours* for the first time in 1915. The edition to which I refer is that published by Payot (Paris, 1965). The quotes have been translated from those on pp. 25, 30 and 31.
2. A distinction between *two* consciousnesses is incorrect; for this reason I have had recourse to the idea of *levels* of consciousness. It is the difficulties of language, a point to which I shall return, which forces me to make this compro-

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mise. Please note as well that I use "social consciousness" and "collective consciousness" as synonyms, with the nuance that the first term emphasizes the contract and the code, while the second emphasizes the *exercise* of each one.

3. Consciousness certainly covers the ensemble of living spaces, which it manifests among the micro-organisms in the most "humble" forms of retractility, or the hyper-refined ones of literature and painting, as with a Proust or a Kandinsky. Regarding the advent of consciousness in humanity, the reader will be interested in the paradoxical theses of J. Jaynes, *The Origin of Consciousness in the Breakdown of the Bicameral Mind*, (Boston, 1976).

4. See Jurgis Baltrusaitis, *Le Miroir* (Paris, 1978); L. de Freitas. *515, Le Lieu du miroir, Art et numérologie* (Paris, 1993).

5. André Leroi-Gourhan, *Préhistoire de l'art occidental* (Paris, 1975).

6. See Erwin Panofsky, *La Perspective comme forme symbolique* (Paris, 1975).

7. Jurgis Baltrusaitis, *op. cit.*, 9.

8. Lewis Carroll, *Through the Looking Glass* (New York, 1963).

9. In 1993, in the Palazzo Grassi in Venice, a vast Duchamp retrospective took place, which echoed the one organized in Paris in 1977 on the occasion of the opening of the Centre Beaubourg. These two events and two places say a great deal about Duchamp's significance and diffusion.

10. *Topos* (plural *topoi*) means, in Greek, *place*. With Aristotle, the *topica* designates the study of places, or the method of argumentation which allows for the imagining of different points of view which one can take on a problem one is called upon to debate (*Topica* is the oldest of the treatises which make up Aristotle's *Organon*) In Freud, one can clearly distinguish *two topica*: the first, according to which the psychic places are the unconscious, the preconscious, and the conscious; the second, which is based on the id, the ego and the superego. For me, the *topos* designates the ensemble of places and practices which characterize the activities developing both from determined frameworks and procedures. The importance I attribute to technique, and the role it more and more plays in almost all activities, encourages me to group them under the term *techno-topoi*. Even if the term is rather inelegant, it has the merit to avoid laborious circumlocutions, which are always approximative. In almost brutally flaunting its status as neologism, it intends to reveal the undoubtedly most marked fact of our times, that is, *that there is no longer anything, or almost anything, that is not produced without the intervention of one or many techniques,* and thus that they are now the constituents of our field of action that extends over the entire planet and beyond.

11. According to Freud, the *pleasure principle* is that which acts upon our mental functioning with the aim of procuring pleasure and avoiding or releasing all unpleasant tension. The second principle, to which it is coupled, is the *reality principle*, according to which the search for satisfacton must follow the twisted paths imposed by obstacles on the outside world. Since the pleasure principle never disappears, it is reborn over the course of a lifetime through trials while creating fantasies and hallucinations. See the *Vocabulaire de la psychanalyse* (Paris, 1968).

12. *Hilflosigkeit* is, according to Freud, *the state of distress* of the infant who, depending entirely on another for the satisfaction of his needs, feels powerless to accomplish the specific action needed to put an end to his internal tensions. For

the adult, the state of distress is the prototype of the traumatic situation gener-
ating anxiety. See *ibid*.

13. J. Janes, *op. cit.*

14. This observation is of general import. Thus, when political, social, economic,
cultural, or even scientific powers tend to assert themselves, they reduce the
political, social, economic, cultural, or even scientific space to a double surveil-
lance, one that is both panoptic and panoramic. Re-presentation is replaced by
re-pression. The signs belonging to exchanges become atrophied.
Totalitarianism is nothing more than power which confuses order with reality.
This tendency is found, we are not afraid to repeat it, on political, social, eco-
nomic, cultural, and even scientific levels. It has given rise to too many "suc-
cesses" for there to be a need to be more specific.

15. The Gulf War, which everyone was able to follow on television, became the
subject of a CD-ROM published by *Time* in 1991, entitled, *Desert Storm, The War
in the Persian Gulf, The First Draft of History*.

16. *Fundamentalism* refers to the tendency of certain religious environments that
seek to make a literal interpretation of dogma respectable. *Integralism* desig-
nates the attitude of those who want to maintain the doctrinal system in its
integrity. The two terms are practically synonomous, even if they take on differ-
ent connotations according to the specific religious and political circumstances.
One speaks of Catholic integralism and Iranian or Egyptian fundamentalism.

17. B. Gille. *Histoire des techniques*, Encyclopédie de la Pléiade (Paris, 1968), 474.

18. It was in *La mutation des signes*, published in 1972 by Denoël, that I first drew
attention to the necessary revision of suffixes in -logy, at least in certain cases,
such as *semiurgy* in place of *semiology*. The latter is reduced to the study of
signs; semiurgy is interested in their production (*the importance of the media*) and
in the new meaning this entails, and of which advertisement, among others, is
one of the great suppliers.

19. By "technogenesis" I do not mean the genesis of techniques, as conceived of by
Bertrand Gille in the above mentioned work, but the combined evolution of
man and machines, in the spirit of G. Simondon, *Du mode d'existence des objets
techniques* (Paris, 1958).