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Open Sky



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the all too predictable development of cybernetic love. Denouncing such interactive practices as a 'catastrophe for love', the Roman contingent noted that the sex industry now offers lovers '*an illusory and artificial space, an easy way out of people's inability to deal with each other responsibly*', and that the best of all possible worlds of the remote consummation of sex with one or more partners is never anything but a denial of human coupling, being no longer merely an accident of marriage, like adultery or divorce, but a denial of the very reality of the 'act of the flesh' and so of true knowledge of the other for, in biblical terms, *to know the other is to love him*.¹⁴

As we have seen, the 'information revolution' that has today superseded the revolution in industrial manufacturing is not without danger, for the damage done by progress in **interactivity** may well be as harmful in the future as that done by **radioactivity**. The 'computer bomb' previously denounced by Einstein will shortly necessitate a new type of *deterrence*: no longer military and nuclear, as it had to be when the major danger was the 'atomic bomb', but this time political and societal. Unless social disintegration has already entered an irreversible phase, with the decline in the nuclear family and the boom in the population unit of the **single-parent**.

ESCAPE VELOCITY

'The Earth is our mother, the Sky is our father.'

'Localization is pitiless,' the traveller Victor Segalen once remarked.¹ Pitiless, yes, like the here and now of a fact. But tomorrow, with the spread of long-distance interaction, it will become *pitiful*.

The resistance of distances having finally ceased, the world's expanse will lay down its arms, once known as duration, extension and horizon.

'The Earth teaches us a lot more about ourselves than all the books in the world, *because it resists us*. Man only finds himself when he measures himself against an obstacle,' noted the aviator Saint-Exupéry. The Earth, and the moon too, from the moment man set foot on it.

Gradually to break down all resistance, all dependence on the local, to wear down the opposition of duration and of extension, not only with regard to the terrestrial horizon but also to the circumterrestrial altitude of our natural satellite: the goal of science and technology has indeed now been attained. To eradicate the gap, to put an end to the scandal of the interval of space and time that used to separate man so unacceptably from his objective: all this is well on the way to being achieved. But at what cost? Surely at the cost of making pitiful, pitiful for all time, not only all those countries crossed in near total indifference, but the world, *the space-world*.

Conqueror of the length that drags, the passenger of the communications vehicle has eliminated one by one the obstacles that none the less allowed him to exist here and now in motion.² From that moment, he not only pollutes nature but also its grandeur, its life-size magnitude.

If the **object** is what is thrown in front of us – *ob-jactus* – then it is inseparable from the *traject* or *path* (journey) and its headlong rush, visual perspective being accompanied for the **subject** by a temporal perspective which our sciences, our technosciences of communication have not stopped shifting, endlessly speeding up the image at the risk of shortly sparking off an accident in this *traffic flow of the real* which all the signs already indicate will be unprecedented.

Since the philosophers of Antiquity, whom modern physicists have proved right, we have known from experience that *time is the form of matter in motion*.³ But what seems to have been forgotten is that if time is not an 'independent incorporeal', it immediately introduces the necessity of a new figure for the accident: 'a particular accident of a number of states which are themselves accidents'.⁴

In other words, and still according to Epicurus, *time is the accident to end all accidents*, for we associate it with night and day and their component parts and similarly with feelings and their absence, motion and rest, deeming any accident in these to be called *Time*.⁵

To better size up the 'temporal catastrophe' which the events of this *fin de siècle* are not managing to cover up so very well at the moment, let us hear this time not from a great traveller or aviator, but from one of the astronauts involved in man's first steps on the moon, Buzz Aldrin: 'The Eagle has just landed, *the lunar module is perfectly still and that's a very weird sensation*. For me, a space flight is synonymous with movement. *But the module isn't moving, as though it were planted here from the beginning of time*.'⁶

It is indeed a matter of a 'beginning', the beginning not only of the conquest of the otherworld of extra-planetary space alone, but *another beginning of time*. This sudden immobility, this forced and

paradoxical rest of non-motion in the space and time of another planet are literally without precedent: lunar time is no longer the same as the earth's; this time split, revealed to the astronauts by the very particular inertia of the night star, already offers them – and them alone – a glimpse of the interference of *lived time* with *astronomic time*, much more than with the *local time* of a lunar region so aptly named: *Tranquillity Base*.

Unable to get their bearings within the expanse of this *terra incognita*, the astronauts are not so much *on the moon* as in the gravitational inertia of a *fixed point*, without *spatial* reference and without *temporal* precedence, each one of them having tested for himself *de facto* **Zeno's** paradox: *the paradox of the immobility of a path*.

Suddenly what is 'thrown in front of them' is an **object**; only, an object without parallel. Mankind's objective since the beginnings of astronomical observation is finally attained: the visual perspective of the Quattrocento, as well as that offered by Galileo's telescope, are outdistanced, outmoded by the incomparable emergence of a new *temporal perspective*.

Since the 'path' (improperly named the conquest of space) has finally freed itself from the reference axis of our native Earth, it ends up finding a completely separate space between the **subject** and the **object**, extra-worldly trajectory slipping in beside ordinary subjectivity and objectivity.

And so the target attained by the arrow of the Apollo 11 mission is not so much Earth's satellite, 'the moon', as the pathway itself.

The being of the path of the movement involved in the conquest of space finally established its credentials in that very peculiar inertia of the Sea of Tranquillity.

But to better grasp the importance of this historic accident, of the telescoping achieved by man's moon landing, which extends to the otherworld Saint-Exupéry's claim that 'the Earth teaches us *a lot more* than all the books in the world', we need to go back three

centuries, to the exact moment when geology discovered the *deep time* of the very density of our planet.

As Paolo Rossi so aptly puts it in his essay, *The Dark Abyss of Time*, 'Men in Hooke's times had a past of six thousand years; those of Kant's times were conscious of a past of millions of years.'⁷

This sudden overtaking of history, this plunge into the mists of time that happens at the end of the seventeenth century could in fact be compared with the leap into the dark of a sidereal expanse that was to culminate, at the end of this twentieth century, in the landing of man on the moon.

In that distant age, which corresponds more or less to the beginning of the 'Age of Enlightenment', the discovery of the immensity of time must certainly have seemed a truly major event, but I think it is going a bit far to say, as some do, that 'we cannot hope to match its import again', at the very moment when we are witnessing the liberation of time's arrow, the arrow of a universal time now experienced, lived, by 'extra-worldly' voyagers like Aldrin, Armstrong and a handful of others. But also, more especially, the emergence of a *global time* that may well dispense with the concrete importance of the *local time* of geography that once made history.⁸

But before we ask ourselves what is, and especially what will in the near future be, *the lack of depth of the present*, in an age of now universal communications, we should, I think, reconsider this gradual awareness of a geological layer *without memory*, as well as the breakdown, the telluric collapse, of knowledge of *the depth of the past*.

Towards the end of the seventeenth century, then, the idea arises, stemming from the new study of stratigraphy, that geology contains a hidden perspective and that this is to be found *everywhere beneath our feet* cropping up, erupting, here and there, through certain tectonic shifts, sometimes revealing above ground the mass of a time without memory. It is a safe bet that at the time this awareness, soon universally shared, must have considerably reinforced the very

notion of a fundamental localization, the *hic et nunc* of a growing materialism.

To find yourselves gathered together, here and now, directly above a lithospheric mantle concealing millions of *matter-years* certainly did not do anything to diminish the value of 'nature' or of its grandeur, as would the later discovery of those billions of *light-years* that separate us, so they say, from the accident that gave birth to time.

'Exoticism is everything that is different,' according to Victor Segalen, that unrepentant traveller, who sized up every locality mercilessly.

I think we can say in this regard that the discovery of the **time-matter** that serves as a basis for the experience of motion and of being must, with the growth of self-awareness, have firmly grounded 'individualism', that fixed point of inertia that once justified every process of settling down; whereas, at the beginning of the twentieth century, *a contrario*, with Einstein, Hubble and Wegener, *the expansion of the Universe* and the sudden *continental drift* for their part highlighted the importance of exoticism, **time-light** making us suddenly forget both the extent and the mass of the time depth of our native habitat.

So we might note that if the emergence of the *deep time* of matter (geology) is fundamentally *endotic*, the *universal time* of light (cosmology) is *exotic*, inscribed in a dilatation phenomenon that endlessly renews our spatio-temporal references, since, as Stephen Hawking explains, 'In relativity, there were already several space-time curves.'

But in both these cases of historical awareness, what emerges, what crops up is no longer just a spatial and indeed *material* catastrophism, that of tellurism; it is a temporal and *immaterial* catastrophism, that of cosmic expansion.

Actually, if the **accident** is solely *what occurs* and not, like **substance**, *what is*, then the more the local time of history passes and fades, the more its accidental character is revealed, the past few

centuries bringing 'to light' the phases of this temporal apocalypse whose probability Epicurus once pointed out to us.

The *cyclical* time of the world's origins and the *linear* time (the sagittal time of time's arrow) of a chronological history would then be superseded by a *spherical* time, the 'dromospherical' time of light (or of its cone, if you prefer) overtaking in the near future the old circle of bygone centuries.

Only, what this cleverly skirts round, thereby promoting some **global** time, is quite simply the **local** time of a history acted out on the surface of a planet within the very particular alternation of terrestrial night and day, under the influence of the specific gravity of one star among many.

After all the carrying on about the sudden depth of geological time beyond the depth of the Mosaic chronology of the Judaeo-Christian scriptures, how can we take this sudden amplification of time beyond the eternal return of the same without some reservations?

Already the two times of the 'line' and the 'cycle', by their very division, posed a certain number of particularly arduous stereoscopic questions for philosophy. But this new 'third dimension' of our old fourth dimension of time comes back down to asking ourselves *what is left* of nature as well as what remains of past magnitude.

Must we 'have pity on the world' from now on, as ecology suggests we should? Beg for mercy for its pathetic expanse?

If localization, restriction to a particular place, has suddenly become so pitiful for the immobile armchair navigator of this waning millennium, does this really mean we must now have pity on a *real space* that has already been discredited to the sole advantage of the *real time* of instantaneous exchanges or, on the contrary, hold our ground against such discrimination?

'All mortal greatness is but disease,' declared Herman Melville.⁹ But when such greatness is no longer that of a proud sea captain but of a science without a conscience, *what disease are we talking about?*

What will be left tomorrow of the last 'surface records' of geography as we know it or of the second dimension of geometry if this new 'flood', the forecast temporal catastrophe, further intensifies the catastrophe in geological space?

After the *original accident* of continental immersion in that fluid mechanics, which not only the scriptures but also our own stratigraphy bear witness to, we can perhaps look forward to the *general accident* of an immersion of local space-time in the electromagnetic and wave mechanics of *time-light*, the waning importance of the time zones soon reproducing the disappearance of land above water level.

If this were in fact to happen, then the Earth, our *space-world*, would indeed be 'sick', struck down with a disease without any known precedent. And that would be a pity for the length, breadth and depth of a space rendered unreal by the artifice of a limit-speed that would effectively *wipe out* both history and the memory of it, since the well-known *desertification* of the geographical expanse would itself be outstripped by that of (chronogeographic) duration, *the desert of world time* – of a **global** time – complementing the desert of flora and fauna rightly decried by ecologists.

If we turn now to the sea or to the great deserts of infertility, what do we find? That there is no more surface, no more relief worthy of the name; just a *line*, a skyline. With the advent of world time, a parody of that of astronomy, the desert is getting bigger, *the perspective of local space is vanishing* and, with it, not only the apparent skyline, but also the whole panoply of surfaces recording movement.

The inertia of the fixed point then rounds off the loss of habitable surface areas, *the perspective of world time*, of the real time of immediacy, taking over both from that of the visible space of Quattrocento perspectivism and from that of the local time of the historic event occurring here and now.

This unprecedented accident, representing the end of the road for

history, recalls the situation mentioned earlier of the astronaut on lunar soil: unsure where he is exactly, unsteady on his feet – like Aldrin in 1969 – he observes a barren horizon beneath a night sky which is no longer the skyline of a landscape, still less that of a country of some description, but merely a *site*, a situation, the touch-down point of the moon landing.

Besides, the very name 'Sea of Tranquillity' for a place devoid of any apparent dynamics illustrates the paradox of this sudden loss of 'surfaces' to the benefit of the 'point' that any extra-worldly voyage secretly entails. Strangely, another aspect of astronautics further reinforces the ambiguity of this temporal catastrophe that the very notion of 'conquest of space' today scarcely conceals. According to ancient Chinese wisdom, *you should never sacrifice mobility to safety*. But on the moon a while ago, as on the earth these days, this is what happens before our very eyes. Twenty-five years ago, the *emancipation of the journey* from terrestrial soil that drove the astronauts to land in the Sea of Tranquillity effectively required such a sacrifice to ensure the safety of the Apollo 11 mission.

It is understandable that the very notion of a *round trip* rather than just a 'one-way' catastrophe justified this elementary precaution. But, to make the point again: since it was no longer a question of extension but of duration, the question of the *irreversibility of sagittal time* once again came into its own; the arrow of time of the moon mission escaped not only gravitational references but also earth's spatio-temporal references, to wind up in the end registering only within the parameters of the laws of astronautics.

Einstein asserted that 'nothing in the Universe is fixed'. In the Sea of Tranquillity, the American astronauts' 'fixed point' is merely a *touch-down site* within the time of the trip from the earth to the moon. And the pitiless nature of this extraterrestrial pseudo-localization has less

to do with some kind of **position** within a territorial unity easily travelled than with the astronauts' **situation** within the safe harbour of non-movement: *the inertia of a dead centre*.

Being not so much on the moon as outside the earth's field, Armstrong and Aldrin have to sacrifice their natural mobility to safety. With low reserves of energy, water and oxygen, their time is ticking away; and that time, that duration, is the time of a *countdown*, for their presence on the lunar landing site is only ever a precarious situation or, more accurately, an imprisoning one, forays outside the lunar module presenting the same pitfalls as the celebrated *extra-vehicular spacewalks* outside artificial satellites revolving in the interstellar void.

According to specialists in logistics – in other words, in the security of supplies – '*the more movement increases, the more control increases*', finally extending to the most intimate conditions of personal survival.

So what extends, spreads out, is not so much 'place', the extension of the real space of one planet among others; it is the extent of control, of an 'environmental control' that takes over from the continental surface area, from the three dimensions of a habitable space for the being endowed with movement.

Aqualung, DataSuit, pressurized cockpit or space shuttle: the situation is now much the same everywhere. Here, in the Sea of Tranquillity or down there, over the hill of the moon's horizon, on that Earth of living beings who, for a time, experience freedom of movement.

When control tends systematically to replace the environment, its height, breadth and depth, the prediction of the navigator Herman Melville effectively comes true: '*All mortal greatness is but disease*'. And this disease, this passing incapacity, has a name: *paralysis*. Paralysis of a world, of a 'space-world' that has abandoned itself to the time of the finite world.

In this paradoxical situation, what is 'incapable' or, at any rate, *incapacitated*, is the environment and its properties. The immensity of the cosmic void or of deep time are merely handicaps for the atrophied being whose safety now takes precedence over all activity, to the point where, for him, the concrete environment has only a single dimension left, **the point**. The point, plus time; only, an astronomic and universal time. Encapsulated in the arrow of cosmic time, cut off from local time by his very travels, the extra-worldly navigator (or the worldly televiewer) is the victim of an unprecedented inertia, for this inertia suddenly gets tangled up with the pre-eminence of time over real space, interactivity taking the place of traditional mobilizing activity.

In a text illustrating the vanity of a technology whose power would soon lead Europe to chaos, Martin Heidegger paraphrased Melville: 'All greatness lies in the assault.'

Once the Second World War was over, though, Heidegger specified that: 'This is not just an assault mounted against something remaining. War is what initially opens up and develops the unheard of, till then never before said or thought. When war is over, what was does not disappear, but the world turns away.'

Turned away, skirted round by satellites doing the rounds, like some useless thing in the way, the world stops resisting and caves in completely in the face of the assault on what remains. Just a bit further down the track and whether Saint-Exupéry likes it or not: *the Earth will no longer teach us a thing*.

The resistance of distances having ceased, the lost world will send us back to our solitude, a multiple solitude of some billions of individuals whom the multimedia are preparing to organize in quasi-cybernetic fashion. After two world wars *in space* that ended in the gradual loss of the *space-world*, with the conquest of the air and of circumterrestrial space, the world war *in time* will lead, for its part, to the loss of our freedom of movement: an irremediable but discreet loss, in which *everything will remain as it was*, except for being

qualitatively discredited in this time-world that will respond in future to our every desire.

Then, alongside the *deep time* of geology and of history, the *superficial time* of remote interaction will rise up and take over from the surface areas of a vanished expanse. The real time of transmission, once and for all outstripping the real space of transport, will fulfil the prophecy of Saint Jerome when he said: '*The world is already full and no longer holds us*'.

For a quarter of a century 'trajectography' – tracking – has effectively replaced 'geography'.

From now on there is a path independent of *any locality* and especially of *any localization*.

A path inscribed solely in time, in an astronomic time that is gradually contaminating all the various local times. It is true that the science of the flight of a projectile, the ballistics of a cannonball, a shell or missile, already anticipated this event, but did so using a *gravitational localization* linked to the centre of the Earth. With an extra-planetary outlet, this 'reference axis' in turn disappears. From the exocentrization of a body in flight above the ground we suddenly swap to egocentrization: the centre is no longer located outside; it is its own reference, its 'driving-axis'. The inertial centre serves as the world's axis, but of a small inner world which turns protruded man into a *planet*, though a living planet, launched into the void of a cosmic time and not, as often claimed, into the space-time of the intersidereal universe.

What spatiality are we talking about, anyway, once we have lost all support, all lift and, therefore, all postural reference?

If it is true that the question of 'spatiality' is never to be confused with the need for the meteorological atmosphere of a habitable space, it is none the less always conditioned by the nature of our

position in the movement of displacement and in its *orientation*, since velocity does not exist without the vector of *direction*.

Now, what 'spatiality' could we possibly mean when the only thing that remains is the *being of the path*, of a pathway wholly identified with the 'subject' and the 'object' in motion, with no other reference beyond itself?

This comes down to the whole philosophical issue of a being which is less *in the world* than *out of it*, this 'out-of-this-world' being going out of its way, though, to pretend to inhabit the real world.

Having got this far, a certain question makes itself felt. But it is a question that has no answer; an almost insane and definitely disturbing question that defies science and philosophy: 'If there is no void without the full, or light without darkness, can we not, should we not, ask ourselves whether space is conceivable without matter and without surface?'

In an age when the interface of the instantaneous transmission of interaction is gearing up to dominate the time-honoured *surface of inscription of action*, surely it would be appropriate to question the very concepts of space and void, as the limit-speed of electromagnetic radiation gears up to remodel the human environment along cybernetic lines.

If time is *what happens without us* and if, again according to Epicurus, that time gets confused with 'the accident to end all accidents' of a process of transmission that is currently spreading, then surely we are forced to re-examine not only the classic notion of **materiality**, but also those of **spatiality** and **temporality**, this 'space-time-matter' which modern physicists have done their best not only to rope together in relativistic fashion but also to fuse, indeed, to confuse?

If this is indeed the case, then we need also to reconsider the whole notion of **accident**, of a 'transfer accident' that now conditions our apprehension of reality.

★

Let us now consider the 'out-of-this-world' aspect of the extra-planetary emancipation achieved by the lunar mission and, more recently, by the revelation of a virtual space or **cyberspace**. In both cases, we are forced to meet the same challenge, the challenge of a sudden 'loss of reality' of space-time-matter. Here, the accident is no longer a *local* accident, precisely situated in the space of an action and in the *presence of a being, there, here and now*, but a *general* accident which globally undermines all 'presence' and promotes a 'telepresence' without consistency and, more particularly, without a true spatial position, since the remote interaction of a being at once absent and acting (teleacting) redefines the very notion of *being there*.

At the heart of this virtual space, where media control (feedback) conditions and takes over from the real space of the immediate environment, **cyberspace** looms up like a *transfer accident* in substantial reality. Suddenly, what gets accidentally damaged is no longer the substance, the materiality of the tangible world, it is the whole of its constitution.

Just as the astronaut broke free of the reality of his native world in landing on the moon, the cybernaut momentarily leaves the reality of mundane space-time and inserts himself into the *cybernetic strait-jacket* of the virtual-reality environment control programme.

In either case, however, the crisis is clear, as much for the 'object' as for the 'subject': the only thing emancipated in the end is the journey, a 'path', the tracking of which is rigorously controlled by the instantaneous speed of emission and reception of information provided by a computer that has suddenly become *the arranger of tangible reality*.

So, it is clear that it is indeed the implementation of the limit-speed of electromagnetic waves that today *brings to light* the virtual reality of cybernetics, the realism of which is gearing up to replenish the realism of the mass and extension of the real space of our immediate environment – that none the less privileged place of all action worthy of the name.

We can now understand the overwhelming necessity of identifying a *third* and final 'interval' of the *light* type, alongside the classic intervals of the *space* and *time* types.

In the age of the industrial revolution in transport, when geography still bore the brunt of most travel, the gradual acceleration of *relative* speeds did not escape the classic conditions of 'position' and 'localization' and, in particular, of the (vectorial) 'direction' of the travelling object. By contrast, with the recent 'informational' revolution in transmission, the absolute speed of remote interaction requires a trajctography independent of the reference axis of earth's gravity, in order to be able to privilege management of the never-ending feedback of information instantaneously emitted and received.

Whence the emergence of a *paradoxical interval* of the 'light' type (the speed of light), both to evaluate the two-way path of wave packets and, especially, to relativize the intervals of space and duration that once, however, went with history and geography.

So, at the end of this century, the *general accident* arises from the urgent necessity of a *neutral-sign* interval to compensate for the notoriously inadequate measurement provided by the traditional intervals of *positive sign* (time) and *negative sign* (space). A 'fractal' interval of the light type that suddenly comes along and overturns the binomial measurement of duration and extension alike.

Already fundamentally depreciated through the material pollution of substances (atmosphere, hydrosphere, lithosphere), our planet is more subtly depreciated by the *immaterial pollution* of distances (dromospherical), which leads us to free ourselves from the 'solid ground' of the tangible experience of geography – thanks, notably, to the acquisition of speeds known as 'orbital' or 'escape' velocity, but which also force us to lose our bearings, to lose touch with the surfaces of matter just so we can inscribe our 'interactive' action in the off-field of a gravitationless space, just so we can teleact instantaneously in the

cybernetic trajectory of a second reality; the very notions of relief or of volume no longer solely affecting matter and its 'third dimension', but *the very reality of the fourth dimension*, thereby provoking this 'temporal catastrophe' – this real-time accident – that now doubles the ancient 'material catastrophe' of which the deep time of 'geology' still bears the scars.

So, along with the permanent dilation of a time that is now not so much cyclical as *spherical* (dromospherical), the depth of the past is not the only depth that is getting bigger. For we are now seeing the amplification of the *present*; only, of a *present continued, inflated*, that is nothing more than the *superficial time* of a telepresence that now reproduces for us the surprise, in short the utter amazement of eighteenth-century folk confronted by the 'geological' discovery of a *deep time* going back several million years.

And it is curious to note that this 'topological' shift in the nature of time, which the theory of relativity does, however, imply, did not disturb the historians but only the physicists, the astrophysicists, such as Stephen Hawking and a few other contemporaries of the discovery of the expansion of the universe.

Yet, this sudden leap from the cyclical time of the eternal return of the same to the cosmic expansion of a *spherical time* – or, more precisely, space-time – ought to have excited philosophers and not just men of science. Unless, of course, as disciples of 'historical materialism', both camps let themselves be hoodwinked by the dominant ideology of a *one-dimensional duration*, the line of that sagittal time of an arrow that never reaches its target. If we leave out the hidden face of temporality by which I mean its absence, *eternity*, the 'eternity' which, Rimbaud tells us, a being cannot fail *to regain*.

But let us get back to this temporal dilation, the welling up of a duration that determines not only the astronomic retreat of the past and the probable extension of the future, but also, for us earthlings,

the sudden globalization of the present, a new flood of 'real time' now washing over the earth more thoroughly than water fills the seas.

Where *local* time was able to 'make history', based on geography, *world* time effectively abolishes it, at least in its actual localization, since the **space-world** gives way to time, but to the **time-world** of an instantaneous trajectography bearing no reference to the ground or to the surface, the *interface* of emission and instantaneous reception now supplanting the whole of the surface areas constitutive of material space. Few theorists, I believe, have really tackled this rapid displacement (this journey) in the notions of space and time due to Einstein's relativity. More importantly, few have picked up the attendant migration in the notions of 'mass', 'duration' and 'extension' that the sudden *globalized expansion of the present* represents for us.¹⁰

Indeed, wherever interactive telecommunication requires a space free of obstacles and thus free of resistance to the accelerated propulsion of information, a sort of *superconductive medium* necessarily pops up that will do away with any kind of telluric 'landmark' as well as any geophysical 'surface record', since the screen itself is already fading and will soon disappear, paving the way for series transmissions broadcast simultaneously into a **DataSuit** and into a stereoscopic vision helmet that transmutes the receiver into a **human terminal** – as though the ultimate surface or, rather, the ultimate interface were the *occipital cortex*!

It is easy to see now how the erasure of political boundaries in Europe and the world is just the tip of the iceberg, the harbinger of a temporal catastrophe in which what sinks and disappears without a trace is not just the *resistance of distances*, but the resistance of the *dimensions* of material space – the point, the line, the surface or volume gradually losing their classic geometric attributes as this **superconductive medium** alluded to above suddenly proliferates madly. An immaterial medium whose fluid mechanics has little to do

with water or air and much to do with the waves that carry information.

So, before our very eyes – and I use the phrase advisedly since physical optics wins out over geometric optics here – the notions of centre and periphery are suddenly redefined. These now have less to do with the 'space' of surfaces and volumes than with 'time', the time of that inflated present known as *real time* which today governs man's activities on a worldwide scale.

At the end of the millennium, the *centre of real time* supersedes the *centre of real space* in historical and political importance. Wherever the **nodal** of interactive telecommunications prevails over the **central** of active communication, the *intensive* definitively towers over the *extensive*.

With the sudden but subtle 'inflation of the present', of a present globalized by teletechnologies, present time occupies centre stage not only of history (between past and future), but especially of the geography of the **globe**. So much so that a new term has recently been coined, **glocalization**, to designate the very latest centrality of real time that is nothing more than this 'superconductive medium' offering no resistance to the electrodynamics of telematic impulses and whose *drag coefficient is zero* since it is itself only the spectacular manifestation of the properties of this third and final *interval of neutral sign* physicists are now talking about!¹¹

The **present**, thereby inflated to world-space scale, to the point where it outdoes diurnal–nocturnal alternation as the usual measure of *local* time, is thus indeed that of 'light' or, more precisely, of that **time-light** that now forces itself on the **time-matter** of surface areas, masses and places.

But in the face of this worldwide deployment of present time, an often hidden dimension of Einstein's theory of relativity suddenly springs to mind: that of the **eternal present**. Curiously, this unavoidable notion has been forgotten, or more likely dropped, even

though it largely clarifies the scientist's refusal to accept, along with Edwin Hubble and a few others, the principle of universal expansion. In fact, if anyone is not a 'creationist', or an advocate of a 'stationary' universe, it has to be Einstein, the very person who declared that: *nothing in the universe is fixed!* He of all people can hardly be accused of intellectual conservatism!

So why has Einstein's rejection of the 'inflationary universe' phenomenon arising from the **big bang** been so woefully misinterpreted in endlessly reopened postmortem proceedings based on assumptions rather than facts?

For Einstein, the present is already 'the centre of time'; the past of the original **big bang** is not, and scientifically cannot be, that *old* centre. The true centre is always *new*, the centre is perpetual, or to put it even more precisely, the 'present' is an **eternal present**.

For the three tenses of (chronological) succession – past, present and future – Einstein substituted a (chronoscopic or dromoscopic) *exposure time*: underexposed, exposed, overexposed.

In Einstein's view, time's arrow is an arrow of light and cannot be the magic arrow of the cosmic archer. Hence, his approach to 'kinematic optics' and his anticipation of the famous gravitational mirages and other astrophysical aberrations which organize not only vision for the human observer, but, more especially, the scientific interpretation of phenomena, based on the absolute limit-speed of both light and universal gravity – that is to say, 300,000 kilometres per second.

The centre of time would thus be **light** or, more exactly, the speed of information-carrying waves.

It is no longer, then, a matter of counting the years or the centuries, on the basis of the traditionalist alternation of night and day; it is now a matter of basing 'the science of time' on the speed barrier, that **time-light barrier** that organizes both the 'extension' and the 'duration' of the phenomenal ageing processes of **time-matter**.

Since this finite yet absolute speed is not a phenomenon but the relationship between phenomena, the **spatiotemporal continuum** cannot have a 'centre' – still less an origin – beyond this very relativity or, in other words, beyond the 'time-light' of an exposure time that imposes itself on the historic and classic time of succession.

'Give me your intuition of the present and I'll give you the past and the future,' Emerson, the founder of transcendentalism, used to say.

Chronometer or speedometer? How can we not contest the linear and unfolding nature of time today? Of this time that passes, this course of *chronos* that reproduces the course of the sun and which clockfaces do not so much logically demonstrate as mechanically '*monstrate*'.

For some, the only suffering is that caused by the passing days. Let them rest assured: *tomorrow the present will no longer pass* or, at least, hardly.

Inflated to fill the dimensions of the world's space, the time of the present world flashes us a glimpse on our screens of another regime of temporality that reproduces neither the chronographic succession of the hands of our watches nor the chronological succession of history.

Outrageously puffed up by all the commotion of our communication technologies, the *perpetual present* suddenly serves to illuminate duration. Reproducing the alternation between night and the solar day that once organized our ephemerides, the *endless day* of the reception of events produces an instantaneous lighting of reality that leaves the customary importance of the successive nature of facts in the shade; factual sequences little by little losing all mnemonic value and so boosting the dazzlement of this *hypercentre of time* that the live emission and reception of information represents so perfectly.

In his memoirs of the first moon landing, Buzz Aldrin in his own way confirms this disqualification of sunlight. Listen to what he has to say from the surface of the night star: 'The light is also weird. Since there's no atmosphere, the phenomenon of refraction disappears, so much so that you go directly from total shadow into sunlight, without any transition. *When I hold my hand out to stick it in the light, you'd think I was crossing the barrier to another dimension.*' It is as though, for the astronaut, shadow and light were two new dimensions, inasmuch as any kind of transition no longer exists for him, the loss of the phenomena of atmospheric refraction producing a different perception of reality.

For the rest of us, inhabitants of Mother Earth, the same 'loss of transition' is occurring at this *fin de siècle*, and the sudden diminished importance of the refraction of sunlight provides grounds for calling into question the different degrees of illumination which, before the invention of electricity, still marked the hours of the day or the days of the year.

Under the indirect light from screens and other control centres of the optoelectronic transmission of events, the *time of chronological succession* evaporates, paving the way for an *instantaneous and chronoscopic exposure time* as harsh as that floodlighting of which Aldrin tells us: 'On the moon, the sun shines on us like a giant spotlight.'

Even if we are still talking about the same 'sun', we are no longer talking about the same 'light' or, consequently, the same 'time'. *Earth time*, the time of its matter, is not in fact the *time-light* that shines on the men of the lunar mission. For atmospheric transition has disappeared and, with it, the fade-in/fade-out of that optical refraction due to the thin gaseous film that allows us not only to breathe – and so to live – but also *to count time*, thanks to the transitive nature of days, hours and minutes, the sequential unfolding of our earthly sojourn being only ever an 'artefact', *a film of the sky* and its meteorology.

Willing victims of the 'total performance syndrome', another

form of 'delusions of grandeur', our astronauts were thus the first to glimpse this **general accident** that awaits us tomorrow, down here, in this *already-here tomorrow* of the perpetual present of real-time technologies.

Neil Armstrong, for instance, only became aware of what he had done 'up there' once he had come back down to earth. *In reality, he did not really live it; he just carried it out.*

And for eight long years, from 1971 to 1979, our extraterrestrial astronaut was to take refuge with his family on a farm in his native Ohio. For his part, Mike Collins, the third man of the Apollo 11 mission, had the strange feeling of *having been both present and absent at the same time, on earth as on the moon*, testing out for us the loss of the **hic et nunc**, that total and fortunately momentary loss of the positional referent.

As for Aldrin, after two nervous breakdowns, several detoxification treatments for alcohol abuse and a divorce, he was to wind up in a psychiatric ward. As though the two most famous crews in contemporary history – that of the Enola Gay, which dropped the atomic bomb, and that of the Apollo 11 space capsule – had been the prophets of doom of humanity's unhappy future.

Let us hear what the late, lamented Jacques Ellul had to say about this at once physical and metaphysical relationship between 'light' and 'duration': 'When Genesis tells us that the first creation is light, surely this is to tell us precisely that it is "the creation of time", since light and time are indissoluble.'¹² Ellul goes on to say: 'Arising from truth, *light literally gives rise to reality*; for, again in the text of Genesis, light is *the appearance of time.*'

To tamper with light, with the illumination of the world, is thus to attack *reality*. Illumination's lack of place gives place to time, to that tangible duration without which no reality of events can exist.

As for *truth*, that is quite a different thing from the much-vaunted

effectiveness of the sciences and technologies of information. Hence the perceptual disorders and pathological behaviour of the astronauts after their emancipation; but equally, today, those experienced by our contemporaries, subject, in spite of themselves, to the hegemony of experts which Jacques Ellul further claims is the major temptation of our civilization: 'the bid to confuse **reality** and **truth** that consists in making it seem that the **real** and the **true** coincide in a single and unique truth.'

¹³

Now, when this confusion goes beyond language, beyond this or that speculative practice, and also attacks the key notions of 'temporality' and 'spatiality', the confusion reaches Tower of Babel proportions; the great danger then is *disorientation* – spatial, certainly, but especially temporal disorientation.

Vertigo of a present-past or of a future that is already here, already seen, already given; a situation not so much **utopic** as **teletopical** which greatly affects being in the world, along with the very notion of a habitat.

When Neil Armstrong, for instance, thinks he has *performed* a task, but has never really *lived* it, or when Mike Collins has the strange sensation of being *doubly absent*, they are both signalling this fatal confusion that fragments the subject's personality. Such confusion is characteristic of the dreamlike states of drunkenness or the momentary hallucinations of narcosis, but especially of precocious senility.

Can we say, then, that this sudden splitting off from concrete reality on the part of our extraterrestrial voyagers is the product of the length of space travelled in their race towards the night star; or that it was the length of time of the lunar mission that produced this narcosis from out of the cosmic depths? No to both the above, and we would all agree, I am sure, that the long-haul navigation of, say, Magellan outdid by a long shot this little escapade, this weekend on the moon.

No, the vertigo comes exclusively from extra-planetary emancipation,

from loss of the *sui generis* referents of the space-time so peculiar to the Earth. In other words, loss of Earth's 'light', the **light-matter** that involves both the time and the space of this 'planetary habitat' whose gravity has shaped even our physiology.

So we can see why today, if the idea of *information* tends to dominate the classic notions of *mass* and *energy*, this is only because it refers to the notion of absolute speed or, more specifically, to the *concept of the limit-speed of light*. Now would be the time to go back over the definition of this **time-light** that informs us of all spatial or temporal 'depth'.

Indeed, if light-matter is an appropriate form for occupying space made perceptible by the particular light of 'earth-matter', *time-light* is the prevalent form for occupying time, made tangible by the speed of light in a vacuum, the differentials of acceleration being easily explained by variations in the density of matter distributed throughout the universe.

So, if the space and time of matter combine to form the relativity continuum, we might add that these same notions are equally commingled in the *time of information* – indeed in the very notion of real time. And so we have then to conclude that the time of light and the space of matter (its density) constitute an inverse correlation, in which a reduction in material density translates as an acceleration in the said 'information', while any increase in this same density corresponds to its deceleration. This holds, even for the supremely hard-hardwearing diamond in the mineral realm.

This is how Louis de Broglie, who wrote *Matter and Light*, unveils for us his vision of the world: 'We might suppose that at the beginning of time, immediately following some divine **fiat lux**, light, at first alone in the world, little by little, by slow condensation, engendered the material universe such as we are able to contemplate it today, thanks to light.'

¹⁴

Curiously, though, in this perfectly anthropic evocation of the 'great condenser', the word 'light' is ultimately equivalent to cosmic

illumination, though de Broglie knows better than most that such **light** is the light of its **speed** and thus the light of the 'dromospheric' condensation of **space-time-matter**.

Time, then, never lets itself be seen outside the ageing of the structures of matter, but the speed of time-light, on the other hand, lets us see, perceive, not only the Earth, but also this 'universe' which no more surrounds us than space contains us, fashioned as we are by the sudden acceleration of a universal gravitation that is exactly equal to the acceleration of light in a vacuum.

'An hour is a lake. A day a sea, night an eternity,' Joseph Roth bitterly observed in 1938, on the eve of a world war. How can we fail to discover after him the inertia of a 'present' time that gets confused with the very fixity of places?

If *relative* speed means man's old age, the accelerated ageing of our cells, for man *absolute* speed means this disease which makes the newborn prematurely senile and which goes by the name of **progeria**.¹⁵

When the real instant prevails in intensity over the density of the extension of real space, *all duration freezes* and inertia reaches gigantic proportions.

Suddenly, immobility no longer has anything to do with the immobility of water on the surface of a lake, or that of the deep time of minerals. It is now *the immobility of all possible journeys or paths*. The time-light barrier then blocks off – along with the horizon of appearances – the horizon of action, the very reality of a space where all succession dissolves, where it is as though hours and days *had ceased to flow, surfaces ceased to extend*: what cropped up yesterday, here or there, now happens everywhere at once. The accident to end all accidents spreads in a flash and the centre of time – the endless present – leaves behind the centre of fixed space for good. There is no longer any 'here', everything is 'now'. The hypercentre of the intensive time of production of the real wins out once and for all over the former centrality of the extensive space of territories.

From that moment: '*the sum total of light is the world*'.¹⁶

Now let us take a look at what may well shortly become a sedentariness no longer confined to the local space of a suburb or a city or a region, but to the time of an endless perpetuation of the present: *contemporary man no longer arrives at, achieves, anything*. This is the total performance syndrome, already at work, as we saw, in our astronauts on their return from their extraterrestrial cruise.

If the here of incarceration has ceased to exist in the escape velocity of action at a distance – teleaction – its **now** none the less remains, an all-powerful and all-seeing now whose *pitiless* nature is incommensurable with the nature of the age-old localization of the **hic et nunc**. The split between **place** and **hour** has now been consummated.

The generalized arrival of transmission has taken over from the restricted arrival of transport. In days gone by, Joshua, the man of God, *stopped the sun*; today the man of science *stops the Earth*! A 'freeze frame' whereby the interactive experience of generalized teleaction will soon prolong the life sentence of the expanse of the space-world, to the exclusive advantage of the time-world of the real instant.

As Joseph Roth, whose sense of headlong flight is not unlike Kafka's sense of inertia, warned us: 'The world worth living in was doomed. The world that would follow it deserved no decent inhabitants.'¹⁷

No, what will remain inhabitable, in spite of everything, is the 'town', a town that is not now the City of the original urbanization of the real space of the continents, but the 'city to end all cities' of a world that will have become fundamentally transpolitical and in which synoecism will no longer mean, as it did in ancient Greece, the gathering of several villages into a single cosmopolitan **city-state**, but the joining or, rather, the telescoping of all cities into a single and unique **capital**, not so much metropolitan as **omnipolitan**. Solitary triumph

of a sedentariness without a home front and without a hinterland, where information will dominate mass and expanse equally; the hypercentre of present time in turn becoming the sole reference axis of worldwide activity. An **axis mundi** likely to erase for ever all other forms of 'centralization', not merely urban but, indeed, human as well: 'the individual of the scientific age is losing his capacity to experience himself as a centre of energy'.¹⁸

As I said, a new word has recently appeared, to name the apparent paradox of a mix between the local time of an activity still precisely situated and the global time of generalized interactivity. That word is **glocalization** and, as we may well imagine, it applies not so much to 'multinationals' which are capable of managing their affairs in the two, equally globalized, dimensions of production and distribution, as to this virtual **world-city** that already contains within itself both the 'geographical' centre of the set of real agglomerations it brings together and the 'temporal' hypercentre of telecommunications that enable it to exist remotely. This it does, *by making itself present* to the other cities, thanks notably to the feats of the *time-sharing* that today supersedes the geopolitical sharing-out of territorial space, since from now on every *real* city is only ever the remote periphery, the great urban wasteland of this *virtual* city that rules over it totally or, better still, 'glocally'.

Directly involved in this **telecontinent** that is spreading over the expanse of **continents** now as discredited as the borders between nations, the **teletopic megacity** is the culmination of that 'cohabitation' initiated by the invention of Athens. But with one difference, since it is no longer a matter of the flourishing of a kind of **synoecism** in geographical space, the fruit of a spatial approach to politics, **isonomy**, the city centre signifying the city's autonomy, but a matter of a temporal and transpolitical perception: **isochrony**, whereby the centre of real time plays the role once allotted to the centre of real space in the Greek polis: that **kratos** which symbolically reproduced

the axis of the world, the world of Mother Earth (*gaia*), whose autonomy and stability were assured only by its geocentric position at the heart of a cosmos where vertical and aerial liberation was both technically impossible and barred, if we confine ourselves to the Hebrew register this time, to catch a glimpse of *the shadow of the Tower of Babel*.