

The background of the entire cover is black. In the upper left, a group of five blue-striped fish are swimming towards the right. In the center, a red torii gate stands over a stone staircase that leads down into the darkness. Two more blue-striped fish are positioned on either side of the torii gate, appearing to swim through it. The title 'LOST Dimension' is at the top, and the author's name 'Paul Virilio' is at the bottom, both with a multi-colored gradient.

# LOST Dimension

Paul Virilio

PAUL VIRILIO

THE  
LOST  
DIMENSION

Translated by Daniel Moshenberg

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# 1

## The Overexposed City

At the beginning of the 60's, with black ghettos rioting, the mayor of Philadelphia announced: "From here on in, the frontiers of the State pass to the interior of the cities." While this sentence translated the political reality for all Americans who were being discriminated against, it also pointed to an even larger dimension, given the construction of the Berlin Wall, on August 13, 1961, in the heart of the ancient capital of the Reich.

Since then, this assertion has been confirmed time and again: Belfast, Londonderry where not so long ago certain streets bore a yellow band separating the Catholic side from the Protestant, so that neither would move too far, leaving a chainlink no man's land to divide their communities even more clearly. And then there's Beirut with its East and West sections, its tortured internal boundaries, its tunnels and its mined boulevards.

Basically, the American mayor's statement revealed a general phenomenon that was just beginning to hit the

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capital cities as well as the provincial towns and hamlets, the phenomenon of obligatory introversion in which the City sustained the first effects of a multinational economy modelled along the lines of industrial enterprises, a real urban redeployment which soon contributed to the gutting of certain worker cities such as Liverpool and Sheffield in England, Detroit and Saint Louis in the United States, Dortmund in West Germany, and all of this at the very moment in which other areas were being built up, around tremendous international airports, a METROPLEX, a metropolitan complex such as Dallas / Fort Worth. Since the 70's and the beginnings of the world economic crisis, the construction of these airports was further subjected to the imperatives of the defense against air pirates.

Construction no longer derived simply from traditional technical constraint. The plan had become a function of the risks of "terrorist contamination" and the disposition of sites conceived of as sterile zones for departures and non-sterile zones for arrivals. Suddenly, all forms of loading and unloading — regardless of passenger, baggage, or freight status — and all manner of airport transit had to be submitted to a system of interior / exterior traffic control. The architecture that resulted from this had little to do with the architect's personality. It emerged instead from perceived public security requirements.

As the last gateway to the State, the airport came to resemble the fort, port or railway station of earlier days. As airports were turned into theaters of necessary regulation of exchange and communication, they also became breeding and testing grounds for high-pressured experiments in control and aerial surveillance performed for and by a new "air and border patrol," whose anti-terrorist exploits began to make headlines with the intervention of the German GS.G9 border guards in the Mogadishu hijacking, several thousand miles away from Germany.

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At that instant, the strategy of confining the sick or the suspect gave way to a tactic of mid-voyage interception. Practically, this meant examining clothing and baggage, which explains the sudden proliferation of cameras, radars and detectors in all restricted passageways. When the French built "maximum security cell-blocks," they used the magnetized doorways that airports had had for years. Paradoxically, the equipment that ensured maximal freedom in travel formed part of the core of penitentiary incarceration. At the same time, in a number of residential areas in the United States, security was maintained exclusively through closed-circuit television hook-ups with a central police station. In banks, in supermarkets, and on major highways, where tollbooths resembled the ancient city gates, the rite of passage was no longer intermittent. It had become immanent.

In this new perspective devoid of horizon, the city was entered not through a gate nor through an *arc de triomphe*, but rather through an electronic audience system. Users of the road were no longer understood to be inhabitants or privileged residents. They were now interlocutors in permanent transit. From this moment on, continuity no longer breaks down in space, not in the physical space of urban lots nor in the juridical space of their property tax records. From here, continuity is ruptured in time, in a time that advanced technologies and industrial redeployment incessantly arrange through a series of interruptions, such as plant closings, unemployment, casual labor, and successive or simultaneous disappearing acts. These serve to organize and then disorganize the urban environment to the point of provoking the irreversible decay and degradation of neighborhoods, as in the housing development near Lyon where the occupants' "rate of rotation" became so great — people staying for a year and then moving on — that it contributed to the ruin of a place that each inhabitant found adequate . . .

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In fact, since the originary enclosures, the concept of boundary has undergone numerous changes as regards both the facade and the neighborhood it fronts. From the palisade to the screen, by way of stone ramparts, the boundary-surface has recorded innumerable perceptible and imperceptible transformations, of which the latest is probably that of the interface. Once again, we have to approach the question of access to the City in a new manner. For example, does the metropolis possess its own facade? At which moment does the city show us its face?

The phrase “to go into town,” which replaced the nineteenth century’s “to go to town,” indicates the uncertainty of the encounter, as if we could no longer stand before the city but rather abide forever within. If the metropolis is still a place, a geographic site, it no longer has anything to do with the classical oppositions of city / country nor center / periphery. The city is no longer organized into a localized and axial estate. While the suburbs contributed to this dissolution, in fact the intramural-extramural opposition collapsed with the transport revolutions and the development of communication and telecommunications technologies. These promoted the merger of disconnected metropolitan fringes into a single urban mass.

In effect, we are witnessing a paradoxical moment in which the opacity of building materials is reduced to zero. With the invention of the steel skeleton construction, curtain walls made of light and transparent materials, such as glass or plastics, replace stone facades, just as tracing paper, acetate and plexiglass replace the opacity of paper in the designing phase.

On the other hand, with the screen interface of computers, television and teleconferences, the surface of inscription, hitherto devoid of depth, becomes a kind of “distance,”



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a depth of field of a new kind of representation, a visibility without any face-to-face encounter in which the *vis-à-vis* of the ancient streets disappears and is erased. In this situation, a difference of position blurs into fusion and confusion. Deprived of objective boundaries, the architectonic element begins to drift and float in an electronic ether, devoid of spatial dimensions, but inscribed in the singular temporality of an instantaneous diffusion. From here on, people can't be separated by physical obstacles or by temporal distances. With the interfacing of computer terminals and video monitors, distinctions of *here* and *there* no longer mean anything.

This sudden reversion of boundaries and oppositions introduces into everyday, common space an element which until now was reserved for the world of microscopes. There is no *plenum*; space is not filled with matter. Instead, an unbounded expanse appears in the false perspective of the machines' luminous emissions. From here on, constructed space occurs within an electronic topology where the framing of perspective and the gridwork weft of numerical images renovate the division of urban property. The ancient private / public occultation and the distinction between housing and traffic are replaced by an overexposure in which the difference between "near" and "far" simply ceases to exist, just as the difference between "micro" and "macro" vanished in the scanning of the electron microscope.

The representation of the modern city can no longer depend on the ceremonial opening of gates, nor on the ritual processions and parades lining the streets and avenues with spectators. From here on, urban architecture has to work with the opening of a new "technological space-time." In terms of access, telematics replaces the doorway. The sound of gates gives way to the clatter of data banks and the rites of passage of a technical culture whose progress is disguised by the immateriality of its parts and networks. Instead of operating in the space of a constructed social fabric, the

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intersecting and connecting grid of highway and service systems now occurs in the sequences of an imperceptible organization of time in which the man / machine interface replaces the facades of buildings as the surfaces of property allotments.



Where once the opening of the city gates announced the alternating progression of days and nights, now we awaken to the opening of shutters and televisions. The day has been changed. A new day has been added to the astronomers' solar day, to the flickering day of candles, to the electric light. It is an electronic false-day, and it appears on a calendar of information "commutations" that has absolutely no relationship whatsoever to real time. Chronological and historical time, time that passes, is replaced by a time that exposes itself instantaneously. On the computer screen, a time period becomes the "support-surface" of inscription. Literally, or better cinematically, time surfaces. Thanks to the cathode-ray tube, spatial dimensions have become inseparable from their rate of transmission. As a unity of place without any unity of time, the City has disappeared into the heterogeneity of that regime comprised of the temporality of advanced technologies. The urban figure is no longer designated by a dividing line that separates here from there. Instead, it has become a computerized timetable.

Where once one necessarily entered the city by means of a physical gateway, now one passes through an audio-visual protocol in which the methods of audience and surveillance have transformed even the forms of public greeting and daily reception. Within this place of optical illusion, in which the people occupy transportation and transmission time instead of inhabiting space, inertia tends to renovate an old sedentariness, which results in the persistence of urban

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sites. With the new instantaneous communications media, arrival supplants departure: without necessarily leaving, everything "arrives."

Until recently, the city separated its "intramural" population from those outside the walls. Today, people are divided according to aspects of time. Where once an entire "downtown" area indicated a long historical period, now only a few monuments will do. Further, the new technological time has no relation to any calendar of events nor to any collective memory. It is pure computer time, and as such helps construct a permanent present, an unbounded, timeless intensity that is destroying the tempo of a progressively degraded society.

What is a monument within this regime? Instead of an intricately wrought portico or a monumental walk punctuated by sumptuous buildings, we now have idleness and monumental waiting for service from a machine. Everyone is busily waiting in front of some communications or telecommunications apparatus, lining up at tollbooths, poring over captains' checklists, sleeping with computer consoles on their nightstands. Finally, the gateway is turned into a conveyance of vehicles and vectors whose disruption creates less a space than a countdown, in which work occupies the center of time while uncontrolled time of vacations and unemployment form a periphery, the suburbs of time, a clearing away of activities in which each person is exiled to a life of privacy and deprivation.

If, despite the wishes of postmodern architects, the city from here on is deprived of gateway entries, it is because the urban wall has long been breached by an infinitude of openings and ruptured enclosures. While less apparent than those of antiquity, these are equally effective, constraining and segregating. The illusion of the industrial revolution in transportation misled us as to the limitlessness of progress. Industrial time-management has imperceptibly compensated

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for the loss of rural territories. In the nineteenth century, the city / country attraction emptied agrarian space of its cultural and social substance. At the end of the twentieth century, urban space loses its geopolitical reality to the exclusive benefit of systems of instantaneous deportation whose technological intensity ceaselessly upsets all of our social structures. These systems include the deportation of people in the redeployment of modes of production, the deportation of attention, of the human face-to-face and the urban *vis-à-vis* encounters at the level of human / machine interaction. In effect, all of this participates in a new "post-urban" and transnational kind of concentration, as indicated by a number of recent events.

Despite the rising cost of energy, the American middle classes are evacuating the cities of the East. Following the transformation of inner cities into ghettos and slums, we now are watching the deterioration of the cities as regional centers. From Washington to Chicago, from Boston to Saint Louis, the major urban centers are shrinking. On the brink of bankruptcy, New York City lost ten percent of its population in the last ten years. Meanwhile, Detroit lost twenty percent of its inhabitants, Cleveland 23 percent, Saint Louis 27 percent. Already, whole neighborhoods have turned into ghost towns.

These harbingers of an imminent "post-industrial" deurbanization promise an exodus that will affect all of the developed countries. Predicted for the last forty years, this deregulation of the management of space comes from an economic and political illusion about the persistence of sites constructed in the era of automotive management of time, and in the epoch of the development of audiovisual technologies of retinal persistence.



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“Each surface is an interface between two environments that is ruled by a constant activity in the form of an exchange between the two substances placed in contact with one another.”

This new scientific definition of surface demonstrates the contamination at work: the “boundary, or limiting surface” has turned into an osmotic membrane, like a blotting pad. Even if this last definition is more rigorous than earlier ones, it still signals a change in the notion of limitation. The limitation of space has become commutation: the radical separation, the necessary crossing, the transit of a constant activity, the activity of incessant exchanges, the transfer between two environments and two substances. What used to be the boundary of a material, its “terminus,” has become an entryway hidden in the most imperceptible entity. From here on, the appearance of surfaces and superficies conceals a secret transparency, a thickness without thickness, a volume without volume, an imperceptible quantity.

If this situation corresponds with the physical reality of the infinitesimally small, it also fits that of the infinitely large. When what was visibly nothing becomes “something,” the greatest distance no longer precludes perception. The greatest geophysical expanse contracts as it becomes more concentrated. In the interface of the screen, everything is always already there, offered to view in the immediacy of an instantaneous transmission. In 1980, for example, when Ted Turner decided to launch Cable News Network as a round-the-clock live news station, he transformed his subscribers’ living space into a kind of global broadcast studio for world events.

Thanks to satellites, the cathode-ray window brings to each viewer the light of another day and the presence of the antipodal place. If space is that which keeps everything from occupying the same place, this abrupt confinement brings absolutely everything precisely to that “place,” that location

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that has no location. The exhaustion of physical, or natural, relief and of temporal distances telescopes all localization and all position. As with live televised events, the places become interchangeable at will.

The instantaneity of ubiquity results in the atopia of a singular interface. After the spatial and temporal distances, *speed distance* obliterates the notion of physical dimension. Speed suddenly becomes a primal dimension that defies all temporal and physical measurements. This radical erasure is equivalent to a momentary inertia in the environment. The old agglomeration disappears in the intense acceleration of telecommunications, in order to give rise to a new type of concentration: the concentration of a domiciliation without domiciles, in which property boundaries, walls and fences no longer signify the permanent physical obstacle. Instead, they now form an interruption of an emission or of an electronic shadow zone which repeats the play of daylight and the shadow of buildings.

A strange topology is hidden in the obviousness of televised images. Architectural plans are displaced by the sequence plans of an invisible montage. Where geographical space once was arranged according to the geometry of an apparatus of rural or urban boundary setting, time is now organized according to imperceptible fragmentations of the technical time span, in which the cutting, as of a momentary interruption, replaces the lasting disappearance, the "program guide" replaces the chain link fence, just as the railroads' timetables once replaced the almanacs.

"The camera has become our best inspector," declared John F. Kennedy, a little before being struck down in a Dallas street. Effectively, the camera allows us to participate in certain political and optical events. Consider, for example, the irruption phenomenon, in which the City allows itself to be seen thoroughly and completely, or the diffraction phenomenon, in which its image reverberates beyond the atmo-

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sphere to the farthest reaches of space, while the endoscope and the scanner allow us to see to the farthest reaches of life.

This overexposure attracts our attention to the extent that it offers a world without antipodes and without hidden aspects, a world in which opacity is but a momentary interlude. Note how the illusion of proximity barely lasts. Where once the *polis* inaugurated a political theater, with its *agora* and its *forum*, now there is only a cathode-ray screen, where the shadows and spectres of a community dance amid their processes of disappearance, where cinematism broadcasts the last appearance of urbanism, the last image of an urbanism without urbanity. This is where tact and contact give way to televisual impact. While tele-conferencing allows long-distance conferences with the advantage derived from the absence of displacement, tele-negotiating inversely allows for the production of distance in discussions, even when the members of the conversation are right next to each other. This is a little like those telephone crazies for whom the receiver induces flights of verbal fancy amid the anonymity of a remote control aggressiveness.



Where does the city without gates begin? Probably inside that fugitive anxiety, that shudder that seizes the minds of those who, just returning from a long vacation, contemplate the imminent encounter with mounds of unwanted mail or with a house that's been broken into and emptied of its contents. It begins with the urge to flee and escape for a second from an oppressively technological environment, to regain one's senses and one's sense of self. While spatial escape may be possible, temporal escape is not. Unless we think of lay-offs as "escape hatches," the ultimate form of paid vacation, the forward flight responds to a post-industrial illusion whose ill effects we are just beginning to

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feel. Already, the theory of "job sharing" introduced to a new segment of the community — offering each person an alternative in which sharing work-time could easily lead to a whole new sharing of space as well — mirrors the rule of an endless periphery in which the homeland and the colonial settlement would replace the industrial city and its suburbs. Consider, for example, the Community Development Project, which promotes the proliferation of local development projects based on community forces, and which is intended to re-incorporate the English inner cities.

Where does the edge of the exo-city begin? Where can we find the gate without a city? Probably in the new American technologies of instantaneous destruction (with explosives) of tall buildings and in the politics of systematic destruction of housing projects suddenly deemed as "unfit for the new French way of life, as in Venissieux, La Courneuve or Gagny. According to a recent French study, released by the Association for Community Development, "The destruction of 300,000 residential units over a five-year period would cost 10 billion francs per year, while creating 100,000 new jobs. In addition, at the end of the demolition / reconstruction, the fiscal receipts would be 6 to 10 billion francs above the sum of public moneys invested."

One final question arises here. In a period of economic crisis, will mass destruction of the large cities replace the traditional politics of large public works? If that happens, there will be no essential difference between economic-industrial recession and war.



Architecture or post-architecture? Ultimately, the intellectual debate surrounding modernity seems part of a de-realization phenomenon which simultaneously involves disciplines of expression, modes of representation and modes



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of communication. The current wave of explosive debates within the media concerning specific political acts and their social communication now also involves the architectural expression, which cannot be removed from the world of communication systems, to the precise extent that it suffers the direct or indirect fall-out of various "means of communication," such as the automobile or audiovisual systems.

Basically, along with construction techniques, there's always the construction *of* techniques, that collection of spatial and temporal mutations that is constantly reorganizing both the world of everyday experience and the esthetic representations of contemporary life. Constructed space, then, is more than simply the concrete and material substance of constructed structures, the permanence of elements and the architectonics of urbanistic details. It also exists as the sudden proliferation and the incessant multiplication of special effects which, along with the consciousness of time and of distances, affect the perception of the environment.

This technological deregulation of various milieus is also topological to the exact extent that — instead of constructing a perceptible and visible chaos, such as the processes of degradation or destruction implied in accident, aging and war — it inversely and paradoxically builds an imperceptible order, which is invisible but just as practical as masonry or the public highways system. In all likelihood, the essence of what we insist on calling urbanism is composed / decomposed by these transfer, transit and transmission systems, these transport and transmigration networks whose immaterial configuration reiterates the cadastral organization and the building of monuments.

If there are any monuments today, they are certainly not of the visible order, despite the twists and turns of architectural excess. No longer part of the order of perceptible appearances nor of the esthetic of the apparition of volumes

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assembled under the sun, this monumental disproportion now resides within the obscure luminescence of terminals, consoles and other electronic night-stands. Architecture is more than an array of techniques designed to shelter us from the storm. It is an instrument of measure, a sum total of knowledge that, contending with the natural environment, becomes capable of organizing society's time and space. This geodesic capacity to define a unity of time and place for all actions now enters into direct conflict with the structural capacities of the means of mass communication.

Two procedures confront each other. The first is primarily material, constructed of physical elements, walls, thresholds and levels, all precisely located. The other is immaterial, and hence its representations, images and messages afford neither locale nor stability, since they are the vectors of a momentary, instantaneous expression, with all the manipulated meanings and misinformation that presupposes.

The first one is architectonic and urbanistic in that it organizes and constructs durable geographic and political space. The second haphazardly arranges and deranges space-time, the continuum of societies. The point here is not to propose a Manichaeian judgment that opposes the physical to the metaphysical, but rather to attempt to catch the status of contemporary, and particularly urban, architecture within the disconcerting concert of advanced technologies. If architectonics developed with the rise of the City and the discovery and colonization of emerging lands, since the conclusion of that conquest, architecture, like the large cities, has rapidly declined. While continuing to invest in internal technical equipment, architecture has become progressively introverted, becoming a kind of machinery gallery, a museum of sciences and technologies, technologies derived from industrial *machinism*, from the transportation revolution and from so-called "conquest of space." So it makes perfect sense

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that when we discuss space technologies today, we are not referring to architecture but rather to the engineering that launches us into outer space.

All of this occurs as if architectonics had been merely a subsidiary technology, surpassed by other technologies that produced accelerated displacement and sidereal projection. In fact, this is a question of the nature of architectural performance, of the telluric function of the constructed realm and the relationships between a certain cultural technology and the earth. The development of the City as the conservatory of classical technologies has already contributed to the proliferation of architecture through its projection into every spatial direction, with the demographic concentration and the extreme vertical densification of the urban milieu, in direct opposition to the agrarian model. The advanced technologies have since continued to prolong this "advance," through the thoughtless and all-encompassing expansion of the architectonic, especially with the rise of the means of transportation.

Right now, vanguard technologies, derived from the military conquest of space, are already launching homes, and perhaps tomorrow the City itself, into planetary orbit. With inhabited satellites, space shuttles and space stations as floating laboratories of high-tech research and industry, architecture is flying high, with curious repercussions for the fate of post-industrial societies, in which the cultural markers tend to disappear progressively, what with the decline of the arts and the slow regression of the primary technologies.

Is urban architecture becoming an outmoded technology, as happened to extensive agriculture, from which came the debacles of megalopolis? Will architectonics become simply another decadent form of dominating the earth, with results like those of the uncontrolled exploitation of primary resources? Hasn't the decrease in the number of major cities already become the trope for industrial decline and forced

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unemployment, symbolizing the failure of scientific materialism?

The recourse to History proposed by experts of post-modernity is a cheap trick that allows them to avoid the question of Time, the regime of trans-historical temporality derived from technological ecosystems. If in fact there is a crisis today, it is a crisis of ethical and esthetic references, the inability to come to terms with events in an environment where the appearances are against us. With the growing imbalance between direct and indirect information that comes of the development of various means of communication, and its tendency to privilege information mediated to the detriment of meaning, it seems that the *reality effect* replaces immediate reality. Lyotard's modern crisis of grand narratives betrays the effect of new technologies, with the accent, from here on, placed on means more than ends.

The grand narratives of theoretical causality were thus displaced by the petty narratives of practical opportunity, and, finally, by the micro-narratives of autonomy. At issue here is no longer the "crisis of modernity," the progressive deterioration of commonly held ideals, the proto-foundation of the meaning of History, to the benefit of more-or-less restrained narratives connected to the autonomous development of individuals. The problem now is with the narrative itself, with an official discourse or mode of representation, connected until now with the universally recognized capacity to say, describe and inscribe reality. This is the heritage of the Renaissance. Thus, the crisis in the conceptualization of "narrative" appears as the other side of the crisis of the conceptualization of "dimension" as geometrical narrative, the discourse of measurement of a reality visibly offered to all.

The crisis of the grand narrative that gives rise to the micro-narrative finally becomes the crisis of the narrative of the grand and the petty.

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This marks the advent of a disinformation in which excess and incommensurability are, for "post-modernity," what the philosophical resolution of problems and the resolution of the pictorial and architectural image were to the birth of the "enlightenment."

The crisis in the conceptualization of dimension becomes the crisis of the whole.

In other words, the substantial, homogeneous space derived from classical Greek geometry gives way to an accidental, heterogeneous space in which sections and fractions become essential once more. Just as the land suffered the mechanization of agriculture, urban topography has continuously paid the price for the atomization and disintegration of surfaces and of all references that tend towards all kinds of transmigrations and transformations. This sudden exploding of whole forms, this destruction of the properties of the individual by industrialization, is felt less in the city's space — despite the dissolution of the suburbs — than in the time — understood as sequential perceptions — of urban appearances. In fact, transparency has long supplanted appearances. Since the beginning of the twentieth century, the classical depth of field has been revitalized by the depth of time of advanced technologies. Both the film and aeronautics industries took off soon after the ground was broken for the grand boulevards. The parades on Haussmann Boulevard gave way to the Lumière brothers' accelerated motion picture inventions; the esplanades of Les Invalides gave way to the invalidation of the city plan. The screen abruptly became the city square, the crossroads of all mass media.

From the esthetics of the appearance of a *stable* image — present as an aspect of its static nature — to the esthetics of the *disappearance* of an *unstable* image — present in its cinematic and cinematographic flight of escape — we have witnessed a transmutation of representations. The emergence of forms as volumes destined to persist as long as their

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materials would allow has given way to images whose duration is purely retinal. So, more than Venturi's Las Vegas, it is Hollywood that merits urbanist scholarship, for, after the theater-cities of Antiquity and of the Italian Renaissance, it was Hollywood that was the first Cinecittà, the city of living cinema where stage-sets and reality, tax-plans and scripts, the living and the living dead, mix and merge deliriously.

Here more than anywhere else advanced technologies combined to form a synthetic space-time.

Babylon of filmic de-deformation, industrial zone of pretense, Hollywood was built neighborhood by neighborhood, block by block, on the twilight of appearances, the success of magicians' tricks, the rise of epic productions like those of D. W. Griffith, all the while waiting for the megalomaniacal urbanizations of Disneyland, Disney World and Epcot Center. When Francis Ford Coppola, in *One From the Heart*, electronically inlaid his actors into a life-size Las Vegas built at the Zoetrope studios in Hollywood (simply because the director wanted the city to adapt to his shooting schedule instead of the other way around), he overpowered Venturi, not by demonstrating the ambiguities of contemporary architecture, but by showing the "spectral" characters of the city and its denizens.

The utopian "architecture on paper" of the 1960's took on the video-electronic special effects of people like Harryhausen and Tumbull, just at the precise instant that computer screens started popping up in architectural firms. "Video doesn't mean I see; it means I fly," according to Nam June Paik. With this technology, the "aerial view" no longer involves the theoretical altitudes of scale models. It has become an opto-electronic interface operating in real time, with all that this implies for the redefinition of the image. If aviation — appearing the same year as cinematography — entailed a revision of point of view and a radical mutation of our perception of the world, infographic technologies will

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likewise force a readjustment of reality and its representations. We already see this in "Tactical Mapping Systems," a videodisk produced by the United States Defense Department's Agency for Advanced Research Projects. This system offers a continuous view of Aspen, Colorado, by accelerating or decelerating the speed of 54,000 images, changing direction or season as easily as one switches television channels, turning the town into a kind of shooting gallery in which the functions of eyesight and weaponry melt into each other.

If architectonics once measured itself according to geology, according to the tectonics of natural reliefs, with pyramids, towers and other neo-gothic tricks, today it measures itself according to state-of-the-art technologies, whose vertiginous prowess exiles all of us from the terrestrial horizon.

Neo-geological, the "Monument Valley" of some pseudolithic era, today's metropolis is a phantom landscape, the fossil of past societies whose technologies were intimately aligned with the visible transformation of matter, a project from which the sciences have increasingly turned away.

### 3

## Improbable Architecture

According to Walter Benjamin, architecture, like cinema, “presents material to a simultaneous collective reception.”<sup>1</sup> This is what filmmaker René Clair meant when he claimed, “The art that is closest to cinema is architecture.”

This sudden confusion between the reception of images from a film projector and the perception of architectonic forms clearly indicates the importance of the transformation of the notion of “surface” and of “face-to-face” that gives way to the appearance of the interface. In this regard, Benjamin’s terms are particularly revealing. Matter, for example, like architecture, is no longer even what it pretends to be, since this matter is “light.” It is the light of an emission, of an instantaneous projection that results in a reception rather than a perception. Furthermore, the collective and worldly nature of this “reception” again clearly indicates that the



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architectural representation no longer acts as one aspect among many. It is now simultaneously all aspects, all points of view and lines of vision, for all the actor-spectators in all constructed space, for the whole population who directly receive the transmission of the architectonic form-image.

We already know that all representation involves reduction of scale, proportion, content, or nature. But now reduction is rejected, for the simultaneous collective response acts as a ubiquitous eye that sees everything at once. Thus it is significant that Benjamin's text opens with a passage from Paul Valéry's "The Conquest of Ubiquity." In effect, Benjamin's earlier phrase installs architectural space in an "alter-world," an alter-world that cinematographic techniques, building on photographic antecedents, tried to conquer. These included the multiple superimposed images of Gance and Eisenstein, Painlevé's rapid- and slow-motion filming, and the systematic use of new means of transport — such as camera rigs, trains, elevators, airplanes and so forth — by people like Fromiaut, Vertov, Griffith, and Moholy-Nagy. We see that the material presented by architecture to the simultaneous reception is, in fact, the total matter of materialism itself — and especially of historical materialism — that gives its meaning and dimension to time and history, as well as to space. The architecture serving as archetype to the cinematic revolution, of Sergei Eisenstein for example, is first of all seen as a mass, or popular, art, as opposed to art for art's sake, which Benjamin refers to as a theology of art.

Later on in the same essay, Benjamin pursues his line of reasoning: "The shooting of a film affords a spectacle unimaginable anywhere at any time before this. It represents a process which it is impossible to locate within a perspective that does not include all sorts of extraneous film accessories, such as camera equipment, lighting machinery, grips and technicians, etc. For the spectator to form an abstraction of all of that, his eye must become like the camera

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lens. In thus enlarging the world of objects which we maintain in the visual and auditory realm, film has resulted in a deepening of our apperception."<sup>2</sup>

Benjamin claims that this apperception tends to favor the mutual interpenetration of art and science. Total matter and total cinema mark the end of Quattrocento perspective. The blind alley disappears into the superimposed vision of a closed-circuit television that never turns off, that always gives and receives, directly or indirectly, all surfaces and all the pieces of a tele-topological puzzle, one in which televised permanence replaces the permanent cinema of the 1920s through the 1940s, where the public would go to forget reality just for an instant.

It is important to note here how Benjamin denies architecture its essential function of occultation; the sheltering against inclement weather also protects against all glances. For Benjamin, the architectonic no longer operates among the registers of resistance, material and appearances; it occurs now instead within the order of transparency and the ubiquity of the instantaneous, both mythical qualities that predict those of the great political and social liberation: "By close-ups we inventory the world of things around us, emphasizing the hidden details of everyday objects and exploring commonplace sites under the genial guidance of the camera. If, on the one hand, the film helps us understand the necessities of our lives, it also leads us into an immense and previously unsuspected field of action. Our shops and city streets, our offices and furnished rooms, our railroad stations and our factories seemed like prison beyond any hope of liberation. Then came the film, and with the dynamite of its tenths-of-a-second, it blew up the concentration-camp universe, so that now, abandoned in the midst of its far-flung debris, we take on adventurous expeditions. With the close-up, space expands; with slow-motion, movement takes on new dimensions. With film, we begin to see entirely new

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structures of matter.”<sup>3</sup>

Gustave Flaubert had already posed the question of the multiple and of technical reproducibility when he slyly announced: “The better the telescopes, the more numerous the stars.” The German philosopher was less able than the French writer to resist the delirium of interpretation. The industrial techniques at issue here entail more than the multiplication of manufactured objects or the reproduction of photographic images. We are witnessing the sudden multiplication of dimensions of matter. The industrialization of artistic “beauty,” so feared by Benjamin as a consequence of darkroom technique, is doubled and intensified by the cinematic sequences of “industrialization of (scientific) truth,”<sup>4</sup> which apparently did not concern the philosopher a bit.

Benjamin relied on the metaphor of explosion, of the dynamiting of a town, with its debris projected over great distances. These distances, however, are no longer situated in any depth of field or “perspective.” According to Benjamin, the field of action opened by cinematic technique is no longer one of urban or industrial concentration or sedentariness. We now have an open system, in which no one can find any perceptible, objective limits. It is a field of constitutive dispersal. It is a world of dispersed, or scattering, structures whose amplitude — contrary to the structuralists — we can no longer measure, structures that in a single gesture arrive at both the ancient geometric and architectonic configurations: “Just as water, gas, and electricity come into our homes from afar, responding to our needs with negligible effort,” wrote Paul Valéry in 1936, “so we shall be provided with visual or auditory images, which will appear and disappear at the slightest wave of the hand, hardly more than a sign.” In this augury of telecommunications, the bourgeois home is merely the site of energy and other modes of supply. Its architecture is an intersection, a nodal point, a fixed pole on which inertia begins to renew the ancient sedentary ways of townspeople,

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legal citizens for whom the liberty to come and go is suddenly replaced by the liberation of home reception.

Elsewhere, in "Paris, Capital of the Nineteenth Century," Benjamin notes: "During this period, the office becomes the real center of gravity for the active domain of everyday life, and the de-realized individual creates a safe harbor for himself in the private home." As today we stand witness to the development of an office cosmology that is directly linked to the flowering of tele-informatics, we can attest to the accuracy of this observation which, with the accompanying decline of metropolitan sedentary behavior, affects the very structure of architecture.

The office, which was once an other-place, an architectural aside, has now become a simple screen. In the bourgeois apartment, the space reserved for work and study has become the terminal of an office-viewfinder, in which the data of tele-information instantaneously appear and disappear as the three dimensions of constructed space are translated into the two dimensions of a screen, or better of an interface, which replaces more than the volume of the ancient dwelling, with its furniture and their arrangements, its contracts and blueprints. This new arrangement also directs the more or less distant displacement of the occupant.<sup>5</sup> This transmutation — where the inertial confinement of the new office has become the axis of gravity and the nodal center of techno-bureaucratic society — explains yet again the contemporary, post-industrial redeployment.

With the first French experiments in "tele-labor," or long-distance work — launched in 1980 by the Direction Generale des Telecommunications — we can begin to see the real basis for this re-organization of architectural and urban space, when we begin to hear references to the "tele-local," as occurred in the multi-enterprise center directed by DATAR in Marne-la-Valleé, to the reduction of traditional office spaces, to the re-organization of employees in certain newly

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de-centralized operations, resulting in the alleviation of investment and operational expenditures, in the renewed realignment of professional and family obligations, in the saving of transport time, and so forth and so on.

For telecommunications, coming together in time means, inversely, distancing oneself in space. The vast dispersion of the scattered debris now involves more than the fragments of the concentration-camp universe denounced by Benjamin. Scattered as well are the personnel, the tele-laborers, who have become objects and subjects of an energy and film transmutation whose purpose has moved from simple industrial production to the long-distance representation of that structural and post-industrial reduction that affects all neighborly relations. As Benjamin noted: "Every day, there grows a need to own the object at the closest possible proximity, through its image and even more its reproduction."<sup>6</sup> No longer aspects of physical space, size and proximity are now elements of the time of photographic, cinematic or infographic exposition, which is a delay of almost instantaneous response, irrespective of the distances among interlocutors.

Coming together to deconstruct structurally or to scatter to the winds, the functions here of eye and equipment become confused, since by definition the resolution of the transmitted image is its instantaneous reduction. But this reduction affects more than the simple content of representation, the projected form-image. It also takes over constructed space, the territorial form, from which emanates the organization of time through the chrono-political direction of the so-called "advanced," or developed, societies. In his memoirs,<sup>7</sup> Marcel Pagnol described this relationship between the eye and the equipment: "In a theater, a thousand people cannot sit in the same seat and thus we cannot say that any two of them have seen the same play. . . The playwright has to take aim at his public by taking his shotgun and firing a

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thousand pellets at once, if he is to strike successfully a thousand views in a single blow. Film resolves this problem, since the spectator, no matter where he is in the theater, sees exactly what the camera saw. If Charlie Chaplin looks directly into the camera, his photogram will look directly at everyone in the audience, whether they are sitting to the right or the left, in the balcony or the orchestra."

The situation of the "tele-spectator" or the "tele-laborer" at home is the same as that of the audience in the darkened theaters of Pagnol, yet with one major difference of scale, one which affects, more than the dimensions of the projection room, the space-time of the metropolitan concentration and urban sedentariness.

If the star looks directly into the camera, his "form-image" will look directly, in the televised interface, at those who are watching, whether they are in the city, suburbs or countryside, whether they are in France or elsewhere. Pagnol's movie star will be infinitely multiplied, like the stars of Flaubert's telescope.

This technical reproductivity is not exactly the same. In the case of the telescope or the cinemascope, the irruption is the same and the notion of the exactitude and resolution of the artistic image re-engages the exactitude of the form-image and the resolution of the problems of scientific observation and of experimentation in the exact sciences. As Benjamin: "The camera substitutes a space of unconscious human action for that space in which man consciously acts."

Basically, following the maxim "too much justice results in injustice," too much justness — too much exactitude in the definition of the recorded and transmitted form-image — results in inexactitude, or better, a relative uncertainty due to the interpretive delirium of the observer, be it spectator or tele-spectator. The film industry certainly knew how to use the fascination and hallucinatory character of this delirium, which remained as unclarified by the means of com-

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munication and telecommunication as by the experimentation of the exact sciences.

With this morphological and architectonic irruption, the technics of telescope and cinemascope does not give more, in that there is no real multiplication. Instead, it interrupts us differently. For the attentive observer, the slicing of physical space into different geometric dimensions, and the durable separation of geographic and constructed spaces, is replaced by the momentary break, due to the imperceptible interruption of different sequences of view-points and the perceptible interruption of broadcasting and of reception.

The new produced and projected space has less to do with lines, surfaces and volumes than with the minutiae of view-point, the dynamite of tenths-of-seconds. These view-points are simultaneously time-points in the tele-topological continuum of long-distance projection and reception.

One mode of splicing and assembling replaces another; but the untimely interference of extension and duration are far from being apprehended in any real sense, precisely because the visual unconscious intensifies, as it were, the instinctive unconscious, denounced by Freud.<sup>8</sup>

The inertia of tele-spectators at home has replaced the sedentary ways of the audience and the actors of the stage and streets, and precisely because the concentration in the actual time of transmission and reception has renewed the classical concentration in the actual space of cohabitation — the unity of the neighborhood, which until recently begat urban architecture.

Thus, along with the “tele-local” machinery, we find ourselves surrounded by tele-informatics equipment that memorizes the orders transmitted by travelling salespeople armed with portable terminals. It used to take two or three days for the orders to get back to the company headquarters; now it’s all over in forty-five seconds. And the same goes for press journalists. The Scrib tele-editing portable terminals

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developed by the Bobst-Graphic company, with micro-computer screen and integrated printer, permit creation, full execution and transmission at a speed of up to thirty signals per second, which is six times faster than telex. Now, a journalist on assignment need only tap into a telephone for her or his article to pass instantaneously into the central computer at the editorial desk of the newspaper, and this at any hour of the day or night. That reporter's piece can then be typed and set automatically and without the intervention of a single employee at the printing end of the process.

In Japan, this has already happened at the level of city management, with the Mitaca experiment in the INS system — the central information agency — the inertial concentrator of facts concerning all metropolitan commercial and industrial residents, users, equipment and enterprises. According to official Japanese government statements, if this experiment in the city of Mitaca works, if this process of instantaneous informational capitalization of an entire city proves successful, it could be extended to Tokyo, Osaka, Nagoya and finally to the fifty largest cities of Japan.

This view of telematic and megalopolitan management seems to have found a supporter, recently, in the person of maritime ecologist Jacques Cousteau. According to Cousteau, in the year 2000 Paris will have to be "a federation of villages in which communication will occur through video rather than physical transport of people." It is as if naval strategy served as model and reference for territorial management. Or else it is as if telecommunication's "populating of time" — such as vacations, interruptions, and so forth — suddenly replaced all the ancient cohabitations, the populating of space, the actual urban proximity.





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Bonhoeffer once wrote: "In its form, creation faced God in an altogether new manner, and, in this face-to-face encounter, creation belonged to Him completely." Now — with the opto-electronic ubiquity and its incidence over the configuration of territory — we can revise this statement, as regards the teletopological metamorphoses of the city: "in its form-image, creation faces man in an altogether new manner, and, in this interface, creation appears to belong to *him* completely." It must go without saying that this term "completely" is an optical illusion, a simultaneously energy- and film-derived illusion. From this we get the term electronic optic, an optic that no longer results from the properties of additional glass lenses. Rather, electronic optics results from properties of instantaneous electronic transmission, from the transparency of distances which renews not only the physical appearances of materials but also the morphological and architectonic configuration of the human environment.

We are no longer primarily concerned with the displacement — or with our being displaced — in the space of a passage. We are now involved with the dephasing in time of the instant of a disjunction-conjunction. This is a concurrence of technical circumstances in which appearances are all against us, all precisely against us in the opto-electronic interface. The separation of different sites in the original geopolitics of the rural, the communal, the urban and the national, has become the interruption of the non-site of contemporary chrono-politics.

This intermittent structuring of duration — like that of physical extension — by systems of interlocution and by interruption of communications, though radically different from that of the parcelling of land, is nevertheless equally concerned with spatial arrangements, with the ripping to pieces of real estate, the irruption in which the architectonic undergoes a series of topological distortions whose effects still remain largely unknown. To this end, consider the

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history of architectonic elements, such as walls, doors, windows, chimneys. The first window is the door, the door-window necessary for access to and thus for the reality of the home, since we could not conceptualize a house without some means of access.

In the first dwellings, the illuminating opening did not exist. There was an entrance and sometimes a chimney of some sort. The window as such — the second window — appeared fairly late, in the sites of monastic cults, before becoming popular among the rural homes and only then, and especially, in the palace and the homes of the bourgeoisie.

The third window is a recent invention: the television screen, a removable and portable window that opens onto the false day of the speed of light emissions. The television screen is an introverted window, one which no longer opens onto adjoining space but instead faces beyond the perceptible horizon. Thus, if the door-window constitutes an opening — a threshold for the immediate and undifferentiated access of people, things, daylight and direct vision, as well as a form of ground-level ventilation that works with the more elevated ventilation of the chimney — then the specialized window is more selective, because it interrupts the passage of bodies. The specialized window is a puncture, a mediated opening for solar light and nearby perspectives. In this context the TV screen becomes a selector of electronic images, an audio-visual medium for the indirect light of the cathode tube.

While the door is both the origin of the necessarily penetrable dwelling and of the specialized window, it is also the first piece of furniture, since it is the same vertically and horizontally. The drawbridge is an example, as is a sluice gate, or the back panel of a cart. Each is a kind of door that itself transports, inside or out, in the coming and going, which illustrates precisely the turning motion of the revolving door, the first technical vehicle of the nineteenth-century domicile, awaiting the elevator.

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The automobile door thus constitutes the second door, but as a door of a doorway outside of the walls, it also completes the distortion effect of the screen of the third window. As a means of physical and communicative access over great distances, the audiovisual and automotive media merge here, collapsing the traditional architectonic structure. Basically, just as the television set posted before the sofa is an object that punctures the walls, the garage must also be considered in the context of its effect on the rooms of the house. Both are thresholds of transformation that provoke the anamorphosis of constructed architectural and urban structures. Movable elements — such as seats, beds or various arrangements — conspire with new means of transportation and telecommunication to contribute to the deterioration of a stability which is actually a stasis of immobile equilibrium. As a phenomenon of accelerated substitution, contemporary living becomes the crossroads for mass-media. At this point, the garage could easily replace the house, that “dwelling” which was only a parking lot for the nomad’s furniture anyway.

Will we soon replace the ensemble of apartment furniture with active and dynamic vectors that will themselves progressively but radically modify the configuration of the building, and then of architectural morphology? Hasn’t the automobile already become a detachable part of the floor plan, the necessary condition for the appearance of the secondary residence, the detachable habitat of the principle residence? Aren’t we witnessing here, in the development of the automotive dwellingplace, a repetition of those architectonic elements already noted earlier? Having made the window autonomous through the television screen, and the door through the automobile, will we now participate in the complete disintegration of the building? Don’t we already feel a kind of domiciliary atopia in the urban absorption of towns and suburbs? Isn’t the ostensibly functional development of

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the modern architectural plan, with its hierarchies of space into principal and secondary rooms or receiving and serving units, really nothing more than an aspect of the different modes of access, such as door, window, stair, elevator, as well as of the means of automotive communication and audiovisual telecommunication? As regards recent developments in advanced technologies, we must pose one final question. How will it end?

Here, the video-cassette recorder affords us — in the wake of telescopes and cinemascope — a new aspect of the mutation in progress, one whose supremacy is already in the works, with the arrival of a new type of inertia in which the building will once again recover all its reality.

We know the primordial role of the measure of time in the history of all societies, from the early religious and political calendars, the *clepsydra*, the sundial, the clock, down to the present digital ticking of the quartz watch. With the video-cassette recorder, with its pre-recorded tapes, or better its differentiated re-transmissions, we still have an organization of time, an electronic calendar done in advance that participates in the management of time, but now of a time that has not yet arrived.

The advanced technologies advance into time in order to create day, a supplementary “false day.” On the one hand there is the primary day, wherein we live; on the other is the secondary day, which is recorded somewhere for us. Just as the secondary residence exists by means of the automotive mode of communication, this secondary, supplementary day occurs thanks to audiovisual modes of telecommunication.

This stereophonic and stereoscopic doubling of space and time offers multiple correspondences between the differentiated residence and the differentiated re-transmission of the advanced video technologies. In the one, the heat is turned on electrically to prepare for the weekend, while in the other the timer is set automatically, and electronically, so as

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to record things that will be seen much later. If we tried to figure the damage to the environment over the last twenty years caused by the multiplication of supplementary residences used for only a few days at a time, we would also have to attempt to estimate the effects of that curious phenomenon of temporal anticipation. This would be made all the more difficult since we have always underestimated the importance of the day and of daylight on territorial organization and administration. This importance comes not only from the alternation of night and day, but also from a system of interruptions of activities which structured the life of former societies and the administration of their different environments. Basically, time is lived — physiologically, sociologically and politically — to the extent that it is interrupted.

While, perhaps, continuous time is that of chronology or history, it certainly is not that of everyday experience. Interruptions of activity or productivity are essential to the structuring of real time, for individuals and for social groups, and here the day is the reference point and the primary standard for these structuring interruptions, as is evidenced in common expressions such as “to see the light of day” or “to call it a day.” More than any other physical, urban, or architectonic barrier, and more than any other natural or political border, the day marks off differences of temporality, differences of regimes that affect the consciousness of time passing, not only through the rhythms of sleeping and waking but more with the eternal return of daylight and of night.

Thus, the region and the city are not organized exclusively through a cadastral system of blocks, neighborhoods, city-centers and peripheries, or clusters of apartment complexes. They are also arranged through a calendar system of vacations, leaves-of-absence, and holidays off. Some interruptions return us to the religious purposes of the Sabbath or the Sunday rest, the seventh day of Creation, a vacation dedicated to contemplation, to the reception of the finished

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product. Others, such as the lock-out and the strike, are interruptions of production that are also necessary to reflection and to a dialogue among social partners or antagonists.

Today, technology plays an analogous role in creating from all forms of new interruptions a modification of time, a distortion of the astronomical day which affects the arrangement of urban space and of architecture, as the window displaces the door.

The solar day that structured the living day was displaced by the chemical day, in which candlelight permitted the development of numerous nocturnal activities. The chemical day gave way to the electric day, which indefinitely prolonged the perception of daylight. With the recent advent of the electronic day, the extension of day and of visibility spreads, taking over space as the extension of an audio-visual and tele-topological continuum, and erasing all the antipodes — those of geographic distances, as well as the dead angles of that domain constructed by closed-circuit TV.

This sudden distortion of the visibility of daylight is more than the simple consequence of televisual technologies capable of turning space in on itself. It also involves techniques of aerospace communication, which are themselves capable of twisting the length of the astronomic day. For example, returning from San Francisco to Europe, we can follow an aerial line that passes over the glaciers of Greenland. If we do so, at certain periods of the year, we participate in an extraordinary phenomenon: there is no night. Behind us glow the red fires of dusk and, in the same instant, ahead of us glimmer the green lights of dawn.

Seeing that which had previously been invisible becomes an activity that renews the exoticism of territorial conquests of the past. But seeing that which is *not really* seen becomes an activity that exists for itself. This activity is not exotic but *endotic*, because it renews the very conditions of perception, which is necessary to physical reality. Thus, the

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invention — twenty years ago — of holography, appears as a metaphor for advanced technologies. Holography is in no way the perfection of perspective, nor is it the most perfect accomplishment of relief and of stereoscopic vision. It is instead the end: the extermination of all perspective reality.

What is false, then, is not only the accelerated perspective, the anamorphosis; it is depth itself, the physical and geophysical distance in time. We see this everywhere: in supersonic transports, in laser optics, in recent developments in holographic film and three-dimensional television. With this invention of a day defined by technological speed, in direct opposition to astronomical time, the primary question becomes less one of relations to *history* than one of relations to *time*, and to the regimes of temporality that issue forth from advanced technologies. In this environment, in which all appearances are against us, the metamorphoses of acceleration contribute to the deformation of ancient reference points, such as physical standards and other architectural archetypes. Basically, reality encounters the fate of modernity: it has always already happened.

The moment of the direct perception of objects, surfaces and natural or constructed volumes gives way to the indirect and mediated reception, an interface that avoids day-to-day duration, as well as the calendar of everyday living. We will never be neighbors in any televisual proximity, and the media are not our contemporaries. We live today in an ever-growing fault between the promptness of the broadcasts and our own capacity to grasp and measure the present moment. The question of *modernity* and *post-modernity* is superseded by that of *reality* and *post-reality*: we are living in a system of technological temporality, in which duration and material support have been supplanted as criteria by individual retinal and auditory instants.

The perspectival effects of classical ornaments and the cinematic characteristics of certain styles, such as baroque,

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liberty or neo-liberty, is replaced by an integral cinematism, an absolute transitivity, involving the complete and thorough decomposition of reality and property. This decomposition is urban, architectural, and territorial. It is based on the deterioration of the ancient primacy of the physical separation and spatial limitation of human activities. And this very deterioration occurs so as to facilitate the interruption and commutation of time — or better, the absence of time — in instantaneous intercommunication.

It is as if we were directly participating in a transformation that will reach every constitutive component of the constructed environment. Meanwhile, we are waiting for an atopia which will do to architectural domiciliation what decentralization and suburbanization have done to the City. Something will affect the building in its very persistence, the resistance of its materials, the duration of its immediate efficiency. It will become less than a decor — a form-image as unreliable as a mirage.



“An image perfect for all speeds would be fantastic, one would suppose.”

This commercial slogan for a German VHS — which extends Walter Benjamin’s view on the nature of architecture — also illustrates the end of the classical optical perspective: the arrival of an opto-electronic pseudo-perspective, a (fantastic) accelerated perspective, one ruled less by the vanishing point than by the simultaneous vanishing of *all* points, and of all instants, in a transmission in which all points without any dimension (pixels) and all instants without any perceptible duration compose an image whose formal perfection springs not from an optic convergence but from a commutation of various forms of information. In this world, the speed of electronic propagation is suddenly the equiva-



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lent of an ocular stability, which itself replaces, in the cathode interface, the ancient statics of materials.

Since what we see comes from that which is not apparent, the immaterial character of the emergence of televised forms mixes up certain aspects of metaphysics.<sup>10</sup> Further, with the fall of the advertising slogan — “one would think” — the problem of seeing as thinking is once more posed. With visibility as the foundation for construing belief as ocular or optic, and as the basis for moral, ethical and scientific validity, we are once more at the level of the theological debate that emanated from Galileo’s telescope: “Can we say we have actually taken part in a Mass that was seen through a telescopic lens?” What seemed before an overly scrupulous Jesuit quibble now becomes a question of reality — or post-reality — that concerns instruments of measure and communication, as well as architecture.

In 1979, for example, former zoo director and video cameraman Jean-Paul Pouvreau and B. Devaux, director of traveling shows and animal films, proposed to abolish zoos in order to end the suffering of incarcerated animals. They suggested replacing live animals with tele-visual images that would be shown in a video-zoo without animals, installed in a space of 2000 to 3000 square meters. With the help of video-informatics arranging the space of an electronically programmed projection that would integrate, in a noctarium, the sequence of day and night for the natural environments of exposed, and over-exposed, fauna, these two created, in broad strokes, the means by which architecture would become no more than the scaffolding for an artificial environment, one whose physical dimensions have become instantaneous opto-electronic information.

We know this video-city, this televisual urbanization predicted by these two ecologists and suggested, for Europeans, by the experience of Atlanta, where, since 1980, Ted Turner’s Cable News Network has allowed Americans to

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receive at home and direct — 24 hours a day and seven days a week, every day and every week — images from around the world through a broadcast satellite orbiting above the Equator.<sup>11</sup> Peacefully seated in their white clapboard homes with wraparound porches, at the crossroads of the Great Plains of the Middle West, the viewers of Cable News Network can leisurely watch the cars that pass before their homes or the television scoops from Iran, Iraq and other so-called hot spots. In this encounter — permitted by the artifice view from the cathode window — the third dimension trembles, and the third mode of dividing space becomes insufficient. Where once the distance of time was disrupted by the velocity vector of instantaneous transmissions, now the very nature of the environment is subjected to electronic fadings and parasitic scoops. The former televised daily news has been replaced by the permanence and direct exclusivity that create for CNN viewers a continuous televisual day, encased in the meteorology of a visual day, just as television sequences are ensconced in the monitors of a video control-booth.

We have passed beyond caring about the supremacy of one mode of information over the press, radio or film. Our house has become a press house, an architecture in which the information-dimension grows and intensifies, and in direct opposition to the activities of all journalists. The contour of daily living and the framing of viewpoint in an architectonic constructed of doors and doorways, windows and mirrors are replaced by a cathode framework, an indirect opening in which the electronic false-day functions like a camera lens, reversing the order of appearances to the benefit of an imperceptible transparency, and submitting the supremacy of certain constructive elements to that cathode window that rejects both the portal and the light of day.

*Camera obscura*, planetarium, noctarium: in these, architecture recovers its obscure origins. If the photo or film studio began somewhere in the cave of the philosophers, the

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crypt of the cenotaphs and the darkroom of the perspectivists, today it threatens and takes over the integrity of the visible continuum, changing sensible appearances into so many instances, mere specters of a perceptive and perspective reality about to disappear.

We can measure and record the evolution of this disappearance by considering the history and archaeology of shadow theaters. These began with the eighteenth-century fondness for optical and scientific curios. One such was the *eidophusicon* that appeared in London in 1781. It was a set piece painted in three dimensions, and lit so as to give the illusion of actual depth. In 1792, Robert Barker offered the first panorama and, in Paris in 1822, Daguerre invented the diorama. Finally, on December 28, 1895, the Lumière brothers conducted their first moving-picture show, in the basement of the Grand Cafe on the Boulevard des Capucines.

In all of these, we study the diverse projection apparatuses — magic lanterns, the *phenascitiscopes*, the kinetoscope, and all the cinemascope — and the accompanying architecture of the first projection rooms — such as the cylindrical form of the panoramas, the spheres, and the rotundas that prefigure, in the nineteenth century, Jeaulme's Panorama, or hemispheric cinema, and even the space of integrated holography — in order to envision the transformations of the constructed environment in the face of telecommunications developments, such as the use of satellites and fiber-optic cable networks.

Why have historians focused on the iron and glass architecture of Paxton's 1851 Crystal Palace, ignoring the architecture of light of the darkrooms of the same period? On the one hand, the development of transparency was established as a result of the materiality of large surfaces of glass, held up by an impressing array of metal scaffolding. On the other hand, transparency entered secretly in the unnoticed architectonic mutation of a wall-screen. The images on this

wall increasingly assumed the value of space, taking over all the dimensions in the projection room, and finally fusing and confusing architecture with projection technique — a fusion that had previously eluded the fresco, the mosaic and the stained glass, for those methods of representation relied on daylight that slipped through the architectural openings.

Whereas the figures of representation used to appear in the solar light, or else in the luminosity of a flame, such as the flickering chiaroscuro of candelabras, today they appear (and disappear) by means of the electronic light of instantaneous representation which controls the lighting of built structures, as well as the diverse sources of complementary, artificial light. Preferring shadow and obscurity, a new horizon is revealed, a negative horizon which relies, not on the direct visibility of night and day, but rather on a false day of indirect visibility — one which has no relationship whatsoever to the lighting of the building, which used to be a necessary pre-condition for the art of construction.

The foyer, as the fireplace, was once a decisive element in the traditional home. Conceptually, it now suffers a strange fate: the foyer of heat is separated from that of light. The optic foyer first began with Clausewitz' metaphoric use of the powers of projection of additional concave and convex lenses: "As the rays of the sun united in the foyer of the concave mirror and, forming a perfect image, produce there the maximum incandescence, the energies and contingencies of war united in the principle battle, and produce there a supreme and concentrated effect."

Clausewitz's foyer will find its autonomy in Edison's electric bulb, and then even more in the terminal of all natural illumination, that place of electronic light. In that light of speed, the German advertising agency will produce a jingle repeating the metaphoric arguments of the Prussian military strategist.

Behind the expression *a perfect image*, the essence of

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representation, which is its technique, does not give us more; it interrupts us in a different way. We need no longer hide the occultation and interruption that only served the ends of demonstrating and promoting different techniques, including those of architecture and urban development. The apparent multiplication of optic and video performances always hides a subtraction, since the representation is never more than one single reduction among many possibilities.

If architecture offers a view through the very materiality of the erection of walls, partitions and buildings, it also contributes to the dissimulation of the horizon of appearances. In this, architecture operates in a manner similar to the way in which state-of-the-art technologies of communication make prisons more visible and more shadowy.

More than any form of demonstration, it is this occultation that is the common denominator of all technologies, old or new. It is the privileged analyst of all arrangements of space and time. For example, the first tableau, the first means of ocular representation, was the opening for doorways and windows. This was long before the easel-and-canvas painting, which so often was self-enclosed, as in a triptych. To understand the first tableau, we would have to try to return to the visual unconscious, to the nature of the opening and the closing, rather than attempt to repeat individual demonstrative performances of one electronic optic or another.

To this end, consider the evolution and three-dimensional extension of the light-providing opening from the ancient cloister, through the mullion windows of the Middle Ages, the great lancet and rose windows, past the special effects of gothic architecture, to the bow-windows and the great metal spokes of the last century and beyond, and up to the glass facades of our present skyscrapers, and the curtain-walls that were themselves contemporaries to the invention and development of the cathode opening. All of this helps

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explain the importance of this transmutation of appearances, the subsequent supremacy of the televisual window over the door and other traditional means of access, a supremacy that already contributes to the decline of public space and the decrease of collective venues.

There are fewer theaters, grand performance spaces (such as opera and symphony halls), stadiums and other places for the effective, collective and simultaneous presence of large numbers of spectators. This reduction comes from direct and global-vision broadcasting, which devalues the real presence of thousands and even tens of thousands of people. As ticket prices and profits have given way to the exorbitant fees the networks are willing to pay for exclusive broadcast rights, we have arrived at a point in which some are seriously contemplating completely eliminating the crowds from all major sporting events, and simply televising the matches and games in empty stadiums, filled with nothing but advertising billboards.

In the United States, where sports are important, cable networks have offered new basketball teams to make up the difference caused by the disappearance of their spectators. This deregulation of public space in the service of household reception is in every point analogous to airline deregulation, to the deregulation of American railroads, and especially of AMTRAK between 1960 and 1975, which affected both the demography and the social class of passengers. Deregulation reduced transport delays from the East Coast to the West, as it also devastated passenger airlines — as had already happened to the general infrastructure of the rail system, including stations, siding, tracks, and so forth.

Once again we encounter the decisive importance of speed in the disqualification of old vehicles and, even more, of an entire environment, such as Formula I racetracks and stadiums, that fall victim to instantaneous broadcast, with the inevitable impact of direct television on the habitat, on

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the nature of neighborhood relationships and on the entire urban infrastructure. Once again, the subsequent use of geostationary satellites to assure urban and inter-urban tele-communication, in Brazil for example, relocates the center of the city, ripping it from the belfry of the town hall and hanging it instead from the zenith of some satellite in high orbit over the earth.

"Immediacy is a fraud," wrote Bonhoeffer in the early thirties, at the exact moment in which radio, telephone and other new modes of mass communication enabled Adolf Hitler to establish control over Germany. We can now measure the perverse effects of this fraud by observing that that which is present and shared is today discredited by the immediacy of that which is not. When a CB hacker explains that his radio allows him to speak "with people he doesn't know, and to communicate beyond the circle of geographic affinities," this means that that which is *not there* controls from long distances that which is present.

Finally, this "pressure of the audiovisual," comprised of the disruptive influences of instantaneous broadcast on our political and other habits, is merely an expression of the deterioration of the unity of the neighborhood, and the subsequent dissolution of the politics of territorial arrangement, as exemplified by the universalization of the *barrios*, homelands, *favelas* and other worker-ghettos of the Third World. Thus, the insidious discredit cast for the last twenty years over *geopolitical extensivity* in favor of a *transpolitical intensivity* of exchange and communication resulted in the progressive decline of the national State, shredded by the demands for internal autonomy and the opposing economic and strategic requirements for international alliances. Despite the illusion of multinational corporations and international marketplaces, the deregulation of different organizational and governmental systems resulted in the reversal of the aggregative, federal principle. This propitious dissocia-

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tion assumed the aspect of a decentralization that was, in fact, nothing more than the prolongation of decolonization. From this emerged an infinite series of fracture lines, divorces and cleavages — all in the name of various liberties — that divided ethenes, groups, classes, and social partners, all the way up to the largest national or international communal entities, so as to create an administration of time, a “chronopolitical” management of activities that challenges the traditional geopolitical arrangement, re-ordering the very forms of population and, with those, urban architecture itself.

We saw this kind of deconstruction and morphological irruption of architecture in the earlier emergence of metallic structures at the London and Paris World's Fairs: the accrued transparency of appearances, the residual character of an industrial construction that was already nothing more than a scaffolding for glass but also — with that recuperated supremacy of light over matter — the devaluation of stone, the decline of dense materials for facades and partitions, the rise of the structuralism of the curtain wall.

In the nineteenth century, an anonymous author described the Crystal Palace: “We see a trellis of lines of exquisite subtlety, but there is no index that allows us to appreciate its true dimensions and distances, and so the eye slides along the length of an infinite perspective that loses itself in the mist.” Herein is announced in advance the crisis of physical dimensions, the advent of buildings stripped of any optic center, in which the structural architectonic of iron and glass behaves as the later image-form will behave in the computer terminals and the televised sequences. In the new trellis of lines, 625 or 819 lines, of imperceptible subtlety, the *pixel* replaces the bolt and rivet. The eye of the telespectator slides along the length of an infinite electronic perspective, and the architecture of light becomes nothing more than the computer's memory — a sequential, modular or matrix system that was prefigured by the first metallic structures,



the optic theaters and other panoramas of the nineteenth century.

In the same way, the World's Fairs of the Belle Epoque anticipated this agglomeration without agglomeration. In this universal over-exposure of commercial and cultural exchanges, the City progressively lost its authenticity as the unity of time and place for an effective cohabitation in the face of an accelerated de-urbanization. With the disruptions in the nature of territorial population — through decolonization and decentralization — the traditional sedentary life gave way to a confinement that resulted from advanced technologies. In the establishment of this inertial confinement, the basis was no longer the geometric axes of the urban arrangement, nor the geomorphological centrality of the group of villages. Instead, the new order relied on the accrued polarization of exchanges and activities, a temporal, nodal, polarization in which the interlocution and interruption of a momentary sitting, little by little, supplanted the older network of highway communication and railyard turntable.

The antique, cadastral segregation of provinces and neighborhoods gave way to time management, in which individualities would become progressively sharper, what with the risks of conflicts and the internecine struggles built into this sort of situation. Now, with the decline of the concrete presence of users, we can no longer easily verify the devaluation of the *close* and the *nearby* to the exclusive advantage of the *distant*. This is the presence of absence, whose unlimited abundance is revealed by the new means of instantaneous inter-communication, such as telematics, citizen-band radio, walkman and other video-technologies.



Alongside the transformation of human populations due to the domestication of fire, water, and wind, alongside

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the transmutations of the natural and constructed environment provoked by new modes and sources of energy, can we now add the impact of new kinds of information, and of a sudden metropolitan tele-distribution?

We already know the evolution visited upon the rural landscape by the distribution of electricity, as well as the rail and road transport systems. We also already know the mutations undergone by the urban landscape, thanks to the elevator and the subway, and, of course, we can look out the window and see the influence of new energy sources — such as solar energy — on our patterns of habitation. And, if we already know all of these, isn't it about time we began to wonder about the relationships between these new energy systems and those new modes of mass communication? Systems theory has long demonstrated the logic of flow for transport and transmission, the visible or invisible dry fluxes of a "substance," generally without consistency, but with great consequences.

If *informatics* — with its networks, memory banks and terminals — is actually a kind of *energetics*, an energy form, then transmitted information becomes a mode of formation that affects for now and into the foreseeable future all the different types of arrangements we have been considering. Where once the old energy sources of coal, gas, oil, and electricity gave rise to a longlasting and continuous current of transformation (although for a shorter period than similar ones of the past), the energy of information feeds inversely an alternative, extremely brief, discontinuous current of transformation, in which the rule of space and of the spatiality of extension of different rural and urban places gives way to temporality, and the nature of regimes of temporalities, produced by advanced technologies.

From this new order comes what we consider to be the essential notions of the *direct* and the *deferred*. In the same instant, we see the philosophic inversion of the relationship

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of substance to accident, linked to the soaring of a kind of energetism that itself emerges from the catastrophic performances of nuclear technologies. The new primacy of an accident — conceived in all of its instantaneous, energetic power — is no longer thought of as some sort of deformation, some kind of destructive danger. Instead it becomes a formation, a productive and constructive probability. Instead of relying on the formal or dialectic logic of the past, this new formation relies on the paradoxical logic that — through industrial and scientific practices — prolongs the crisis of determinism, the popular “uncertainty principle” of contemporary physics.

In this “energetism” that emerges from quantum mechanics, the accident is no longer that of a visible dislocation: a substantively constituted ensemble, the apparent irruption of some kind of object. It is instead the inapparent rupture of the unity of measure, be it of matter, light, space or time. It is a transference accident that challenges all primary references — such as the unity of place and time — in favor of the motion of motion: that absolute transitivity of speed that is to time as it was to space just yesterday, in the heyday of Einstein’s relativist continuum.

Until the end of the nineteenth century, space — in the distinction of movements and of physical and geographical extension — acted as the differentiation between space and time. At the turn of the century, with Albert Einstein, we begin to see a preliminary confusion of terms and appearances; space becomes space / time, in a spatio-temporal continuum. This great telescoping of two variables becomes a mere disturbance when considered in the context of our present fragmentation, disintegration of dimensions, and quantum indeterminacy, all of which are borne of that fusion in which relativist space-time, and its quadri-dimensional continuum, vanish before the emergence of a dimensionless space-speed, a kind of discontinuum in which the grandeur of

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speed surges like some primitive space: the standard for all dimensions, precisely because geometry has revealed that — in the abstract extension — all measurements can be considered measures of length, wave lengths.

Speed is thus no longer simply a measurable qualitative dimension, as it was in Einstein's relativist system, where "acceleration is defined as the quotient of an infinitely small increase in speed and by the correspondent increase in time."<sup>12</sup> Speed has become a qualitatively measured space, whose dimensions are based on the constant of light, of the light-standard and only the light-standard. It seems imprecise to continue to claim, as do some scientists like Carl Sagan, that "speed expands time in the instant in which it shrinks space." Acceleration does not really reduce space, nor does it really stretch time, because, since the invention of the field — as in the gravitational and electromagnetic fields — those two spatio-temporal variables are now perceived as "accidental" and statistical rather than "substantial."

According to Einstein: "With the invention of the electromagnetic field, a daring imagination was needed to fully comprehend that it was not the conduct of bodies but rather the conduct of something that existed between them, *i.e.* the field, that could be the essential for ordering and interpreting all events."<sup>13</sup> At the end of his life, Einstein refused to write about these atomic and quantum events as "occurring in space and time . . ."

According to Epicurus, "time is the accident of accidents." With this in mind, we can say that the space-time of the Einsteinian relativist continuum was the accident of accidents, of the transfer of speed. In this, the speed of light illuminated matter in the instant in which light offered a representation, but a hyper-cinematic representation, devoid of all physical dimensions, which, after the downfall of ether, already predicted the field. Maxwell's equations finally passed from the field of philosophical and theoretical repre-

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sentation into the field of atomic and quantum action, in which the classical depth of field of Einstein's relativist continuum begins to blur, just like that of the Quattrocento perspectivists.

We can see this situation today in the most recent audiovisual technologies. Having witnessed the advent of television, cinemascope, high-fidelity, all the way up to the recent experiments with hemispheric cinema (and again, in 1982 at the Collège de France, with integrated holographic film), we now see that every venture — irrespective of the sophistication of the means employed to create a kind of visual or aural relief — is bound to fail. This built-in failure does not arise from the quality of the acoustic enclosure, nor from the properties of the specified optics. It comes from *habit* — from our own system of habit — because with custom this so-called “relief” becomes integrated and then disappears, regardless of its original verisimilitude.

Basically, according to all reports, after only a few months the imaginary third dimension becomes blurred, and soon no one can tell the difference in depth between the photogram and the hologram. It's as if the fourth dimension was the only relief, and the solitary depth a depth of time which we never really get used to, a paroptic depth which allows us to see a day which is not exactly that of solar or any other light. Instead, we see by means of a subliminary illumination, and one which has no relationship whatsoever with dimensions, distances, or the depths of the traditional field of space.

Commutation has progressively replaced the limitation and interfacing of surface; instantaneous reception has replaced departure, in the inertia of a confinement that is becoming the norm. All of this has happened because the habitual notions of height, length and width have undergone a transmutation, one that affects the organization of ocular and auditory perception, and thus the entire administration

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of territories and of all construction. Now one architectonic element stands ready to supplant all others. The window replaces the door.

This is an event of considerable importance. It reaches to the heart and soul, the principle and nature of architecture; it relegates the protocol of physical access — as well as the necessity of an effective presence — to a secondary plane of actual experience.

We can now better understand the precise materiality of architecture which fascinated Walter Benjamin. It was connected less to the walls, floors, and opacity of surfaces than to the primacy of the access protocol of doors and bridges, but it also referred equally to the ports and other means of transport, that prolonged the nature of the threshold, the practical function of the entryway. This protocol of physical access gave all its meaning to the space of a dwelling and of a City; both were linked to the primacy of the sedentary over the nomadic ways of our origins. And all of this is being swept away by advanced technologies, especially those of domestic teledistribution.

The cathode window and the matrix screen are able to displace doors and physical means of communication, because cinematic representation has already displaced the reality of the effective presence, the real presence of people and things. Further, the accident of instantaneous transfer machinery displaces the substance of space-time, in favor of a kind of energy reduction and a hyper-cinematic reductionism that affects urbanism and architecture, but above all else re-orders geometry and the dimensions of physical space.

With all of this, there is no reason to stand stunned before post-modern facades or the ambiguous character of an architecture that has announced its own superficiality. The mediating of the environment now affects much more than simply the tools of communication, such as control towers, video-based management, nodal centers, and informatics

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centers; it has come to re-order intimate space, the very nature of our domiciles, through the development of teledistribution.

Servan-Schreiber's apartment offers a taste of this future; every room save the bedroom is dominated by a piece of advanced electronic furniture. There's a telex-computer console for satellite correspondence, a game computer for the kids, a home-management computer for domestic affairs, an educational computer for the study of languages, history or math, a word-processor replacing the old typewriter, not to mention televisions and VCR's.

These performances and electronic video-performances are matched only by the architectural nullity of all buildings. This is the nullity we see in the arrangement of Silicon Valley, the electronic suburb of an agglomeration without agglomeration. We have arrived, in the era of telematic non-separability, at the zero degree of architecture.

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- <sup>14</sup> Jean Petitot, "Géométrie du hasard," *Traverses*, #24, 1982.
- <sup>15</sup> Edmond Couchot, "Rhétorique de la technologie," *Traverses*, #26.
- <sup>16</sup> Michel de Certeau, "Rhétorique de la technologie," *Traverses*, #26.
- <sup>17</sup> B. Mandelbrot, *Les Objets Fractals*, Flammarion, 1975.
- <sup>18</sup> *Ibid.*
- <sup>19</sup> In 1971, during the Apollo flight which allowed Armstrong to step onto the surface of the moon, I participated in a stunning phenomenon. Around two o'clock in the morning, while watching the first landing of a human on the moon, I saw the stars of the night, at the same time on my television screen and through my window. See my examination of this moment in "Le littoral vertical," in my book, *L'insécurité du territoire*, Stock, 1975.
- <sup>20</sup> Among twentieth-century transcendental mathematics, logistics is far and away the most introspective. It involves a notation that allows for the enunciation and treatment of various propositions, all the while putting into relief continuities and discontinuities.
- <sup>21</sup> *Theoria*, procession, parade, *processus*.
- <sup>22</sup> Kurt Gödel, Princeton. Symbolic logic produced an important and yet curious theorem. Gödel's proof is a method that proves the existence of an object without ever producing the object.
- <sup>23</sup> Paul Virilio, "La Dromoscopie ou la lumière de la vitesse," *Critiques*, 1978.

### 3

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- <sup>1</sup> Walter Benjamin, *L'homme, le langage et la culture*, Denöel, 1971.



## Notes

<sup>2</sup> *Ibid.*

<sup>3</sup> *Ibid.*

<sup>4</sup> "Film is the truth 24 times per second," Jean-Luc Godard.

<sup>5</sup> The Apple "Lisa" computer foregoes a keyboard in favor of a simple "electronic mouse" which is placed on a table, thereby likewise displacing the cursor on the screen.

<sup>6</sup> Benjamin, *op cit.*

<sup>7</sup> Marcel Pagnol, *Confidences*, Julliard, 1981.

<sup>8</sup> Paul Virilio, *Esthétique de la disparition*, Balland, 1980; *The Aesthetics of Disappearance*, trans. Philip Beitchman, Semiotext(e), 1991.

<sup>9</sup> In February, 1983, Chirac announced that Paris would have full cable access by 1989.

<sup>10</sup> Paul of Tarsus.

<sup>11</sup> By 1985, two Hughes satellites would assure telecommunications among the cities and the most remote recesses of Brazil.

<sup>12</sup> J. Abele and P. Malvaux, *Vitesse et univers relativiste*, Sedes, 1954.

<sup>13</sup> A. Einstein and L. Infeld, *L'évolution des idées en physique*, Payot, 1974.

## 4

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<sup>1</sup> Paul Virilio, *Esthétique de la disparition*, Balland, 1980.

<sup>2</sup> G. Costade Beauregard, *Le Second Principe de la science du temps*, Editions du Seuil, 1963.

<sup>3</sup> I. Prigogine and I. Stengers, *La Nouvelle Alliance*, Gallimard, 1979.

<sup>4</sup> B. Mandelbrot, *The Fractal Geometry of Nature*, Freeman and Co., 1982.