

PAUL
VIRILIO

**RADICAL-
THINKERS**



**THE
INFORMATION
BOMB**

THE INFORMATION

Paul Virilio

Translated by Chris Turner



VERSO
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No one can say what will be 'real'
people when the wars which are
beginning come to an end.

Werner Heisenberg

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CHAPTER 1

The civilization or militarization of science.

If truth is what is verifiable, the truth of science is not so much the extent of progress as the scale of technical catastrophes occasioned.

Science, after having been carried along for a century in the arms race of the East-West detente, has developed solely with a view to the pursuit of *performances*, to the detriment of any effort to discover coherent truth useful to humanity.

Modern science, having progressively become *science* – the product of the fatal confusion between *operational instrument* and *exploratory research* – has lost its philosophical moorings and lost its way, with few taking umbrage at this, except for a few ecological leaders.²

² Pope John Paul II was criticizing the militarization of science and its culture of death as early as the late 1980s.

Indeed, if the 'experience of thought' does in fact lie at the origin of the experimental sciences, we cannot but notice today the decline of that *analogic* mental process, in favour of instrumental, *digital* procedures, which are sayable, we are told, of housing knowledge.

Operational reality of the technical instrument, resolutory truth of scientific thought – two fundamentally distinct aspects of knowledge, which are fused here without anyone apparently becoming alerted to the situation.

Science, which is not so attached to 'truth' as once it was, but more to immediate 'effectiveness', is now drifting towards its decline, its civic fall from grace As a panic phenomenon – a fact concealed by the success of its devices and tools – contemporary science is losing itself in the very excessiveness of its alleged progress. Much as a strategic offensive can wear itself out by the scale of its tactical conquests, so techno-science is gradually wrecking the scholarly resources of all knowledge.

Like an Olympic sport in which the performance drugs, the anabolic steroids and such like, destroy the meaning of the athletes' effort by an abuse of the pharmacopoeia, extreme science is moving away from patient research into reality to become part of a phenomenon of generalized virtualization.

After having been drawn, against its own better nature, into the planetary death race of the 'balance of terror', 'post-modern' science is now engaging in a new type of competition that is equally insane: a *race to achieve their performances in the fields of robotics or genetic engineering*, which in its turn draws the various scientific disciplines on to the path of a 'post-scientific extremism' that eviles them from all reason.

Science, which was once a rigorous field of intellectual adventure, is today bogged down in logical adventurism that denatures it. 'Science excess', of extremes – a limit-science of the limit-excess!

As everyone knows, that which is excessive is incontinent. 'Science without conscience is mere rumour without soul' (Rabelais), and a techno-science without consciousness of its impending end is, however useful, merely a sport.

'Extreme sports' – those in which one deliberately risks one's life on the pretext of achieving a record performance.

'Extreme science' – the science which runs the calculable risk of the disappearance of all science. A phenomenon of a knowledge which has suddenly become cybernetic, this techno-science becomes, through techno-culture, the agent not, as in the past, of the creation of history, but of the dizzying whirl of the *destruction of reality* – and that to the detriment of all verisimilitude.

Only a few centuries after having heralded the Copernicus and Galileo, the *return of the appearance of objective truth*, techno-science is once again becoming the *agent of the disappearance* of that same truth with the appearance of a knowledge which is not so much encyclopaedic as cybernetic, a knowledge which denies all objective truth.

Thus, after having largely contributed to the invention of the various means for the representation of the space of virtual reality, contemporary science is now engaging, a *cosmic*, in the eclipsing of the aesthetics of scientific disappearance.

A science of verisimilitude, of the plausible, still

the discovery of a relative truth? Or a *science of impossibility*, committed today to the research and development of a heightened virtual reality? This is the alternative we are offered.

In fact, the only scientific horizon is authenticity: the experimental rigour of researchers. Unfortunately, we know what media abuses surround certain 'discoveries'. We know the promotional character of the premature announcement of the results of a particular experiment, when what is really going on is little more than an exercise in the conditioning of public opinion by an extremist science. That science is now concerned less with truth than with the effect created by the announcement of a new discovery – though not, as used to be the case, a genuine discovery serving the common good.

In illustration of these disenchanting remarks, we may usefully criticize the carefully sustained confusion between the *sporting hero* and the *scientist*, between the adventurer who pushes himself violently to his physical limits and the white-coated adventurer who pushes himself to the *ethical* limits, the adventurer who experiences the elation of risking not just his own death, but that of the human race.

Let us examine, for example, the Bob Dent-Philip Nitschke affair. On Thursday 26 September 1996, Bob Dent, a cancer patient in his sixties, was the first person to make use of an Australian law which had been in force since 1 July of the same year: the so-called Terminal Act.²

² The Northern Territory's Rights of the Terminally Ill Act remained in force until 27 March 1997, when it was overturned by the Australian federal government. (Tenn.)

Linked to a computer managing his IV system, he said 'yes' a first time to the machine developed by doctor, Philip Nitschke.

After a period of nine days, as laid down in the law, he clicked on 'yes' a second time. The choice he made at that point was: 'If you click on "yes", a lethal dose will be administered within thirty seconds and you will die.'

From these facts taken as a whole – *nine days* of waiting, born without any choice in the matter, *nine days* of waiting, voluntarily, *thirty seconds* to change your mind – the question of the limits of science, of a science that is here akin to therapeutic extinction, is raised: Is this the programmed decease or *computer-aided suicide*?

There is much to be said about this 'decision' which the doctor's participation is confined to: is it a *back-passing machine*, the cause of active death, advancing behind the mask of a cybernetic procedure, inflicting sudden death.

A clinical example of the new virtualization of death, which *remote electronic action* wipes away the patient together with the scientist's responsibility.

Philip Nitschke, innocent of the crime of euthanasia, and no more responsible than a manufacturer of firearms or knives, has managed to take advantage of the ambiguity of the apdly named "terminal illness" to die the nihilism of the coming cybernetic era.

Like Kasparov, the world chess champion, who played a game against a computer specially designed to play chess, Philip Nitschke has just pioneered the creation of a 'fatal' couple.

Let us not forget, however, that what

between the doctor and his 'patient' – impatient, as it happens, to put an end to his life – had already been in play in the age of the balance of programmed terror, with the system of 'Mutually Assured Destruction' (MAD) between East and West, and the development – interrupted by the implosion of the Soviet Union – of a genuine 'doomsday machine' capable of deciding the passive euthanasia of humanity by automatically triggering the nuclear apocalypse.

CHAPTER 2

'totality or all-inclusiveness? We can scarcely question today of what is meant by the endless word **globalization**. Is this a term intended to derive from the word **internationalism**, associated with communism, or, as is often claimed, is it to single market capitalism?

Either answer is wide of the mark. After the 'theory', prematurely announced a few years ago by Fukuyama,¹ what is being revealed here are the 'end of the space' of a small planet held in suspension in the electronic ether of our modern telecommunication.

Let us not forget that 'excellence is a *doxa*' (Aristotle), and perfect accomplishment a *deus ex machina*.

¹ Francis Fukuyama, *The End of History and the Beginning of Man*, Hamish Hamilton, London, 1992.

The time of the finite world is coming to an end and, unless we are astronomers or geophysicists, we shall understand nothing of the matter: 'globalization of history' if we do not go back to physics and the reality of the moment.

To claim, as is now the case, that **globalism** illustrates the victory of free enterprise over totalitarian collectivism is to understand nothing of the current loss of time intervals, the endless feedback, the telescoping of industrial or post-industrial activities.

How are we to conceive the change wrought by computerization if we remain tied to an ideological approach, when the urgent need is in fact for a new geostrategic approach to discover the scale of the phenomenon that is upon us? And we need to do this *to come back to the Earth* – not in the sense of the old earth which sustains and nourishes us, but of the unique celestial body we occupy. To return to the world, to its *dimensions* and to the coming loss of those dimensions in the acceleration set now in history (which, with the loss of local time, has just lost its concrete foundations), but of reality itself, with the new-found importance of this world time, a time whose instantaneity definitively cancels the reality of distances – the reality of those geographical intervals which only yesterday still organized the politics of nations and their alliances, the importance of which had been shown by the Cold War in the age of (East/West) bloc politics.

'Physics' and 'metaphysics' are two terms which have been current in philosophy and understood in that discipline since Aristotle, but what of *geophysics* and *meta-geophysics*? There is still doubt over the meaning of the latter term, while the factual reality clearly shows that the

continents have lost their geographical foundations supplanted by the *rele-continents* of a globalisation system which has become quasi-instantaneous.

After the extreme political importance assumed by the geophysics of the globe over the history of so far rated not so much by their national frontiers, communications distances and time-lags, we have sometimes seen the transpolitical importance of a *meta-geophysics* which the cybernetic interaction of the contemporary world represents for us at the twentieth century.

Since all presence is presence only at a distance, the *presence* of the era of the globalization of the world can only be established across the widest possible gap (this is a gap which now stretches to the other side of the world, from one edge to the other of present time); this is a *meta-geophysical* reality which strictly transcends the *rele-continents* of a *virtual* reality that more and more, as a greater part of the economic activity of the world is conducted, conversely, destroys cultures which are precisely the space of the physics of the globe.

We are not seeing an 'end of history', but we are seeing an end of geography. Whereas, until the transition of the nineteenth century, the old world produced an auspicious distancing between societies, in the age of the current transmission of information the ceaseless feedback of human activities is the invisible threat of an accident befalling this interactivity – an accident of which the stock market might be a symptom.

This point can be illustrated by a particular example: in the last few years, or, more precisely,

early 1990s, the Pentagon has taken the view that *geostrategy is turning the globe inside out like a glove*.

For American military leaders, the **global** is the *interior* of a finite world whose very finitude poses many logistical problems. And the **local** is the *exterior*, the periphery, if not indeed the 'outer suburbs' of the world.

For the US general staff, then, the pips are no longer inside the apples, nor the segments in the middle of the orange: *the skin has been turned inside out*. The exterior is not simply the skin, the surface of the Earth, but all that is *de sita*, all that is precisely localized, wherever it may be.

There lies the great globalitarian transformation, the transformation which extraverts localness – all localness – and which does not now deport persons, or entire populations, as in the past, but deports their living space, the place where they subsist economically. A global de-localization, which affects the very nature not merely of 'national', but of 'social' identity, throwing into question not so much the nation-state, but the city, the geopolitics of nations.

'For the first time,' declared President Clinton, 'there is no longer any difference between domestic and foreign policy.' No longer any distinction: between the outside and the inside – admittedly with the exception of the topological reversal effected previously by the Pentagon and the State Department.

In fact, this historic phrase spoken by the American president ushers in the **meta-political** dimension of a power which has become global and permits us to believe that domestic policy will now be handled as external policy was in the past.

The real city, which is situated in a precise place and

which gave its name to the politics of nations, is to the *virtual city*, that *de-territorialized metropolis* hence to become the site of that *metropolitization* or rather *globalitarian* character of which plain for all to see.

We had no doubt forgotten that alongside with accumulation, there is speed and its concentration which the centralization of the powers that have each other throughout history would quite simply taken place: feudal and monarchic power, or of the national state, for which the acceleration and transmissions made the government of this relations easier.

Today, with the new policy of trade global city is foregrounded once more. As one of the major historic forms, the metropolis provides the vitality of the nations of the globe.

But this **local city** is now only a **district**, one among others of the invisible **world meta-** 'centre is everywhere and whose circumference' (Pascal).

The virtual hypercentre, of which real city ever the periphery. And, with the desertification of space, this phenomenon is further accentuating of medium-sized towns, incapable of holding against the attraction of the metropolises, which telecommunications infrastructure, together with speed air and rail links. The *metropolitization* phenomenon catastrophic human hyper-concentration that coming to suppress the urgent need for a genuine of populations which were previously spread over the whole of their territories.

To illustrate the recent consequences of domestic telecommunications for municipal politics, one last anecdote: since the sudden proliferation of mobile phones, the Los Angeles police have found themselves presented with a difficulty of a new kind. Whereas, in the past, drug dealing in its various forms was precisely situated in a number of districts that were easily monitored by the narcotics squads, these squads are now entirely defeated by the random and essentially de-localized meetings between dealers and users who all have mobile phones and can meet wherever they decide – literally, anywhere.

A single technical phenomenon which both facilitates metropolitan coexistence and the dispersal of major risks – this needed to be borne in mind if, in the future (at all events, very soon), a cybernetic control appropriate to domestic networks was to be developed . . . hence the relentless advance of the Internet, the recently *sanitized* military network.

The more that time intervals are abolished, the more the image of space dilates: 'You would think that an explosion had occurred all over the planet. The least nook and cranny are dragged out of the shade by a stark light,' wrote Ernst Jünger of that illumination which lights up the reality of the world.

The coming of the 'live', of 'direct transmission', brought about by turning the limit-speed of waves to effect, transforms the old 'tele-vision' into a planetary **grand-scale optics**.

With CNN and its various offshoots, domestic television has given way to **tele-surveillance**.

This **sudden focusing** – a security-orientated phenomenon of the media monitoring of the *lité* of nations – heralds

the dawn of a particular form of day, which totters on the diurnal-nocturnal alternation that prefigures a new history.

With this **false day**, produced by the illumination of telecommunications, an artificial sun rises, an artificial lighting system which ushers in a new time: a time in which the simultaneity of actions should take precedence over their successive character.

With **visual** (audiovisual) **continuity** passing over from the **territorial contiguity** which has now declined in importance, the powers were themselves to shift from the regional to the 'real time' of the chronopolis, the transmission of images and sounds. Two consequences of **globalization** have, then, to be taken into account today: on the one hand, the extreme distances which ensue from the **temporal contraction** of transport and transmissions; on the other, the general spread of **tele-surveillance**. A new world that is constantly 'tele-present' twenty-four hours a day, seven days a week, thanks to the artifice of 'horizon optics' which puts what was previously out of sight on display.

'The destiny of every image is enlargement,' wrote Gaston Bachelard. It is science, techno-science, which has taken responsibility for this fate of images. It did so with the telescope and the microscope. In the future, it will do so with a domestic tele-surveillance which will exceed the strictly military dimensions of the phenomenon.

The exhaustion of the political importance of the *sun*, which is a product of the unremarked

acceleration of the life-size nature of the terrestrial globe, demands the invention of a **substitute grand-scale optics**.

This is an *active (wave) optics*, replacing in a thorough-going way the *passive (geometric) optics* of the era of Galileo's spy-glass. And doing so as though the loss of the horizon-line of geographical perspective imperatively necessitated the establishment of a **substitute horizon**: the 'artificial horizon' of a screen or a monitor, capable of permanently displaying the new preponderance of the *media perspective* over the immediate perspective of space.

With the **relief** of the 'tele-present' event then taking precedence over the three dimensions of the volume of objects or places here present . . .

This helps us better to understand the sudden multiplication of those 'great lights'² that are meteorological or military observation satellites. The repeated sending into orbit of communications satellites, the spread of metropolitan video-surveillance or, alternatively, the recent development of live-cams on the Internet.

All this contributing, as we have seen, to the inversion of the usual conceptions of *inside* and *outside*.

Finally, this generalized **visualization** is the defining aspect of what is generally known today as **virtualization**.

The much-wanted 'virtual reality' is not so much a navigation through the **cyberspace** of the networks. It is, first and foremost, the **amplification of the optical density** of the appearances of the real world.

2 'Grandes luminaires': a reference to Genesis 1:16: 'And God made two great lights.'

An amplification which attempts to compensate the contraction of distances on the Earth, a contraction brought about by the utopian compression of various telecommunications. In a world in which tele-presence is submerging the immediate presence of individuals (in work, trade, etc.), television can no longer be what it has been for half a century: a place of entertainment or of the promotion of culture; it must, above all and foremost, **give birth** to the world time of exchange. It is this virtual vision which is supplanting the vision of the world around us.

Grand-Scale Transhorizon Optics is, the site of all (strategic, economic, political . . .) virtualization. Without it, the development of **globalitarianism** is preparing to revive the **totalitarianisms** of the past, which would be ineffective.

To provide the coming globalization with the necessary optical density, it is necessary not merely to connect the cybernetic networks, but, most important, to create a new reality of the world in two.

As with *stereoscopy* and *stereoptopy*, which distill from right, bass from treble, to make it easier to see, in audiovisual relief, it is essential today to effect a new reality by developing a *stereo-reality*, made up, on one hand of the *actual reality* of immediate appearances, on the other, of the *virtual reality* of media appearances.

Not until this new 'reality effect' becomes accepted as commonplace will it be possible really to speak of **globalization**.

To manage at last to 'bring to light' an *open world*, a world without dead angles, without

shadow' (like the micro-video which replaces both car reversing lights and rear-view mirrors) – this is the objective of the technologies of **synthetic vision**.

Since *a picture is worth a thousand words*, the aim of multi-media is to turn our old television into a kind of **domestic telescope** for seeing, for foreseeing (in a manner not unlike present weather-forecasting) the world that lies just around the corner.

The aim is to make the computer screen the ultimate window, but a window which would not so much allow you to receive data as to view the horizon of globalization, the space of its accelerated virtualization . . .

Let us now take an example whose significance is widely unrecognized: that of 'live-cams', those video imaging devices which have been set up all over the place and which are only accessible through the Internet.

Though apparently aimless and insignificant, the phenomenon is nonetheless spreading to all parts of an increasing number of countries: from San Francisco Bay to Jerusalem's Wailing Wall, by way of the offices and apartments of a few exhibitionists, the camera enables you to discover **in real time** what is going on at the other end of the planet at that very moment.

Here the computer is no longer simply a device for consulting information sources, but an automatic *vision machine*, operating within the space of an entirely virtualized geographical reality.

Some Internet enthusiasts are even happy to *live their lives 'on screen'*. Interned in the closed circuits of the Web, they offer up their private lives for everyone to watch.

The collectivist introspection of these people, who exemplify a **universal voyeurism**, is set to expand at the

speed of the single world advertising market, very far off now.

Advertising, which in the nineteenth century was simply the publicizing of a product, before becoming in the twentieth an *industry* for stimulating desire, in the twenty-first century to become pure *commerce*, to this end it will require the unfolding of an open space which stretches to the horizon of visible planet.

Global advertising, far from being satisfied with the classic poster or with breaks between TV programmes, now requires the imposition of its 'eye' on a mass of TV viewers who have in the interim become tele-actors and tele-consumers.

To come back again to the Internet, a number of forgotten by tourists vaunt the merits of their remote Alpine hotels show off their fine vistas on the screen; proponents of **land art** are preparing to equip their sites with multiple Web cameras. You can also tour the planet; you can tour America, visit Hong Kong, view an Antarctic station in its polar darkness.

In spite of its poor optical quality, 'live transmission' has become a promotional tool directing anyone's gaze to some privileged vantage points.

Happening is no longer a coming to pass; it is passing away. Electronic optics is becoming the 'engine' of a now globalized fore-sight.

If, in the past, with the telescope, it was simply a question of observing something unexpected looming on the horizon, it is now a question of seeing what is going on at the other end of the world, on the hidden planet. Thus, without the aid of the 'artificial

multi-media, there is no possible way of negotiating the electronic ether of globalization.

The Earth, that phantom limb, no longer extends as far as the eye can see; it presents all aspects of itself for inspection in the strange little window. The sudden multiplication of 'points of view' merely heralds the latest globalization: the globalization of the gaze, of the single eye of the cyclops who governs the cave, that 'black box' which increasingly poorly conceals the great culminating moment of history, a history fallen victim to the syndrome of total accomplishment.

CHAPTER 3

On 20 January 1997, Bill Clinton reasserted in his inaugural address that in the last hundred years the 'American Century' had begun. He stated that 'America exploded onto the world stage to make the American Century'. He further stated that 'we will live the promise of America in the twenty-first century: the USA standing at the head of a whole world of free peoples'.¹ Yet, in the same address, the president also warned of a run-down American model, a fractured, broken democracy, heading, if they were not careful, for a political catastrophe.

What is it to be, then? An Americanized world or the disorders of a pseudo-third-world? How to assume planetary proportions? And what, we may ask, is the American century anyway? And what, we may ask, is America?

¹ White House, Office of the Press Secretary, press release, 20 January 1997, 12.05 pm EST.

To this latter question, Ray D. Bradbury was fond of replying, 'America is Rembrandt and Walt Disney.' Yet, when Bill Gates (the 'get wired' man) recently wanted to spend some of the pennies he'd been putting aside, he bought not a Rembrandt, but the manuscript of Leonardo da Vinci's *Codex Leicester*. Perhaps because the United States is, in the end, more Italian than Dutch, German, Russian, Hispanic or even WASP. Because, as everyone knows, America was discovered towards the end of the Quattrocento by the Florentine navigator Amerigo Vesputri and the Genoese Christopher Columbus, at a time when other Italians, such as the Genoese Leon Battista Alberti, were introducing the West to *prospettiva* vision.

Now, the 'ever-changing skyline' of the historic rush towards the American west is the line of the horizon, the *vanishing point* of the Italian Renaissance. In the strictest sense of the term '*per-spectiv*', which means *seeing through*. The true hero of the American utopia is neither the cowboy nor the soldier, but the pioneer, the pathfinder, the person who 'takes his body to where his eyes have been'.²

Before eating up space 'with a voracity unique in the history of human migrations', the pioneer eats it up with his eyes - in America *everything begins and ends with covertness of the eyes*.

In 1894 the historian Frederick J. Turner wrote:

American social development has been continually beginning over again on the frontier. This perennial

² The expression was coined by Gaston Béhuffat, one of the inventors of 'aid' or 'snatch-class climbing'.

rebirth, this fluidity of American life, this exodus westward with its new opportunities, its constant contact with the simplicity of primitive societies, furnish the forces dominating American character. . . . *The frontier is the line of most effective Americanization. The wilderness men are the colonist.*³

Even today, we old European continentals find it difficult to imagine a state at peace which would have no constant strategic value to its geographical location, a nation that would merely be a series of virtual islands heading off at great speed towards an unpopulated horizon.

From the beginning, the dimensions of the American state were unstable because they were more a function of than political. It is because the Earth is round that the European flotilla discovered the New World only to find which led west to Japan and China.

It is again because of the roundness of the Earth that the 'ever-changing skyline' of the pioneers can never be reached, that it slips away and endlessly recedes as one approaches it. . . . It is merely a delusion, an optical illusion - not so much an appearance as an *apparition*.

Everywhere and nowhere, here and elsewhere, inside or outside, the United States represents

³ Frederick Jackson Turner, *The Frontier in American History*, Holt, Rinehart and Winston, New York, 1964, chapter in question was actually read at a meeting of the American Historical Association in Chicago on 12 December 1893 (Itrans.)

which had until then no name, a 'beyond' of the ancient colony, an offshore nation. America bears no real relation to the old diaspora or migration of the nomad of former times, who, while advancing rapidly across the endless plain, frequently turned around to familiarize himself with the lie of the land by which he might return. It is the country of no going back, the land of the one-way ticket — the fateful amalgam of endless facing and the ideas of freedom, progress and modernity.

In conclusion to his famous analysis, Turner was, however, forced to acknowledge: 'Four centuries from the discovery of America . . . the frontier has gone, and with its going has closed the first period of American history.'⁴

The frontier *mis-empire* of the history of the United States seemed to be completed, seemed halted at the outer limit of the continent, on the horizon of the Pacific.

On the eve of this 'American century' of which Bill Clinton spoke in his inaugural address, the United States was, then, still hungry — not so much for territories as for trajectories; hungry to deploy its compulsive desire for movement, hungry to carry on moving so as to carry on being American.

The other day, someone asked Francis Ford Coppola why had American cinema continued, in spite of everything, to be the stuff of dreams the world over. 'It isn't the films which are the stuff of dreams; it's America, which has become a kind of huge Hollywood,' retorted the Italian-American director.

⁴ *Ibid.*, p. 38.

There are films you are tempted to walk into believe they are three-dimensional.

In sending their reporters to the four corners of the earth, the Lumière brothers had already shown, at the end of the nineteenth century, that the cinema was a substitute for human vision which not only flouted the distances and dimensions of the real (thanks to the illusion known as persistence of vision) but also flouted the distances and dimensions of the cinema. The cinema was, in fact, a *new energy*, capable of moving your gaze to other places, even if you yourself do not move.

'One must first speak to the eyes,' said the Lumière brothers. One can imagine the mileage the American cinema — for which 'to halt is to die' — would be able to cover from this technique of *fake movements*, at the very moment when the 'ever-changing skyline', which was the symbol of its pseudo-democracy, had just come to a halt.

At President William McKinley's declaration at the beginning of his term of office, the American people were told to 'go back to the past'.

There would be no resisting the obvious: the cinema was exchanging one lie for another, one illusion for another, one engine for another. And why not?

Since there was no longer a horizon towards which to rush, they would invent fake ones — *substitute horizons*.

The American people would be satisfied. It would be going back into the past. It would carry on moving towards a 'beyond'.

McKinley also declared that if America elected a president who did so because it was happy to become an empire, it was a nation.

The 'second part of American history' begins not only in the east of the continent, in the mechanical factories of Detroit where production-line working came into operation at the Ford plant around 1914, but also in the west, when, in 1903, a certain Mr Wilcox registered a development of 700 inhabitants in the state of California, which Mrs Wilcox immediately named Hollywood because, as she remarked, holly brings good luck.

It was to be in this outlying suburb of Los Angeles that the American nation was to pursue, 'by other means', its endless race, its journey of no return. With westerns, trail movies, road movies, burlesques, musicals and its most recent productions, such as the *Speed* series,⁵ it created a cinema of acceleration, capable of restoring the highest velocity to an 'authentic Americanization'.

Though, at the time, American cinema could not be nationalized, as Soviet cinema was, Hollywood nonetheless lived under close political and ideological surveillance. From Will Hays, the czar of censorship, in the twenties, through the years of William Randolph Hearst's all-powerful press influence and pressure from the upper echelons of the police forces, influential army chiefs, civil and religious leagues, etc., right up to the sinister 1950s, the dark years of McCarthyism.

When, in 1936, Blaise Cendrars managed, not without difficulty, to get into the fortress-studios of American industrial cinema, he sensed there, as in the rest of the country, an air of *mystification*. 'What a good joke!' he

5 The US films *Speed* (1994) and *Speed 2* (1997) were directed by Jan de Bont.

wrote. 'But who are they trying to find here, democracy – who but the sovereign people?'

If we believe Turner's analysis, when he speaks of a 'frontier effect' which 'is productive of individualism' when he argues that 'complex society is precipitated from wilderness into a kind of primitive organization of the family [or survivor groups?]. The tendency to "social" ... then, industrial cinema, by upping its ante to the point of overdose, must inevitably lead to social collapse and the generalized political debility of this 'American century' – end.

What began with the grand-scale Hollywood of the 1920s was, in fact, the post-industrial era, the era of the de-realization of the world. For the last time the push west was now merely some vague 'frontier movie', a *toupe-à-œil* frontier; however, very far from being deceived by this optical illusion, still continuing to march towards the Pacific in droves.

Things came to such a pass, indeed, that in the 1930s California had to cut itself off from the Union to avoid being submerged by the tide of the 'Reds'. It was ringed by the 'blockade', with three divisions of military officers patrolling the frontiers (which had no internal frontiers) of Oregon, Arizona and Mexico. And we should not forget also the mass raids on the 'un-American' who were, it was felt, 'taking the bread from the mouths of the jobless Americans' – and their brutal deportation to concentration camps, people of colour, lone women, abandoned, the sick and the infected were pitilessly interned in camps in the desert, here becoming mingled with social and racial problems.

It was a grandiose age in which, after the Wall Street crash in 1929, fifty per cent of the American population lived in near-poverty conditions, fifty per cent had only a minimum of sanitary provision, and there were between 18 and 28 million unemployed. Clearly the United States was going through a period of 'growing pains', but on this occasion it was also prepared to drag down a planet which had grown too small for it.

Government by technocrats was soon to follow, in the form of the New Deal with Franklin Delano Roosevelt, who was dubbed the 'New Moses', because he 'led his people out of the desert of poverty . . . Before leading them into a total war in January 1943 at Casablanca.

'People who don't like television don't like America' claimed Berlusconi during a memorable election campaign in the Italian style. In the past one might have said the same of those who did not like cinema and today one could say it of people who don't like the Internet or the future information superhighways – those who do not favour *blind* adherence to the ravings of the metaphysicians of technoculture.

'Admittedly,' says one of those west coast gurus, 'we shall abandon part of the population to their fate when we enter the cyber age, but *techno is our destiny*, the freedom high-tech machines give us is the freedom to be able to say "yes" to their potential.'

The question which now arises is whether we have the freedom to say 'no' to the 'promise' of a yet more 'American century' which lies before us, 'no' to the nihilistic discourse which the America of *perspective* and *trans-appearance* has been endlessly calling out for 600

years . . . 'Cyber is a new continent. cyber is an reality, cyber must reflect the society of individuals. cyber is universal, it has no authorities, no head, etc.'

Meanwhile, Bill Gates was quite happy to put on show at the Musée du Luxembourg in Paris. Vinci's famous 'futures', we find a description of the end of the world, its disappearance beneath waves of water or waves perhaps . . . Maybe the old Italo was not far wrong.

6. From comments made at the *Colloque Solus de la* by, among others, John Perry Barlow, vice-president of the Electronic Frontier Foundation.

CHAPTER 4

After Dolly, the predestined sheep, will there soon be human clones? And why not, indeed, since it will be possible before the end of the twentieth century to produce them? Even now, hundreds of men and women are requesting exact copies of themselves or duplicates of one of their dear departed from the famous Dr Wilmut.

We might say that, for a section of today's public, human cloning is becoming as simple an operation as having one's portrait taken by a photographer in the nineteenth century. Or, since 1895, buying a ticket to see the Lumière brothers' baby guzzling its food up on a screen.¹

As the century of unbounded curiosity, covetous looking and the deregulation of the gaze, the twentieth has not

been the century of the 'image', as is often claimed in optics – and, in particular, of the *optical illusion*.

Since pre-1914 days, the imperatives of production (advertising) and, subsequently, during the long Cold War and nuclear deterrence, security and defence needs have gradually drawn us into an interferal world in which industrial optics have run wildly out of control.

This has produced the new opto-electronic world which ranges from remote medical detection and diagnosis, probing our 'hearts and loins' in real time, to global surveillance (from the street-corner camera to the panoply of orbital satellites), with the promised land of the cyber circuit still to come.

"The cinema involves putting the eye into a machine," claimed Kafka.² What are we to say, then, of the machine exerted for more than half a century by optical technology which has become mendacious and omnipresent, which, like any totalitarian regime, encourages the individual we are individuated beings?

If, in terms of current laws, which are supposed to protect individual liberties, we are in fact the owners of our bodies – and also of the images of those bodies – and audiovisual environment has long since induced us to have no concern for those multiple appearances of ourselves which unknown general staffs – of the military, the police, but also the medical, financial, political and advertising establishments – steal, misappropriate, explore and manipulate without our knowing it.

1 Louis Lumière had used a portable camera – it weighed barely twelve pounds and was patented on 13 February 1895 – as an amateur photographer, particularly to film his friends and relations. His stated ambition was to reproduce life.

2 Gustav Janouch. *Conversations with Kafka*, trans. Roca, André Deutsch, London, 1968, p. 160.

as they are in secretly fighting over our *optical clones*, our modern mortal remains; to turn them, in the short term, into unconscious actors in their virtual worlds, their nomadic games.

Science fiction, socio-fiction, political fiction . . . role-playing games, parallel strategies, the divergent and scattered elements of a future cyberspace in which, naturally, 'there is no need to move about in a body like the one you possess in physical reality. . . . Your conditioned notion of a unique and immutable body will give way to a far more liberated notion of "body" as something quite disposable. . . .'³

After the disclosure in March 1996 of the 'mad cow' affair, followed closely by transgenic foodstuffs and animal cloning, the huge marketing operation launched by the 'food power' multinationals is likely, then, to find an audience which, if not informed, is already half-converted. The public will be ready finally to accept that, in the years of global crisis which apparently lie before us, and in a physical world entirely doomed to a joyful *Last ein Uelängang*, the evolution of the human species may depend more and more handsly on the expeditious procedures of animal experimentation.

This had long seemed to be presaged in the practice of vivisection, the dissection of living creatures, or rather, as Antonin Artaud put it, creatures *condemned to die alive*.

*

3 Howard Rheingold, *Virtual Reality*, Secker and Warburg, London, 1991, p. 191. Rheingold is citing a paper by Wälsler and Cullichen.

An old Japanese friend recently confided to me: 'I can forgive the Americans for the fact that Hiroshima was an act of war, but an experiment.'

The fear today must be that, after the end of nuclear deterrence and the reassuring failure of experimentation of the early part of the twentieth century, the global economic warfare which has descended on the planet may in turn become experimental and, more significantly, bio-experimental.

Dolly is not, then, an innovation, or even a revolution. She is a clone in the full sense of the term, a *klon* (clone) in the strict sense. Before having a past, she has, as the saying goes, 'a past'. It is this which worries us, this fraught past of our not so much as a military-industrial society, in which scientific discovery and crime – all crime – have been closely linked and have progressed together, carrying each other forward.

'There are perhaps just wars, but there are no just armies', or so the saying goes. From now on, it will be with science as it is with war: there is no longer any innocent science.

If we have long claimed that there existed some 'tribunal of history', it was doubtless because the tribunal was rather disreputable. We are currently creating an *experimental judicial system* on an international scale. It has been given the task of reassuring us, by means of a fashion, in public relations terms the ravages wrought by an *experimental science* which has itself fallen in reputation, and of restoring a semblance of conscience to applied science which has begun to carry on like a notorious 'bad boy' . . .

With the support of the work of these *special tribunals* of a new kind, made up in disparate fashion from scientific and technical experts, a few rare 'moral' personalities and, most recently, representatives of the big corporations, we should not doubt that a case could soon be made for human cloning, and that it could be made legal in the eyes of credulous or profit-hungry populations.

Among these famous *committees of the great and the good* there are some who are already arguing the benefits of the bio-medical applications of human cloning. But with a little more audacity, could not these spokespeople for scientific futurology soon present it as a possible *repair technique* on an industrial scale, or even advocate the formation of a new sub-proletariat which could be exploited in the event of a great nuclear catastrophe (which is still possible) or genocide?

Yes would such *repair* have what we still by common consent call an *ethical value*? Would it even bear any relation to article 1 of the old Hippocratic oath, the '*primum non nocere*'? Or would it in the end be anything other than *death killing death*, a disguised cruelty?

At the very moment UNESCO is granting the ruins of Hiroshima and Auschwitz (those two fields of experimentation) 'historic monument' status, shall we have to admit, after the horrors of war, the errors and ousings of a dubious peace?

And can we really contemplate in the near future the industrial breeding and all-out commercialization of human clones, destined, like animals, for a *living death* behind the barbed-wire fences of some experimental farm in the depths of some prohibited area because at least there

we wouldn't be able to see these fellows of o their cries?

Or will these sophisticated procedures meet tory? Will they not soon seem too humiliated investors and will we not return to the old n carceral methods in which the soldier (or the man) is no longer treated as an individual, but once again, in Clausewitzian fashion, 'a resou mined like any other', a *disposable product*...? A appearance of the old national armies, to be repl specialists of the new scientific warfare, this wo seem a logical step.

Why shouldn't it happen — in an age when have refound a vocation as slave-traders and are a prison-ship, a hulk with its containers full of inhibited human merchandise; and when ever m treatment is being inflicted on migrant popula; deportees of another age in this post-militar world where triumphalism has grown rare?

A physical world which now offers the sproured army — a great headlong flight, with its g of decision-makers vanishing into thin air and uring to issue irresponsible orders and direct follows.

With pseudo-individualism, liberal hedon nothing more than an 'every man for himself' stampede generated by a general abandonment the level of exactions increases and inhibitions

Thus *tabula rasa* is an ideal situation, a prime o for a scientific futurology which declares itself schizophrenic and advocates the complete victu living matter. 'humanity' being what remains

have taken from human beings all that can be touched and all that can be seen'.⁴

After the collapse of the hope of any spiritual survival, the great regression of living matter has, then, begun, with the manifest refusal of our age to generate the succeeding ones, and the absolute reversal of the accepted logic of the evolution of species, with the most accomplished link in the chain (the human being?) re-situating itself on its own initiative not far from the very first cell – the point at which the first glimmers of terrestrial life seemingly appeared . . .

With the new *super-observation* of living matter outside the 'natural channels' that has insidiously developed within cultures and mentalities during this extraordinary period, this half-century of nuclear deterrence in which we have effectively become temporarily reprieved hostages, populations of living-dead.

From the virtual survival of cryogenics to the vogue for cocooning and the Near Death Experience movement of Dr Moody, to the multiplication of eschatological or pseudo-scientific and technological acts. To the feats of virtual transplants and nano-machines, to *in vitro* and *in vivo* bio-cultures, already applying to the human organism the standard switching of parts which applies in the mechanical world, to the interchangeability of new transhuman beings and, lastly, to suppressing once and for all the pain of living since, by a possible substitutability of cloned bodies, human beings

4 Remarks made in March 1997 by a French geneticist and Nobel laureate who sits on an ethics committee.

could still cherish *the hope of surviving themselves same time having ceased to exist*.

It's a bit like the baby who, in the photograph the Lumière brothers' film, has gone on gawling just as hungrily since the beginning of the twenty, even though he long ago died of old age.

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