Paris: Invisible City

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Paris, the City of Light, so open to the gaze of artists and tourists, so often photographed, the subject of so many glossy books, that we tend to forget the problems of thousands of engineers, technicians, civil servants, inhabitants and shopkeepers in making it visible.

The aim of this sociological opera is to wander through the city, in texts and images, exploring some of the reasons why it cannot be captured at a glance.

Our photographic exploration takes us first to places usually hidden from passers-by, in which the countless techniques making Parisians' lives possible are elaborated (water services, police force, ring road: various "oligopticons" from which the city is seen in its entirety). This helps us to grasp the importance of ordinary objects, starting with the street furniture constituting part of inhabitants' daily environment and enabling them to move about in the city without losing their way. It also makes us attentive to practical problems posed by the coexistence of such large numbers of people on such a small surface area. All these unusual visits may eventually enable us to take a new look at a more theoretical question on the

nature of the social link and on the very particular ways in which society remains elusive.

We often tend to contrast real and virtual, hard urban reality and electronic utopias. This work tries to show that real cities have a lot in common with Italo Calvino's "invisible cities". As congested, saturated and asphyxiated as it may be, in the invisible city of Paris we may learn to breathe more easily, provided we alter our social theory.

First sequence. Crossing through

PLAN 1

"You can find anything at the *Samaritaine*" is this department store's slogan. Yes, anything and even a panoramic view of the all of Paris. All of Paris? Not quite. On the top floor of the main building a bluish ceramic panorama allows one, as they say, "to capture the city at a glance". On a huge circular, slightly tilted table, engraved arrows point to Parisian landmarks drawn in perspective. Soon the attentive visitor is surprised: "But where's the Pompidou Centre?", "Where are the tree-covered hills that should be in the north-east?", "What's that skyscraper that's not on the map?". The ceramic panorama, put there in the 1930s by the Cognac-Jays, the founders of the department store, no longer corresponds to the stone and flesh landscape spread out before us. The legend no longer matches the pictures. Virtual Paris was detached from real Paris long ago. It's time we updated our panoramas.

PLAN 2

Swamped by the influx of cars, the Paris prefecture in charge of traffic finally decided, during the Second World War' to introduce traffic lights. Where to put them? How to be sure they wouldn't compound the chaos rather than reducing it? Such questions can be solved only by means of a mock-up, a diorama, a map, model

or theory. The theory in this case, that countless decision-makers were to contemplate, was in plaster of Paris! In the darkest hours of the Occupation an old man with a beret lovingly adjusted the map so that the contours of the model would correspond to those of Paris itself, outside, scale one. Later it was painted in vivid colours to show the main traffic flows and plan the course of the rivers of cars that the Liberation and post-WWII boom were to unleash in the old city centre.

PLAN 3

On the background of a computer screen we can also see "all of Paris". The image isn't very good. The pixels are a bit granular and packets of bauds struggle along tortuous modems but, at last, thats'it! We clearly recognize the landmarks of Paris in this interactive computer game called the *Second World*: the archangel of the Saint Michel Fountain receives a visit from an alias with a monster's head; suburbanites can rent apartments on the Champs-Elysées for a few francs; and new department stores like Zola's *Bonheur des dames* can extend their boutiques without demolishing anything more than a few bytes. You simply need a digital avatar to start a conversation without any risk of divulging your age, sex, voice or name. They even say that these beings with neither hearth nor home recently held elections to designate the councillors of all these proxies and aliases. Is this second world more virtual than the first?

Don't all answer at once. In the futuristic offices of the game company there's nothing ghostly about the workers paid to heat up, stir and revive the cauldron of the "Second World". They're made not of cables and figures but of flesh and blood. In fact the company is temporarily bankrupt before switching to another medium. Has anyone ever seen ectoplasms on the verge of bankruptcy? So the word "virtual" does not necessarily refer to a world of spirits freed from the constraints of matter. At this stage, life on the Web seems more like the Neolithic in which Lutetia was founded. Social life seems to be back to square one: rough bodies, frustrated feelings, fledgling languages, barely polished "netiquette", simplistic technologies, fluctuating currencies. These elementary social atoms groping for one another in the dark seem more like the primitive beings peopling the opening of Rousseau's *Discourse on the Origins of Inequality*. If one word could express this slowness, this thickening, this archaism, it would be "material" rather than virtual.

PLAN 4

Yes, computers have the virtue of materializing things better, of slowing them down, of reducing to the scale of a model the abundance of interactions that we take for granted in scale-one Paris. The *Second World* is less a panorama than a diorama like the one found under the circular platform of the *Samaritaine*, recounting, in the touching style of the thirties, the heroic fortunes of its founders who started as peddlers on the Pont-Neuf. From the top floor of the *Samaritaine* we couldn't see much of what made Paris different, except for the strange discrepancy between the landmarks and the landscape. In the computer dioramas we see panoramas on a reduced scale whose materiality is so great that it makes the "plasma" into which we are all plunged traceable and palpable.

No panorama enables us to "capture all of Paris" in a single glance; it's easy to understand that. Beware of the word invented in the early nineteenth century by an Englishman who offered bedazzled visitors a 360-degree painting imperceptibly mingled with 3D objects in a room. At the centre of the room the visitors stood, transported into the battle of Waterloo, onto the deck of a sinking ship or into the nacelle of Gambetta's balloon as he escaped the siege of Paris. As in an *Omnimax* cinema, if we can see everything from all sides it's because we're inside a room in which the illusion is mastered, and not outside. Even from the top of the *Samaritaine* we saw nothing but the thick mist of good weather and exhaust fumes which now veils Paris on sunny days: harmful smog drowning the city in pollution. No, there are no more panoramas – or rather, the engineers and calculators use only clever dioramas to offer a bird's eye view of some vista. To take it all in at once, to "dominate it at a glance", to calculate the flows, Paris first has to become small.

In this sociological opera we're going to move over from the cold and real Society to warm and virtual plasma: from the entire Paris set in one view to the multiple Parises within Paris, which together comprise all Paris and which nothing ever resembles. The proliferation of computer technology makes this invisible Paris describable at last. Our work explores the properties of this plasma which are no longer exactly those of social life as traditionally conceived. People say that Society today is so fragmented, fractured, de-structured, atomized, anomic, that it would be vain to want to theorize it globally. Impressions, juxtapositions, fragmentations, but

no more structure and, above all, no more unity. Or, conversely, everything levelled down, uniform, global, standardized, liberalized, rationalized, Americanized, monitored, and the social world has disappeared, surviving in ghettos under the name of sociability. In that case all we could do would be to hang on to the last traces of the old world, museums of the social: little cafés, little shops, little roads, little people. Sociology would be finished. In any case, the time of the social sciences would be over. Enough indeed to die of suffocation.

Here we argue just the opposite. The twofold impression of fragmentation and monotony, of de-structuring and uniformity, could stem from the point of view chosen like it could stem from the temperature selected. Something else orders and locates, gathers and situates, binds and distinguishes, sets the pace and the rhythm, but that something no longer has the shape of a Society and must be followed, step by step, by other methods – through photography, perhaps, or rather through series of photographs that we would need to learn to read continuously – even if our ways of thinking interrupt and disperse them. What we call the social, the "slipping token" of the social, passed around, will become visible if we manage to link up, one by one, the very particular traces running through it, traces that move rapidly – like sticks reddened in the fire, tracing shapes in the summer night only because of the way we, as children, waved them around. These traces, trajectories, wanderings, partial illuminations, phosphorescences: Paris, the City of Light, is weaved by them; Paris, the invisible city, consists of them.

No pretty pictures here, only slow motion; no picturesque accounts, only theory. Yet the text has no aim other than putting graphic documents into tension; documents that have no purpose other than covering Paris, seen from a certain angle, followed along a certain route, behind certain vehicles. Why should social theory estrange us for a second from the city in which we both live – the author of the text and the author of the images? On the contrary, it can but bring us closer to it. We shouldn't be offended by concepts if they reveal certain features of the most ordinary life. The etymological dictionary informs us that, before meaning "model" or "contemplation", the word "theory" signified "processions of ambassadors going to consult the oracles". That's what we need: let us contemplate and follow the processions of images; perhaps they'll take us to the cryptic answer that the

prophetesses always give to the question: "So what are we doing together? How can so many of us coexist?".

Step One. Dominating at a glance

<div align="right">**PLAN 5**</div>

Mrs. Baysal's personal point of view is of no interest to us yet. We'll revert to it in a while. From the window of the Ecole des Mines, where she efficiently controls the planning of lecture schedules and the use of lecture rooms, she sees no rooms, attends no lectures. Shut away in her office, reduced to the narrow viewing slot out of her window, she could talk with authority only about the eighteenth century façade of the former Hôtel de Vendôme, and even that she sees slantwise. So how does she manage to see 'all the rooms' of the school as well as the entire schedule? Answer: by turning her gaze from the outside sun illuminating the golden stone of the Hôtel de Vendôme, to the inside of her office. From there she no longer sees the Luxembourg gardens, nor the luxurious façade of the quaestorship of the Senate, but lined paper. Indeed, representing the social always starts with large sheets of paper spread across her desk, reproduced on the screen of her computer, lined up in reams in the flat drawers next to her chair that she flicks open with an expert hand. In columns and lines, Mrs. Baysal has filled in the hours, lecturers' names, classes and available rooms. The small oak-lined office could hold neither hundreds of students nor dozens of teaching staff, nor the lecture rooms themselves. She sees them all, synoptically, only if they stay outside and if she carefully manipulates nothing but the welter of signs that her simple rules have disciplined: the same "lecturer-sign" cannot be put in the same "time-cell" in two different "room-cells"; the same "room-cell" can accommodate "class-signs" only in two distinct "time-cells". Of course, at a glance she dominates everything that keeps us together – we the lecturers, students, lecture rooms and schedules –, but provided that she keeps her eyes on her programme, is unable to see the students and is not talking to the lecturers or spending her time outside in the dazzling sunshine. Plato was wrong somewhere with his sad Cavern that had to be left in order to contemplate reality itself rather than pale shadows. Mrs. Baysal, by contrast, descends into the darkness of her office, gets used to the obscurity of the world of signs, and finally sees the whole

school, its space, its time, its population and its order. Yes, the school itself, finally visible.

Does that mean that representation of the social lies in the hellish Cavern, reduced to paper wrinkled by the hands of scorned bureaucrats? Not quite. Plato was wrong not only about the direction to take to attain reality itself, but also about the imagined split between the sign and its signification. Mrs. Baysal knows all the students by name and all the lecturers; she has visited all the lecture rooms and can recite all the organization charts of former years by heart. The signs swarming on her desk do not belong there; they arrive, only to leave again in a continuous procession over which she reigns unchallenged. Every bit of the spidery scrawl at the intersection of lines and columns relates to another sheet that she sends via internal mail to each lecturer or displays outside each year's class. Nothing less isolated than her scheduled; nothing more linked. Linked to what? To other plans, documents and traces. The lecturers receive the schedules concerning themselves and fill in the corresponding blocks in their diary. What do they do to find the right lecture room in the school? Get lost? Yes, at first, but they end up finding their way thanks to the signs, arrows and numbers that faithfully reproduce the scribbled notes: "V-207", "L-109", groping their way down corridors, following these particular pheromones (alignment of signs with others that differ from them: some in shiny brass, others in blue plastic, others in ink on paper), traces that guide the way through the labyrinth. Now and then, like in videogames, they get a helping hand from Mr. Lelarge the concierge, at reception, or Mr. Laberthonnière the caretaker. Nobody has seen anything in its entirety. And yet everyone, at the set hour, in the set place, starts the class. The school functions, regular as clockwork, overseen by the eye of the master, the Dean, Mr. Frade, although he sees nothing but a corridor, a few students rushing to get to their class on time, a lecturer who's lost his way and stealthily hurries along, clutching his briefcase.

Romantics always dream of an assembly that, with neither schedules nor lists, signs nor intermediaries, transparently reveals Society in its immediate solar presence. By dreaming of a full, entire reality, common sense simply dreams of a diorama enclosed in a narrow room. For four thousand years we haven't had the good fortune of living in a Swiss canton, gathered in the town square to decide on

current affairs, hands raised. It's been a long time that Society hasn't seen itself entirely in a single glance.

"But where have they got to? Where are the first-year students? What's happened to the sociology lecturer? Why is the Michel Chevalier classroom still locked?" In cases of crisis we sometimes imagine a hidden structure, something invisible, an ordered power that embraces everything in a single unit, silently telling the few living beings in the corridors what to do or where to go. Yet there is nothing invisible, absent or silent in this obstinate structuring of the social. The schedule is there, under Mrs. Baysal's eyes, approved by Mr. Frade, countersigned by each of the lecturers, checked by the caretakers, usherers and turnkeys. The schedule is clearly there, structuring, active, but only if it is adhered to in its flows, its token-like movements, its transformation of signs into notice boards, notice boards into scribbles, scribbles into adjustments, adjustments into decisions. Neither transparent presence, nor invisible and sly action; the structure slides along its narrow sheath of traces. To see the entire school it is necessary first to inscribe it, then to circulate it and finally to make it correspond to some signposts. The structure then appears, assignable and visible. It can be seen, photographed and even, by clever layout and web design, followed in its course.

PLAN 6

You find the former scene too narrow? Well let's leave it then. What Mrs. Baysal does for the allocation of lecture rooms in a single school we can do for all the sites of Paris. Instead of a schedule, let's look at a satellite photo. Here's all of Paris with its streets, the Seine, historic buildings, shady courtyards, private gardens, boulevards cutting swathes through the city, construction sites. All of Paris? Of course not, we can see nothing of Paris on that map, no detail. The Ecole des Mines is hardly visible; just a few blurred dots, a few pixels. No trace of Mrs. Baysal, her schedule or the corridors in which her notices are posted.

"It's the general framework in which your school is set", they'll say. "The satellite sees from higher up, further off. Its gaze dominates. It reigns. Nothing escapes its eagle eyes. All the agitation of the social world is encompassed in one sweep. Sociology must make way to geography, the small to the big, the human to the natural."

Is that really so? At *Explorer*, the agency that sold us this image taken by the *SPOT* satellite, it measured 8 x 10cm. Those who sold it to us had a view of Paris no more expansive than that of Mrs. Baysal from her office window. As for the satellite up there, in its regular ninety-minute orbit, it sees nothing at all. It passes by, slides past, collects, processes, formats, encodes, transmits. The *SPOT* operators in the blind control room in Toulouse who see with their eyes have their gaze set not on Paris but on the computer screen. They processes wavelengths in false colours. They decode, manipulate, arrange, improve, extract, screen, then pass on the images to their colleagues in the next office, leading up to the printing stage and from there, eventually, to the sale. It seems that the "geographic map" also circulates like a token, like the schedule above. By looking at the satellite image we extract ourselves from our particular point of view, yet without, bouncing up to the bird's eye view; we have no access to the divine view, the view from nowhere. We go from our bounded view to a sliding view that will carry us from a labyrinth of transformations to the general frame in which our daily action is set – and that will never be more than a few square centimetres big. The frame has the same dimension, in a sense, as the object it frames. The big is no bigger than the small; the satellite photo of Paris is smaller than Mrs. Baysal's schedule. "With 'ifs' we could put Paris in a bottle", goes the saying in French; with maps we put it in even faster!

PLAN 7

When we move on from bureaucratic inscriptions to geographic data we shift to another medium, institution, graphic representation and scale – not from the inside of the social to its outside. The proof is supplied by a visit to Météo-France's offices. "What's the weather going to be like this morning?" I look at the road outside and manage to make out a bit of sky, neither blue nor grey, and from this fragile induction I venture a: "It's going to be good, no point taking an umbrella". Or I watch the weather forecast on TV: nice Météo-France map in bright colours, in front of which an announcer is clowning around; an electronic diorama on which some isobars, anticyclones and showers "of interest to" Ile-de-France – and me, by inclusion – are shown.

But where does this map come from? An employee of Météo-France, avenue Rapp, comments on it by phone after transmitting it to the TV studios. A few hours

earlier it was simply a background map on which data from across the country were marked in different colours; from the Montsouris park, for example, where the employees had just noted the meter readings in their registers, the oldest of which dates back to 1872: sunshine, rain, temperature, pressure. Gathered together, added up, standardized and averaged out, these data make it possible to forecast the day's weather. In their Montsouris office meteorologists can see the Ile-de-France weather only if they don't look outside. If their gaze wanders onto the bright green lawns, the flower beds or the strolling couples they'll never be able to say what the weather is going to be like. Like Mrs. Baysal and the *SPOT* cartographers, they must also sigh and turn back to their dimly lit computer screens if they're to understand the frame around them. As a born Parisian I have the same relationship with their forecasts as I have with the schedule at the Ecole des Mines in my capacity as a lecturer: I hold in my hand what holds me at a distance; my gaze dominates the gaze that dominates me.

PLAN 8

I behave well with this map, like the copy of the schedule that Mrs. Baysal gave me and that I carefully fold up and put into my trouser pocket to refer to later, once at the school – dry. I dominate both of them with my gaze. Through a continuous series of transformations and movements they have come from two institutions that have defined the general framework in which I now set my point of view. Smaller than me, they nevertheless fit me in. No mysterious dialectic to imagine for that; I'm not structured by what I structure: I look at a map on the TV screen, linked by a series of intermediaries to the clouds covering Ile-de-France; I remember the number of the lecture room where I'll meet my students later in the morning. I've connected myself to two dioramas, put myself at the intersection of two blind tunnels carrying the traces that provided for my existence in terms of two different expectations: the first, generic, "of interest to" all inhabitants of Ile-de-France who are scared of getting wet; the second, nominative, intended for the lecturer in me. Nothing proves that I'm going to find the lecture room, that I won't get to the school soaking wet! The two inscriptions stem only from two simple hypotheses: one on my punctuality, the other on today's weather.

At a certain temperature Society no longer exists. It breaks down like bits of DNA that are heated slightly; it frays like them, becomes stringy. It is no longer a sphere next to other spheres, like grapefruits packed in a box, but a weird way of moving about, tracing figures, like unknown writing on rice paper painted with an invisible brush. There is not exactly an outside to the social, if by this word, already more precise, we mean a certain form of rapid circulation of traces. The outside, the general framework, is not what dominates me; it is what I dominate with my gaze. But what I dominate I don't see unless I refrain from looking outside, otherwise I'm immediately limited to my own point of view. Hence, there is never much sense in distinguishing the individual and the context, the limited point of view and the unlimited panorama, the perspective and that which is seen to have no perspective. It is better to distinguish the person looking from a window and not seeing anything, who has no idea who they are nor what they should do, from the person who, in a continuous flow of traces, picks out an image that will teach them both who they are, in particular, and the global frame in which they should be situated. Either I really see and I see nothing, I am nothing; or I see nothing directly, I look at a trace and I begin to really see, I gradually become someone.

Step two: Aligning

PLAN 9

With her eyes Mrs. Lagoutte looks at the name "rue la Vieuville" in white letters on a blue background. With her forefinger she points at the same name "rue la Vieuville" in bold type on the map she's holding with her other hand. With a quick movement of the chin she accommodates her gaze to these two very different texts: one, written diagonally on the page, is 1mm big and requires short-sightedness; the other, horizontal, is 6cm high and requires long-sightedness. A miracle! The two match, letter for letter, despite the glaring differences. She's arrived! This is the street she was looking for… and here's number five! In a single glance at her map she embraces the entire eighteenth *arrondissement*. By lifting her head she sees only a white wall, very much like all the others, that she couldn't have identified without having been born in the neighbourhood or living there for a long time. Fortunately

she also sees the street nameplate and the name written on it. What does she see? What is she touching with her forefinger?

PLAN 10

Don't be too quick to say that she's pointing to an element of her outside environment. Here's a foreman of the roads maintenance service who's attaching a "rue Huysmans" nameplate to the wall with four strong screws – to replace the one stolen last week by collectors. Without the work of this agent of the roads maintenance service, Mrs. Lagoutte would be lost in Paris – at least in this neighbourhood with which she's not familiar. She'd have to ask passers-by and shopkeepers to guide her to this street named after a decadent yet equally Christian symbolist writer. To understand the full benefit derived by Mrs. Lagoutte from this alignment we don't need to be trained thinkers; we simply need to look at the street nameplates stacked in piles in the municipal workshop, avenue Francis Weil. There are hundreds, but we'd inevitably get lost if we wanted to find our way by pointing to them: plaques of "Rue Gauguet", "Rue Cassini", "Rue Cabanis" cohabit on the same wall but allow no alignment yet. They're being stored there, waiting to be used. If nameplates and signposts are to serve a purpose there has to be a reliable institution to fix them in the right places. But where is the right place? While Mrs. Lagoutte's search is (temporarily) over because she's found the street she was looking for, that of the municipal agents is just starting. Deciding on the right place: that's a new problem. By raising her finger towards the nameplate, then lowering it to the map, then again pointing it upwards, this woman's hand is showing us what we, in turn, must show by a new series of pictures. It is not only the flow of traces of interest to us here but, in a sense, also the successive arches that, step by step, keep the tunnel through which they flow open. Without the establishment of these relays, these affordances or props, Mrs. Lagoutte would never be able to use the street guide (that she can carry in her bag and hold in her hand) to help her find her way in the real Paris.

PLAN 11

It was not so long ago that the streets of the city had barely more names than numbers. People groped their way along, from neighbours to shopkeepers, street

urchins to accomplices, with neither map nor guide, relying on fingers pointed towards a particular sign, steeple, gibbet or bridge. One could just as well recruit one's students at random off the Boulevard St. Michel, or forecast the weather by raising one's head to a corner of the sky. The gradual change from this cheerful chaos to the impeccable roads maintenance service is not a move from disorder to order, nor from rich sociability to cold efficiency; it is the transformation of a sixteenth century town of four hundred thousand inhabitants to a city of four million. Whereas the four hundred thousand could use one another as landmarks, memories, archives and carters, the four million can no longer do so. Some civil servants spend all their time defining the signs that will enable people to move about in Paris. The tourist has the impression of passing into a material frame that overwhelms and crushes him. The effect totally changes when one enters into the *Service Parcellaire* (responsible for detailed surveys), Boulevard Morland, in the fourth *arrondissement*. Here is invisible Paris, its exact form, its streets. Filing cabinets line the corridors, marked with the names of neighbourhoods – yes, the same names that serve as references "outside" (but we now know that there is never an outside).

In the office of the *Service Technique de la Documentation Foncière*, the STDF or Ordinance Survey Department, a list of instructions sets out the day's work for a small team consisting of Marc Savelli, Maryse le Cam and a trainee. They are thus in the same position as Mrs. Lagoutte: she had to find the Rue la Vieuville; they have to find the Rue Gaston Rebuffat. Except there's a slight problem: this street doesn't exist! Why not? Because it's just been created… That's right; long before being a home to inhabitants, an address for postmen, a décor for tourists, the street itself has to be dug out of the dense fabric of the old Paris. So streets, like most things in the City of Light, start in the Boulevard Morland, in a file, on a form, on a map. If all roads lead to Rome, all streets of Paris come from the *Service de la Nomenclature*. Today a blue file bears its name: "Gaston Rebuffat", the courageous alpinist who thrilled me in my childhood with his heroic conquest of Annapurna. After spending a long time on the long waiting list of worthy names to be honoured, his canonization process has taken a giant leap forward. On the map in the file only a code name indicates the new road: CJ/19. On the next sheet the signature of

Jacques Chirac, then mayor of Paris, definitively approves the choice: CJ/19, recently cleared at the same time as a new bend in the Rue de Kabylie, will now be called "Gaston Rebuffat". The roads maintenance service can order the nameplates.

But even if we now know what this road is called, we still don't know where it is nor what map to use to get there. What a future Mrs. Lagoutte looking for the future Rue Gaston Rebuffat with the help of her (updated) map will point to is a nameplate, we know that. But to situate that nameplate one needs another guide, more seldom visible but just as important: the detailed land use map, a masterpiece of the municipal services, based essentially on the 1/500° map of 1900 that has since been digitized. This map has to be updated since the road is new. Let's follow the guide carefully, that is, do what our friends from the STDF call *cheminement*, "traversing". That's perfect, "traversing" is the title of our chapter. Mrs. le Cam points to a little graph on which the corners that she's just recorded, by moving from "station" to "station", have been pencilled in. This little station, this cross – nailed to the ground – looks exactly like one that an explorer would have erected in the Amazon jungle.

For the past thousand years the city has so often been mapped, itemized, measured, inscribed, transcribed and triangulated, that you'd expect to be able to trust the maps without going into the street in the little white van to start all over again. After all, the Parisian jungle is not the Amazon! But according to our land surveyors the difference between a tropical jungle and a concrete one is not that big. One gets lost in both: in the former due to a lack of landmarks and in the latter due to an excess of signs, nails, posts and marks that one has to learn to distinguish. In both cases the same instrument is used, a theodolite on its telescopic tripod, and the oldest of all sciences, topography, or topometry, which served the Ancient Egyptians already, we are told, to survey their fields after the flooding of the Nile. To find their way on this map of Paris that they have to adjust, our friends can use neither maps nor nameplates since those very things depend on the quality of their own work. They're going to rely on what they call "unalterable landmarks", little coloured crosses, half erased by the weather, that our eyes, unaccustomed to the land surveyor's job, never notice. Even they lose them so easily that they take along bad photos to help find them: a window, a porch, columns, the corner of a wall. Strange photo album, meaningful only to them, that comprises the treasure of their extensive

experience as explorers of the macadam. It's on these tiny marks that they align their theodolite and, shouting into their walkie-talkies, read the angles recorded electronically by their built-in computer.

On their return from the expedition, safely back at the Boulevard Morland offices, we see the usefulness of land surveyors and geometry more clearly. The map that vaguely guided them this morning is more exact this evening. Seated in front of her computer Mrs. le Cam sees the new road appear on the screen. The computer calculation has converted the angles into walls, parcels, façades and pavements, and the vectors have become straight lines. She is then going to do something that no one else has the right to do. Once the calculations have been checked, she is going to "burn" the Rue Gaston Rebuffat onto the venerable map of Paris – an old term in copper engraving that computer scientists have retained to refer to the irreversible nature of the mark. From then on all future maps, those of the cadastral services next door, of the receiver of revenue, of the post office, of land occupation plans, of the land occupation coefficients and of the special urban planning zones, will all bear the indelible mark of the Rue Gaston Rebuffat.

PLAN 12

We get it now, the street nameplate marks not the movement from the individual to the frame, but rather the interface between two forms of circulation: that of Mrs. Lagoutte and that of the roads maintenance service. Although the nameplate lasts longer than the brief search of the passer-by, its frame is so impermanent that Mr. Carrié's service constantly has to ride around the streets of Paris replacing nameplates – to ensure that the streets don't gradually disappear from the view of passers-by. As for the Ordinance Survey Department founded in 1856 by Baron Haussman, it's been trying for a hundred and fifty years to survey the map of Paris and preserve a trace of all the changes that this vast organism is constantly undergoing – a task comparable to that of Penelope, accelerated by the computer but, by definition, never finished.

In the preceding Step we considered what could be called "the Baysal operator": we see "all of" the Ecole des Mines only if we don't look at it directly; only a document circulating in the school makes it visible to someone in their office. By following "the operator Mrs. le Cam", we notice that the differences between offices

and roads, signs and things, inside and outside, count less than the alignment of traces. The Ordinance Survey Department maintains the same relations with Paris as Mrs. Baysal's office does with the Ecole des Mines. In fact it does more: it materializes the conditions that will allow documents to apply to the world, thus helping those concerned to coordinate their action. Like miners in a coal mine, by means of markings and signs it props up the galleries in which documents will soon circulate – finally endowed with meaning.

<div align="right">**PLAN 13**</div>

"But why bother with all these commissions and procedures, meetings and alignments, triangulations and alidades? We may need them to find our way in a material and urban context foreign to us, but fortunately we know who we are, physically, individually, subjectively and, thank God, without any landmark, nor juxtaposition of traces, nor inscription, civil servant, institution, filing cabinet, corridor, or office! We are present unto ourselves, immediately, we flesh and blood Parisians."

"Your papers please!", the traffic officer asks politely. With his forefinger he taps the bad photo that's supposed to prove the identity of the person claiming to own the driver's licence (a worn pink card) held out to him through the open window – a person (but who?) who's just gone through a very red traffic-light. "I don't have them on me", answers the (unknown) driver awkwardly, "That's all I have: the car registration, the car licence, the driver's licence". "That's you, there, on the photo?" the irritated officer asks sceptically. Like Mrs. Lagoutte just now, he's trying to bridge the gap between traces by means of a one-to-one correspondence. In vain, he tries to make the features of a fifty-year-old driver match the beaming face of an eighteen-year-old who's just passed his baccalauréat and his driving test. "Yes, it's me, of course! Who d'you think it is! Me! Me!" – an answer as stupid as saying "here" when someone asks you where he or she is. Me, here, I, now – what linguists call "deictics", that is, what can be pointed to – can start to have meaning, substance, only if one document is compared to another: a face and an instant photo; a name on a driver's licence and the same name on the car registration papers; a street name in a guidebook and the same street name on a map. But this correspondence is

maintained only by layers of traces, as numerous for one's personal identity as for the place in which one is situated. Had the traffic officer been more belligerent, it would have been necessary to go all the way back to a *fiche d'état civil*, a record of civil status, and to the signature of witnesses who certify that many years ago that child was indeed born to that mother, in that maternity hospital. The car could be stolen, the driver's licence forged, the baby switched with another one, by mistake… No matter how convincing we are about our own existence, we receive our identity via another alignment of circulating documents.

Ego, hic, nunc – identity, place, time – this is probably the most unsure starting point for an exploration of the social. *Ego*: identity cards, records of civil status, testimonies by neighbours; *hic*: cadastral plans, maps of Paris, guidebooks, signposts; *nunc*: sundials, watches, the electronic voice of the speaking clock. These are the things that make it possible to change the empty form of deictics. But that which fills, which points to, by means of the forefinger, the needle, the arrow, the nail, the number, the name, the form or the stamp, has none of the characteristics of a society in which we have a role, a place and a time. As soon as we follow the shifting representation of the social we find offices, corridors, instruments, files, rows, alignments, teams, vans, precautions, watchfulness, attention, warnings – not Society. By tracking the token of the social it's as if we never met the two venerable figures of good sense: the actor and the system, the individual and its context. We don't even discover something that might fall in-between the two, a sort of dialectic or hybrid. No, we find ourselves following a movement that bears no relation to either the individual actor or the social context. We hook up onto an alignment of traces, of which the series of linked corridors in the Boulevard Morland give a better approximation than most sociology textbooks: a *terra incognita*, a plasma, that we're going to have to map in detail with less powerful instruments than those of the Ordinance Survey Department, but with the same meticulous determination.

Step three. Referring

PLAN 14

We can see the social; we can even touch it. Through comments, images and models we can show this showing and make this touch tangible provided we follow up the tracers, a little despised, often barely visible, that bureaucracies abundantly multiply, that computers materialize, and that we call "paper slips" when they circulate and "signs" when they have been fixed to something. It is the alignment of dockets with signs and signs with dockets that, by lining the narrow corridors in which inscriptions circulate, makes it possible to dominate something with a gaze. Although we've progressed a little, we still don't understand what is circulating from trace to trace. The little computer mouse makes us used to seeing information as an immediate transfer without any deformation, a *double-click*. But there is no more double-click information than there are panoramas; trans-formations, yes, in abundance, but in-formation, never.

Ah, the Café de Flore! Haven't we seen this one enough on photos! Haven't we lamented enough the disappearance of the outmoded charm of the St. Germain quarter – Jean-Paul Sartre, Simone de Beauvoir, the existentialist waiters with their impeccable way of serving, trying to imitate the pages of *Being and Nothingness* about the bad faith of waiters.

Okay, but all that's not enough to fill the till of the manager-owner. Emblems don't do any more for him than the picturesque does for us. Let's talk business, then, and follow the track of a simple question: how much money is there in the till? The answer is no easier to find than the Rue Gaston Rebuffat on a map. We'll be told that it's enough to count the number of coffees, hot chocolates, vermouths, whiskeys, etc. Precisely, we'd like to know what "count" means, for lists don't look like cups of coffee. Something that has neither the aroma nor the consistency of a little black coffee is transmuted into pure gold, in the evening, under the watchful eyes of Mr. Broussard the general manager (a little surprised at our indiscreet questions!). He points to the successive rows of figures denoting a sum, the last line in red, at the bottom on the right, what Americans call the bottom line, the only thing in the world, they say, that counts. Yes, Mr. Broussard's forefinger refers to something, but to what? Above all, by means of what?

Like the Ecole des Mines or the city of Paris, the Café de Flore is lined with counting instruments, measurement devices, allocators of tasks, and inscriptions –

dockets and signs. What interests us now is the little jump that a coffee has to make to become a price: a step that is both tiny and infinite. Let's count the number of transformations needed for the manager's finger to point to a figure relating to something rather than nothing.

We'll start with the order. No, first the tourists have to find the Café de Flore. As we've just seen, for that they require guidebooks, maps and the name written on the canvas awning. Okay, they've sat down. Now to order. No, first we need to know which waiter is serving at which tables; there has to be a schedule and an organization chart, table numbers, code names for the waiters, a computer, a dispatcher. We move on to the order. Wait! How do we know which waiter received, then served, then took the money for which order? We could get lost here. What's needed is an electronic stylet to find each order received and allocated to a particular waiter rather than another. Lastly, the waiter has to put a slip of white paper on the side of the saucer, a paper that looks nothing like a coffee although it's the exact measurement of the coffee – and even the only thing that will remain of this drink very soon, when the final count has been made. It is precisely on the accumulation of these little white papers, torn by the waiter when he's received the money, that the return depends: the sum, the distribution of tips, the calculation of VAT, the payment of taxes, the weekly order of bags of coffee (a mixture skilfully prepared by the House of Vernhes for the Café de Flore).

While Sartre is writing at the table and "the waiter is playing at being a waiter", while "the inkwell *is* an inkwell [and] the glass *is* a glass", the coffee is reduced to nothingness several times, cascading down from form to form until it becomes a number, gradually eliminating everything not concerning it, discarding its "externalities" one by one, sketching the practical form of economics as it flashes past – in its accounting version at least. Before the philosopher has had the time to jot down all the treasures of bad faith deployed by the waiter ("as if it were not his free choice to get up at five a.m. every morning or to stay in bed, even if it means being sacked" (p.96)!), the cup of coffee has been transmuted into a bottom-line.

PLAN 15

We're so used to these cascading transformations that we no longer notice the pace at which they cross through our existences, speeding along the gaping divide

between being and nothingness – and back again. The comfort of habit makes us believe in the existence of *double-click* information. We begin to be attentive to their strange nature only if we turn towards objects with which we are totally unfamiliar. Scientific laboratories, for instance, have the advantage over cafés (even existentialist ones) of deploying the detailed series of intermediaries required in the production of a trace. In science one never runs the risk of confusing the series of transformations with simple information. To understand the risky configuration of the social, let's push open the door of a laboratory.

In the biology department of the Ecole de Physique et Chimie de Paris, directed by Jean Rossier, Etienne Audinat has managed to make the activity of a single rat's neuron visible. "What am I doing in a book on Paris?" he asks us, surprised. I simply need to point to the cover of *Neuroscience* on the common room table for him to understand why we've come to take up his time and to put Emilie's camera into action: to reveal the activity enabling him to make his neuron visible.

The cover shows two pictures: the first, a black and white photo; the second, an anatomic drawing in colour. Question: what does one see? The first image or the second? Neither. The only thing that's visible, interesting, informative, innovative, good to think and good to publish, is the correspondence between the two. But do they resemble each other enough for us to superimpose one on the other, like "Rue de Vieuville" on the nameplate and "Rue de Vieuville" on the map? No, because they aren't alike at all. So what do we see? The invisible transformation of one into the other. There's clearly a reference, but no superimposition; there's obviously imagery, but if we freeze on the frame, what we see no longer relates to anything. Scientific visibility has the strange peculiarity of also being based on a striking transformation of images into images. The reference, in a laboratory, doesn't consist of throwing oneself from an image towards the outside of that image – its referent, as the linguists say –, but of sliding sideways into a fine passage of traces, of moving more or less quickly while maintaining certain elements constant throughout the series of transformations. These constant elements remain invisible although they alone enable us to grasp the meaning of what we see when going from one image to another. The reference circulates. "If we could grasp this very particular movement in the image", I say to Audinat, "we could explain how all the Parises

fold into the big Paris." "Okay" he says, "I've got it. Come with me and see how a rat's neuron becomes visible in the lab. You can do what you like with that."

Let's open the *Journal of Neurosciences* on page 3998, volume 17, N°10. While all the streets of Paris start in a file in the Boulevard Morland and all orders at the Café de Flore end up in an accounting list, all rat neurons at the Ecole de Physique et Chimie end up in this paper form – that is, the "good" neurons, those chosen for their quality among millions of others that were ignored or rejected. Note the extent of the circulation mentioned above, simply regarding the cover, as soon as we consider a scientific article. The little photo in the top right-hand corner shows a neuron, but this trace is convincing only in combination with its electric potential – top left-hand corner. The research group's reputation derives from an even rarer combination: in the middle, on the right, a photo of an electrophoresis gel bears the marks of molecules synthesized by this particular neuron. The anatomy, the electric potential and the molecular biochemistry of a single living rat neuron under the microscope is what we can see here – what we see, precisely, if and only if we read the key (below) and the body of the article. To grasp the meaning of this page spread out before us we have to imagine the movement of the reference threading its way from the photograph to the electric potential, from there to the gel, then to the table and to the text – not to mention the scrupulous reviewers who accepted the article for publication and an immensely long series of drafts and corrections (including what I've just described, that leads from the neuron of a Parisian rat to a book on Paris). We can lengthen the circulation of the reference, but we can't leave it abruptly and still speak the truth.

At the end of the last century my compatriot in Beaune, Etienne-Jules Marey, invented what he called a "photographic gun", the distant ancestor of the little Action Tracker, a camera invented for photographing sport and available today very cheaply. Marey didn't want to hunt pigeons, nor photograph them in full flight. He wished to identify the series of movements enabling the bird to fly, by superimposing phases on the same plate. Anatomists had never dissected living birds, while naturalists had observed the rapid movement of their wings without being able to grasp it. Marey captured the natural sequence of movements on the plate without touching a single feather of the bird. This is more or less what we've

done with our layout, from the real Paris to the virtual one. In order to give a graphic equivalent to this shift of meaning, let's look at a sequence of phases that produced the perfectly clear little photograph at the top of page 3896. How do Audinat and his group see a neuron? How does the reference manage to fly? It's so annoying being able to grasp it only set on the page! How we'd like to see them at work, these researchers, by exposing the rapid sequence of their gestures on the plate of another photographic gun — could web design allow this lay out at last?

We always simplify this reference operation. We want there to be words and things; we then ask how a word refers to a thing – which never happens, of course. Instead of jumping over the divide in a *salto mortale*, let's wander slowly along all these little shifts, the accumulation of which ends up charging the words with meaning. Let's follow the guide: a rat is sleeping in the cage; the decapitated rat; the brain extracted; the microtome cutting fine slices; the introduction of a micro-pipette with a sufficiently minuscule orifice; the framing of the preparation under the microscope; the repetition of the image on the computer screen and, from there – and this is the finest part, and the most moving – the slow identification of a perfect neuron through the undefined layers which become blurred; the progressive adjustments; the first micro-electrode that has to be brought into contact to obtain the electric potential of the neuron (but at this scale it's as if several metres separated them, and when the syringe is clean the neuron isn't anymore); that's it! The oscilloscope breaks down the electric activity into phosphorescent traces: "It's a good neuron!" exclaims Audinat. The second micro-electrode approaches; new adjustment; with a skilful gesture the pressure is inverted and before our eyes the active neuron, still *in vitro*, discharges its neurotransmitters; these are gathered in a micro-pipette; another laboratory, another discipline, molecular biology, pipetting and re-pipetting, the little warm basins of PCR; the gel of the electrophoresis; the darkroom. *Data*, contrary to their Latin name, are never given; they are *obtained.* Let's call them *sublata.*

The neuron's activity resembles the neuron no more than the bill at the *Café de Flore* resembles the cup of coffee, or the evening's takings resemble the bill. From this lack of resemblance stems a deadly doubt on signs. People conclude that words are mere convention or even that they lie. Of course they lie! Of course they're

absurd to the point of making Sartre feel quite ill. No wonder: they're isolated, deprived of the whole sequence, the whole stack of intermediaries, of all that breaking down that, à la Zeno, allows one to go from one visible to another without ever passing through resemblance. Don't expect Audinat to leave his laboratory to "see" the neurons any more than you'd expect the manager of the Flore to raise his head from his accounts in order to "see" how much he's earned. Access to the reference is never achieved by skipping stages; it's achieved by following the layers of slight transformations without missing a single one, without omitting the tiniest step. Nothing in *double-click* information allows us to keep a trace of this layering of intermediaries; yet without this wandering the trace of the social is lost, for words then refer to nothing and no longer have any meaning – that is, no more movement.

Step four. Losing and winning

(PLAN 16)

The person pointing to the rat's neuron touches a sheet of glossy paper, the head end of a network of multiple and heterogeneous substitutions. Clearly, there is reference; what he says is real; the proof lies at his fingertips, provided he doesn't, for a single second, leave the narrow shaft in which layers of intermediaries flow, each differing from the one before and the one after by a minuscule gap, a hiatus. After following the flow of traces, the alignments that make them relevant, the transformations that charge them bit by bit with reality, we need to understand a little more precisely the nature of these hiatuses whose syncopes give rhythm to the trepidation of the social. We don't live in "information societies" for the excellent reason that there is neither a Society nor information. Transformations, yes, associations, yes, but transfers of data without transformation, never.

It's no easier to extract a clear opinion from the crowd of Parisians than to isolate a single neuron in the millions of billions constituting their grey matter. For a polling institute, the whole of Paris is a brain as vast as that of a rat. When we go through the door marked "SOFRES" we enter into another laboratory. Here, no guillotine, no microtome, no PCR, no microscope, but heavy instrumentation consisting of a sequence of shorter operations: a questionnaire, a protocol, a preliminary study, pollsters, statistics, computers and, above all, Parisians who agree

to participate in a tricky operation: the extraction of an opinion. In this office the pollster is isolated with the pollee like a priest in his confessional. On the table, a questionnaire; opposite, the respondent; everywhere, as always, files and computer screens. To simplify the collection of opinions *SOFRES* set up its agency directly under the Créteil shopping centre. Chosen for her angelic face, a young woman has the job of recruiting volunteers every day and taking them back to the agency, just as donors were recruited for blood in the pre-Aids years. These volunteers, sorted on the square in front of the shopping centre, have to correspond to the statistical categories provided for in the protocol: "Now we need some women of 55 who're not retired and earn between 100,000F and 200,000F a year". "Good" pollees are no easier to find in the crowd leaving the supermarket than "good" neurons in the muddled wires under the microscope. Fortunately there's the badge "SOFRES" and pollees' love of polls: "Oh please miss, interview me, I beg of you!".

No more than Etienne Audinat wanted to keep the rat whole, do our confessors want to sound out the kidneys and hearts of their volunteers or hear about their sons-in-law's snubs, their grandchildren's teeth, or the Alzheimers that have just sliced through their aged fathers' neurones. In the little booth it's *in vitro* that the information is extracted from the pollee. All that's wanted are reflexive reactions to the rapid succession of logos of different brands that the biscuit companies have asked *SOFRES* to differentiate today. After three-quarters of an hour the pollee will be asked politely to go. Having left the agency she/he can become a consumer again, a user of public transport, a driver or a roadhog, a good or a bad mother; none of that concerns the pollsters anymore. They enter the data – the "obtained" – into the computer where a smart software package allows them, at a simple *double-click* of the mouse, to extract not electric potentials but margins of error and perfect pie-charts. The pollee has been lost; the market share per biscuit brand gained. Let's not be in a hurry to say that a living consumer has been transformed into a cold figure. The consumer's been lost, but an extra point's been gained in the cloud of figures used to reduce the margin of error of all statistical calculations which, in turn, enable the agro-food industries to distinguish their biscuit brands better. Don't let's go by the cold indifference of the pollster who keys in the data: two to six months later,

faced with the new packaging on supermarket gondolas, the consumer will gain from it one hundredfold. One hundredfold? Well yes.

SECTION 17

In the former Grande Galerie of the Natural History Museum it seems as though the stuffed birds have also lost a lot of their warmth: they no longer sing deep in the woods, nor peck in humid marshes, nor nest on worm-eaten beams. The hundreds of navigators, explorers and missionaries who sent them back stuffed over the years, by the crateful, unquestionably lost a lot of information on the way. But if we talk of loss, let's also consider the gain. All the feathered creatures are there together, visible at a glance, their label nailed to the tripod. In the Celebes the explorer had felt nothing more than a light touch in the dusk; a hundred years earlier one in the Solomon Islands, over four thousand miles away, had heard nothing but the rustling of wings; elsewhere, a navigator at sea never knew where the golden pheasant, an unknown species that he managed to remove from the menu on board, had come from. The naturalist at the Museum no longer has these problems or scruples: almost all the birds in the world can be compared at leisure. Let's say, rather, that the birds become comparable because all their geographic and temporal attachments have been broken – apart from the limited information on the label. The birds have lost one kin but gained another family: the vast genealogy of all living species constituted by the Museum's collections. How can we talk of sub-species, species or types outside of this gallery, these collections and these drawers? The ornithologist, like Mrs. Baysal, Mrs. Le Cam or Mr. Audinat, can't turn his gaze to the Jardin des Plantes to see the birds of the world "in real life", "in flesh and blood". Instead, it's by turning towards the inside of the new gallery that he can actually, finally, see Evolution, that huge sweeping backdrop, that groundswell whose transformations would immediately stop glaring at us if we were unable to compare all these stuffed specimens beak by beak, claw by claw, feather by feather. From this point of view the Museum is to birds what the Ordinance Survey Department is to the streets of Paris.

"Of course", we might say, "it's quite simple. The birds, like consumers, have simply been abstracted, decontextualized, formalized and formolized, wrenched from the lived, living contexts in which they enjoyed a free and earthly existence".

Not at all. By progressive transformation we slipped the rats, pollees and birds from one context into another, one life into another, one vibration into another. In practice we never observe the move from concrete to abstract; always from concrete to concrete. We never leave the real for the formal, for we always slide from one real to another. Nor do we jump from the contextualized to the decontextualized, since we always wander from one institution to another. Is *SOFRES* not also a place? Small open-plan offices, no larger than the pollee's home, where after work, around a beer, the pollsters lead an existence as convivial as anywhere else. Is the Museum not also a place? A marvellous island, more valuable, with its centuries-old accumulation of drawers, cupboards, corridors, herbarium and files, than many tropical islands with their cheap palm tree.

PLAN 18

To measure the hiatus explaining transformations of information, we should also avoid two symmetrical mistakes: the first would be to forget the gain and to deduct only the loss; the second, that we're about to consider, would be to forget the loss. "The map is not the territory": a little proverb that should be borne in mind if both the megalomania of those who dominate the collection of traces, and the paranoia of those who think they are dominated by them, are to be avoided.

Unfortunately Mr. Nguyen's service didn't keep the old servo-controls that enabled him to get the sluices of Paris' water supply to "talk". I'd have liked to have heard the mechanical voice of the "talking sluices", recorded on tape, echoing in the silence of the *SAGEP* control room: "E.T. sluice, E.T. sluice, 75 degrees, 80 degrees, 85 degrees, sluice open, sluice open!". This choir of non-human voices travelling from the pumps to the ear of a human conductor would have thrilled me. Today, in this place that national security regulations prohibit us from revealing, everything is computerized. Not a drop of water from the tap (for drinking or otherwise) enters Paris without passing through this control board – except for rain water which falls on another service, the *SIAP*, at Clichy. From the point at which it leaves the purification plant until it is handed over to the two giants – Générale des Eaux and Lyonnaise des Eaux – sharing its distribution, and then on to the ninety eight thousand user connections, sensors measure the outflow, pressure and chemical quality of the water. Is it water that flows through this immense control panel on

which different coloured lights correspond to altitudes? Of course not, it's signals sent by sensors connected to the sluices – other paper slips, assembled by decentralized computers to which the most local regulations have been delegated by software. In addition to the flow of water in the pipes, we need the circulation of signs in wire networks. Water leakages must be avoided; data leakages must be mopped up. A neighbourhood of Paris can be drowned; or we can drown in data. Incidents that could break the pipes must be avoided; or shots that would overwhelm the operators, on the watch around the clock, hands on the controls.

The operators claim that this huge synoptic table helps to distribute water in Paris just as the instrument panel helps to pilot a Formula 1 racing car. For sure, it's a matter not only of information sent up, but also of orders sent down, down to the sluices themselves constantly regulating the dense network of over eighteen thousand kilometres of pipe work. Although every drop of water spends an average of six hours in their system before being consumed, in the operators' eyes (or rather, at the extremity of their joy sticks) the fluid behaves like a solid: it reacts immediately, so that they physically feel the vibrations under their bodies of the multitude of flows, and are able to anticipate the orders to give, in a flash, eyes riveted to the feedback from the water towers, reservoirs and exchangers. Yes, they steer the network: "Open Les Lilas! Close St. Cloud! Block Austerlitz! Careful at Montmartre!". If the four million consumers took their shower at the same time the pressure would suddenly plummet. Only the statistic dispersion of daily habits, depending on neighbourhoods, time schedules, equipment and factories, makes it possible to predict hiccoughs. Our operators are good sociologists, capturing statistical clouds that are far more precise than those of *SOFRES*, hour by hour, neighbourhood by neighbourhood. It's true that the proliferation of TV channels has helped to drown the peak that corresponded to commercial breaks in the film on TF1. On the other hand, there's no doubt about the two peaks that invariably correspond to half-time and the end of European Cup matches: thousands of toilets in Paris, used at the same time, flush away water from the bladders of all the city's football fans who've suddenly come unstuck from their couches!

The whole of Paris in colour on the screen and Parisians' most personal habits? No, nothing of Paris shows on the screen, apart from the overall destiny of

1,150,000 cubic metres of water flowing under our feet without us ever noticing the piezometers, the debimeters, the bills, the servo-controls, the controllers or the operators. As their name indicates, the "pan-opticons" make it possible to see everything, provided we also consider them as "olig-opticons", from the Greek *oligo* meaning little, and found in words such as oligarchy. In the oligopticons we don't see a drop. If the *SAGEP* operators are able to run such a complex network so skilfully, it's because of the parsimony with which they accept data – obtained – on their screens. Their wisdom is proportional to their deliberate blindness. They gain in coordination capacities only because they agree to lose first water and then most of the information.

Megalomaniacs confuse the map and the territory and think they can dominate all of Paris just because they do, indeed, have all of Paris before their eyes. Paranoiacs confuse the territory and the map and think they are dominated, observed, watched, just because a blind person absent-mindedly looks at some obscure signs in a four-by-eight metre room in a secret place. Both take the cascade of transformations for information, and twice they miss that which is gained and that which is lost in the jump from trace to trace – the former on the way down, the latter on the way up. Rather imagine two triangles, one fitted into the other: the base of the first, very large, gets smaller as one moves up to the acute angle at the top: that's the loss; the second one, upside down in the first, gets progressively bigger from the point to the base: that's the gain. If we want to represent the social, we have to get used to replacing all the *double-click* information transfers by cascades of transformations. To be sure, we'll lose the perverted thrill of the megalomaniacs and the paranoiacs, but the gain will be worth the loss.

End of the first sequence: Seeing/Circulating

PLAN 19

At first it seemed simple: to encompass all of Paris in a gaze we simply needed to be high up, to stand back. But where should the camera lens be put? At the top of the tower of Montparnasse? No, the view would be too squashed. At the top of Montmartre – which would have the advantage of not seeing the hideous Sacré-Coeur? Yes, but the partial view would be too oblique. At the bottom of the

catacombs? We'd see only a narrow corridor, partially lit. From the blind eye of a satellite camera? We'd get only one view. From the prime minister's window, at Matignon? We'd simply see a well-tended garden and not France, even though he governs it. From the balcony of the Mairie de Paris, at the Hôtel de Ville? An empty and cold square, cluttered with ugly fountains; nothing that gives life to this metropolis. Does that mean that Paris is invisible? "Move on, there's nothing to see". Well yes, let's do just that, let's move and then, suddenly, Paris will begin to be visible.

The initial point of view doesn't count; all that counts is the movement of images. All the images are partial, of course; all the perspectives are equal: that of the baby in its pram is worth as much as that of the Mairie de Paris, of Mrs. Baysal, of the employee responsible for inspecting what he calls the *regard*, the man- or draught-hole for visits and repairs in a sewer, water mains, a cellar or furnace. Does that mean we should mistrust images, always too weak, and let our thoughts jump to that which always defies meaning; reach up heroically towards an absent Society in which all these partial perspectives are set, towards a divine point of view which is the perspective of no one in particular? No, the photos collected for this web site preclude such a diabolical jump. Let's rather say that the visible is never in an isolated image or in something outside of images, but in the montage of images, a transformation of images, a cross-cutting view, a progression, a formatting, a networking. Of course, the phenomenon never appears on the image, yet it becomes visible in that which is transformed, transported, deformed from one image to the next, one point of view or perspective to the next. There has to be a trace linking them, making it possible to come and go, to travel in that lane, on that ladder of Jacob, transversally, laterally.

It's not easy to see a phenomenon, to make it appear. Infinite respect for images – iconophilia – is needed, and at the same time we mustn't pause, fascinated, on an image, since it points to something else, the movement of its transformation, the image following it in the cascade and the one preceding it. Iconoclasm would be contempt for images under the pretext of their not being the thing itself, of wanting to have access in one fell swoop to the real Paris, seized directly. Idolatry, iconolatry, would mean freezing on an image, believing it made sense, when in fact

it is simply passing, designating the one preceding it and the one following it. It's difficult to adjust the gaze to traces without immediately obtaining the fuzziness of either fetichism or iconoclasm. For the image to be clear, with neither supplement nor residue, it must represent only itself, without relating to any prototype. At the same time, it has to agree not to catch any gaze except to afford it the opportunity of grasping the movement from one image to the next. Yes, we touch, we refer, we see; but provided that with our gaze, our forefinger, we point to the course from one trace to another, through the successive abysses of transformation. If we have this virtue then yes, we can see, we can represent the social, the world around us.

A charitable reader will perhaps acknowledge that we have avoided the two perversions of idolatry and iconoclasm, but only to succumb to a far more serious mental disease: near maniacal obsession with dockets. We readily admit, there is something strange in this exclusive attention to the movement of inscriptions. Yes, we are mad about traces. Or rather, we only take advantage of computer technology to understand the extent to which we live in less complex societies than in the past. We gradually slide from complex relations to simply complicated ones. The difference between the two is based precisely on the absence or presence of tokens – in the broad sense that we have given to this word.

Complex relations force us to take into account simultaneously a large number of variables without being able to calculate their numbers exactly nor to record that count, nor, *a fortiori*, to define its variables. The lively and animated conversion we're attempting, leaning on a bar counter, is complex, as is the course of a ball and the play of football teams in a match, or the fine coordination through which an orchestra listens to or filters the emanation of each instrument and voice. By contrast, we'll call "complicated" all those relation which, at any given point, consider only a very small number of variables that can be listed and counted. Mrs. Baysal, like everyone else, leads a rich and complex life: the management of timetables at the Ecole des Mines is only complicated; that is to say, at any moment it involves only the folding of a sheet of paper, a list, a task, before moving on to the next one, itself simplified. Complex relations comprise a multitude of equally complex relations; they link together series of simple relations. The art of conversation could be seen as an extreme; the opposite extreme would be the

computer, a complicated folding of relations that the indefinite redundancy of the machine allows us to process as series of zeros and ones.

As far as we're concerned, we don't prefer complicated to complex relations. The former have the sole advantage of making things more easily visible because each step, each link, each jump, is the subject of an inscription that can be described and even photographed. Industry calls "traceability" the ability to follow a part from its design through to its sale, via its entire production process. The "quality control process", now widespread, has the effect of enhancing that traceability by multiplying inscriptions, labels, diverse descriptions, in short, those famous paper slips that we track like a dog tracks a hare. By becoming more complicated, the organizations that produce Paris simplify themselves to the same degree – hence, the proliferation of computer screens visible on almost all our photos, whether they concern the weather, water, nerves, rooms, roads or living species.

The term information societies has little meaning if it's supposed to refer to the generalization of *double-click* information transfers. It remains relevant if, through it, we can distinguish the increasing materialization, in bauds and bits, of what until now was considered to be the unfathomable spirit of social life. The more information spreads and the more we can track our attachments to others, since everywhere cables, forms, plugs, sensors, exchangers, translators, bridges, packets, modems, platforms and compilers become visible and expensive – with the price tag still attached to them. On this web site we simply take advantage of the thickening of relations, of the continuous underscoring through which the most minute connections seem to be marked with a highlighter. Owing to files and print-outs, each relation, even microscopic, becomes the drosophila of the social sciences, expressing in enormous dimensions that which has hitherto been too complex. Because of this slight shift towards complication, the reader will perhaps forgive us for our myopic obsession with the trails of traces.

Second sequence: Proportioning

PLAN 20

Water, electricity, telephony, traffic, meteorology, geography, town planning: all have their oligopticon, a huge control panel in a closed control room. From there very little can be seen at any one time, but everything appears with great precision owing to a dual network of signs, coming and going, rising and descending, watching over Parisian life night and day. No single control panel or synoptic board brings all these flows together in a single place at any one time. On France-Telecom's Ile-de-France supervision screens, warning signals indicate congested segments of the telephone network. Skeins of coloured lines reflect the scattered activities of millions of Parisians within the city and beyond. The jumble on the screen at midnight on 31 December, when everyone calls everyone else, is not the same as on days when a popular TV game saturates two telephone exchanges in the city centre at the same time. No bird's eye view could, at a single glance, capture the multiplicity of these places which all add up to make the whole Paris. There are no more panopticons than panoramas; only richly coloured dioramas with multiple connections, criss-crossing wires under roads and pavements, along tunnels in the metro, on the roofs of sewers. Through the half-open windows of these control rooms we can see what anyone would see if they were limited to their own perspective: a glimpse of gardens and roofs; very little in fact, so we may as well go back to the phosphorescent screens, down into the Cave. We thus have the choice: either the oligopticons and their traverses, or fixed, blind viewpoints. The total view is also, litterally, the view from nowhere.

The path we have followed, sniffing along the trail, short-circuits both Paris and Parisians. No path leads to either the global context or local interaction; our social theory metro line stops at neither the "Society" nor the "Individual" station. It seems,

rather, that we again need to distinguish cold from hot, real from virtual. At room temperature it's as if there were only one big Paris in which more or less crushed, constricted individual interactions were lodged. But as soon as things warm up, Paris is dispersed into a multitude of offices, each of which sees a bit of everything in the trajectories of various paper slips. As for the individuals, either they remain at their single, particular perspective and limit themselves to an unassignable, invisible, non-existent point; or they connect to one of the circuits of paper slips and undergo the most amazing transformation, for they too start wandering through Paris, stretched out, multiplied, scattered, increased, distributed.

A new question arises, at so to speak "high temperature", that we couldn't even imagine at "low temperature". What is there between the two kinds of strand, those drawn by oligopticons and the others by the rapid movement of the former individuals, now distributed? In the real Paris, when we left Society we would zoom in on the individual in a continuous movement from the macroscopic to the microscopic. Likewise, when we left local interaction we would shift to the broader frame of Society without which relations were insignificant. We had visualized Paris like a set of Russian dolls fitting snugly into one another. But in the virtual Paris the strands are all of the same dimension, all equally flat. They are connected and superimposed like so many spider webs; there's no way they can be arranged by order of magnitude, from the encompassing to the encompassed, the enveloping to the enveloped. Yet aren't they well ordered? Aren't there big and small? Winners and losers? Yes, but this work of proportioning, measuring and relating, these painstaking decisions on the major and the minor, are added to all the other work tracked until now. The proportioning also circulates in Paris – against the background of Paris: another brightly-coloured vehicle that we can track by following the shrill wail of its siren.

Step five. Summing up

PLAN 21

What is unquestionably the "biggest" of all objects? The starry vault above us. Could the sky itself be also the end-product of a progressive deambulation? Of

course: the sky – galaxies, pulsars, dwarf stars, stars, planets – has to circulate somewhere in Paris, like water, gas, electricity, the telephone, rumours and surveys. There's no way, we now realize, that we can grasp the structure of the universe by looking up at the grey and polluted skies of Paris. On the contrary, we have to focus on channels through which the entire sky moves in the form of a dual series of adjustments, and from that continuous flow take something that serves as a reference, that has the shape not of an image but of a transformation of images. These days we see clearly only if we look at the phosphorescent light of some computer screen.

Tinkling away at her keyboard in the library offices of the CNRS astrophysics institute, boulevard Arago, our friend Suzanne Laloë works on the million and a half currently recorded celestial objects constituting the sky. As head of the Paris branch of the Simbad database (Set of Identification, Measurements and Bibliography for Astronomical Data – kept up to date by the Strasbourg data centre), she enriches the file of each of these objects with articles from throughout the world, that in one way or another refer to them. Articles drawn from the eighty publications analysed by her team, received by post or email every morning, are entered into the database accessible on the Internet. Simbad thus redistributes, throughout the world, all the references produced by the astronomers' small community. Does Suzanne watch the sky or the literature on the sky? Does her cursor point to a cluster of galaxies or a heap of articles? Both, and that's precisely what makes this unique oligopticon so interesting. Before focusing their instruments on a point in the sky, astronomers can ask Simbad, for example, for "the list of all galaxies with a redshift greater than four on which there has been at least one publication". Without this valuable information the telescope's mirror would vainly turn towards new galaxies and the astronomer would be unable to distinguish the object she was aiming for. She would see nothing but spots. One can find one's way in the sky provided that one is not drowned in literature on the sky.

The Little Prince was wrong to mock the businessman who owned and counted stars: "'It is entertaining' thought the little prince. 'It is rather poetic. But it is of no great consequence' " (p. 45 Ed. Mammoth, 1998): poets eternal failure to understand the greatness of bureaucrats! Without Simbad astronomers would be no more

equipped to find their way in the sky than passers-by would be in Paris if the Ordinance Survey Department disappeared; Arcturus would vanish as quickly as the position of Gaston Rebuffat street. The value added by the database – fed in cooperation with Nasa – stems from Suzanne's and her Strasbourg colleagues' painstaking work checking that the name used in each of the articles corresponds to the one officially approved by the International Astronomic Union: an exhausting task of cleaning up articles written by astrophysicists who at times lack precision, so that Arcturus, known since Antiquity, is sometimes called HD 124897, sometimes PPM 130442, and sometimes [HFE83] 1018.

Philosophers of language have rambled on a lot about the capital question of whether or not "the evening star" has the same reference as "Venus". With Simbad, Suzanne Laloë's instructions are precisely not to solve this thorny issue too quickly. One celestial object can hide another. What a telescope on the ground calls MSC 263.9-3.3, one aboard a satellite may refer to as 1E 0840.0-4430. These may be synonyms, in which case the database - the "obtained" base - should replace them all by a single referent: "Arcturus", for example. But from the same angle, the astronomer may have aimed at a neighbouring star, and may use the same name to refer to an object separated by millions of billions of miles: "One has to be careful", explains Suzanne, "not to group together clusters of synonyms too quickly, because then it's really difficult distinguishing them again, we don't know anymore which is which! We're not astronomers, we're library scientists, we're not allowed to make celestial objects disappear!" In contrast, at other times she'll readily delete ill-identified objects at the click of a mouse, objects that have entered her database by mistake and clutter it. For example, an clumsy astronomer may have thought he'd seen an object that will subsequently remain invisible since no one can find evidence on Simbad of what he thought he was talking about! His article would have roamed through the dark world of data, as obscure as intergalactic space.

Where is the sky and what are its dimensions? Don't let's be in a hurry to answer that it is infinitely larger than the small office in which Suzanne works, obviously extending beyond the Astrophysics Institute. Or, with all our usual reflexes of scepticism, cynicism and critical minds, state that the sky is simply as big as this list, this catalogue of celestial objects, and hence no bigger than a quadrilateral as wide

as two A4 sheets, twelve inches thick: a ream of paper that refers to nothing; a derisory mass of symbols. The notion of a circulating referent introduced above enables us to negotiate this gap fairly intelligently. The sky is simultaneously over there, over here, and in our minds. There's no reason to doubt its entire reality, nor to believe that that reality would be any more whole if in one vertiginous bound we could leap into sidereal space. Yet we're not shut up in that office of the Observatory, prisoners for life behind sheets of pixels, dreaming of possible freedom that direct contact with the galaxies would finally guarantee us. No, at the click of a mouse, through a series of links, we're connected to a galaxy that is thus rendered visible and accessible. But the galaxy Z 0040.1-0148 is not the external referent of the word "Z 0040.1-0148", as those who constantly pit words against things and things against words believe. Rather, it's what runs along this fragile thread like an electric fluid. "GEN+1.00124897" refers to the quality of the current sliding along, stemming, in part, from Suzanne's and her colleagues' constant efforts to establish a "tension" between the cluster of articles and the celestial objects to which they refer. Our knowledge is neither limited nor absolute; it circulates through its transformations. Once the price has been paid for these means of transport, yes, it is indeed the whole sky that Suzanne dominates and sums up from this tiny head end in the boulevard Arago in Paris.

PLAN 22

Why this prolonged focus on the progressive, intermediate and almost tubular nature of the reference? Because all the other calculations of scale depend on it. Elsewhere in Paris, at the Montsouris Park for example, Météo-France also sums up the sky, although a different one, the sky of today's weather on Planet Earth and especially in Ile-de-France. Elsewhere, in Rue Crillon, Airparif also draws up the map of the sky, but once again not the same one since it concerns the quality of the air breathed in by the inhabitants of the Earth, or rather of Paris and its suburbs. If we omit the tubular nature of all these skies, each circulating in its narrow network of reference, we believe ourselves capable of ordering them from biggest to smallest: galaxies first, then the solar system, then the complex system of the upper atmosphere, Ile-de-France, Paris, the particles belched out by millions of exhaust

pipes, and finally me, the average civilian who has trouble breathing at a major intersection and once again returns to my doctor to treat chronic asthma. We could end up aligning all these skies in successive layers, like in a travelling shot sliding from the omniscient view of God to the minuscule perspective of a mite.

But as soon as we fold the different forms of reference back into their respective channels and roll them laterally towards their referent, the zoom becomes impossible. Their centre is everywhere, their circumference nowhere. Suzanne Laloë's intergalactic space on the second floor of the Astrophysics Institute is added to that of the weather in the Moutsouris park, which in turn is added to that of the map of pollution peaks published this morning in *Le Petit parisien*. They sum up all these skies, just as the gas network is laid alongside the electricity network, itself next to television cables. We note that they circulate side by side in narrow pipes, identified elsewhere on another map: that of the roads planning department on a scale of 200 to 1. Yet they don't overlap, are not reduced to each other. Nothing sums them up; no camera will ever be able to zoom gradually from cable to sewer. Their forms of reference can coexist without ever being entangled.

PLAN 23

The economy is hardly smaller than the sky, that is, if we are to believe its prophets who treat it as the "impassable horizon of our time". Everything is claimed to be situated within it. We are said to zoom gradually from the macroeconomic to the microeconomic, from the unquestionable laws of the international market to the microeconomic transactions in which I force myself on Tuesday mornings to rationally calculate the price of the apricots I want to buy at the Maubert market. If this prophesy were exact, on what scale would the market news service (SNM), run by Mr. Defaix at the Agriculture Ministry, 3 rue Barbet de Jouy, be situated? With his 135 agents and 45 million francs he makes a pure and perfect market of 40 billion francs visible and transparent – at least to himself (Suzanne needed only a few million francs and some twenty people full time to encompass the entire universe!). Owing to this service, all the wholesale markets of France and Navarre are present on the Minitel information service "36-17 SNM". Now there's a nice oligopticon!

What are apricots worth this morning at Rungis? Although I felt an apricot, weighed it in my hand and tasted it, I was still unable to extract a price from its juicy flesh. I may not be a specialist, but the wholesaler at Rungis hardly knows more than I do. Standing in front of his cases of fruit lined up in the hall, he waits for the buyer on his bicycle, order forms ready. Both have before them yesterday's market price list as well as a short comment by the SNM which, for the benefit of the ministry and Brussels, and for all buyers and sellers, has forecast tomorrow's prices. As Mr. Defaix, an expert in both sociology and economics explains: "There's no rational base to price fixing, it's deals and deals; we record independently; we're the only completely free ones in this branch, and it's thanks to us that a perfect market exists, as if all wholesale markets in France participated in price determination in a single market hall".

Ah, here comes the analyst Eric Engel, carrying a listing, a Bic pen, yesterday's green market price list and his briefcase. Everyone knows him here at Rungis. He strolls up and down the fruit and vegetable stalls every day, part of the small team of fifteen people that the SNM deploys continuously in Europe's biggest food market. Let's follow him closely because the price of apricots depends precisely on peculiar manner of crossing through Rungis. Note, he's not supposed to inspect the quality of products. When he weighs the fruit carefully in his hand, tastes it and compares it, the idea is to collect information on what wholesaler after wholesaler, buyer after seller, started to negotiate that very morning, from deal to deal. He's not asked to proceed by means of opinion polls, like our friends at Sofres, in Créteil, nor by panel; nor is he asked to go everywhere. His skill consists in trying to extract from sellers and buyers the price at which they have really negotiated, each one with a slight advantage in telling the truth – and in lying a little. ("Perhaps he told you that he sold his lemons at 6.5 francs a kilo, that's his problem, he won't sell any!", a buyer whispers to him.) As he moves along the hall Mr. Engel becomes a more and more valuable source of information; he's starting to know the prices of the day that confirm or invalidate the previous day's forecasts, grade by grade, variety by variety ("Where's the beetroot?", "Around 6", "Yeah 6, like mine."). He hears fewer and fewer lies since in exchange for the information received he can provide the averaged out sum that neither buyers nor sellers know yet but that they'll be able to

see shortly on their Minitel screens. The scoop he offers them comes straight from the mouths of all his former informers! The difference is that he circulates freely and independently, whereas they negotiate their incomes. The action of all concerned becomes visible only in the column of figures on Mr. Engel's listing, corrected by hand, and now added to yesterday's prices.

In conference room number 226, "Fruit and vegetables", in the SNM offices, Mr. Engel compares his prices to those of other analysts and they calculate a mean. They then start the tedious process of reviewing all the products in alphabetical order: garlic; choice grade artichokes; second grade artichokes; aubergines from France; aubergines from Holland, and so on. Mr. Engel notes the mean on a blank synthesis sheet. The gathering looks like a school staff meeting grading term papers. Gradually the previous day's forecasts, corrected, become that day's prices. Products no longer in season are scrapped: ("Has anyone seen spinach today?", "Not a leaf!", "And lettuce, seen any?", "Damn expensive hey! Even the Chinese didn't want any"). Mr. Engel adds a little comment on the market trend after each agreement: "The apricot supply that developed quickly has not adjusted to demand. This morning at Cavaillon and Chateaurenard 1,070 tonnes were presented for sale". Tomato prices remain stable. On a visit to Bayonne the agriculture minister will read the SNM fax in the car on the way to the airport. At least this time they won't throw tomatoes at him; maybe apricots though!

We now know that it's impossible to set the Market News Service within an ordered relationship that ranks economic phenomena from the macroscopic down to the microscopic. Depending on the time of day and the quality of his work, the SNM analyst will represent either a young newcomer that the others rag by pulling the wool over his eyes – so that he's just as lost as I am when I'm robbed at the "Mammon fruit and vegetables" stand of the Maubert market – or the combined action of thousands of agents countrywide, waiting for a global decision from his sheet of paper on what they've earned or lost, what they've all accomplished collectively in the previous half-day – not to mention the past five years of transactions memorized by the service's computers. The overall frame of the French market, the spatio-temporal context in which fruit and vegetables are sold, can be obtained only by the constant circulation of the 150 SNM officials. Without their

path through the piles of crates, the friendly relations they maintain with wholesalers, their ceaseless work of inter-comparison, the keying-in of their data - their "obtained" - on the computer, the sending of figures to all the participants, there would be no global frame, no context, no measurement, no scale; in short, no means for any actor to know whether she or he had sold "more cheaply" or bought "more expensively" than another. Like the reference, the scale depends on the circulation of traces, and on the local, meticulous, perpetually corrected production of sums.

PLAN 24

For the spectacular cinematographic effect of dolly shots, you need a travelling platform. But such a platform is as utopian as the fiction panoramas with which we started. Or rather, sizes can regularly be ordered only from the inside of a weakly lit hall. The zoom effect supposes that one could see the whole without focusing on details; that by overlooking the whole the details would still have meaning; that there is a strict order making it possible at any point in time to calculate the scale from biggest to smallest; and, finally, that one could disregard the lenses, the optics, the photographers, the developers, the laying out, the files, the offices, the institutions and the databases, in short, all those tiny places in which totalities are made, set up, composed. Believing that one can zoom is forgetting that photographs of galaxies, markets or neurons are all the same size, that they never occupy more than a surface area of between 35x20cm and 24x26cm – with a few extravagant and expensive exceptions of around 56x150cm – and that the gaze inspecting them always has the same dimension. None of the oligopticons visited for this book were bigger than 4mx3m. The dimension of what we look at obviously stems not from the size of the images but from the connections they establish and the rapidity of the circulations of which they are simply the temporary head end. All places have the same size: the course of "proportioners" varies only their relative measurements and their capacity to be bigger or smaller than another. Only the incessant movement of relationism is weak enough to spawn differences and record them lastingly.

Step six. Designating

PLAN 25

Here we are, back at the Café de Flore. This time, however, we're not going to examine the manager's efforts to add up the number of coffees sold, on his small accounting oligopticon. We turn to one of his customers. Or, rather, we follow the gaze of a couple of North American tourists staring at another couple sitting in the room. Perfect timing: the American is a famous sociologist, Howie Becker, and his wife Dianna is a photographer. Something has struck them about this young couple, this particular morning, in a Latin Quarter café. Something *typical*. They've just taken a shot, a *cliché* – a French word adopted in English. Is there a more Parisian scene than lovers engaged in a passionate conversation, oblivious of their surroundings, the glasses and the waiters, the academic reading his newspaper, the manager and his business concerns; indifferent even to these tourists, so typical, shamelessly clicking away at them. "Just like a Doisneau", says the photographer softly to the sociologist, "Paris will always be Paris". "*Plous ça change, plous c'est pareil*" he answers, amused.

Here we are, well placed at the core of an individual interaction, inside the Café de Flore, in the heart of the St. Germain quarter, the centre of the capital. Before us we have a microscopic relation that seems to fit snugly into the Parisian context, like a pip in a peach. As the song goes: "Lovers are alone in the world". Alone? Not quite. If we look more carefully, we'll soon see, moving towards the table, an abundance of little tokens that can give meaning to the scene, and that the young woman takes or leaves, with an air of nonchalance. All we notice in this interaction is the mound of an ants' nest whose invisible galeries stretch across the entire city. An identity card gives us her name: Alice Dessart: "des-arts" [the arts], the name is too good to be true. A top by *Dorothée bis* lay on display in a shop window; a young man's mother gave it as a gift to this young woman who's wearing it today. A pair of men's jeans, deliberately grunge, was going to be thrown out; a second friend gave it away to this young person wearing it this morning. A 1995-model orangy-red *Swatch* was part of the collection three years ago; the mother of a third boyfriend gave it to this young lady who's sporting it at the Café de Flore table, along with a citrine and silver ring on her left-hand middle finger, which, in a very roundabout way, came to her from the mother of the friend who no longer liked the pants. As for the necklace that her hand casually toys with, it was received directly from the

grandmother of a fourth suitor. Dressed in gifts from head to toe (ransoms paid by those whose heart she stole), Alice receives homage from her new lover.

At low temperature, yes, of course, there are individuals. At higher temperature, it's difficult to be sure. We'd rather say that there are targets towards which an ever-increasing series of missiles is heading. We're all Saint Sebastians: a sharp prick of love – wasp, horsefly, cherub – the disrupting arrow of grace, the bite of jealousy, the devouring fire of ambition, the onslaught of viruses and bacteria, the itch to travel, or to consume, the narcissistic wound, fire that flushes the face. Yes, Alice – that's the name she was given: another arrow shot by her parents – is camping at the intersection of these vectors, these vehicles, these angles of attack, these protests, all converging on her, offering their services, like so many *make-live, make-die, make-do, make-have* and which, with their Lilliputian vibrations, end up putting into motion this interaction, wrongly described as intersubjective. All that converges on her, like the flight of pigeons in the Luxembourg garden onto the bag of seeds that an old woman regularly holds out to them; like a cloud of yellow flowers on the bark of a forcicia that yesterday was still dry and today is revived by the spring.

What's Alice going to do with this swarm moving towards her to define her, situate her, name, authorize, allow and wound her, to carry her away, to make her live? Maybe she's going to sum up in a single word the situation, the accumulation of circum-stances, what is rightly said to "stand around" her. With a touching movement of her hand she lifts her dyed red hair, traces the shape of her lips in a studied shade of violet. She highlights the passage of what is passing over and pressing in on her from all sides. In scarcely a word, a mouvement of the mouth, she extracts one of the possible summaries of what is happening to her this particular morning in the large hall of the Café de Flore, and that passed through Paris, one of those readily-available clichés that a long life as a Parisian won't allow her to overlook: "Maybe I'm in love with him after all…". This little sentence doesn't describe the situation but it does frame it, format, specify, summarize and interpret it. There's not that much difference between this expression and what the technicians of the water network seen above write on their logbook after an eventless night: RAS, *rien à signaler*, nothing to report. From the circumstances Alice has extracted a day's report, almost a paper slip, for sure an account.

We shouldn't exaggerate the gulf separating the oligopticons – so easy to track now thanks to the materialization of computer technology – from these delicate interactions that are small and limited only because Alice chooses to ignore everything else and sum up what's happening right now, in one word of surprise, even when her hand, wanting to catch the glass before it falls, accidentally grabs her companion's hand. The American couple wasn't wrong: "Lovers in Paris", they wrote in their travel album as a caption for the picture. Of course, oligopticons have the peculiarity of helping us see what they receive in signals: the information moves back and forth as clearly visible as the changing of the guards in some British palace. The diastole and the systole of their thousand hearts shake the whole of Paris: a thousand pumps, sucking and forcing, whose throbbing constantly causes the windows, the tables and even the walls to vibrate, like the regular passing of metros under our feet. And who said that Alice doesn't also breathe? That she doesn't return what she took? That she doesn't put back into the city as much as she received? From the target she's turned into the archer: she blazes with a hundred fires, winks, flashes her features. Her lover, enthralled, looks at her, captivated – apart from the fact that he paid for her coffee, which suits the general manager and adds a picture to the album of these two passing tourists. Like the control rooms, she can also be represented in the form of a beating heart whose amazing network of arteries and veins meanders through the entire city of Paris. In both cases localizing the global – as we did earlier on – or distributing the local – as we've just done – offer the same star-shaped sites.

PLAN 26

Between the frame and the framed, positions are easily exchanged. Sometimes, when we are strangers in a neighbourhood, other visitors, even more foreign to the place, ask us how to find the Rue la Vieuville or the Rue de l'Agent Bailly. They see us as locals, part of the décor through which they're passing, like the café-bar or the street toilet. The same applies to us when we ask them our way: a multiplication of *quiproquos*, mistaken identities, outlining for each individual the totality of a city that no one – we now understand – can sum up without creating, through various different sensors (questionnaires, studies, lists, résumés), some kind of oligopticon:

even to obtain an anonymous crowd one needs statisticians and sociologists. Each one serves as an element in the frame, for all those she or he sees as an element of the frame. Hence, there is no more a frame than an anonymous crowd or passers-by. The Americans see Alice as one of the famous sites of Paris; Alice sees these one-day *paparazzis* as one of the usual nuisances of Paris.

At low temperature we have the impression of an isolated and fragile passer-by circulating in a frame that's older, harder and bigger than himself, like a polished steel marble violently shot through the hellfire of an electric pin-ball machine. There's the frame and there's the passer-by; the pin-ball machine and the marble. That's the somewhat discouraged point of view of a tourist who adds his minute presence to the millions already living there. It's the desperate point of view of the one who, abandoned by all, sits down on the pavement with his little board marked "I'm hungry". No one gives him anything, has ever given him anything. He lives in the cruel city like an insignificant scrap, trampled on by indifferent crowds: smaller, without any doubt, than the crushing frame surrounding him.

Yet this situation of extreme coldness cannot be generalized. If the temperature rose a little the differences would no longer be so big – as for indifferences, they'd become shameful. Between the frame and the passer-by there was no vacuum: we observed either the frame or the individual. The first and the second levels dovetailed together precisely, with no gaps and no margins. That was the real Paris. In the virtual Paris, hot, virtualized and consequently filled with possibilities, there is no longer either a foreground nor a background – in fact there is no longer a ground. By following the swarm of entities converging on Alice, we covered all of Paris; at the entrance as at the exit, at the input as at the output, the import as the export. If we studied one of the oligopticons summing up a part of the whole Paris we'd draw the same star, on the way there and on the way back. A city doesn't consist of a general, stable frame in which private actions are nestled, like doves in a dovecote or tombs in a cemetery, but of a criss-crossing of stars, the branches of which serve as supports, obstacles, opportunities or décor for one another, unless, as is usually the case, they never meet, even though each of them is supposed to cover the entire city.

If we're able to study the oligopticons, it's thanks to the tracks they leave behind them, both there and back again, and to the closed premises that our interlocutors' friendliness enabled us to visit and to photograph. This allowed us to situate, to locate the Whole, or the small wholes that each form a bit of Paris. So we learned how to visit the capital without ever going by that view from nowhere that could be called Society, whose obsessive presence cooled down the big city. We then used this star-shaped model to visit not the Whole but the Element, individual interaction that's sometimes said to constitute the social world. We notice that there are no more Elements than there is a Whole, and that the interactions also have the shape of a star, a web, a fine network of which we could study – with more difficulty, admittedly – the ins and outs, entries and exists, and even the dark halls where locally, through summaries and clichés, the temporary and particular sum is formed. Our representation of the social becomes weird: it ignores both Society and the individual, the local and the global. Each part is as big as the whole, which is as small as any other part. As soon as it starts travelling, the token of the social traces improbable paths. It digs, more actively than an old mole, and everywhere it goes it leaves empty spaces, letting in air and making space; everyone "spaces out" as they say in a gymnastics class. It allows us to breathe more comfortably – soon, perhaps, we'll be empowered again.

Step seven. Commensuring

PLAN 27

In his office at the city hall the mayor of Paris is talking, right now, with his public relations adviser. This twosome is clearly no bigger, occupies no more space, breathes no more air, than the one formed by Alice and her suitor. No one would say that the former interaction was bigger than the latter, just because one took place at the City Hall and the other in a café. Paris is no more a pyramid than Society a sphere. Nothing superior could serve to house the former couple in more grandeur than the couple formed by the constituent and her suitor: no general frame, no doll's house in which they could be placed, one right at the bottom and the other right at the top. We now know that this would amount to drawing the interaction of the first two inside a third place: perhaps, in the office of the demographer, on the population

lists, we could tick off the names of the constituent and Mr. Tiberi, the mayor, and we could – although it would take time – find the paper-slips that have brought the two together, figures amongst figures, bits of information amongst bits of information, uninformed Parisians amongst uninformed Parisians. We could also turn them into typical representatives, and fit both of them into a class struggle, but that would be in a fourth office, that of a sociologist of urbanism and social trends, somewhere, Rue Pouchet for example, at the CNRS, and via another path of other paper-slips, other questionnaires. Finally, we could – and that's what we're doing here – bring the two together in a single narrative, in a montage and some story, using images and text to highlight the fragile path that binds them. But we know that that's a fifth "office", Boulevard Saint Michel, in the very place where we're compiling this improbable sociological opera before putting it before our web visitor's eyes – if she or he willing to visit it! – in an nth closed place: bed, café chair or office.

It's also impossible, after having reused Margaret Thatcher's apt slogan "there is no society", to restore our two couples of poor wretches to common humanity. There would be no point in applying the cobbler's or financier's morality and reducing both of them to poor humans, incapable and trembling, equal before the dread of degeneration like that of love. That would be cute but false. In fact there's nothing particularly "small" in individual interaction, as we've just seen, and nothing particularly human either. While Alice, through intense and relentless efforts extracted, just a few lines from the crowd of missiles launched at her to define in a worn-out word what was happening to her that was different, the mayor of Paris must also work hard to extract, from the swarming mass of beings rushing to invade him – the spectre of the Commune that once burned this building, the crowds of media, the pressure from his friends, the confusion of the crowd –, a fifty-four-minute appointment with his favourite adviser. In order to define themselves, both he and Alice have to take into account the whole Paris. So, we can't say that they are "obviously" two necessarily equal individual interactions, just because in both cases they are humans, humanity being, as we all know, 'the measure of all things'. The movement of the social is not made more of Society than of interactions.

In other words, size remains impossible to determine without something making it commensurable: we can neither compare these two couples by stating that they are unequal, one small, the other big, nor consider them as equal, by virtue of their common humanity, that great equalizer. So how do we compare these incommensurable worlds? By following the method – the path – that has served us until now, by identifying the traceable links that connect the two scenes and include the one in the other, in some or other form. The little Alice, a mere constituent, laughs at her representative, the mayor of Paris. In passing, without thinking, she thus introduces into the conversation some elements of this famous image circulating everywhere – well no, not everywhere: in the channels that the public relations adviser is paid to know well ("They've got the info, they've got France" proclaims the poster for a newly launched magazine) – an image that can be said to link us to the little crisis meeting at the Hôtel de Ville. But, unfortunately for him, Mr. Tiberi knows nothing about his constituent, Alice, even though a fraction of her keeps him alive, through the local rates and taxes she pays for her small flat and that will pay for the electricity, the Persian carpets, and the many unfair deals of this not-so-honest Mayor. The relationship between the two remains tenuous but ascribable; if the fraction of a figure on the annual accounts of the taxes of Paris bears a minute trace of Alice, her mocking laugh about the crooked Mayor hardly resembles this poor man overtaken by events and trying to repair his badly shaken image.

PLAN 28

Does that mean that the social will never be able to be gathered together? Should we abandon all hope of coherence? Should we resign ourselves to the permanent fragmentation of lived worlds? No, of course not, because once again the course of the measuring instrument, through its persistent movement, gradually reduces the incommensurable distance separating one place from another.

On 1 June 1997 a young woman with red hair points at the election campaign poster of Mr. Tiberi, mayor of Paris, candidate for the Fifth *arrondissement*. Alice leaves in the morning to fulfil her election duties. Nothing binds these two characters, Alice and Mr. Tiberi, particularly strongly, except for the fact that they're both on the voters' roll of this neigbourhood and that Mr Tiberi wants to be re-elected. We can't say, for all that, that Alice is "small" and Mr. Tiberi "big", just

because one is a constituent and the other a candidate. Yet their respective size is precisely what is at issue: everybody is deciding on that today; we'll have the answer after 9 p.m. Developed over two centuries of violent change, reforms, adjustments, upheavals, not to mention a few revolutions and days of barricades, the entire electoral system must be apprehended as a single measuring tool: it concretely resolves the question of deciding who is big and who is small – obviously a partial measurement, but what measurement isn't? We now know, every panopticon is an oligopticon: it sees little but what it does see it sees well.

Alice's body is now hidden behind the curtain of the polling booth: no authority can check the ballot that she slips into the envelope, but the curtain goes only halfway down to the ground, so that her feet show. The scrutineers have to be able to check that Alice is alone and that no relative, boss, lover or sentry has come to secretly influence her. As ridiculous as it may seem, this little fitting room is as important as Mr. Engel's rounds through the large hall at Rungis: without the independence of his service, no pure and perfect market; without this partial abstraction of the citizen behind her "veil of ignorance", no valid vote. Going from the polling booth to the total count of votes is not going from small to big. Nor do we go from bottom to top: we produce both the counting unit and the sub-total that will make the sum. The measurement tool partly establishes what it is going to measure: there are no measured measures; only measuring measures.

To obtain Alice's isolated vote, an apparatus as complicated as the one on which a single rat's neuron appears on Mr. Audinat's screen needs to be set up. A tricky operation of abstraction and concretion: Alice had to be separated from all the others, from her friends and suitors; had to be concealed behind the modest veil thrown over these relations, then reduced to an envelope, the only way of counting all the Alices and all the Tiberis. At first we cannot say, with total accuracy, that Alice's vote has the form of a micro-interaction: it becomes one in order to pass through the hole in the ballot box. Alice's vote must no longer be distinguished from the others, except as a line on the paper added to other lines. Without the accumulation of all these pre-conditions, her vote wouldn't 'count'.

With the gesture of a school-girl Alice, voter's card and envelope in hand, hesitates: is there still time to change her vote? No, here she is in front of the

president and his assessors who smile, seeing her having her photo taken by Emilie Hermant, like a star busy accomplishing a solemn act. Note that the ballot box on the table is transparent for the same reason that the polling booth is opaque. These details are by no means insignificant: a transparent polling booth with an opaque ballot box would signify a dictatorship. "Has voted!" exclaims the president while the assessor makes her sign the register. We could follow these tracks, as we did above: voter's card, register, signatures. There's not a single link in this long chain that at some stage in history was not involved in fraud, and has not required additional precautions and counter-measures. In this respect the *Conseil d'Etat*, first, then the *Conseil constitutionnel*, have seen it all – the Fifth *arrondissement* too because of Mr Tiberi's many cases of fraud! But it's another track that should hold our attention here: the measurement tool makes commensurable that which was not so before.

Alice reads *Le Journal du Dimanche*, open in front of her. She looks like the wholesalers earlier on, checking the previous day's market prices: they'd come to sell their apricots but they weren't sure at what price to sell them. Alice has come to vote but she still doesn't know the sum of her action and that of her fellow citizens. Provided there's not too much fraud, the measurement tool practically solves the impossible question of knowing whether we are a small isolated actor or a large combined system. If "Alice-polling booth-envelope" can count as a microscopic interaction, how can we qualify Alice-busy-reading the newspaper whose articles are trying to guess what all the Alices of France are going to do? An actor who becomes a system? A little one who becomes big? A cat that overthrows the mayor like Puss in Boots with the Ogre transformed into a mouse?

Once again, the rapid movement of the measurement crosses the seemingly abyssal distance separating the microscopic from the macroscopic. At the table set after 8 p.m. in one of the large rooms of the town hall of the Fifth *arrondissement*, the scrutineers count the votes dropped into the ballot box. Everything depends now on how carefully the counting is done. Our obsession with tracks is shared here this particular evening: everyone holds their breath, for there seems to be very little difference in the numbers. The additions are done and redone scrupulously. Contention is brewing. Outside, a TF1 crew is getting ready to film the results. Mr.

Baretti, journalist, balances his voice "one, two, three, testing, testing" before telling viewers to which side the scales have tipped. We're not caught in a structure; we're busy watching, from sub-total to sub-total, the passing of the vehicle whose tracks draw a structure through which we have chosen to be represented, and that will soon overtake us all. What Alice was feeling earlier at the Café de Flore, in a little voice filled with surprise, "but I'm in love!", the whole of France – a France dispersed throughout this electoral apparatus – also feels now in a 'big' voice filled with surprise: "Hey, the Left has won!".

On the television screen the whole of France is summed up on a single dial. The balance of political forces of an entire country is expressed in a single dynamometer that's no bigger than the screen on which Mr. Audinat could read the electric potential of a single rat's neurone. Seated on her couch, Alice now knows what she did, this very morning. Could we say that it's a matter of the sum of sums, the meta-sum, the mother of all sums? No, because from the polling booth to the ballot box, from the ballot box to the scrutineers' table, piles of votes, counted and recounted on the black tables right up to the hall at the interior ministry's offices and, along a parallel circuit, from the opinion polls taken from the ballot boxes to TF1 reports and Sofres, we have simply, laterally, followed channels of acts, figures, counts and data ('obtained'), without going from small to big, without ever going up from bottom to top, and without even passing by either the Whole or the Element. The totality of the national representation is not obtained by abandoning the local for the global, by taking a giant leap from Alice's sofa to eternal France, but by moving from place to place, office to office, towards lists adding up ever longer columns of figures. The dial of the dynamometer on the TV screen is added to all the others and runs, it too, across the big Paris, without being able to reduce, encompass, absorb, annihilate it. From now on we'll talk no longer of big or small, high or low, but of linked or separate, aggregated or disaggregated. The TF1 set, the crowded hall at the interior ministry, the Place du Panthéon in front of the *mairie*, the town hall of the Fifth *arrondissement*, differs from Alice's apartment - where she watches the results while drinking a beer to the unexpected victory of the Left, filled with indignation at the equally unexpected victory of Mr. Tibéri – not like the whole differs from the

part, but like a part linked by strands of figures accompanied by signatures and stamps differs from a part that is stamped with figures and signatures.

Step eight. Restricting

PLAN 29

The totality doesn't present itself as a fixed frame, as a constantly present context; it is obtained through a process of summing up, itself localized and perpetually restarted, whose course can be tracked. Paris is neither big nor small. Places without dimensions are temporarily dimensioned by the work of rules, files and sums, whose Brownian movement is barely detached from the background of all the other bubbling incessantly agitating the cauldron of the big city. Strange arithmetics of the social: the additions are added to the totals without being able to sum it up. This point couldn't be verified more adequately than by visiting the place that seems to offer the ideal counter-example.

There's nothing disturbing about Mr. Henry, a senior officer in the national police responsible for public safety in Paris (he doesn't want his real name to appear, not through fear but through the modesty that is so fitting for faceless power). Yet, in his office at the Prefecture, strapped in his police inspector's uniform, he's perfect for the part of the one who sees everything, the missing figure of the panopticon. At the touch of a key he shows us on his computer screen how he can display any of the hundred cameras on the *périphérique*, the Paris ring road, the two hundred videos watching over the buildings and streets of Paris, the hundreds of eyes silently patrolling the corridors of the metro: "D'you want to see the porch of the Elysée palace? There you are! The exit of Notre Dame? You're there … Platform 2 of the B line of the RER at Chatelet? Nothing simpler!" Have we finally found the site where the whole of Paris is summed up under the vigilant gaze of Big Brother? "Some crazy guy offered to cover the entire Paris with only 2,400 cameras!" he tells us, laughing, and adds: "But I wasn't interested." It's his lack of interest that got us thinking.

Going through the series of sentry posts that led us to the office of Mr. Henry, a member of a hierarchically organized corps of 17,000 people, had we perhaps reached the supreme panopticon, the thousand-eyed peacock, capable of

encompassing all of Paris and of justifying the worst restrictions on those – Cain and Abel alike – who know that no tomb is deep enough to hide from the centralizing Napoleonic French state?

In a third-floor basement at the geometric centre of Gallo-Roman Lutetia, shielded from floods, bombs, attacks and riots, three brand new rooms serve as the information and command centre of the *préfecture de police* responsible for "defending institutions, protecting goods and people, and controlling traffic". The smallest room receives and dispatches the 400,000 calls that Parisians make to the police emergency services every year. The second, far bigger, is exclusively for traffic. Finally, the third room, called "general operations", much bigger and more solemn, is used as a command post: "This room is the product of the chief inspector's will", Mr. Henry tells us. There are six other smaller ones in every district consisting of three *arrondissements*. Each has its own radio frequency continuously carrying voices to the central command post which can then transmit orders on a single frequency that all the others have to be tuned into.

The immense central screen presents a detailed map of Paris showing all the police officers dispersed throughout the city: busses, cars, motorbikes, pedestrians. On each side of this map 40 TV screens simultaneously display the images of some of the surveillance cameras. By zooming in on the Champs-Elysées we easily identify the policeman called "papa 28", lost in a cloud of exhaust fumes, corresponding to the P-28 icon on the map. "The aim is not to replace staff on the road but to anticipate, to compare information, to get a general picture". The TV channels are there too with their coverage, sometimes faster than that of the police. In front of walls of screens we find the four consoles where uniformed staff receive information from their colleagues, compile the computerized notifications of complaints, and send or relay orders. Behind them other consoles are set up to receive teams from the security police, the gendarmerie, the CRS (riot squad), the SAMU (the medical emergency services), the RATP (the Paris public transport system) and the SNCF (the national railways). In case all the computers were to fail, a second room is ready to receive the Prefect and his troops.

As one of Mr. Henry's young colleagues notes when taking us around the police headquarters: "The whole of Paris is reverberated here, and more than Paris, the

whole of France". A few excited fans are on their way back from the Francofolies festival at La Rochelle? The police, warned by the security branch, are at St. Lazare train station to meet them. The SNCF closes down a line in Aveyron? It's in Paris that the provincials are organizing their demonstration and that the police will try to avoid clashes. A department store organizes a rock concert at the Place des Ternes? They fail to inform the police; rioters break shop windows and police officers have to intervene before the loot can reach the burglars' market. Angry hospital doctors intend to march on the Elysée Palace? They have to be stopped. Salman Rushdie wants to give a talk at the Pen Club? It's necessary to mobilize almost as many people as for the end of a soccer match. "The political sensitivity of Paris is incredible. You can burn down the parliament building in Rennes, but blocking off access to the Elysée Palace is unthinkable. The Prefect of police could lose his job". Paris' two-thousand-year history has resulted in an accumulation, on a few thousand hectares, of all the passions and agitations that can be activated right down to the centre of this spider web, this central cortex with its neurones crackling in front of us. Happier than Mr. Audinat with his rats' brains, we have the opportunity, as in the Hollywood film *The incredible shrinking man*, of finding ourselves reduced to the scale of the phenomena that serve as cerebral states for the Parisian police. We shrink as small as we can to see the big Paris brought together by a tight bundle of alerts, radio waves, television channels, and torrents of orders struggling to be heard in the constant noise of static.

This impression of exacerbated sensitivity is intensified by the threat of thrombosis constantly weighing on the capital city subjected daily to three million internal combustion engines – the surface area covered by cars being greater, we are told, than that of the roads! Any incident, any accident, any intervention, any passing through by some head of state, can block the traffic on this tiny saturated space that is always just a fraction away from total immobility. A single car double-parks in a no-stopping zone and 30% of the flow is lost. Successive waves of repercussions travel several miles upstream – repercussions that will immediately have to be taken into account to bring in fire engines, ambulances or "forces" as they're called at HQ. It's the traffic room's job to represent the same events as the general operations room but from the particular point of view of fluidity on the city's

roads. On Avenue Berlier, in the east, a PC keeps a watch over the *périphérique*; under the flower market square, just round the corner, the Lutetia PC regulates traffic lights; on the fifth floor of the Grandes Carrières police station another PC (the information and impounding orders room) deals exclusively with towing cars away to the pound.

Here the police do more than watching and regulating; whenever necessary they decide. The huge computerized screen reflects these priorities by means of tracers generated by the SURF (urban traffic-light regulation system) software. All roads in Paris are displayed in the form of tri-coloured arrows. When they're green the computers regulate traffic flows themselves; when they're orange, flesh-and-blood police officers work along with the device but their orders have to remain compatible with those of the computers; lastly, when the arrows are red, police officers in the streets take over: with whistles blowing, batons flailing, shouts and fines they readily cancel all the routines pre-programmed by computers – to the detriment of the Lutetia and Berlier PCs that have to guarantee Paris's fluidity above all. "But the state's requirements come before anything else; it can happen that we have to free a 30-kilometer corridor!".

Can we say that the police officers in charge of traffic dominate all of Paris? Precisely not. Proof of that is in the strangest oligopticon of all, in these rooms containing so many of them. Close to a computer screen an official is sitting at a table looking at a map of Paris on a scale of 7,500 to 1, shifting around wooden figurines that he takes from a box as if he were playing Monopoly. Why? "Because SURF" he explains "gives an image that's too precise! All the traffic problems in Paris have a ripple effect spreading over several kilometres. No computerized map enables us to vary the scale fast enough: either it's too big or it's too small; the frames are always too rigid. Here, with the figurines, I can see both the whole and the details, anticipate better and spread out my forces more effectively". Police buses, motorcycles and cars are moved around on the map as in any war game, in spite of the sophisticated visualizations constantly flashing on his colleagues' screens. That's precisely the theoretical problem that the police at the central command station have just solved for us: unlike the two Thom(p)sons of Tintin fame, "their job is precisely not to know everything". The etymological dictionary

defines the verb "restrain" as that which "draws back to the most reduced limits", from "re" indicating the backward movement and *stringere* meaning "to draw", "to bind".

In the main room we're told that it's more a question of warning than of restraint. Unwittingly using a term from physics, the agents of the prefecture refer to an 'event' when talking about their giant detector's recordings. According to them, there are about 70,000 'events' a year, on average. But the arrival of a truckload of apricots from Rungis would not be qualified as an event, no more than a crash that set two motorists at each other's throats under my window. To be described as an event, at least 50 'forces' have to be mobilized in the affair. We can see that the grain Mr. Henry is interested in is not individual interaction. He says so frankly: "I'm not Big Brother, I'm not interested in individuals. That's the criminal investigation department, I've got no authority to investigate. They, yes, they'd need a finer grain; they've got to be able to follow an individual. What we're interested in are crowds; police in uniform don't need detailed knowledge". His deputy gives us a quantitative estimation of this difference of grain: "It's 50 people in a circle of about 100 meters in diameter; there's no point overloading the map below that". Mr. Henry, a fine sociologist, a disciple of Le Bon, explains very precisely what he would like to capture with his oligopticon: "We work on people above all; the crowd is composed of disparate elements; as long as it remains like that I'm not worried; our main concern is that it doesn't become a crowd with its own psychology, in which individuals lose their individualities; that's when it becomes an irresponsible mass; I've got to watch it; there are professional agitators, they can make 50 people dangerous, whereas I can deal with 300,000 who won't at any stage lose their individuality and their responsibility; we have to prevent the crowd from building up; we're not angels, if we have to stop it we do, but our problem is entirely different to that of the criminal investigative police who have to monitor individuals".

Reassuring words specially for the researchers to numb their vigilance, or analysis of a sociologist talking to colleagues to show them the multiple ways of representing the social? Since the latter hypothesis teaches us more, that's the one we'll follow for the moment. The HQ's mission is not to sum up Paris in a whole. Its aim is almost the opposite: preventing the city from forming a mass, from becoming

a continuous block of immobilized vehicles; ensuring that a single mass with one psychology doesn't turn it into a totality. Through a continuous series of isolated interventions, Mr. Henry's forces work at disaggregating, at fluidizing, at preventing the formation of lumps, the "building up" of passions, as he puts it. Far from wanting to know everything, this subordinate of the direct descendent (by function if not by blood) of Lieutenant La Reynie (1625-1709), one of the first organizers of urban police, would like the millions of Parisians to stay as they are, composed of individuals that he never has to know personnaly. His rarely achieved goal? Being able to write in his log book: RAS, nothing to report. So, in the end, one hundred and thirty five people coordinate seventeen thousand who police five million: to the panopticon it's necessary to add a filter; to the operation of summation, an opposing operator of restraint.

Yet Mr. Henry doesn't claim to let events go by without a trace. Better placed than any sociologist, he manages to record the behaviour of groups of Parisians over a period of several years, owing to the computerization of his log book. These fuzzy sets have properties resembling recurrent patterns that the general operations room treats as so many MOSOS (*modules de maintien de l'ordre et de service d'ordre*), modules for the maintenance of order. Over the years it became apparent that demonstrators, for instance, always tried to smash the same windows. The police therefore learned how to prevent that by deploying staff to protect them. The behaviour of demonstrations organized by the CGT (a workers' trade union) is more stable that that of techno concerts. The MOSO describing the former can be applied blindly; more vigilance is required for the latter. Moving the President from the Elysée Palace to Le Bourget on the outskirts of the city, closing off the roads on the banks of the Seine to cars on Sundays, sending a tow truck onto the jammed *périphérique*, are all recurrent events that MOSOS transform into reflex action. Even more tragic events such as terrorist attacks have their MOSOS since the same decisions have to be taken to clear the way, to facilitate the landing of helicopters, to move away gawking onlookers, to evacuate the wounded. Only the place, by definition unpredictable, will change. Early planning will help to save a few precious minutes. In the case of some events that mobilize thousands of police officers and the riot squad, such as the 14th July celebrations or the Pope's visit to

Notre Dame, the computerized listing is hundreds of pages long and sets out the distribution of staff and the range of their possible interventions.

How well the city lends itself to the proliferation of megalomaniacs and paranoiacs! – two associated disorders that oppress the same breath in opposite directions: the ones believing they are able to see and dominate everything; the others imagining that the former can see them at every moment and totally dominate them. The omniscient and omnipotent God of catechism has now taken up residence in the secular figure of the Society of surveillance. And yet, by walking tirelessly along this lateral dimension leading us from one local and provisional summation to the next, we gradullay loosen the grip on our imagination of the pyramid metaphor. Paris is not the cenotaph of Cheops, an immense mass of stones bearing down with all their weight on the shoulders of slaves, whose radiant apex could belong only to the divine world. Nor does it have the form of an inverted pyramid with its base lost in the clouds and its sharp point ripping apart the fragile bodies of individuals bound hand and foot. Paris is no more pyramidal than it is spherical. The rare and fragile places in which the full power of the oligopticons is concentrated are situated down below not high up, under our feet not over our heads, scattered throughout the city, at our service, restricted, incapable of nurturing either delusions of grandeur or constant fears of plotting. Far from saturating Paris with their implacable control, they prevent the city from becoming a single block. What they could rather be compared to is electric plates set to maintain the temperature, to avoid the cooling down or explosion of a pressure cooker.

End of the second sequence: flattening out / spacing out

PLAN 30

Long before the "butterfly effect" of chaos theory became a cliché, my daughter sang the following song, of obscure origins, in her shrill little voice:

"The cat topples the bowl

the bowl topples the table

the table topples the room

the room topples the staircase

the staircase topples the house

<div style="text-align:center">

the house topples the street

the Street, the Street topples Paris

Paris! Paris! Paris has toppled over!"

</div>

Our fathers lived in Paris with the dangerous cat in the nursery rhyme sitting in front of their bowls, on the table, in their room above the stairs that could topple the Streets… They knew the fragility of their position, the rapidity with which barricades overthrew regimes. They paid much attention to sudden upheavals of scale. What a strange inversion of metaphors: those societies so easily overthrown never spoke of social fracture; we, on the other hand, multiply social fractures in a society that seems frail yet where nothing appears to be able to alter the relationship of order flowing from dominant to dominated. Could the token threading through the social not give society both the flexibility and the cohesion that we believe have been lost? Scales count less than the instruments establishing them, the institutions summing them up and restraining them, the movements overthrowing them. If the social world is flat we can breathe fully, deeply, there is no longer a lack of space.

When we talk of "fracture" we imagine a fragile society that the slightest turn could crumble. Might this fragility not stem from the effect of zooming in that claims to make something greater of Society, something higher, more comprehensive, more complete and more real than the minute interaction lodged in it; or of zooming out that claims gradually to move from the abstract and total view of Sirius to the all-encompassed, dominated, complete, real, lived view of face-to-face interaction? Since from one level to the next nothing looks the same – there's nothing about Mr. Tiberi, for example, in Alice Dessard, nor of Alice in Mr. Tiberi – we were only able to interpret passages from small to big as so many breaks, ruptures, betrayals, incomprehensible hiatuses. But the token of the social doesn't have this fragility; it doesn't count on resemblance to go from place to place. It doesn't believe that we can track in from the *mairie* of the Fifth *arrondissement* to Alice's bachelor flat, nor from the Paris *préfecture* to the fire that's just gutted a squat in the 18th *arrondissement*. It knows that no tracking shot can take you from the sky to a map of the sky. It skips all levels, has no belief in size, is indifferent to qualifications of big and small, micro, meso or macro, as it threads its way between people and things without warning, tirelessly connecting elements from what was

previously called 'Nature' and 'Society'. Its steadfast course is added to all the courses animating the big Paris day after day, without missing a single step.

All too often social theory still inhabits this utopian world where the zoom is possible. It really believes that we can slide from biggest to smallest, and then wonders how the microscopic – face-to-face interaction – manages to remain meaningful despite the crushing weight of the macroscopic. Conversely, believing it can see only the small, detailed or isolated, it tries to understand how the aggregation of these minute events can possibly produce the big. Everything changes if we add, not only local and temporary sums to the theory, but also the actions of all those who do the sums, and all the fragile channels in which they ceaselessly move about, along with their paper slips and the ci-devant individuals, transformed into stars at the centre of which all these vectors converge to offer them a part of their existence – or to get rid of them for good.

Is there somewhere a sum that could make it possible to include all sums, that of the sky and the market, of water, of the police and the weather? In other words, is there a meta-sum, a hyper-sum, within which all the partial sums that we've considered until now are set? That's how the social is usually discovered. Instead of being the token darting about everywhere to draw differences of scales, as in this opera, it's most often defined as a particular sphere to which one could relate its own phenomena that, once grouped together, would form Society. Whether we are sociologists or not, sometimes without even thinking we make that all-encompassing gesture in which our hands start at eye-level and end up meeting again at the navel, as if on the way they had stroked the generous curves of a huge pumpkin. This typical gesture sometimes accompanies definitive statements on the importance of "placing all these events in the general evolution of societies", of "taking into account more fully the social context". As sociologists often say after being shown too many details for their liking: "Where's the big picture?". But as global as we may wish to consider this famous 'context', it will never be bigger than a pumpkin: what the lips dare not speak, the hands of the structuralist willingly admit. If the starry sky above our heads and economic law at the inmost depths of our wallets circulate along narrow channels, the same must apply to Society. Far from being that in which we all reside, Society is produced, on a tiny scale, within these numerous

laboratories that coexist, without mixing with those of the producers of skies and markets.

We could even put back onto the map of Paris the different channels through which social theories circulate, by doing for the sociological discipline what we did for the market news service, for Simbad's sky, for the legislative elections, or for Mr. Henry's crowds under surveillance. The exercise would be more difficult, it would lack certain *paper trails*, some of the routings would be badly documented, some of the transitions inadequate, certain gazes shut off. But in spite of everything we'd notice that the components of general sociology differ, depending on whether we're going down the Boulevard St. Michel or up the Rue des Ecoles. The globality of Society also emerges through these laboratories, publications, institutions, conferences, files, questionnaires – cellars, recesses and attics. Until now we haven't multiplied officials and offices, intermediaries and paper-slips just to lose sight of them suddenly under the pretext that it's a matter no longer of neurones, stars, water, prices, flows and votes, but of the thing most important to us: What is it that holds us all together? How can all these scattered groupings be summed up?

For instance, here in the group formerly headed by Mr. Raymond Boudon, social phenomena consist of individual aggregations that produce perverse effects through a series of involuntary transformations, without for all that forming social structures. Further on, with Mr. Pierre Bourdieu at the Collège de France, individual action must always be situated within a field that may not determine it but that is the only thing to give it meaning. If we go up the Rue Laplace to the CREA, to Mr. Jean-Pierre Dupuy, we notice that structures do exist but through a phenomenon of self-organization resembling neither aggregation alone nor the field. There's nothing shocking about this dispersion: a sociogram of Parisian cosmologists would show no more agreement on the evolution of white drawf stars or the origins of the Big Bang. Moreover, the matter – identified, isolated, transformed – on which each of these laboratories works differs entirely: here, statistics and stylized examples; there, extensive inquiries by questionnaire; elsewhere, models borrowed from economics. The word 'sociology' has all the characteristics of a *faux ami*, and its definition will change again if we go down the Montagne Ste. Geneviève to the GSPM, to Luc Boltanski and Laurent Thévenot, on the other side of Luxembourg, or at the bottom

end of the Boulevard St. Germain, to visit Mr. Michel Crozier's group, or else if, in a rare act of open-mindedness, we went up the Boul'Mich to have a coffee with the researchers at the CSI, at the Ecole des Mines.

Despite the megalomania to which the social sciences are so partial, there would be little sense in saying that just one of these laboratories had summed up all of Society. We could just as well say that the water utility could be scrapped under the pretext that the EDF dispatcher alone watches over the entire electricity network, or that the criminal investigation department could disappear because uniformed police keep an eye on groups of over fifty persons. On the other hand, there would be little sense in saying that these laboratories are all equally right, and that the addition of these partial sociologies would make a good general sociology. In which office, in which file, in which article and at which conference could the irenic, eclectic, ecumenical super-sociologist gather together the sum of "actors" of the CSO, "actor-networks" of the CSI and "persons" of the GSPM, not to mention the "socio-professional categories" of INSEE and the "sociocultural trends" of Cofremca (whose offices, in any case, are situated on the right bank!)? Sociologies are like metro lines: they can be linked up but provided one pays the cost of digging a new and deeper line such as *Eole* or *Méteor*, thus adding corridors to other corridors – and possibly digging deficits deeper than gypsum quarries. We can add sociologies to the social world but we cannot subtract any. What the notion of Society was supposed to cover in an impossible totality, the token that we're following in this book leaves free to be deployed. It's necessary to open the cages in which Society held us captive. We can never say, as Rastignac did: "Paris, to us two!"; only: "Paris, to us four million!".

Third sequence: Distributing

PLAN 31

Everything's calm at the roads maintenance service, in front of the most beautiful coloured map ever made of the City of Light. If we want to understand to what extent Paris is folded and refolded, turned and rolled over, that's where we need to go. It's impossible today to dig the slightest hole in a street without hitting a telephone cable, bursting a water piper, releasing a spurt of steam from the city's heating system, interrupting traffic lights, chipping off the corner of a pavement, shifting a guardrail, uprooting a signpost, removing a metal grate, opening a manhole – not to mention the Gallo-roman sarcophaguses wedged between metro and parking garage, waiting to be resurrected or taken to a museum. To find their way, officials at the roads maintenance service decided to note everything. In signs and icons these Penelopes, whose pneumatic drills daily undo the previous day's archiving, try to capture the position of all the official objects that constitute the public space of Paris (like seas on a geographic map, large uniform blocks on the screen, devoid of detail, represent private spaces: an abundance of existences that the roads maintenance department needn't know). This admirable inventory of all the traces, scars, folds, stands, kiosks, trenches and networks striating the public space is our *Carte du Tendre*. This is what is going to guide us through the labyrinths of actions and passions, expectations and repulsions, appeals and anticipations, constituting the real populations of Paris.

Paris is as flat as the palm of my hand. Folded perhaps, and folded again like an *origami*, but flat everywhere, without the distance between two circumstances ever being eliminated. Even today, any movement from A to B has to be paid in coin of the realm: by registered letter, escalator, elevator, telephone or radio link, petrol, diesel, elbow grease. Remove all these intermediaries and Paris unfolds like a map that could cover the surface of the Sahara; unfurl the City of Light and it's as vast as

Siberia. Victor Hugo and Tocqueville clearly saw that, in the revolution of 1848, when they had to warn the Parisians, in the name of the Parliament, that Louis-Philippe was in flight, the Regency impossible and the Republic proclaimed. With neither television nor cell phone nor motorbikes whizzing through the city, sirens screaming, not even a megaphone, they had to cover the tortuous old Paris on foot, climb over the barricades one by one, parley with each group of more or less fearsome rioters. For every road, every block of houses, they had to find a representative capable of relaying the news through contradictory rumours zig-zagging across the city. Our two parliamentarians covered Paris, measuring the indefinite distance separating quarters and classes, verifying with their eyes, their feet and their rasping voices that, without an immense effort, nothing could unify the political body of the Big Paris. What fortunate ancestors who lived in the heat of the virtual Paris: at that stage *double-click* information had not yet given them the illusion of a global context with ineluctable necessities.

When there's a lack of techniques, when by chance a strike or breakdown deprives us of a means of communication or transport, everyone learns, walking and talking, that the social world is indeed flat, that it has to be composed piece by piece, staircase by staircase, concierge by concierge. When riots are rumbling no one believes that there is a Society, constantly present, with little individuals living in it. From every bridge insurrection can emerge, a new totality, a new regime, marching through Paris, offered to Parisians. Switching from the real to the virtual Paris means finding the road to these potential totalities, these scattered virtualities, yes, these former virtues (the word "virtual", don't forget, also derives from *virtus*, the favourite world of the ancient Romans), from this plasma — the word meaning a fine layer of clay that Prometheus was said to have used to model Pandora.

It's to objects that we must now turn if we want to understand what, day after day, keeps life in the big city together: objects despised under the label "urban setting", yet whose exquisite urbanity holds the key to our life in common. Laminated within their forgotten wisdom we find all the movements, all the durations, all the sturdiness that former forms of the social no longer know how to gather – individuals and Society, fields and structures. It seems that the big city is even more populous than Babylon, with a multitude of agitated little beings whose

combined action gives height, width and depth to the entangled networks described until now as flat as a board. While computerized materialization enabled us to disseminate Society in a host of scattered, dimly-lit offices, matter will now allow us to redistribute the action of the living and the dead, the absent and the present, the real and the virtual.

Figure nine. Formatting

PLAN 32

"Paris has approximately 770 Morris columns, 400 newsstands, two theatre stands, 700 billboards, 2,000 information stands, 400 public toilets, 1,800 bus shelters, 9,000 parking metres, 10,000 traffic lights, 2,300 post boxes, 2,500 telephone booths, 20,000 bins, and 9,000 benches." So we are told in the volume published by the *Commission municipale du mobilier urbain*, the municipal commission for street furniture, which can also be used by any architect, town planner or landscape architect to order a batch of *"potelets"* – a sort of bollard that transforms our pavements into a game of skittles – (173 francs), a parking meter of the Schlumberger kind (2,500 francs), or even a "traffic model" bus shelter (66,300 francs). The guide notes with humour that all that's missing today is the category "elements of justice", "gallows and scaffolds that, after bollards and fountains, constituted the third category of street furniture – now fortunately something of the past!". (Judging by the number of imploring faces and tortured bodies lining the corridors of the metro and the pavements of Paris, the commission may well be over-optimistic.)

Should we count all those gadgets among the inhabitants of Paris? Partly, because they anticipate all the behaviours of generic and anonymous inhabitants whom they get to do a number of actions, in anticipation. Each of these humble objects, from public toilet to rubbish bin, tree protector to street name, phone booth to illuminated signpost, has a certain idea of the Parisians to whom, through colour or form, habit or force, it brings a particular order, a distinct attribution, an authorization or prohibition, a promise or permission. The bright yellow letter box makes us lift our arm, from a distance, to slip in our envelope. The bollards (791 francs) categorically prohibit cars from driving onto the pavement – and break the

shins of blind pedestrians; tree protectors (300 francs) allow cyclists to chain up their bicycles (advising against theft) and protect the barks against damage; tulip-shaped bins (500 francs, plus a 200 franc installation fee) receive the rubbish in parks, although since the big bins with flap lids (5,930 francs) also attracted bombs, most of them were removed and replaced by little green brackets holding bags that are deliberately transparent so that policemen and guards can check for sticks of gelly next to hamburger scraps; Norman Foster bus shelters (available for the neat sum of 84,700 francs) provide shelter from the rain and even allow one to delicately pose one's posterior – although, like the misericords in churches, they prohibit sitting or lying down. Anti-beggar devices are as numerous as the countless bollards struggling in vain against the invasion of cars (called Passy, Prestige, Potelet-borne, Saint-André, collapsible bars, and other bodyguards). If you doubt the immensity of prohibitions and permissions, the obstinate distribution of segregations and selections that this multitude of objects practices night and day, equip yourself with a pushcart or sit down in a wheelchair. Other than exceptionally, you won't go further than a hundred metres without being blocked. Anyone who moves about comfortably and takes obstacles in their stride is clearly *authorized* by these objects to live in Paris.

It would therefore be somewhat unfair not to include in the inhabitants of Paris these beings with multiple but standardized forms which serve as so many couches, coat racks, affordances, signs, alerts and obstacles in the paths that each of us threads through the city. Far more than an indifferent frame around our subjective passions – on the contrary, in fact – they make all the difference between a successful trip and a failure. Stones thrown through a ford, bridge piles, prostheses, stilts, hands to be helped; they serve as links in chains that keep us in the city. Their Lilliputian action partly composes the circulating self, a sort of external brain serving as a counterpart of the internal one: the multiplicity of neurons requires the constant support of these countless injunctions whose activity varies from one second to the next.

PLAN 33

This bank automat asks me to introduce my card into the slot and to key in my pin code, discreetly. No, it doesn't ask "me", it asks "someone who talks French,

who already knows what a bank card is and who has memorized a pin code", to execute the order. It addresses a generic bank customer and an ergonomic human being – neither dwarf nor giant – with certain properties – he talks French – and about ten thousand neurons – after about a hundred training sessions a pigeon would probably be able to do it as well as me. "Me/I" has just more or less filled, with my card and my code, the place allocated by the device. Give or take a few adjustments, I oblige the automat, in the sense that one says "I'm obliged to you", and thus occupy the place assigned to me by the ergonomist, the computer scientist, the video-graphics artist and the banking group that prepared – for them, for us, for "one" – this site onto which I've just logged.

As I leave my automat with my bank notes I'm on the Boulevard St. Michel, and here I'm taken care of by another administrative service, another institution, the one that's trying – in vain – to channel pedestrians so that they cross the road without getting hit and, above all, without bothering the shouting, moaning, polluting, hooting road-hog motorists. Careful, don't make the mistake of assuming that this other administrative service is thinking of the same user as the bank's. The latter had fairly rudimentary cognitive capacities and a unique identity, her or his pin code, memorized and recorded discreetly, whereas the former has no such subtleties. I've now been given the required muscles, resistance and agility so that if I want to cross the boulevard directly I'm stopped from doing so by a grid 80cm high, 140cm long and 8cm thick, a Croix de Saint André model, with or without publicity frames, that costs 403 francs (plus a 600 franc installation fee) and is made not to withstand strong pressure but only to materialize the municipality's advice. Not only does this barrier prevent me from crossing, it also attests to strong discrimination against old people, for the young agile ones jump over it and hop across the road between the cars, while I'm left standing on the other side, forced to obey its orders. It compels me to make a detour so that I'm right in front of the pedestrian crossing. Am I going to cross? This time a third administrative service assigns a new skill to me: knowing how to obey the symbolic injunction of a red or green sign of authority represented by a little man, to which no one seems to pay any attention (15,000 francs for the traffic light, plus a 10,000 franc installation fee, excluding cabling). I hesitate. The motorists don't. They cross the red light, so why should I wait for the green one?

And by hesitating I suddenly mobilize moral indignation: "But that's unfair, *they* can go because they're dangerous and *I* hesitate because I'm weak". Those who thought that with a little green character they could stop the Parisians from crossing when it's red don't have the same idea of me – of them, of us, of one – as the people who put up sturdy barriers to force the less nimble ones to go round. They think, wrongly, that pedestrians are obedient, capable of observing a sign, whereas a minute earlier they thought that Parisians only knew how to obey power struggles.

Here I am in the Rue St. André des Arts. I've just read, in the encyclopaedic work of Bernard Rouleau on the history of the streets of Paris, that this is a trace dating back to the Neolithic. When hunter-gatherers had crossed the ford, from the East, they followed this exact same curve to avoid the marshes that the Seine formed here as it wound along. I flow along this street like a stream along its bed. For over three thousand years, I guess, this movement from east to west has no longer been a conscious decision: I follow the course of the street like herds of reindeer, perhaps, already following the tracks of their predecessors before Lutetia existed. In what way does this action differ from the preceding one? Not a moment of attention is required. I'm not even forced by a barrier; no law demands compliance; I move along without thinking. No, in fact I do think about it. Of course, as a great reader of books on Paris I think aloud about why I don't even think as I walk straight down the narrow shaft of the Rue St. André des Arts. Moreover, a sort of paddle designed by Stark (the price isn't given, but the sheet explains its use: "Identifies a place of historical importance, on which it briefly recounts the past; must be easily accessible without marring the harmony of the site") has just reminded me of what I read in the books, rendering the same service for history and time and the street names do for geography and space. Wandering through the city one finds manuals and maps everywhere.

I'm not simply passing through Paris: the "I" also passes through forms of action, regimes of intelligence that are virtually unrelated to one another. In front of the bank automat I had to act as a generic being endowed only with an individual pin code; pressed against the barrier on the pavement I was a mechanical force weighing against another mechanical force; in front of the traffic light I became a reader of signs, capable of understanding a prohibition; by swearing at a reckless driver I'm

transformed into an indignant moral citizen; by walking down the Rue St. André des Arts I automatically joined the natural flow of people; by reading Rouleau's book I swerved onto philosophy, meditating on the silent influence of hidden forms. From one second to the next different regimes of action relayed one another, leading me from one competence to the next. I'm neither in control nor without control: I'm formatted. I'm afforded possibilities for my existence, based on teeming devices scattered throughout the city. I go from one offer to the next. To progress a little further I grasp the small bit of programme that others have stuck onto each device for me, like we did as boy scouts in our tracking games, with neither goal nor intention, deciphering one by one the coded messages leading us on and on.

A battle's raging in the computer industry, to decide whether microcomputers should be equipped with all possible programmes and capacities or whether, on the contrary, they should be left to remain stupid and cheap but soundly connected to the network by high speed links that, on demand, will download the intelligence tablets called "applets" needed by each person to process their own data. *Network computer*'s metaphor isn't bad. Instead of an intelligent, heavily equipped character, with all possible softwares – from word-processing to image-recognition software or automatic translators –, I'm prompted, as I wander through the streets of Paris, rather to imagine a light, agile and inexpensive actor, but one that's sufficiently linked to circumstances to be able to import the competencies required for a sequence of action, without being weighed down by all the softwares. Moving about step by step, I receive the little I need from the situation, to continue my route. I'm thus in the same position as the oligopticons: blind but plugged in, partially intelligent, temporarily competent and locally complete.

PLAN 34

The self that I need to move from one attribution to another is therefore neither an individual nor a force nor a puppet, but rather the thread binding these successive *aplets* of selves anticipated and formatted by others: like the rest of the social world it too moves about. Passing through the gate of the St. Germain metro station I activate a sensor – unless I jump over the gate, something that a double-shielded device tries to prevent me from doing. This immediately makes me, somewhere in the calculations of the RATP (the Paris Metropolitan Operator), a whole number

added to other whole numbers used to calculate flows. Through my behaviour I'm thus feeding the RATP's data input system. Descending the large staircase I lean on the banister, a little wrought iron guide offered to my hand to avoid the risk of falling. Of course, the RATP has anticipated not my personal self but the standard self defined by ergonomics and incorporated into the specifications of its banister. The train arrives and here the RATP gives back to me, in the form of an offer of transport, what I had given it in the form of a demand for transport trough the signals I triggered. It adjusts the traffic to user flows. Yet as soon as the train starts moving, for the RATP I become an average weight that has been the subject of many tests in which I was pitilessly replaced by heavy cast iron dummies. I count only as a mass that an electric engine has to be able to transport without any shocks. Strange compound personality: anonymous cast iron quasi-quintal, I can nevertheless sound the alarm that will label me, in everyone's eyes, as the source of a responsible and individual act. Everything changes again when we pull into the station: a flash of intelligence, an obligation to be free, a decision to alight, an ability to read and to want, a wave of conscience. But it lasts only an instant: through the corridors here I am again, navigating by radar, following the crowd and habits without more active neurones than those needed for triggering the 'automatic pilot' that guides me to the exit, moving forward, second by second, as if steered by an invisible handrail. The RATP has covered the metro with a multitude of formatting devices intended for generic beings of different forms, natures, consciences and intentions – summed up in the word "user" – and me – the strolling, circulating, transversal me, the chaining and moving me – I grasp or don't grasp one or another of these attributions, corresponding to some or other figure, depending on whether I've taken hold of the banister, jumped over the barrier, or thrown myself under the metro, scaring the wits out of the driver.

PLAN 35

Yes, the self is clearly overtaken but not, as formerly believed, by a Society of which it constituted a cell, a limb, a person, an individual. What surpasses it is the multitude of these beings, these proposed selves with whom it shares its habitat daily and in whose recesses it lodges the folds of its multiple distributed body. Constant bombardment of offers for existing, in the form of rays, pulses, flashes:

shop windows filled with possible selves, faces filled with intentions, boards saturated with opportunities. Consider the multiple beings that slip into our mascot *Café de Flore*. What relationship is there between cows whose leather has ended up as red seat covers, and the coffee, a skilful mix from the four corners of the world, specially selected for the Flore? All of them act and weigh on action, but without forming a uniform list. Each one is linked to a history whose pace and tempo differ entirely. A hundred and thirteen years ago the *Flore* was a place where lovers talked and scholars read the newspaper. The benches, quickly worn through, have to be reupholstered every five years. This expresso, still warm, was made less than three minutes ago. Who could fathom the age of bodies engaged in a slightly animated conversation? There's nothing less homogeneous than a living being: a few million years, perhaps, for this heart that beats faster, for that ancestral part of the brain that sniffs when faltering; a few generations for this very pale skin – the grandfather's nose, the grandmother's dimple, the father's sense of humour. At a precise moment, around the saucers, agents conspire, respire; arrangements of different times, of scattered, pleated, folded combined material, most of which act in silence. In the words themselves, in the conscious sound of the words, there's no more unity than among these heterogeneous beings in the large space of the café. The little word "bastard" isn't the same age as modern slang, "*argot branché*" in French, in which the word *argot* dates back to 1628 while *branché* was spawned by the computer generation. And when did the idea originate to meet at the *Café de Flore* to solve all the world's problems? This little trope comes from the post-war years and *Life* or *Paris Match* articles on German existentialism – discreet publicity carefully nurtured by the manager of the *Flore*. Interactions gather dispersed times together in a single bundle.

We see that it's difficult to talk of "intersubjective relations", of "face-to-face" interaction: too many interferences, too many actions, too many folds, too many heterogeneous materials – wood, steel, cane, tongue, heart, blood, genes, neurons, tropes, figures –, too many diverse temporalities – millions of years, centuries, minutes, seconds, instants. Not only is interaction neither homogenous nor synchronous, it is not synoptic. Most of the elements participating in it appear to the gaze only in times of crisis or disturbance: a hole in the bench, a wobbly table, a

spilt coffee, a cold that adds its germs to words, a stopped watch, a rumbling tummy, a strong perfume that irritates, a quarrel that flares up. Without these tiny hitches their action would have gone unnoticed, especially since these acts, never visible at the same time, don't have the same weight in interaction: this one is never, so to speak, isobaric – we cannot make a map of the pressure being exerted on us from all angles. The marble table "supports" the bent elbow and acts as a force whose mechanical moment is supposed to be calculable; the hairstyle "attracts" looks; words "seduce"; the jacket "protects" against the cold; the heart "beats" faster; genes "express" proteins; neurotransmitters "saturate" their receptors; the waiter "watches" customers out of the corner of his eye; lovers, fascinated by each other only yesterday, gradually "grow apart". None of these verbs expresses an equal pressure that could be said to shape interaction in the same way, with the same necessity, the same inertia, the same cohesion, the same causality. In fact the participants wonder what's happening to them, the conversation makes turns and detours; there they are now, all captured by the noise of a coffee cup that's fallen over, uneasiness and hurried appearance of participants: none of them knew that they were on the verge of rupture… No, indeed, the common little word intersubjectivity isn't appropriate for describing this heterogeneous crowd with such different temporalities, such multiple pressures. What about "interobjectivity"?

Step ten. Performing

PLAN 36

As soon as we focus not only on the traces left by paper slips and name plates – what the Americans so neatly call the paper trail – but also on the trail left by the actions of iron, stone, brass and flesh that each past actor has left to their survivors, Paris experiences a massive population explosion. Participants abound. To explain our behaviours, our mortality, our attachments, there's no need to look for the inexhaustible strength of an invisible structure. Rather leave it up to this despised Third Estate whose multitude silently guarantees respect for the absents. We share the city with another *demos* who doesn't have the usual form of flesh and blood humans.

More and more, we see steel porcupine spines bristling on the tops of statues, on the cornices of buildings, in passageways, on narrow balconies. It seems that no better way has been found to prevent pigeons from covering buildings in their excrement. Insensitive to signs, signals, advice, warnings and historical reminders, the feathered creatures – ethologists working for the municipality decided – are sensitive only to the pain that long steel points can inflict on them. One could say of this device that it 'disciplines' the pigeons. It is prepared to receive them, it anticipates their behaviour, it incorporates basic ethology, and it offers everything needed to make birds behave well when they're tempted to transform the Louvre, for example, into a guano island. A prohibition is marked by means of steel nails that only a fakir would enjoy. Don't think this cruel device is reserved for animals. Some crazy mind produced the same innovation not for pigeons but for those who've nothing to lose but their chains. The nails are a little bigger, the points less sharp, the spaces between them wider. This is how to ensure that beggars' bums don't find a little rest next to an ATM where they're likely to scare away users with full wallets. Nails arranged along the bench make it unusable for the poor. The pigeons, on the other hand, could comfortably nest there. Another attribution defines, by force, how the beggar is supposed to act: he's allowed to tramp endlessly but not to sit down.

We could of course imagine a police officer tirelessly imposing a forced march on those who, for this very reason, are called homeless, "no fixed abode"; or a pigeon-chaser letting off crackers to scare away the unrepentant cooers; or a park-keeper whistling every time a child walked on the grass; or angry pedestrians revolting and moving away cars parked on their pavements; or a water-carrier offering to relieve the thirst of tourists with an iron goblet. But objects have the peculiarity of fulfilling these functions in the absence of those for whom they serve, in a sense, as representatives, intermediaries or lieu-tenants (that is, place-holders). Nails, needles, grids, bollards, Wallace fountains: each of these actants retains the folded trace of those who, thanks to them, can be absent. Guards and police officers do other things; automats keep watch. Objects thus have two faces: on the side of those they format, they multiply opportunities to exist; on the side of those they replace, they multiply opportunities to be absent. Anthropogenic on the one hand; sociogenic on the other. That's what explains the number of partial inhabitants and

the constant impression that we all have, in the city, of being overtaken by events. Most of the inhabitants present are not in human form; most human actants disappeared long ago. Yet no transcendent form binds them; it's just that objects transport the action given to them through time, something like those delayed action tablets that slowly diffuse precious molecules which would otherwise be poisonous in large doses if released too quickly in the bloodstream.

PLAN 37

To define sentences or phrases that don't describe a state of affairs but produce what they say, linguists use the verb "to perform". It's not a question of informing but of causing the thing one says to exist by the very fact of saying it: "The session is now open" opens the session, whereas "Your hat is white" produces no white hat – except in the expert hands of a conjurer. The administrative act that designates the Rue "Gaston Rebuffat" also makes it exist as Rue Gaston Rebuffat. Yet the interest of the performative word derives not from this act of spontaneous generation – that's a bit too reminiscent of the Creator's *fiat lux* – but from the irreversibility of its consequences. A slightly more animated discussion during the meeting of the Commission in charge of road names, and it would have been necessary to order different nameplates to illustrate a name other than that of the brave mountaineer. It's too late now: Mrs. Le Cam, remember, "burned" this name onto the map of Paris. But the performative action goes much further when to maps and documents it adds walls and houses that until then were only faint marks on blueprints. Through the building *"le mort tient le vif"*, the dead hold the living. Students replaced maids long ago on the sixth floors of Haussmanian buildings, but they still have to climb the backstairs to get to their tiny lodgings, for they have been banned from using the lift by the architects of the time. The layout of the walls still conveys the discrimination that inspired it and that no owner, no matter how generous, can now disregard.

It's all those small performatives that serve to establish the curious link between closed places where a little discussion is enough to thoroughly change an interpretation, and the world on scale one that can no longer be changed, or only at a huge cost. Following them, we always move from place to place by minute degrees, but this time through time. The community of the dead and the living transits

through these invisible movements that only an archived file can make assignable. Between the action of the ones and that of the others, no mysterious passage via the Spirit of Time, but paper gangways following stone bridges, leading to flesh and blood links.

When the RER on Line B from Chatelet pulls into the Gare du Nord, passengers in the second or third carriages are startled by a violent noise caused as pantographs are folded back to prevent them from melting. This is the point of transition from 1,500 volts, used by the RATP, to the 25,000 volts of the SNCF. Bi-current trains still show traces of one of the most amazing performations that have marked the subterranean face of Paris. At the turn of the nineteenth century, to avoid the nasty capitalist railway companies from invading the city and linking up their stations by means of tunnels that had always defied its jurisdiction, the left-leaning *Conseil municipal* insisted on the new metro resembling the railways in no way whatsoever. The size of tunnels had to be such that no carriage could ever enter them, and there was even talk of modifying the rail gauge, until the defence ministry refused. A debate on the plans, a vote at the municipality, a switch of alliances, a surprise election: any one of these tiny actions may have sufficed to disrupt the strange Yalta alliance that was permanently to separate railways from metro. Once the tunnels had been dug no turnaround was possible. Fifty years later the engineers responsible for linking up the train operator (nationalized since then) and the subway operator had ample time to measure up what the word performative meant. It cost them billions to undo the incompatibility between the two networks that the Paris *mairie* had sunk into concrete, if not into bronze. Some traces still remain, as attested not only by the violent shock of the pantographs but also by a little message so often heard: "Due to strikes by a certain category of SNCF workers, the connection at the Gare du Nord is suspended".

PLAN 38

Perhaps we're right to talk of the "weight of the structures", provided we take the word "weight" literally and not figuratively. Mixed in with tons of stone and steel, the weight of an interpretation is not quite the same! When the Baron Haussman decided to clear the old quarter of the Cité to build the Préfecture now housing the HQ where Mr. Henry keeps watch, a breath of air, a petition, a riot could have

destroyed his plan. Once the inhabitants had been chased away, the old medieval alleys razed to the ground and the hovels demolished, the baron's interpretation became the world in which their successors had to live. Even today, we're still living in Haussman's dreams come true. He holds us by threads that aren't only made of municipal decrees, compulsory sizes and regulations, but that would also force us, if we wanted to follow them, to move like ghosts through the walls back to the point from which they've been drawn.

PLAN 39

A box of archives, found by chance, enables us to play ghost by revealing to Emilie Hermant the forgotten work of her grandfather who quite unexpectedly left to join the world of the invisible. The only reason that Haussman devastated the old Lutetia and cleared the square in front of Notre-Dame was to hand it over to cars and busses: 20,000 vehicles per day in the early sixties. Express-tour companies, those that show people Paris in three hours (the Galeries-Lafayette department store of plan 1 included), were very familiar with that when they searched desperately for parking space for their busses and sacrificed fifteen precious minutes to allow customers to photograph one another in front of the three porches, really just to show the vast proportions of the church and the finesse of the statues. It was André Hermant, architect of the Reconstruction, and his colleague Jean-Pierre Jouve who were entrusted with the task of designing the new square. They had to reconcile several contradictory parameters: diverting the traffic; carrying out essential excavations; clearing a square in front of the church worthy of the sacred building; and creating an underground parking garage. Their solution had to be fluid while preserving History, and beautiful as well as practical. On 24 December 1969 the ministry signed a contract in which the architects were given three months to draw up traffic plans providing for both vehicles and pedestrians, to make proposals for the parking garage and its access, to define a plan for the vestiges and their presentation to the public, and to design a space that set off the beauty of the building and its surrounding, without forgetting to think about redoing the archbishop's garden that was still closed to the public. They were also asked to supply a general report on the evolution of the site and its current situation, to draw up plans for the surface as well as the first-, second- and third-floor basements, all

on different scales, and to provide mock-ups, photos of those mock-ups, descriptions, and traffic plans. Finally, while they were about it, they were expected to evaluate the impact of an expressway on the left bank of the Seine (it was only in June 1974, under Giscard d'Estaing, that it was decided to scrap that folly) and of the possible demolition and rebuilding of a bridge or two.

Three months to propose a plan, but they weren't to hurry, our two architects, for no place in Paris is more venerable or older. Tourists from throughout the world come to visit it – not to mention the fact that the Paris *Préfet* has a view of the square from his office window. Hence, the essential role of the increasingly refined plans and schemes, mock-ups and artist's views, with their miniature trees and little cars that the architects arranged before a series of commissions. The authorities summoned one after the other could make changes by hand or by pencil, that later would require bulldozers to accomplish. The relationship between small and big, software and hardware hung on a thread, that of the architect who spent his days and nights working against the clock, terrified of demolishing something that had to be preserved, or of preserving something that was supposed to be demolished. Strange mock-ups, in a now outdated style, related not to a state of things but anticipated that which should or could be. Cutting up the square outside Notre-Dame was like doing open heart surgery with a kitchen knife! Under the leadership of Mr. Fleury, director of the Ile-de-France *Antiquités historique* (currently vice-president of the "*Vieux Paris*" commission), it was necessary to go back into the past, probe the ground, discover even older walls, shift the parking garage again, decide on the form of the crypt that would preserve most of this past, once again visible, for the public. The architect, projected into the radiant future of the triumphant 1970s, plunged once again into the most distant past, taking the successive interpretations of this square one by one: engravings, plans, reports and inquiries, an avalanche of anatomical charts enabling surgeons to identify the countless vascular networks so that they could operate without killing their patient.

People exchanged photos, walked round and round the mock-ups, the short-sighted put on their glasses, the long-sighted took them off, to see the details, the perspectives, the effect better. From month to month an opinion was formed. It was decided not to move any bridges, and to opt for mineral paving – taking care not to

forget a milestone marking the point zero of all the roads of France. It was necessary to go around the deepest roots of certain trees, so there were more lines to erase or to draw with a ruler, more copies in the bin. Ever more services, prohibitions, permissions. Two years after the inauguration of the parking garage in 1971 the architects were still to be found on the square with their notebooks, checking how the developments, decided on progressively, were starting to age. Slowly the changes could be seen melting into the surroundings, adding their brand new oldness to the successive layers, some of which were buried for ever after while others had been exposed to daylight. Tourists were sitting on the stone boundaries that hadn't been intended for that use. A fence and box trees were added to dissuade strollers from perching on the base of Charlemagne's statue. Signs were put up, indicating in several languages that the grass was out of bounds. When the crypt was inaugurated in September 1980 the architect had slipped far into the shadows, so that his grand-daughter, crossing the square without a thought, knew absolutely nothing about his scale-models.

PLAN 40

Urbanism simply shows, life size – through the tons of earth that are moved and the masses of concrete poured –, how to switch from the map to the land or rather, from an amended map to an irreversibly transformed land. But the same phenomenon of performation is found in situations where attachments consist of lighter paper slips. The feedback, the performation can go even faster, shooting up and down a cascade of transformations at lightning speed. "Porte d'Orléans: 9mn", that's what the illuminated signpost on a gantry over the *périphérique* tells us. We may curse the traffic jam that blocks us at the Porte de Vanves, but at least we know what delay to expect. Strange situation: who produced the information displayed on the signpost if not my car and those of my colleagues, all congregated around me, waiting patiently, like regulars, tapping their fingers on the steering wheel to the rhythm of music of which only the muffled bass can be heard? Just as the charming Alice saw on the television screen the results of the elections in which she had participated, so our individual behaviours are gathered together in a totality that is democratically returned to us. "All of you, in your cars, today, Friday 4 June at

18.15pm – and a temperature of 20°C (the signpost adds it as a bonus) – are contributing to a collective action in the form of a magnificent traffic jam one kilometre long, whose size, flow speed, almost oily slithering, will force you to lengthen your travelling time by fifteen minutes, so accept your responsibility". Warned by the signpost, I shift towards the right and leave the ring-road at the Porte de Vanves to go down the boulevards "des Maréchaux", an alternative ring road which is naturally congested as well.

I must have misunderstood the intention of the signpost: it wasn't an injunction – "Get off the *périf*" – but a piece of information "for convenience": "This is what to expect, so relax". Mr. Dupressoir at the Berlier PC, east of the left bank, a few metres from the new national library, explains that under no circumstances may he give orders to motorists. The tiniest fraction of the 400,000 vehicles on the *périphérique* would be enough to block the entire Paris if they were diverted onto the Maréchaux. Every time he switches on the sign "Exit recommended" the highly politicised inhabitants around the Maréchaux kick up a fuss. His job and that of his PC is limited: they take care only of the *périphérique*, which explains the beauty of the illuminated ring over which he watches night and day, district by district. The traffic lights of Paris *intra muros* are regulated by the Lutèce PC, under the flower market. Mr. Dupressoir's job consists in ensuring that the hundreds of thousands of vehicles on the *périf* – that the *Petit Parisien* scathingly calls "France's biggest parking space" – move along freely without forming lumps, obstacles, jams, accidents, in short, what the computers processing signals call "alerts".

Anyone who has continued the Paris crossing started above and has ended up on the *périphérique*, will now receive a new attribution, a new format. In fact Mr. Dupressoir has no interest whatsoever in them as individuals, or even as flesh and blood drivers; all that he cares about is the molecule of information they form, along with their vehicle, as they set off sensors in the road every five hundred metres. From Mr. Dupressoir's point of view the thing occupying the *périph* night and day is more like the fluid dealt with by the water utility – admittedly, an unusual fluid since its viscosity varies from hour to hour – than like Mr. Engel's markets or Mr. Henry's crowds. The burst of bits that I set off as I drive onto the *périf* is a tiny part of what's occupying me at that very moment. If he wants to, Mr. Dupressoir can

have a little more precision and capture me not as a drop of water but as a metal centaur. The whole idea of the Berlier PC is to cover the entire ring-road with a hundred or so cameras – although blindly, like an oligopticon. In the control room the green button indicating that the traffic is fluid has just turned red. The police officer on duty immediately switches to the appropriate camera: a street lamp has collapsed and is blocking the inner *périphérique* at a tunnel exit. Suddenly the fluid coalesces into solid and the information becomes more specific: the registration plates of the blocked trucks are visible; uniformed police are on site, we can see them waving their luminous batons, hear them receiving orders from their colleagues at the PC.

We could say that Mr. Dupressoir with his sensors, cameras and surveys has discovered very particular sociological material on the borders of Paris, an unusual mix of fluid dynamics, political aggregation, and sudden variations of dimension and consistency. Sometimes this sort of beast attests to sparse glimmers of intelligence, for it reacts, albeit unpredictably, to the messages telling drivers and cars what they're accomplishing jointly. Organized chaos, a market as impure as it is imperfect: Paris. Yet it's impossible to claim that with its sensors the Water Service captures the same Parisians as those of the Berlier PC, or as the crowds watched by Mr. Henry, down at the HQ of the Paris *Préfecture*. In every case the oligopticon captures a different matter, different aggregates, different behaviours, a different physics. All these aggregates aren't plunged into a common matter of which each oligopticon seizes only an aspect. There's no more common medium in the social world than ether in the physical world.

Step eleven. Standardizing

PLAN 41

We easily forget the narrow places, maps and scale models, visions and dioramas through which the forms currently appearing to us as the unquestionable frame of our existence passed. Under the pretext that this prolonged, continuous, relentless action occurs through objects of different forms and sizes, we act as though small living creatures were crushed by inanimate objects. Yet the transition of performatives in time is documented just as well as that of information in space.

One only needs to follow these humble mediators, these despised intermediaries, to find the chains through which the dead holds the living. But the importance of performatives also eludes us for another reason: we think we live in a stable and constant world and have difficulty remembering the work needed to stabilize those constants. Here again, we need to replace the full by the empty, the continuous by the discontinuous, surfaces by fine networks, the given by the obtained, the inert by the active, the cold by the hot, the real by the virtual. We don't live in disciplined and regulated societies, in which only individuals add their little margin of disobedience and unruliness. We live among irreducible entities bound by no particular measure – except, sometimes, the fine line of a costly standardization whose luminous course makes their trails easy to track. As in those amusing *Gestalt* drawings where children look for a hidden object, there's a sudden inversion of form and content.

No example is more striking than that of the UTC (OP), the "universal coordinated time" of the *Observatoire de Paris*, the Paris observatory. Every single organism, body and place possess its own time that depends on a very particular set of sequences, perceptions, sensations, transformations and archives. Yet, four touches of a finger on a telephone keypad and here we are at 3699, the talking clock. Every ten seconds, on the dot, it gives us the time – hour, minute and second, to a thousandth of a second – in its warm mechanical voice, sometimes male, sometimes female. Shifting from lived time to that of the Observatory doesn't mean giving up the aberrations of subjectivity to finally gain access to the objective frame of all possible existence. It means linking the billions of tic-tocs of our own bodies – genes, cells, neurons, hormones, reflexes, routines, automatisms, habits, memories, traces – to the tic-toc of another guardian of time, watched over night and day by the service of Mr. Granveaud, director of the *Laboratoire primaire du temps et des fréquences* at the Paris Observatory, a few hundred metres from the office of Suzanne Laloë, a heavy consumer of timing, like all astronomers and computer users. Shifting attention from the measuring instrument to metrology we don't pass from sum to hypersum but from the slow work of proportioning to the even slower production of proportions: abacus, rulers, benchmarks, patterns, standards. Instead of going up to the hypersum we have to go down towards the 'infrasum', a domain

known to very few and despised in France, yet startlingly clear as soon as we follow up the tools that render commensurable that which could never be so on its own.

The chain of time doesn't resemble that of mass. If you buy a sausage, your butcher will weigh it on a scale that sums up the weight in kilograms, the price per kilo and the total you have to pay once you've been given the bill. The quality of the scale could be tainted by fraud similar to that which adroitly swung the electoral scales to the left (or gauchely swung them right!). If you express your disagreement the butcher will show you the certificate of the weights and measures office for his scale. But who guarantees the inter-comparison of all scales? At the Pavillon de Breteuil near Paris, like Sleeping Beauty in her glass coffin, lies the standard kilogram, the international prototype, protected in its cave ten metres underground by the BIPM, the International Bureau for Weights and Measures. This platinum kilogram is so fragile that it can't be used to calibrate its standards, also in platinum. Daylight, dust or pollution could add or remove a few phentograms of matter to or from it. The slightest change of pressure would be fatal. Accordingly, most of the time reference kilograms, representatives of a sort, are used to replace it in all regular administrative acts. Yet once every thirty years or so (three times since 1889) it is necessary to check that the representative copies haven't gone off course or betrayed the honourable intention of the original. During a ceremony restricted to a minimum, to limit the sputter, movements and variations of temperature, the prototype is exhibited outside its mausoleum. The discrepancy between the different representative kilograms is measured, and the Master swiftly returned to its tomb.

Metrologists of time scorn the solemn archaism of metrology of mass and weights. Nothing but convention defines the kilogram, while the masters of time have never stopped defying its narrow limits. In 1967 they even managed to flout the convention that seemed surer than all the others: the Earth's rotation on its own axis that until then had served to define the second by division. Since then, metrologists at the Paris observatory have used the ticking of an atomic clock to measure variations in the earth's rotation. The guardian of time, the Earth itself, is now guarded and observed as it slows down and accelerates on the dial of the (French) Atomic Time network – obtained statistically in Mr. Granveaud's service from a set of atomic clocks scattered throughout France. By dialling 3699 I connect

myself to the most intimate properties of caesium atoms that define both intervals and timekeepers. Even if Mr. Granveaud cares little for conventions – isn't he trying now to calibrate time with pulsars, those stars with tightly compact neutrons that form even more ideal clocks because of the regularity with which they turn on their own axis? – he knows all the advantages of these institutions and conventions. For twelve million francs the thirty-five people in his service guard the Primary Chain of French time, offering a surprising mix of nature, institutions, conventions, organization, laboratory, law and bureaucracy currently circulating in Paris to facilitate the coordination of all the other participants' actions. The clocks they coordinate can break down but are more precise than the solar system - which may have a slight lack of precision but very rarely fails! At national level Mr. Granveaud's lab compares the eleven clocks spread across the country – five of which are in Paris – by taking as a reference the master clock (in Mr Granveaud's own offices) that materializes "French legal time". To compare all these clocks they aren't moved, of course. The GPS system is used (as it is for international comparisons). The quality criteria change depending on the duration: for a second, quartz is fine; for a longer period, caesium is better.

The measurement of time has a huge advantage over the other units: anyone can directly contact the head of the primary network kept by Mr. Granveaud, via telephone or satellite. "Rather go directly to God than through his saints" goes the saying. What is impossible for the mass unit is possible with a watch. For 3,000 francs you can even buy a receiver to decode the modulated carrier that gives a precise beep and is accurate to a millionth of a second. With the annual change from summer to winter time, when the six clockmakers of the city of Paris manage to set the 10,000 public clocks simultaneously – 4,000 of which are in public transport – only a few steps separate them from quartz atoms, pulsars and the solar system. To gauge this metrology, try the following: reduce by one, then by two, then by three orders of magnitude the precision of timekeepers, measures of length, scales and electric units. Slowly, progressively, all activities will be out of phase with one another. Trains will no longer arrive on time, satellites will no longer coordinate their signals, packets of data will get mixed up because no one will know when they arrived, computers will go off track and error margins will increase. Just once,

before praising freedom, improvisation, tolerance, leeway, straying or disorganization, measure the greatness of metrology, the fragility of the primary and secondary networks that make a minute fraction of commensurability possible. Yes, the form and the content have been permanently inverted: inconsistency is the rule, the rule is the exception. Each time you see a constant circulating in Paris, take your hat off and salute it respectfully. The world is not constant in essence but through work, institutions, laboratories, organizations, arrangements, metrology, BNM, BIH, BIPM, BNM-LPRI, BNM-INM, BNM-LCIE, BNM-LNE, BNM-LPTF …

PLAN 42

Please acknowledge this gentleman from the Ministry of Equipment, Ile-de-France, who is responsible for checking the quality of CO-CO2 analysers in garages. These apparatus are used to check that our exhaust pipes comply with current legislation and don't emit more than 3.5% of carbon monoxide which is the norm for recent models, the fruit of complex negotiations between car manufacturers, the *Service des Mines*, and environmental protection groups. The talking clock binds me to atoms in the solar system; the analyser that this police officer from the Paris *Préfecture* plunges into the exhaust pipe connects us both to the upper atmosphere and to the upper echelons of the civil service. The apparatus cannot be used to check your car or as proof in case of a fine unless it has itself been checked and has received a stamp, seal or mark to certify its conformity to standards. The police officer who gives you a fine participates in the transfer of a standard as surely as if you set your watch on the 3699. The Ministry of Equipment van is carrying reference gas cylinders, themselves validated by another label and another certificate. Alphagaz, an Air Liquide subsidiary, is responsible for supplying the standard cylinders of the three mixtures of N2, CO2 and CO used to calibrate the analyser. Since the air pressure can invalidate the results, Mr. Rareg starts by taking a barometer from his van. He then carries out his tests, in which the analyser examines the content of the three pilot gas cylinders. If he records a difference greater than 0.5 for CO and greater than 1 for CO2, the apparatus does not conform to standards. Of course it's not he who invented these thresholds. He reads them on another standard, legal this time, the "31 December 1985 directive" signed by the minister of industry – yes, a 31 December! Irrespective of what anti-bureaucrats say,

the civil service is never idle. The verdict is pronounced. The expert punches the control label. During this time, the primary standards are kept in the Alphagaz cellar. These gas cylinders will be transported with great care throughout the world to be compared in Japan, the US or elsewhere to other cylinders lying in other cellars. As with the kilogram, there's no superior authority, no pulsars, no fundamental principle of physics. There's no choice but to revert to the longstanding, archaic solution: physical inter-comparison of cylinders transported by air and measured side by side.

PLAN 43

Although all these constants and standards circulate in reference circuits like the other inscriptions and paper slips that we've learned to track, what they do is quite different. They don't serve to coordinate actions, to measures balances of power, to transform information; they do both much more and much less: they simply ensure that, if one wanted to measure something, one would be able to do so without the measurement changing from place to place, from time to time. Without these constants maintained at a great cost, no one would be able to know if there really were any differences. Paris doesn't rule France only through laws and decrees, circulars and directives, but also because the head of metrological networks are almost all based there. What is true for metrology is even more so for the flags (*étendards*) deployed by medieval knights during battles. This word, from which the English 'standard' derives, is used to describe 'norms', a strange hybrid of law, commerce, techniques, administration and anthropology. Constants circulate at a great cost in an attempt to establish a little commensurability; standards do too, in order to obtain some compatibility locally.

In the south of Paris on the Boulevard Lefèbre in the Fifteenth *arrondissement*, the *Laboratoire national d'essai* (the National Bureau of Standards) comprises the strangest gathering of laboratories producing standards and certificates of conformity. The Vinceness zoo with its exotic animals pales in comparison with these hybrid machines used to calibrate all the objects of our daily existence. What a fragile ecology protecting us in anticipation from defects of all sorts. Behind the two-way mirror of a showroom, ergonomists with cameras examine the gestures and dexterity, or lack thereof, of typical consumers as they encounter formidable new

products for the first time: chopper, packet of spaghetti, toaster, step-ladder, electric knife. Elsewhere, comparative tests are run on washing machines expected to remove stains that are themselves standardized – impeccably dirty cloths produced by a Swiss company! In another section white-coated technicians meticulously rip out the eyes of teddy-bears to ensure that our offspring don't suffocate in their cots with these glass carbuncles. Further on it's the cot itself that's tortured in an attempt to burn it. All possible disasters are anticipated within the walls of this institution that masters fire, noise, pressure, torsion, traction, rolling, wear, chewing, scraping, incompetence, stupidity and even the bad faith of awkward customers. What trials are these products not subjected to, to obtain the little stamp "Complies with EC standards" that opens doors to markets and makes the object transferable elsewhere!

Like commensurability, conformity has a high cost. The fact that a product resembles another product, that it complies with a standard and can be measured: all this is a miracle that can be achieved only with much effort and provided one pays the price, not in prayers but in torture, tests, ascesis and sacrifice. Those who study metrologists, standardizers and normalizers cannot believe in an efficient and well-ordered world in which social and subjective life introduces a little fantasy, liberty, agitation, interpretation or play. They're more likely to use the term social for that which allows one for a while, through instruments, laboratories, templates and constants, to bind and associate some of the beings constituting the world and that no measure will ever wrench from their fundamental irreducibility.

PLAN 44

If we examine the transformations that we undergo when we connect ourselves to measurement instruments, the relationship between the production of standards and the distribution of roles of interest to us here becomes clearer. Is Paris polluted? Why, I perceive it with my nose, with my son's asthma, with the smog blurring the horizon. Of course, Paris is polluted now, how could I doubt that? In any case, I read it in the newspaper. What a strange climatic change: Parisians now fear good weather that always triggers a "peak" of pollution.

Where is this famous peak? In my newspaper. But where does the information come from? The whole of Paris? No, precisely, not "the whole" of Paris, only certain areas of Paris whose representativeness is a subject of controversy with the

ecologists – sensors take samples and transform them, add them up, unite them and return them to the prefecture, responsible since Messidor Year VIII of the Revolution for public health in the city. Airparif takes all the measurements and when it thinks it's detected a peak, a telephone conference is held between all the labs, Météo France and everyone responsible for traffic. Mr. Viélard, head of the prefecture laboratory sends a fax to the prefect with his suggestions: "I think it's necessary to inform or to alert the public, to decide on alternating the traffic or not". Depending on the prefect's decision, newspapers and digital sign boards (225,000 francs per unit) will relay the information so that the effect of all these cars on Parisians' health can be foreseen. What about me? Well, I have the pollution, I receive it, perceive it, recognize it. I now transport the overall pollution of Paris with me wherever I go in the form of peaks, thresholds and maps that have become as familiar to Parisians as those of the weather report or traffic jams. The overall pollution of Paris has been performed in the sense that everything that reaches the instruments – micro-particles, ozone, dust, nitrogen oxides, residue of unburned hydrocarbons, sulphur components – gets back to me in the form of a map, the sum of Parisian pollution that makes me "have" the pollution. Paris now has a pollution problem incompatible with public health, as surely as it has a metro that is incompatible with the trains of the SNCF. In both cases a small-scale model, through a long cascade of principals and instruments, a lengthy sequence of workers, has transformed the phenomena at scale one with which we started.

Figure twelve. Scripting

PLAN 45

By flattening out the social world, by respecting its absence of dimensions, by following the course of formattings that enable a distributed self at all times to find the pieces of software enabling it to move further, by examining how past time and place transport their action to other time and space through the continuity of objects, by following the lightning speed of performatives, by identifying the metrological sequences that for a while and at a huge cost guarantee the fragile maintenance of constants, we have constantly studied the numerous vehicles representing the social. Yet we don't always understand why the social appears never as a surface but

always as a sphere, never flat but always ordered from biggest to smallest, never consisting of archipelagos linked by the tenuous threat of formattings but always of a giant pyramid whose structures are lost in the sky or under our feet, crushing individual actions. For there to be such a constant discrepancy between the course of formattings and their reception, there has to be another phenomenon at play that totalizes the social, as if we were taking photos with a fish eye that transformed the whole scene in front of us into a spherical projection. We can assume that we transport this rounded lens with us. Although no diorama can ever really totalize, or ever leave the darkroom where it illuminates the narrow scene that it has constructed, it constantly adds its own totalizations to the distributed city, like huge bubbles stirring the cauldron of Paris before bursting at the surface. To conclude, it's to this new phenomenon that we must now turn. We need to follow it too in its movement, no matter how immobile it is supposed to be. We should be able to reconstruct the shape of Society in the generous roundness of a pumpkin.

Paris was made first, before being remade and defined. Most old cities started by being, long before being thought. Unlike Chicago that started with a grid traced out on plains cleared of their Indian inhabitants, in Paris plans, projects and portraits emerged over a thousand years after its birth. That's the case, for instance, of the ever-so Parisian taste for perspectives. Roads, squares and rows of buildings are built to be looked at. A strange situation, when you think of it: it's a matter of making the cityscape resemble the painting of a landscape. Blocks of houses are demolished and domes and churches built so that they look good through a window.

Long before the Avenue de l'Opéra existed it was decided that the opera should be visible from afar. On this engraving we see the avenue as planned; on the photo we see it as it was at the time. Those of us who know Paris are surprised by the building in the middle of the Avenue, that seems to have been put there by mistake. Shortly after the photo was taken it was demolished, freeing the view from the narrow windows of the Louvre all the way down to the gilded statue of Apollo triumphantly carrying his lyre on the summit of the Opéra Garnier. Just after the avenue was eventually cleared, in around 1870, Mr. Castellani's diorama afforded fascinated spectators a circular view of what he called *Tout Paris*. The term, coined in 1867, referred not to historical buildings and houses, parks and steeples, towers

and belfries, but to the Paris smart set. In concentric circles the perfectly round diorama aligned everything that mattered at the time, like men of letters, artists, statesmen, fashionable society, princes and barons of industry. What a surprising parade that uses the new opera as a pivot on which the stage of high society revolves. What a good lesson in sociology, this panorama whose artifice makes no effort to conceal itself. Yes, the social is indeed there, as surely as in a sociology textbook, surrounding the very symbol of the Empire. Yet no one would take it for anything more than an image, a script, a sketch of *Tout-Paris*. Every time you're offered a total view of Society, look for the *Passage des panorama* exit.

PLAN 46

Social perspectives are always intended to totalize but we know only too well that none of these panoramas can really sum up the social: neither the modest Place des Vosges, nor the elegant row of buildings in front of the Odeon theatre, nor the Place de la Concorde, nor even the long view down the Champs Elysées. The city was moulded by an accumulation of series of views, one after the other, juxtaposed but never summed up. In his beautiful book, Bruno Fortier cites the surprising example of the meridian exit from the observatory that crosses the Avenue de l'Observatoire and cuts directly through Catherine de Medici's chateau. In fact none of this view was originally planned. It would nevertheless be wrong to overlook the performative effect of the belated wish for alignment. The view climbed onto the bandwagon and added its small but decisive shift to the fortuitous movement of plots and demolitions. After a few centuries it seemed that this magnificent arrangement had been intended from the outset, so that the visitor walking through Luxembourg easily imagines a royal desire to reign over the space of Paris, reflected in this series of landmarks and obelisks.

Paris is constantly obsessed by totalizations that could give meaning to the city in the making. Ramparts and tollgates, walls of the farmer-generals, but also the strange idea of retaining the intersection of Roman roads at its centre, the famous *decumanus* of which scholars still hope to find the trace but that other historians rightly claim was never charted by the Romans at all! The myth of *la Grande Croisée* runs through the entire history of the city: when under Haussman the Rue de Rivoli was extended, the idea was to have a road linking modern Paris to Lutetia. As

Jean Favier put it, we waited eight centuries to witness the reappearance, at the intersection of Sebastopol and the Rue de Rivoli, of this crossing intended to reflect the organization of a Roman *castrum* that never existed. This doubtful coherence nevertheless still plays a part in the city. It scripts it, enabling it to tell a long continuous story peopled by town-planners in togas.

SECTION 47

The wish to totalize thus adds its bit to multiplicity: it claims to rule and order, but we'd rather say it scripts the social as a sphere and a totality. Without the stairways, the majestic handrails, the obelisks, the motorcades and the republican guard parades, without the monumental statues, the neoclassic façades and the plushly-carpeted salons, where would we find our representations of high and low, big and small, powerful and powerless? Did Louis XIV, the Sun King, an expert in this regard, not go so far as to order terrestrial and celestial globes on which he wanted the constellations marked as they were at the time of his birth: favourable omens that had to be remembered forever? A vertiginous zoom binds the movements of the Heavens to those of the prince's moods and the state of constellations to that of the kingdom, but no one takes this grandiose scene for anything more than theatrical décor on the king's stage. Others, more competent than ourselves, have already studied each of these historical places whose accumulation might explain why we grasp the social as a whole. Every intersection, square, garden and fountain retains the trace of these constantly renewed efforts to recount the history of Paris and to give it a form that can be recognized by new inhabitants who would otherwise live "like monkeys on the temples of Angkor", as André Malraux said. The monumental doesn't express the silent and hidden presence of Society; on the other hand, we derive our feeling of a vaster and more lasting Society from the very mass of marble giants, immense colonnades, bronze statues, neoclassic frontons, towers and skyscrapers as well as the majestic inscriptions that make Paris as talkative a city as Rome. The monumental '*lieux de mémoires*' are not the metaphorical place-holder of an absent social structure; on the contrary, it is the structure that is the metaphor of all these representations, which in turn offer the only literal definitions of the social world ever to be encountered.

SECTION 48

The Eiffel Tower has played its part for a long time in the scripting of Paris as a totality, not only because it can be seen everywhere, or because alone it sums up the city in foreigners' eyes, but also because from it one's gaze encompasses Paris as a whole. Paris loves viewpoints and terraces, panoramas and vistas, tirelessly reflected as if through a gallery of mirrors, forever seeking an all-encompassing perspective that it obviously can't find since each new total viewpoint blocks the one before, creating as many opacities as views across the city. What other metropolis lends itself entirely to a single gaze from more different and opposing points of view? Japanese tourists have no problem grasping Paris in one shot. Their guidebooks, manuals and itineraries prepare them for a quick, overall grasp that extracts from the multitude the few typical elements summing up the city. In the early nineteenth century already, when the British invented tourism, they simultaneously devised the tourist guide enabling visitors to find their way swiftly through the maze of *Tout Paris.*

Hence, partial totalizations run throughout Paris, characterize the landscape, erect their monuments, awaken memories with plaques and plinths and epitaphs, scenes explaining the whole development, as if awareness of the total could simply add, incessantly but locally, to the scattered multiplicities. Yes, there really is a total social, a panopticon, but in the plural and in the heat of an incessant circulation of postcards, pictures and vignettes. Our very words have this monumental form when, leaning on a bar counter, we make definitive statements to sum up the thread binding us together: "We're in a Republic after all!", "We little guys don't count", "All rotten to the core", "*Vox populi vox dei*", "*Paris vaut bien une messe*" ("Paris is well worth a mass"). Each of these sayings is a collection of statements, composing the social world in its own way, offering the Collective the possibility of coming together in a different form, summing up a perspective, with the same performative efficiency as if the town councillors had erected a statue, renamed an avenue, built an intersection, or opened up a new road through formerly blocked arcades.

PLAN 49

The supporters of social structures have become somewhat lazy. Since they see that an interaction never contains the meaning of its own action, they dream of something greater, more distant, more hidden, to explain this meaning and cause this

action. But they rarely bother to follow the little paths, dispatchers and canals on which the strength, aptitudes and competencies – rarely in the form of a cause, and never in that of a structure – move about. The social structure is the refuge of ignorance, it allows one to do without representation, or scripting, and to scorn the poor actors overwhelmed by their environment. But those actors are never particularly overwhelmed; let's rather say they know they are numerous, populous, mixed, and that they ceaselessly sum up in a single word whatever it is that binds them in action. How can this multiplicity, these overwhelmings, be explained without reverting to structure? Why not talk of subscription, by attaching it to the metaphor that metrology so conveniently supplies? We could then say that at times Parisians subscribe to the partial totalizations that circulate in the city and enable them to give meaning to their lives.

We subscribe to clichés, to collective statements about what the social is made up of, like we subscribe to media whose circulation transfers, transforms and performs images and representations. The charming Alice wouldn't have laughed so loud about the poor mayor's miseries if she hadn't read the satirical newspaper to which she subscribes. More generally, we can also subscribe to that which circulates in Paris and defines interactions as well as the totalization of all those interactions. As we have seen, alone Alice doesn't redo, *de novo*, from scratch, the entire frame of the interaction in which she is situated; in part she plays out the existentialist scene of the Café de Flore. Let's say that to know what's happening in this interaction overwhelming her, she has bought a subscription to a movie channel "Love in Paris". Bought a subscription? Yes, of course: in order to survive, Parisians subscribe to many channels. They have gas, electricity, possibly the cable, certainly the telephone, and necessarily running water and sewerage. All these mediums pass through all the interactions, acting, silent, dangerous sometimes, closely watched, controlled, maintained, by hundreds of engineers, supervisors and accountants, workers and employees, politicians and scholars, prophets, essayists and journalists, all kneading the dough of greater Paris at the same time.

By generalizing the subscription metaphor, we could say that Parisians subscribe to psychology, physiology, economics, sociology and other mediums whose countless connections may often remain hidden but are nevertheless identifiable and

assignable. To have bones and neurons we have to subscribe, this time to the public health service. Before receiving the blackish and whitish x-ray of your face in the radiologist's consulting rooms, did you imagine yourself with all those teeth, with that deformed, grimacing face? How can we imagine the face without the radiological image of the face? Knowledge of the skeleton of your face after your death was something abstract, generic, bookish, but as you leave the radiologist you look at the photo of your face, face-to-face. Well yes, for a while you "subscribed" to anatomy to be able to see or know what was within you. You'll forget it of course, like you've already forgotten last night's film on TV, and soon you'll resume your existence with the face lived from the inside, but for a while you'll have met the bones of your face via the X-ray, radiologists, the public health system, and the health insurance fund's deficit.

Don't treat the software differently from the hardware. What's true of anatomy is also true of psychology. A whole set of apparatus is needed to format what's happening to you and bubbling around you, constantly weighing and impacting on interactions in a form that is perpetually formatted, continually present in all conversations, in newspapers' advice, and as true of the Oedipus complex as it is of depression or fatigue. That doesn't mean, of course, that the formatting is illusory or untrue, no more than the X-ray of your face has invented that sniggering laugh, that *memento mori* out of nothing. Every time we talk of intermediaries we talk not of lies but, on the contrary, of truth, of the only one we have, provided we always follow the traces, the trajectory of figures, and never, never stop on the image. The Piéron Institute, rue Danton, houses psychology laboratories. That's where the psychology of Parisians is partly shaped and formed. What! Parisians don't have a psychology at birth? Of course not. They have to get the feelings of love, emotion and hate partly comprising them from somewhere. If it takes a vast institution to format universal time, it takes an even bigger one to enable everybody to "have" an Oedipus complex, to develop stress at work, to benefit from the so called middle-aged crisis, to experience the menopause, to allow themselves a teenage crisis, to give birth to over-gifted children. It takes laboratories and journals and conferences, manuals and magazines for Parisians to be able to subscribe to a psychology as surely and lastingly as they do to electricity. "Gas on all floors" is still written in

white letters against a blue background on old buildings in the city. It requires metrological work for us to be able to write on the same buildings: "Individual psychology on all floors". Subscribing means that for a while, by plugging into instruments, and thanks to the cabling of a large institution, we receive something from outside that resides within us for a while: organs, a skeleton, abilities, a psyche.

The proof lies in the conflicts of subscription that force us to jump painfully from one format to another. As we all know, what one network attributes to the psyche, another turns into a physical disease. The same backache can lead to the psychoanalyst's couch or the surgeon's scalpel. Depending on the subscription, we switch from one history to another, one path to another. After experiencing the pain of subjectification, the same patient experiences the joy of objectification. Well yes, objectification can also be a joy, when the shift from one subscription to another, one channel to another, allows the ego other states. In the surgical ward we can also experience the bliss of objectification, and the last thing that we want is to be treated as a usual, human, complete, psychological person, corresponding to the common category of what makes a person. What does make a person? We don't know and that's precisely why the Piéron Institute labs, psychoanalysis societies and hospitals work unceasingly. In French we say that one subscribes to a *bouquet de chaînes*, an arrangement of TV channels. In this mixture of two metaphors the one is pleasant, a bunch of flowers, the other less so, for in French a channel is *une chaîne*, as in chain, chained up, irons. The image is perfect: in Paris, bundles of "chains" circulate, to which we can subscribe, changing the composition of the attached persons as we go along, from room to room, person to person, place to place.

If Paris consisted of individuals endowed with a basic psychology – calculation, reason, intention – and a psychoanalysis of their hearts – Oedipus complex, guilt, sub-conscious, frustration – we'd miss all the phenomena that appear when we change instruments, institutions, channels and chains, and when we reveal alternately, depending on time and place, the things that happen in face-to-face interaction. Paris is comprised of beings who are not very well composed. It's not enough to add psychologies to other psychologies; psychologies should be added to anatomies. Paris is composed of beings who don't know what they're made of, but

who, to find out, subscribe to different bundles of channels that equip them with multiple entities clearly apparent in their interaction. These entities then disappear, making way for others, illuminated differently, another instrument, another institution.

End of the third sequence: To Relativise/To Realize

PLAN 50

"Everything is suspect... Everyone is for sale... And nothing is what it seems.": that's the slogan on a poster for a bad American film. For many decades intellectuals' job was to rescue the common people from their naive beliefs, from their visceral trust in authority, from their innocent taste for whole and honest truth, from the basic evidence of their nature. The idea was to allow *vulgum pecus* to see things more objectively, to become more wary, to form a critical mind. No goal was more lofty than opening the eyes of the populace by revealing market forces and manipulation of truth behind appearances; no vocation more sublime than shaking the man in the street until he was "denaturalized", until he relinquished his dreams of freedom and felt the burden of invisible determinations weighing on him. The operation succeeded beyond all expectations: Hollywood made a sales argument out of it! Just as the computers that in the fifties cost millions of dollars and filled immense rooms with empty tubes are now being reduced to minute electronic chips that hardly cost more than the sand from which they're made, so too the critical mind has been miniaturized and the drop in its prices is following Moore's famous law: the Walter Benjamin now measures no more than two millimetres, one can buy a Guy Debord anti-virus for next to nothing, plug in a Roland Barthes in one go, install a Bourdieu self-diagnosis module with a single cut-and-paste, and as for a Baudrillard, it's available in free share … The critical mind requires no more effort; doubting everything is as easy as doing a ten-digit division on a pocket calculator.

We now understand why critique, whether high-brow or popular, cumbersome or miniaturized, costly or cheap, brave or facile, sees nothing but lies everywhere. It still longs for a full, wholesome reality and finds only strands, paths or channels that it doesn't know how to follow, objects that it can't see how to fathom, stumbling at each step on the same abysmal distance between words and things, past and present,

constant and fickle, objective and subjective, and that, without a vehicle enabling it to go step by step, it never manages to cross. If we forget Suzanne Laloë in her observatory, the image of the sky seems to be a lie unworthy of the real Sky out there. If we overlook Mr. Engel at Rungis, the economy seems to be a mysterious force capable of buying everything. If we ignore the extent to which Mr. Henry in his PC sees nothing, we imagine a faceless and lawless power dominating and manipulating us. If we lose sight of the polling booth and ballot box, scrutineers and pollsters, national representations take the form of a vast eyewash detached from everything. If we disregard the painful labour of the National Bureau of Standards, we believe that the whole world consists of equal and uniform things. Yes, in the mediations binding them "Everything is suspect... Everyone is for sale... And nothing is what it seems." Of phenomena, we see only detached fragments connected to nothing, and we sigh as we long for the good, the beautiful and the real that our era – so they say – has stolen from us, when in fact masses of them are circulating, under our feet, under our noses, barely attached a little differently – the tiniest photomontage is enough to re-establish contact with them.

So, in order to think there's not only the critical mind. We can have a goal other than that of unveiling the real structures concealed by the common people's illusions. We can also spawn an abundance of mediators, drown the megalomaniacs and paranoiacs in a wave of little participants, add to the population of humans those multitudes whose tireless labour, "out of patience and rage", produces more beauty, truth and justice than the cargo cult of those always dreaming of a transcendence finally rescuing us from an ordinary existence. Sociologists were trained in the alarming discovery of the masses suddenly rushing into towns, with no one knowing what to do with them. Here we are, a century later, used to living in crowds, in cities, in techniques. What alarms us today probably requires other answers to the same little question: how do so many of us manage to co-exist? It's pretty unlikely that the social world is composed of the same elements as a century ago: individuals, crowds, mass movements, subjects, classes, trades, professions, and then, to order it all, standards, rules, cultures, structures, habits and laws.

Why change sociological theories? What importance can that have? What's the point of extracting the reader out of traditional aporia about actor and system,

volition and determination, individuals and crowds, weakness and power? What goal is there in our obsession with flattening, spreading out, relativizing, linking, realizing, unfolding, stretching, lengthening, and refolding society? Why would the little satellite, which for one hundred and fifty years faithfully followed the sphere of the social world, suddenly go off on a tangent, escape its trajectory and start circulating everywhere, exploring other worlds, mixing with things that don't concern it: stars, neurons, waters, gas, telephone, prices, colonnades, wrought-iron banisters, and what have you? All that agitation, in the middle of which, no, no, there's no doubt, sociology has nothing to do? Let's stick to our "social factors", "social questions" and "social dimensions", don't let the token of the social encroach on the other domains of economics, techniques, management, psychology, town planning, ethnography, archaeology, computer science, network science, connector technology, and other -logies, -graphies, -ics, bits and pieces.

And yet we live in towns, in crowds, in techniques, in networks, in multiplicity. We've got to get used to that. Either this new existence has broken, fractured, scattered and erased former existences, in which case we would be prohibited from seeing ourselves as full and complete beings, for all we'd have left would be a critical mind that had become more and more easy, the crepuscular taste for nostalgia, or an apology for dispersion, destructuring, crumbling, the sado-masochistic pleasure of fragmentation and impotence. Or else it's the other alternative explored in this little sociological opera: we have to change the very vehicle that serves to study totalizations. Yes, there is a common world, full and whole existences, civilizations, but we have to agree to study how totalities are summed up in narrow temporary places where they paint their pictures; and then follow them in the worlds they perform – streets, corridors, squares, words, clichés, common places, standards –; and, finally, we have to agree to explore how these scattered totalities provide beings, themselves multiple and variable, with ways to gather themselves as coherent wholes. After learning how to wander along these traces, to proportion relations without ever going through the myth of Society, after learning how interpretations are formatted, we can now go a little further and try to understand how this social theory can empower. It really is time to virtualize Paris, to increase its temperature.

Concluding sequence. Allowing

Those who envy us for living in the centre of Paris have no idea of the crushing load we carry. Everything depends, we now know, on whether it's cold or hot, real or virtual. When the temperature is low, Paris weighs on the shoulders of its inhabitants, its workers, as if every building were the tombstone of a huge cemetery. What's the difference, after all, between the city's most famous avenues and the tombs of Père Lachaise? There are as many reclining statues in the one as plaques on the buildings of the other: "Here Claude Bernard had his laboratory", "On the site of this hotel Victor Hugo lived", "Pasteur was a student here", "Picasso had his studio here: in the same building Balzac lodged the painter of *Le Chef d'oeuvre inconnu*". Everywhere the great dead crush the little living. At the Ecole de Médecine one can still visit the chapel where the *club révolutionnaire des Cordeliers* made and unmade opinions. Where is opinion made now? We wonder with what arms, what mouths, what barricades governments could be overthrown. Where are the Parisians of yesteryear? Higher up, in rue Gay-Lussac, in May 68 the cobbles used to vibrate as if they were on a cushion of air; today they rest on a thick layer of asphalt, rigid and compact like the venerable bones in the Saints Innocents cemetery. Yes, it's hard work walking up the Montagne St. Geneviève, not because of the slope but because of the relics one has to keep stepping over. In front of these commemorative plaques we gape in admiration like Mexicans in front of the pyramids that, considering the small size of their contemporaries, they thought had been built by giant ancestors. Where are Pascal and Saint Geneviève? Laplace and Hugo? Péguy and Foucault? Where are the agitators capable of heating up a bit this vast museum that tourists visit, guidebook in hand, under the impression they're in a huge theme park? "To our great dead, the fatherland is grateful" is written on the

Pantheon: Where are the revolutionary *tricotteuses* capable of unknitting this much-too-tight tissue? On what facade do we see: "To the living, the homeland reviving"?

When the temperature is higher Paris becomes lighter. The tight network of surveillance cameras, electronic codes, patrols, dogs, guards and police officers no longer smothers the passer-by who starts looking at the city differently. It's always the same: congested, populous, suffocated, controlled, on the verge of apoplexy. Yet we breathe a bright and lively air. What's happening? From real, Paris becomes virtual: its temperature has risen; the representation of the social has become more relaxed, lighter.

Step thirteen. Instituting

PLAN 52

It's hardly surprising that its name hasn't changed, for after more than four centuries the Pont-Neuf (the "New Bridge") is still under construction! It was redone in 1891 already, right down to the foundations of its piles, under the close surveillance of the Ponts et Chaussées engineers. Today it's again being restored. Signs inform us of its ailments, its remedies and the name of its physicians. To replace every stone worn by time there's a new stone, carved in an open-air workshop on the Quai des Orfèvres by a sculptor, an expert in the trade. Physiologists claim that the body lasts several decades owing to movement in which each cell is replaced by a flow of fresh proteins to occupy the exact place and function of the aged cells whose debris scatters in the wind. For a biologist the living body therefore differs from a stone bridge only in the pace of its renewal. Speeded up, both resemble a jet of water that maintains its shape through the swift movement of countless tiny drops, each adding its minute contribution to the slightly trembling form. Speed aside, the Pont-Neuf, with each of its stones occupying the place of a discarded one, each newly sculpted gargoyle ousting an old one, deformed by time and blackened by pollution, also flows like a jet of water. Stop the movement and you'll have nothing but a gurgling at the bottom of a greenish basin; a corpse; a crumbling ruin.

Specialists of organisations readily distinguish institutions from shapeless aggregates simply by the fact that the function, called an 'office' since the eleventh

century, lasts independently of the fragile and mortal person occupying it temporarily. The living pass by, the roles remain. An historian in public law, studying the perpetually renewed work on the Pont-Neuf in archives of the Ecole des Ponts, would probably say that she had before her, in the stone arches that the Parisians waited for for nearly twelve centuries – cursing the narrow wooden footbridges of the Petit and Grand Chatelet – the very example of an institution, a political body, neither more nor less durable than the municipal council of Paris or the French state. Yes, the Pont-Neuf, seized in its movement of renewal stone by stone, is part of public law. The difference between stone bridges, flesh and blood organs and political bodies stems not from their nature but only from the pace at which their offices are renewed. The Pont-Neuf has the same vertiginous turnover as an office in which all the staff came from a temping agency, or as a flaking skin. Either way, the form, like that of sacred temples in Japan, is maintained only through the replacement of passers-by who come to occupy the function for a while. "The king is dead, long live the king".

The artist Christo thought he was innovating by wrapping up the Pont-Neuf in white fabric. He wasn't aware that for many centuries its stone arches had been enveloped in the folds of Parisian institutions, without which it would have collapsed a long time ago. The Pont-Neuf rests not only on sound piles firmly secured to the bed of the Seine, but also on another Corps, other administrations: those of the Highways and Bridges, of Historical Monuments, of the Préfecture. If the rising waters of the Seine no longer lash at its arches, it's because it has always been cautiously wrapped in its guardians' care, in its engineers' calculations. Its gargoyles are a matter of closer surveillance than that of their unseeing eyes glued to the river boats. The cement holding up the Pont-Neuf is the administrative corps sheltering lovers smooching under its arches without more of a thought for the stones holding them in place than for the artisans and civil servants who maintain those stones. Even in broad daylight, under the spring rain, the Pont-Neuf is wrapped up in a fine reticulation of calculations, wash drawings, archives and municipal decrees issued by those doers of the bridge (*pontus*) who, they say, gave its etymology to the venerable word "pontiff". *Pontifex maximus*: a term that would perfectly denote the Pont-Neuf, captured in its slow perpetual cycle of renewal, kept

up by an institution of live stones, themselves constantly renewed by a faster cycle of nominations.

The famous expression "*Se porter comme le Pont-Neuf*" ("to feel like the Pont-Neuf", literally "to be hale and hearty") therefore actually refers to two very different states. The first, stationary, relates only to the stone bridge – meaning a steady decline with ruin and decay at the end. Eaten away by pollution, abandoned by the administrative Corps, left to themselves, the disintegrating stones would soon fall into the Seine and be swept away. "To feel like the Pont-Neuf" means to be on the way to death. The proverb changes meaning only if we add to the bridge the continuous movement that makes it New generation after generation. But then we also need to add the pontiffs, corps, institutions, administrations, civil servants, councillors and craftsmen who are attached to it and at arm's length keep its form intact. The first Pont-Neuf belongs to the real Paris, a mineral frame against which bodies, powerless under the crushing weight of passed determinations, stand out. The second Pont-Neuf participates in the Paris that's virtual, virtuous, virtuoso, capable for the past two thousand years of renewing itself on site, stone by stone, life after life, passer-by after passer-by.

Philosophers readily define time as "the series of successions" and space as "the series of coexistences". For a long time we believed, in Paris, in France, that the big deal was a question of time, of the series of successions that, on a great revolutionary day, or through a major crisis, or a Giant Leap Forward, would sweep away the past and replace everything that existed by another fresher and more radiant existence. Isn't it strange that all the feverish revolutionaries, the councillors yearning for riverside expressways, the crazy architects who wanted to raze Paris to the ground to build parking spaces, dreamed all these utopian dreams in one of the oldest, most congested, tortuous and sedimentary of age-old cities. Today, alas, the scales of history have tipped to the other extreme. After wanting to deprive Paris of its past, we have armies of historiographers, restorers, museologists and cemetery guards who now want to deprive it of its future. "Stark paddles" rain down on the historical buildings of Paris like April showers. No one dares to do anything anymore. The façades of buildings remain but their insides are totally revamped, as if the architects, suddenly paralysed, didn't dare to proudly announce that they could

build better than their predecessors. Soon the streets, like showpieces, will bear the following signs: "Touching the works of art is prohibited". For the first time in its long existence the City of Light is really ageing, kept intact in an illusion of the past, illuminated only by the spotlights of boats of tourists on the Seine, passing by after a day at Disneyland. *Fluctuat et mergitur*. After crazy modernism, the paralysis of the amusement park.

Perhaps we flirted for too long with history and "the series of successions". We now need to try space and the "series of coexistences". How can space be created? By doing everything contrary to those modernizing gestures that so easily trigger succession when they abolish what they claim to replace. That's what we've tried to do in this sociological opera , this diorama for grown ups. In photos and text we've attempted to highlight the role of the countless intermediaries who participate in the coexistence of millions of Parisians. In the series of transformations that we followed with myopic obsession, we would have liked to have kept each step, each notch, each stage, so that the final result could never abolish, absorb or replace the series of humble mediators that alone give it its meaning and scope. Economics, sociology, water, electricity, telephony, voters, geography, the climate, sewers, rumours, metros, police surveillance, standards, sums and summaries: all these circulate in Paris, through the narrow corridors that can never be used as frames nor infrastructures nor contexts for others. By preventing intermediaries from abolishing those who precede them and those who succeed them, we increase the series of coexistences. If the philosophers were right, we would generate more space than time through mediators' movements. History, as some claim, has perhaps ended. If so, coexistence is starting. The end of modernization – and of its miserable and last avatar: conservation in museums – does not mean the end of Paris.

By comparing the real Pont-Neuf to the virtual Pont-Neuf, we can assess a little more accurately the difference that it can make in Parisians' eyes. Discouraged by the scale of the context, by the age of the walls and the enormity of institutions, little inhabitants have got into the habit, over the past few decades, of expecting their salvation to come from the narrow leeway left to them by the crushing determinations that they have, in a sense, abanonned to their own fate. If the market, geography, Society, laws, techniques and the sciences occupy all the space, if all

these total surfaces can be arranged in a vertiginous zoom that goes in degrees from biggest to smallest, the inhabitants have nothing but the personal sphere left, their heart of hearts, the remaining creativity that can still be squeezed from deep down inside the self. That's enough to spray some graffiti on the blind walls; there's still a little pressure in the can of paint before it's totally empty. If by chance you think you're relatively free from alienation, there's no lack of highly-respected sociologists to add an even stronger dose of determinations and nail you to your bed, paraplegic, with a series of invisible laws that they alone master. They'll chase the little breath left in your body with a good measure of social pressure and, if you're still breathing, the unquestionable demands of the global market will flatten you for good.

Everything changes, however, if the networks highlighted in this work occupy only a tiny narrow place. As big as the oligopticons visited in our inquiry may be, they occupy only a few square metres, and if they spread everywhere, it's only through very fine cables that the slightest trench dug in the ground for the flimsiest motive. But what is there between these cables? Nothing. So *there's* the space we need to be able to breath more freely! No cloth is big enough to wrap up the whole of Paris like Christo wrapped up the Pont-Neuf. "With ifs you could fit Paris into a bottle", as the saying goes. Well, what if these ifs were simply empty claims? Who's vain enough to believe that his oligopticon is a panopticon? Where can we find paranoiacs and megalomaniacs with enough nerve to deprive us all of air? Not at the roads maintenance department, we saw that; not at the Préfecture either, which is even more surprising; not at the water utility, nor at the new market at Rungis; not at the Café de Flore; not at the Paris Observatory even though it gives us universal Time; not at the France Telecom surveillance centre; nor even at the Montsouris park in the Météo-France offices where today's weather report is compiled. Well then, do these devourers of space and time exist only in our imagination? If so we'd have the space to spread out with ease. The channels of contexts would circulate in the middle of barely explored *terra incognita*. We could imagine other imaginations than those stemming from the residual self escaping in an ultimate effort from the excessive weight of ineluctable determinations. The institution allows, authorises,

promises, leaves to do and causes to act. Nothing's stopping us then from feeling like the Pont-Neuf.

PLAN 53

What a strange feeling: if Paris is flat, then a huge reserve army is occupying all that unknown space that none of the networks considered in these pages cover. The surveillance and policing networks simply graze the big Paris that totally eludes them. Once again, an inversion of form and content occurs. The frame occupies only a tiny space. The context circulates in channels that are as invisible as the former tubes of the pneumatic dispatch system. The word 'power'changes meaning. It no longer denotes states of unquestionable things, but everything that crosses Paris in convoys of strong-rooms similar to those of security guards transporting money. There is indeed power; that is, force, virtualities, empowerment, a dispersed plasma just waiting to take shape. The term Virtual Paris doesn't refer to the downloading from the Web, the complete disembodiment, ultimate modernization or final connection that is the stuff of hackers' dreams; on the contrary, it means a return to incarnation, to virtualities. Yes, the power is invisible, but like the virtual, like the plasma, like the perpetual transformations of the Pont-Neuf.

We started this book of images from the panorama at the top of the *Samaritaine*. Eighteen months later we meet at Emilie's place for her birthday, in front of another panorama. As if Paris demanded a counter-gift in return, as if we had to prove ourselves worthy of it and of our predecessors, or as if we had to pick up the thread of a story by looking for it in the narrow shafts in which it had got lost, we have put together this unlikely opera. We suddenly notice that if we spoke of Paris, the Invisible City, it was, essentially not simply to combine social theory with a photographic inquiry, but to give back, in a little beauty, some of the lavish splendour that the City of Light has in store. Paris scan, Paris can.