Memory in Motion

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Images
Chapter Eight

Mapping the World: *Les Archives de la Planète* and the Mobilization of Memory

*Trond Lundemo*

*They Had to See Paris.* And in order to see it, a traditional family from rural Oklahoma who had struck it rich in oil, depicted in a little-known 1929 comedy by Frank Borzage, decides to go there. But why did they have to see Paris instead of New York, London, Berlin, or Tokyo? Because they had already seen it. They had seen photographs in newspapers and films and read descriptions of the City of Light. The image of Paris was the most propagated in the world, and the logic of tourism takes them to the place they already know from visual media. They had to see Paris because they had a memory of the city, even if they had never been there. Even as they decide to cut their visit down to a couple of days, feeling homesick after having covered the sights reproduced in the media, their choice of destination indicates how images of places format memory. The main production value of Borzage’s film is a series of views of Paris, which serve to perpetuate the image propagation that makes the rural family want go there in the first place. The simple denomination of Paris in the film’s title releases swarms of images and expectations and demonstrates the close relation between memory, images, and topographical location. For this reason, memory always takes place, as images are spatial and topographic. I will probe this topographical layout of memories as sociotechnical networks of images by looking at a well-known (psycho-)geographical location, Paris, and the visual construction of its mnemotechnical properties.

As examples of such networked memory topographies, I will focus on the media configurations and mapping techniques of two rather unique productions, separated by almost a hundred years. The first is Albert Kahn’s *Les Archives de la Planète*, a collection of photographic images forming an inventory of ‘the surface of the globe’. Financed and supervised by the French banker Albert Kahn between 1908 and 1931, it prominently features the city of Paris at different moments during the production of the collection. The second example, also configured as an inventory, is the web installation *Paris ville invisible* created by Bruno Latour and Emilie Hermant in 2004 which portrays the infrastructural composition of networks upholding the City of Light. The ‘invisible’ aspects of the city are accessible only to a
few, notably the technocrats and maintenance personnel in city planning offices who follow its operations on surveillance monitors, but even so, they subtend the visible aspects of Paris. The difference between the media employed in the two mapping projects – analogue film and photography in *Les Archives de la Planète* and digital interactive installation in *Paris ville invisible* – allow us to approach not just the changing technologies of geographical mapping during the past century but also the different conceptions of memory that underpin these changes. Both cases form heterogeneous media networks in their own right but also display interesting connecting points between image technologies and visual media in a larger context. I will analyze these configurations of images with regard to the specific processes of individuation that they facilitate and discuss them in the light of Gilbert Simondon's theories of imagination and individuation as well as Gabriel Tarde’s concept of the ‘public’ as an eminently modern social formation. For in Tarde’s work, the public is notably defined in terms of its capacity to affect and to be affected ‘at a distance’ – that is, across spatial and temporal boundaries – a capacity afforded by forces of image propagation that may be understood as networks of memory.

**Memory as image propagation**

Before we move to a discussion of the two media networks mentioned above, the role of the image in relation to memory and the topographical dimensions of this relation call for some elucidation. An image, in this broad sense, is never one but a composite structure, a cluster, governed by interconnectabilities and montages. Images are pre-individual and autonomous beings forming networks of memory through association and propagation. In Gilbert Simondon’s view, memory is a form of imagination because it consists of forces and energies and forms processes rather than fixed representations of time and place. Memory is not the ‘storehouse of the past’, to be retrieved or not by the individual, as described in Freud’s theory of the unconscious, but a dynamic process that produces consciousness and subjectivity. Memory is a medium where images act upon each other, agglomerate and multiply, and modulate the present as well as the past for the purpose of future action. Simondon takes as his point of departure the mental image as a relatively independent agglomeration in the human being, but it soon becomes clear that the image transgresses any boundaries between subject and object, interior and exterior, concrete and abstract. He outlines the role of ‘object-images’, ‘aesthetical, prosthetical, technical’ in
the process of image formation and propagation and how they play a crucial role in forming collective life and memory.2 As Simondon notes, imagination (and by extension memory) is a pre-individual vehicle of ontogenetic processes where mental and material images are formed. The life of images starts with spontaneous growth into a framework of motoric tendencies; develops into perceptual patterns that structure experience and serve an organism’s adaptation to the world; and finally forms a system of relations, evocations, and mutations that creates analogical and reflexive models of the world.3 These models are symbols, according to Simondon, in the sense that they are integrated with objects in the world. The universe of symbols is capable of integrating new complete images through synergic compatibility and can open itself up to invention. By incorporating the past, the image makes the past accessible for projection into the future. In the process of multiplying and propagating, images can transform and reinvent themselves and change the ways in which the objective, the subjective, and the social are configured.4 Images are in this sense eminently political.

Imagination can be turned towards future (anticipation), present (perception), and past (recollection). It should be noted that not only the last dimension of images are concerned with memory, because memory entails also perception and dispositions and agencies for the future.5 Significantly, Simondon’s concept of imagination, and by extension our understanding of memory, is not centred on individual creativity, inventiveness, or ability to retrieve moments and events of the past. Imagination is a process of image propagation – hence its name – in which images act like micro-organisms that invade the mind and body of the thinking and remembering subject at certain times and leave him/her on others. Images, material or mental, can be viral, as we have learned from YouTube and other online video servers, and act like parasites in memory. They are genetic processes that present themselves according to their own proper forces and can act autonomously, with an agency of their own.6 There is an emergent potentiality to images that allow them to modify and re-arrange themselves as well as the larger arrangement of images we live by.

If images are the matter of memory, it explains how recollections are always in modulation and change. The question of memory is where Simondon meets Bergson, who equally understood matter/memory as streams of images: such images are at the core of memory’s regulation of the relation between present, past, and future.7 For both philosophers, memory and imagination are non-psychological concepts that pass beyond the interiority of the subject; in contrast, image streams, as continuously evolving asubjective perceptions, constitute processes of individuation and socialization.8
However, such modes of memory and processes of individuation are subject to alterations and transformations due to changes in image technologies. Simondon is not directly concerned with historical changes within these networks of images in his thesis on imagination, but he is certainly aware of them when he calls for the ‘philosophical, psychological and social task of saving phenomena, by analysing the image that they emit, and reinstall them in the becoming and in invention’.9 Taking the cue from Simondon, I will analyze the mnemotechnical image networks emanating from the two geographical mappings of Paris, with particular attention to the way in which differences in mnemotechnical modes inform the individuation of these projects.

The life of images takes place in sociotechnical networks that change over time and according to context, opening up to analysis specific modes of propagation and mutation in distinct but interconnected visual technologies. The technological image networks of film and photography, which constitutes its own micro-network in the *Les Archives de la Planète*, form one such historical memory layer, while digital photography and hyperlinked text materials in *Paris ville invisible* represents another. As will become clear, however, these networks never operate in isolation but interact with and transform each other. The life of images, and hence of memory, is always intermedial as well as intermediary, connecting technical objects, bodies, and minds with subjects and collectives and the world.10

When the image acquires self-motion with the advent of cinema, the connectibilities of images are reconfigured. In an epistemological sense, the montage between images takes on new exigencies and affordances by submitting the spectator to a specifically designed time flow and hence also a specific network of memory and individuation. The emergence of time-based analogue media technologies at the end of the nineteenth century redistributes the connectibilities of the media networks, underscoring the asubjective role of memory and perception. With the distributed networks of the Internet and the feedback loops and recursive programming of computing, memory and individuation is modulated according to a different temporalizing dynamic. Memory is, then, in motion, because the media are changing. Moreover, this change in media does not only entail a shift from ‘old media’ to new, as in the often proclaimed development from the analogue to the digital, from film to computer, from TV to Youtube or Netflix. The very concept of media is in motion. Computer media not only store and transmit information but actually process it – a procedure that is closer to action-oriented memory than passive storage of data. If the mode of connectivity between images is changing, so are the specific processes
of memory and individuation that they afford. But this also means that the concept of ‘the public’ cannot be taken for granted and neither can related concepts such as ‘the audience’, ‘the mass’, and ‘the crowd’. In their place we have to identify other and more distinct collective individuations based on the agencies at work in each case.

These concepts are not historical and social stable categories but depict processes of becoming that always proceed through networks of images, media, and people. In Simondon’s theory of individuation, collective and psychological individuation consists of forces that expand on and refer back to biological as well as technical individuation by posing problems that cannot be finally resolved and consequently lead to interminable processes of formation. These problems depend on an incongruity between perception and action, between consciousness and body, and lead to a succession of individuations going from metastability to metastability. These processes form the ‘transindividual’, or what we often call a personality, for a limited period of time. Collective and psychological individuation always proceeds in the relation between a body and the world, a subject and other subjects, and hence on the circuits of the propagation of images that make up imagination and memory. Psychological and collective individuation depend on each other, ‘they permit the definition of a category of the transindividual that tends to account for the systematic unity of interior (psychological) and external (collective) individuation’. This unity of the system of individuation proceeds through links between the body and its environment, mental images and object images, making the individual a ‘transindividual’ in becoming, going from metastability to metastability. The psychological individual as well as the collective are not stable or isolated entities but formed in the process of affecting and being affected by each other. The historical shifts in connectivities between images strongly define these processes of collective individuation.

If Paris is the locus for our discussion of shifting modes of collective individuation, it is because media and memory always entertain complex relationships with places and their history. As Cicero already observed, *ars memoriae* are about assigning what should be remembered to a place and about performing a spatialization of the past. Classical mnemotechnics, as described by Frances Yates in *The Art of Memory*, deploy the ‘method of loci’, memory palaces, a way of recalling information drawing on visualization and spatialization. Moving images have continued to reshape this topography of memory. The City of Light, eminently visual and visible in the history of painting, photography, and film as well as in literary description, is a privileged place for the formation and propagation of images. It is the
capital not only of a nation or a culture but also of a period of pervasive technological change worldwide. As the 'capital of the nineteenth century' (to use Walter Benjamin's words), Paris is a luminous point of entry for addressing shifting processes of image propagation and individuation.

*Les Archives de la Planète*

It is not only the case that images install memory through representations of places; different modalities of memory are also produced by different kinds of locations and locational techniques or cartographic procedures. A case in point is the collection of films, colour photographs, and stereoscopes that make up Albert Kahn's *Les Archives de la Planète*, formed between 1908 and 1931 in France – a part of the world-mapping ventures of the early twentieth century. *Les Archives de la Planète* was initiated in late 1908 when Albert Kahn made a trip around the world. While visiting the United States, Japan, and China, he had his chauffeur take photographs and films from the trip. After this trip, Kahn decided to create a photographic and cinematographic archive of the planet and appointed Jean Brunhes, a pioneering cultural geographer, as its director. Between 1912 and 1931, Kahn financed cameramen travelling to more than 50 countries around the world to make this inventory. When the collecting processes were brought to an abrupt end in 1932 due to Albert Kahn's bankruptcy in the wake of the stock market crash, it comprised 72,000 autochromes (a new colour photography process on glass plates invented by Louis Lumière in 1907), 183,000 metres of film (over 100 hours of projection), and 4,000 stereographs. There are also some 4,000 black-and-white photographs, but their role in the archive appears to be secondary in comparison to the other technologies used. A small part of the film footage was acquired from newsreel companies and was not shot by the Kahn cameramen. The archive was kept intact after Kahn's bankruptcy and even survived the occupation of France, which commenced shortly after Kahn's death in 1940. Almost all of the film material is stored as unedited shots, and only small parts of the material were spliced together for use in Jean Brunhes’ courses at Collège de France or the occasional screening for invited guests at Albert Kahn’s mansion. The collection was never exploited commercially, and the material largely remained locked up in the vaults of the archive.

The collection is embedded in the globalizing and colonizing technologies of modernity, aiming to construct an image of the world in its spatial as well as in its historical dimensions. Albert Kahn described the project
as an ‘inventory’ of the surface of the globe inhabited and developed by man as it presents itself at the start of the 20th Century in order to fix once and for all the practices, the aspects and the modes of human activity, whose fatal disappearance is only a question of time.\(^{15}\) This description reveals the topographical dimensions of the project as well as its temporal ones. The mapping of the world takes place at a moment of change, for use in an unknown future when these modes of human existence have disappeared. The visual media employed in this charting of the surface of the globe immobilize and ‘fix once and for all’ a moment in time. The photographic terminology employed by Kahn announces what André Bazin later will describe as the ‘Ontology of the Photographic Image’– a fundamental and eternal human need for the preservation of the past in order to defy death.\(^{16}\) Moreover, the stylistic prescriptions identified by Bazin for this ontology – long takes, staging in depth, deep focus – are intimately linked with the topographic properties of photography and cinema. What is to be ‘fixed once and for all’ for Kahn or ‘embalmed in time’ for Bazin is, essentially, a geographical location.\(^{17}\)

In most mapping projects, local detail is multiplied until it makes up a coherent world map. In a geographical world atlas, the map of the globe is broken down into separate sections of continental, national, regional, and municipal scope.\(^{18}\) Brought together, the different parts of the atlas are supposed to form a coherent and comprehensive map of the world. This interconnection between the local and the global, the social and the national does not only apply to the spatial dimensions of Kahn’s project. Kahn’s collection is also a historical map. Certain places and regions are included in the ‘archive’ at different times and given intervals, producing a historical cartography, a network of world-encompassing techniques of control that inscribed the local in a larger global system and the single event in world history. In such an approach, cinema unifies the eagle’s perspective with that of the fly.\(^{19}\)

If Les Archives de la Planète is a geographical and historical mapping project, it is only by stretching the sense of the term that it can be called cartographic. There are, of course, a plethora of cartographic techniques in different cultures throughout history, but the collection makes no use of cartographic maps of the kind that was shaping geographical representation and imagination at the time it was produced. No maps in the ordinary sense of the word form a coordinating interface for the collection, nor are maps inserted in the films or photographs as means of orientation or links between places. The presence of cartographic maps was a convention in fiction and documentary films at the time, deployed in order to situate
the individual shots within spatial coordinates and to create a continuous world of the film. In this sense, cartography is often allied with the unifying embedment of the shot in classical editing.\textsuperscript{20} In the relative absence of editing of the film shots or sequential ordering of the autochromes, the singular images in Kahn’s collection present us with a fragmentary world, isolated islands of spaces as places and time as events. If there is a cartographic principle to the organization of the shots and autochromes, it is closer to the loose juxtapositions of places and times known from ancient Japanese and other oriental maps, where fragments of space are separated by amorphous clouds, lakes, and streams (a mode of cartography that Albert Kahn would have known well through his fascination with Japanese culture). A compelling image of this dissociative organizational principle can perhaps be found in its adjoining gardens in Bolougne-Billancourt in Paris, whose forking paths lead abruptly from the Japanese to the English garden and further into the French garden, the blue forest, and the ‘prairie’. This garden is an integral part of Kahn’s geographical mapping project, in the sense that it forms a heterotopic collection of places on the site of the archive, but like the films and autochromes, it disregards any latitudinal-longitudinal coordinates in its layout.

There is also a temporal dimension to this mapping, as some locations, especially in Paris, are filmed or photographed by Kahn’s cameramen on repeated occasions. This is partly motivated by an awareness of historical change, sometimes actualized and sometimes anticipated. In the area around the Arc de Triomphe, there are films shot before the First World War to document contemporary life, traffic, and fashion. During the war, the location was intensely photographed and filmed, along with the rest of Paris, in the fear that the approaching German forces may ruin the city. The streets were populated with a majority of women, as many men were drafted and killed in the war. The celebrations at the end of the war mark a new layer of the historical sedimentation of the place, followed by the baby boom a couple of years later. Towards the end of the 1920s, changes in fashion and a dominance of automobiles shape the urban landscape. These updates of the visual identity of a place at irregular intervals, functioning as superimpositions of images of the same place at different times, emphasize how Les Archives de la Planète’s geographical mapping of the world is inseparable from a historical and temporal mapping.

There are a few rare shots in the archive that highlight this temporal superimposition of the same place at different times in a physical image. A film of 50 seconds called Superimposition Test (Essai de surimpression) (AI20405), from November 1920, presents clouds passing over shots of the
Arc de Triomphe and the Panthéon. Camille Sauvageot, the cameraman employed by the project who most often conducted technical experiments, also shot superimposed films at different speeds. In *Place de la Concorde* (AI120347) from October 1923, only twelve seconds long, he superimposed night scenes of lights and cars in fast motion with shots from the same camera positions during daytime in normal speed. This layering of the temporality of ‘normal’ perception with the technological time of cinema, which he dubbed ‘the master of time and scales’, is repeated in two 1926 films of similar length: *Avénue de l’Opéra le soir* (AI137517) and *L’arc de Triomphe* (AI120266). Sauvageot also directed a series of colour films in 1929, but these experiments are exceptions in the collection. Still, they provide a visual metaphor for the multi-layered temporality informing the project.

As it happens, the concept of temporal superimposition also informed *Les Archives de la Planète* as a whole. The project was to a large extent made for a context that remained unknown at the time of its creation. It was rarely shown or exploited, had no fixed future use in view, and was created as a kind of time capsule, addressing a spectator or user in an unknown future when the world inscribed in the films and photographs had disappeared. The films and the photographs were, in other words, not intended for a contemporary public but for a time when the relation between the individual and the crowd or the mass might be a very different one due to a transformation of the modes of life inscribed in the collection. While photography and cinema have been powerful tools for formatting social memory in general, and in the twentieth century in particular, these images sought no immediate impact on human memory but rather constituted a ‘living memory’ for the future. Of course, any archive and collection has a future use as its motivation, but most often they consist of documents that are already embedded in a social context and that attest to particularly significant moments in the past. Since Kahn’s collection deployed cinema and photography to chart a vast and fragmentary world of life forms, it invests the archive with a wholly new temporality. This archive is made for a future world, for future collectivities.

This locational projection into the future is what makes *Les Archives de la Planète* an aberrant ‘archive’. The organization of the collection, with its lack of editing between film shots or a fixed order between autochromes and moving images, removes it from the cartographic logic that informed the colonial and globalizing projects of its time. Instead of creating physical connections between images, places, and dates, there are only virtual connections to be actualized or not at some future moment. The project simply eludes the representational ambitions of most other mapping projects at the
time and proceeds according to a disjunctive logic. While archives are usually defined by rules of selection that determine what to include and what to discard, as well as universal principles of indexing and ordering, *Les Archives de la Planète* is a cartographic project in the unusual sense evoked by Gilles Deleuze in order to describe the work of Michel Foucault. Kahn's collection is diagrammatic, in the sense that it forms ‘a spatio-temporal multiplicity’ that is ‘co-extensive with the social field’ and that superimposes ‘history with becoming’. Of course, Kahn's collection does not map the diagrams of power through an exposition of the visible and the sayable, as Foucault does in his archaeologies and genealogies. However, the dissociative logic in the connections between shots and autochromes as well as its projection into an unknown future elude the representational primacy in other archives and mapping projects. If we recall the processes of individuation and memory that Simondon identified in the image and apply them to Kahn's collection, we might read Deleuze's diagnosis of Foucault's cartography as a description of Kahn's mapping project:

...every diagram is intersocial and in becoming. It never functions to represent a pre-existing world, it produces a new type of reality, a new model of truth. [...] It makes history by undoing previous realities and significations, constituting points of emergence or creativity, unattended conjunctions, improbable continuities. It doubles history with a becoming.

The forces and energies unleashed by the propagation and transmutation of locational images compose circuits of memory that go beyond the historical or the predetermined notion of place. Such a cartography contrasts with French historian Pierre Nora's famous concept of *lieux de mémoire* – the extensive externalization of memory in static representations of places, dates, and events that characterized a modern obsession with memory and the problems of remembering. The concept identifies a shift in history and historiography in a French social context as late as the 1930s. With the end of rural communities and the advent of mass media, a ‘real’ memory invested in life – what Nora called *milieux de mémoire* – gives way to a memory shaped through monuments, archives, institutions, and dates. In the place of a memory embedded in the gestures and spaces of a community, the *lieux de mémoire* are erected because spontaneous memory is lost and ‘we must deliberately create archives, maintain anniversaries, organize celebrations, pronounce eulogies and notarize bills because such activities no longer come naturally’. They are ‘the rituals of a society without ritual’.
Hence, a memory that is immediate, natural, real, and part of life is contrasted with a memory-history that is constructed, artificial, and external. Many of the distinctions between true memory and externalized memory echo those of Plato: where Plato’s media critique focused on writing, Nora identifies ‘the trace, the immediacy of the recording, the visibility of the image’ as the problem. ‘What began as writing ends as high fidelity and tape recording’, Nora claims, without noting the line of descent from Plato’s argument. The key role played by cinema in this process becomes clear in Nora’s choice of metaphor: ‘Indeed, we have seen the tremendous dilation of our very mode of historical perception, which, with the help of media, has substituted for a memory entwined in the intimacy of a collective heritage the ephemeral film of current events.’ This dilation of perception is exactly the propagation of images constituting memory and imagination itself.

There has never been a true and real memory separated from media nor a ‘life’ independent of tools, technologies, and spatial constructions, and this is why memory itself has a history. In Nora’s account, however, it appears eternal and stable up until a very recent date. Not only is this account premised on a distinction between human internal memory and technological, external memory; it also produces an image of the social as a distinct entity, criss-crossed by channels of communication, rather than as emergent agglomerations of forces, where technologies function as living memory networks.

In their organization, the images in Les Archives de la Planète are intimately connected to places and the time of their recording, but this by no means implies that these images-places, still or moving, are fixed in time and space. Since images are always acting on each other, propagating, modulating, and undoing themselves, their connecting points and constellations are always changing. An image of an event is never fixed but in constant motion because other images are always affecting it. The constant accumulation of images in the collection each time assigns a new place to the single shot and autochrome and relocates it in new circuits of propagation. One example could be the many films of socialist and communist meetings and manifestations. The socialist meeting in support of Russia captures the crowds outside the Wagram theatre in Paris in November 1920 (AI138016), and it may or may not be seen in conjunction with the film of the delegates in the Third International Congress in Tours a month later (AI107253). A conventional documentary on social and political movements would edit these shots together with the footage from the Manifestation of the Communist Party on the occasion of the death of Lenin in Saint-Denis, Paris, in February of 1924 (AI138063). In this collection, however, no one has
made these montages, and there is no way of determining how they would relate to each other. Any other juxtaposition is equally possible, making the montage a virtual aspect of the images, to be realized or not in some future. The individual films and photographs in Kahn’s collection may lend themselves to representations of individual persons and specific crowds at given times and places, as has been done in various recent documentaries – for instance in THE BBC TV production Edwardians in Colour: The Wonderful World of Albert Kahn (2007). However, as an aggregate of potential connections and disjunctions, Kahn’s images are instead a resource for the type of virtual associations that constitute memory in processes of collective individuation.

Judiciary and administrative archives store documents that have a legal and bureaucratic political function. As Cornelia Vismann has shown, it is only after their use has changed and they no longer exert the same political power that they become documents for historiography. Historians then make use of the documents to reconstruct the ways in which they were once active and exerted power. Both while in use and as historical source materials, archival documents form precedence for future decisions or offer a means of scrutinizing authority. In contrast, Les Archives de la Planète is devoid of any such history of usage. It deploys the visual media of its time to make an inventory of the world but does not collect documents that have been in use. For this reason, the techniques of inventory invest the collection with a memory that is more cartographic, or better, diagrammatic, than institutional or individual. They aim at an inscription of forms of social life but are never themselves part of the social context they seek to document. It is a collection without a social history, very much in contrast to the way almost all other film and photography archives or collections are a monument to an epoch, a nation, or a social movement.

If images are endowed with a particular capacity for propagation and association, the associational or social forces of the Kahn archive are also infinitely delayed. There is an intentional anachronism in the images from the outset, since the images are mobilized only at the moment when they diverge from the social life they purportedly represent. The deferred propagation of memory is perhaps best exemplified in the various shots of Paris mentioned above, where the Kahn cameramen visit the same places again and again at different times to inscribe a changing social world. Paris is comprehensively mapped before the First World War, and the life of the city is again recorded through the cameras when the post-war fervour is taking place and on other potentially life-changing occasions. Rather than seeing this lack of an ‘original’ social context as an obstacle to analysis, it presents
an opportunity to reconsider the mediating functions of images and to chart the mobilization of memory in the deferred time between shooting and showing, collecting and exhibiting. The images did not contribute to the social memory of their time, as they were seldom shown or projected. The collection was indexed according to the nations, regions, and cities where it was shot, and it adheres to the topological principles of historiography. However, it would only become active as a network of memory once the social modes of life inscribed in the collection had disappeared. It is premised on an insurmountable leap into the future, a mode of action at a (temporal) distance. In this sense, the collection not only has change or difference built into it, it even contributes to the very disappearance of social life forms by which it is motivated. The new media of film and photography are powerful forces in the globalization observed by Kahn and contribute strongly to the changes in local cultures that this process sets about. The life of images always creates feedback loops in relation to the world they are sensed to document, but in Les Archives de la Planète, where the temporal dissociation between the ‘inventory’ and the world is the impulse for the collection itself, these recursions create superimposed temporalities. The media are themselves propelling the end of what they document by inscribing a place and time that will only emerge as such once it has disappeared, once the map no longer fits any terrain.

Les Archives de la Planète is invested with a latency where the connections between images remain virtual. This suspension of the propagation of images is an important aspect of Simondon’s concept of collective individuation. Psychological and collective individuation is caused by problems that biological individuation cannot resolve: an incongruity between perception and action such as the relation to the environment and other individuals or the consciousness of death. Collective individuation intervenes as a deferral or slowing down of the processes of vital individuation where these problems emerge. Simondon describes these processes as a bending back to pre-individual and individual individuations – a kind of regression that creates types of collectives based on the transindividual realm that includes the environment as well as other individuals.29 The networks of images involved in these processes operate according to intervals and suspensions, as Bergson also identified in the streams of images and matter. These disjunctions form a becoming that is ‘co-extensive with the social field’ (to quote Deleuze’s description of Foucault’s diagram) rather than a stable and resolved representation of the world.30

The Kahn archive, then, provokes juxtapositions between its images and the geographical sites as they look today, and this was part of Kahn’s
intention. However, he probably did not foresee that the material recorded with the new media of his time – autochromes and films – would become accessible in another medium only. Since most of the shots in the archive only exist in one screening print due to their lack of exhibition, and since the autochromes could only be reproduced through re-photographing, the material has been almost entirely inaccessible until today. The archival imperative of digitization has made the documents accessible only as a world in bits. The FAKIR database, available on the premises of the Albert Kahn Museum, and its small web version Mappemonde, still wanders between the local and the global, the small event and the historical panorama, the individual and the nation.31 Indexed according to continents and nations – as most film histories are – on a world map interface, the shots and photographs seem to contribute to the traditional cartographies of world geography and history. The digitized images of Les Archives de la Planète, which in their fleeting analogue constellations eluded representations of crowds, places, and events as fixed entities, are in a very literal sense reterritorialized. Their interconnections depend on relays between places and historical periods, such as the pre-war years, the battles of First World War, the post-war years, etc. The interface of the FAKIR and the Mappemonde databases reproduces the traditional coherent and totalizing representational strategies of the atlas and cartographic mapping. In an age of increasingly privatized and individualized reception and representation, however, as epitomized by television, the personal computer, and the Internet, the ‘inventory’ made by and for Kahn’s archive resurfaces in a different format within another mode of life. The media technical affordances emerging from these new connective modes of networks inevitably also inform the way they operate. Alongside the traditional representations of place in the database interface, there is a simultaneous deterritorialization of the relations they impose. These current processes of memory and collective individuation in digital networks are the topic of the web installation Paris ville invisible.

Mapping the invisible city

When the social theorist Bruno Latour returned to the photographic inscription of Paris almost a century later, the city had become mute and invisible. Bruno Latour and Emilie Hermant’s 1998 book Paris ville invisible, with text by the former and photographs by the latter, was made into a web database in 2004 which demonstrates and analyzes this shift in the image of the
crowd and of the city. The reason why Paris is invisible is that every aspect forming the logic of urban networks takes place ‘under the surface of the world’, in city planning offices and bureaucratic institutions. The once so luminous city, with its monuments and institutions, eludes representation through fixed inventories of places and crowds. *Paris ville invisible* already announces its representational limitations in its title. This is not because the web installation is overwhelming or beyond the grasp of the subject. The pictures and the text can actually be entirely covered in a few hours. The title of the book and web installation is instead designed to address the concept of visibility rather than to be taken literally. Why would Latour and Hermant make a ‘photographic inquiry’ if Paris had really become invisible? The invisibility only concerns one layer of visuality, and the project aims to make another visibility stand out.

The City of Light has not given way to the ‘City of Bits’, as argued by William Mitchell in his book from 1995, as the streets and monuments of Paris still co-exist with the urban roles of computer surveillance and infrastructural operational images. Latour and Hermant aim to make another level of the visual composition of the city apparent, one that is normally hidden to the inhabitants and visitors of the city and that is only visible to a few. This is why they call their web installation an ‘oligopticon’, and the project is in this sense intensely concerned with visuality and visibility: to make visible the images one doesn’t normally see and to investigate how these images sub tend the intensely propagated images of the city informing the memory of Paris. *Paris ville invisible* is an archaeology of a globalizing image that depends on other images and especially on the networks they create. The tourist attractions and monuments propagated all over the world, the images that make people want to ‘see Paris’, are only the surface layer of a connective network of images and media subtending them. The continuities between the city and its representation in film and photography – a de facto monumentalization of the city in cinema theatres and museum galleries – change once the city’s images are navigational means in a virtual as well as an actual urban space. Places of transit, designed to be anonymous and non-specific as well as emptied of memory, form key parts of the ‘invisible’ Paris in Latour and Hermant’s oligopticon. Their project is to analyze these subtending images with an emphasis on their social or connective dimensions.

Adapted to the digital techniques of the web installation, these alternative views of the city are exempt from ‘social life’ as ordinarily understood. The streets are empty. The life of the city is now found in the offices for infrastructure and city planning and their operational images
for controlling traffic and surveillance of the city. Operational images tracking traffic and automated work processes, rarely seen and perhaps only *read* by an individual salaried worker, make up the visual panorama of the web installation. *Paris ville invisible* focuses on the new role of images as control tools for the waterworks, sewerage, train services, and public safety—images that propagate a very different form of memory than the cartographic representation of the city. These images do not display the sites and monuments of the arguably most remembered city of the world but instead become functional through intermittent yet continuous updating: they are mapping a Paris in motion.

The control rooms for traffic and public safety surveillance are populated by screens that change at regular intervals, where human or automated reading devices are programmed to react to certain changes in the images. These networked images constitute processes of memory thanks to the way in which they are interconnected, updated, and read by stored algorithms that respond to emerging data. Such memory networks thus depend on computing operations whose microtemporalities are beyond the grasp of the human sensorium: even more so since a change in the composition of the image or in the constellations between the different constituents of the network produce recursive effects in the image networks. These image networks operate through feedback loops and transmutations: operational images never stand alone. They only function through interoperability, and their links and connections instigate a form of memory that is continuously updated with a view to future action.

In Latour and Hermant’s description, the city has changed from ‘the City of Light’ into an opaque city, but this does not mean that it cannot be traced through digital means. However, their database project provides little reflection on the way in which the media used for the web installation also form part of this reconfigured visibility. In reality, the physical properties of the digital camera for the inscription of (the city of) light constitute a radical change in social techniques. The images and texts of the web database cannot implement the continuous updates and recursions of the image networks they depict, and consequently they resort to a different temporality. The website is constructed so as to create connections between the iconic views of Paris and the networks of images that subtend them, but they cannot implement the updating and feedback that make the interconnections operable. The images are the same as when the installation was put online in 2004, and the itinerary through the designed pathways remain stable. The movement of the single images is restricted to navigation within a frozen panorama where the user may pan across the
landscape: there is no movement in the image itself. By clicking on the text at the bottom of the image, the whole of the text is superimposed over the image, and the still images lend themselves to a variability of movement at the user’s impulse of navigation. The interconnections between the images and the texts may change according to the navigation of the human agent, but the pre-established order between images and texts remains fixed. This can be understood as an unavoidable concession to the online installation format, where the processual dynamics of the operational images are irretrievable. The archival logic of the web installation had to sacrifice such dynamics, but it may still pinpoint important changes in the collective modalities of these image networks. The introduction to the piece reads:

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.33

According to Latour, Paris has probably never been visible at a glance, as it has always relied on the networks and actors forming the city. The opening image of the web installation’s indicated pathway is a shot from the top of the Samaritaine department store which can be panned 360° by moving the cursor to the left or right edges of the image. The adjoining text reads:

‘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.34
The revelatory panorama of Paris that opens and ends *Paris ville invisible* fails to make a representational inventory of the city: ‘it no longer holds any attraction, and gives no information’. Since Latour and Hermant produced their web installation, the Samaritaine has closed, and the blue ceramic panorama is no longer accessible, if it is even there. So perhaps it is also time to update the web oligopticon. The key point of *Paris ville invisible*, however, is that the temporal logic of the panorama itself has changed. It is no longer a question of just replacing the panorama of Paris with a new one and including the Centre Pompidou and other changes in the surface cityscape. In the final ‘station’ of the indicated pathway of the installation, it returns to the panorama presentation:

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 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.35

This new beauty of Paris resides in its capacity for new incarnations rather than representations. Latour’s Paris is a network of social and technological mediators, couplings, and relays. The operational images surveying traffic and sewer systems, shopkeepers, and mailmen are parts of the same network as the photographic images in the web installation and the inhabitants and the visitors that navigate the city through paper maps, signs, Google maps, GPS, or Google earth searches. *Paris ville invisible* charts the city as a memory that is being reconfigured at the bureaucratic and technological levels every day.

Incidentally, *Paris ville invisible* was itself invisible for a period: the URL of the web database, <http://www.bruno-latour.fr/virtual/index.html>, had expired in the fall of 2011 and only returned a ‘page not found’ message.36 Web retrieval is always unreliable, and any page can disappear at any moment, and it was perhaps in anticipation of expired links that Latour published the web project as a text-only PDF book, with the caution that: ‘This text is not understandable without the pictures. It is provided simply to help those who have difficulty tracing the complete legends on the web.’37 The sudden invisibility of the web installation demonstrates the ambiguous
visibility upholding these networks addressed in Hermant and Latour’s title. They subtend the ‘official’ and stable representations of the city and yet operate beyond the thresholds of perception, thus instigating different forms of collective individuation. The infrastructural networks integrate technological and human forms of memorizing by operating in terms of the connective forces of memory itself. The individuating capacities of images are thus folded back onto the representations of Paris, now investing them with a virtual dimension. Les Archives de la Planète, through its deliberate time lag between shooting and projecting and the disjunctive logic between shots and autochromes, also operates according to a diagrammatic mode of mapping, where the connections constitute points of emergence and invention. ‘It doubles history with a becoming’ that is ‘co-extensive with the social field’. The futural logic of Kahn’s cartographic project is now realized at the level of media infrastructure.

Collective individuation and the public

In Les Archives de la Planète, the media of autochromes and film contrast and complement each other in order to make an inventory of the social modes of life at the time of shooting for a time to come. Like a time capsule, the surface of Paris at a given time was to be compared and contrasted with Parisian life in an unknown future. However, this visual information is unleashed at a time when archival image technologies operate according to a different processual logic. Today, the images of the collection are only accessible in digitized formats and through digital interfaces. Kahn and Latour’s respective cartographies thus reveal two different yet intersecting approaches to the life of images. Kahn’s mapping of Paris, or any other city in his collection, is oriented towards a future when the map no longer matches the terrain. Where Latour evokes a Paris of the past, as represented for instance by the panorama on the top of the Samaritaine, it is only to fold the city’s infrastructural connections and relays back onto its representations, inscribing these representations within a processual and connective dynamics.

Both mapping projects form temporalizing image networks, but they produce different types of collective individuations. The temporal deferral in Les Archives de la Planète seems to entail the type of individuation that, according to Simondon, takes place when the individual is confronted with a world in which perception and action becomes incongruous, i.e. a ‘problem’ in Simondon’s terminology of individuation. The experienced lack of continuity
between the historical world and its anticipated, undefined present can only be resolved with recourse to the environment and other individuals. Since imagination and memory are key elements in all processes of individuation, the suspension of image propagation invests such processes with a diagrammatic becoming that is co-extensive with the world itself. Along similar lines, *Paris ville invisible* depicts memory as a virtual power of incarnation in which temporal images network themselves. The connections and recursions between images are determined by processes beyond human perception and action, but they still constitute collective individuations. The problems Simondon sees as characteristic of this mode of individuation always refer back to biological and technical individuation as a kind of regression to pre-individual individuation. These different individuations are distinguished by degrees rather than processual forms: also technical individuation encounters incongruities with the environment that produce concretizations of technical objects. As a principle, individuation must consequently be understood in terms of processes of deferral and quantum leaps, metastabilities and recursions, and not in terms of specifically human or machinic substances.

These processes of individuation, actualized by Kahn’s and Latour/Hermant’s image networks, consequently demand that we understand the concepts of the audience, the mass, the crowd, and the public in new ways. The instances of metastability we often refer to as the person, individual, and collective are not pre-existing or subjected to these processes. They are isolated fields to be described and analyzed, since they only exist within these very individuating processes. Such insights confront us with a very different social ontology than the one underpinning, for instance, the Frankfurt School. If we understand individuation as processes of memory operated through the propagation of images, we also have to think about the media networks historically, as different network forms produce different modulations of memory and images. Collective memory was always in motion since it is formed through ontogenetic processes where images propagate and transmute like micro-organisms, but the velocities and technologies of connectivity have undergone radical changes. These shifting velocities and connecting points between images — material and mental, past and present — have reconfigured and transformed the very idea of what is communal and social.

For Simondon, collective individuation is a function of the affectivity between living organisms, objects, and technologies. Such affectivity is the matter of images — ‘material’ as well as ‘mental’ — and the way in which they propagate, act on, and transmute each other. Collective individuation is in this sense a continuous process of affecting and being affected according to the connectivity between elements in image networks. This capacity for affecting
and being affected also informs Gabriel Tarde’s concept of ‘a public’ formed by a dynamics of imitation and invention. In a move that prehends certain aspects of Simondon’s concept of individuation, Tarde finds invention at the intersection of (or disjunction between) two imitative trends. In contrast to the concepts of crowds or the mass (la foule), Tarde’s concept of the public depicts the capacity to affect and be affected over a distance but congregated in time. This theory of the public is developed in the years between 1893 and 1901, with reference to the impact of newspapers and more generally the development of the printing press, the railway, and the telegraph. Yet these are also the early years of cinema. With its many different forms of distribution and exhibition throughout history, individual and collective, from ‘peep show’ to projection, cinema is instrumental in forming the ‘public’ as a temporal social formation. Les Archives de la Planète implements collective individuations in similarly temporal terms – through a suspension of memory and the introduction of a latency in the propagation of its images rather than fixed spatial representations of places and crowds. By inscribing history within a logic of becoming and by giving the document an explicitly multitemporal mode of existence, Les Archives de la Planète forms an idiosyncratic archive of its time. It is perhaps a paradox that when this archive is just re-emerging in a medium able to support dynamic processes of connectivity (the digital databases FAKIR and Mappemonde), Kahn’s project is reterritorialized and stabilized as representations of places and events of the past. The current version of his cartography forms a coherent historical and geographical atlas; the disjunctions between the shots have been edited into self-sustained narratives and the differences between the media of the archive have been smoothed out. Instead, it is an entirely different database memory of Paris that points us in the direction of what might perhaps be a more appropriate interface for the Kahn archive. Paris ville invisible produces connections between images that themselves have the status of infrastructural memory networks, defined by the time-critical feedback processes of collective individuation.

Notes

1. I call Paris a psycho-geographical location to emphasize how it also has a place in memory and consciousness. The term calls forth associations to the dérive of the situationist movement and their psychogeographical maps (and Guy Debord’s 1955 psychogeographical map of Paris in particular), but I will not pursue a further elaboration of the situationist theory of specta-
cle, the city, maps, and memory here, as it would lead to a clouding of the theories of place and memory I am focusing on in this context.


3. Ibid., pp. 18-23. For a discussion of the ontogenetic role of images in Simondon's philosophy, see Väliaho, pp. 91-93.


5. Ibid., pp. 15-21.

6. Ibid., p. 7.

7. Which is, of course, not to say that their philosophies of the image are identical: Simondon doesn't conceptualize a 'plaque sensible' or a centre of indetermination halting and making cuts in the streams of images, and he notes how Bergsonian intuition only partly accounts for the processes involved in the genetic cycles of imagination leading to invention (ibid.: 23).

8. The whole of Bergson's *Matière et Mémoire* [1896] treats this problem; see pp. 11-17 for an introduction to the thesis.


10. When Simondon persistently refers to images as 'intermediary', he uses the term differently from Bruno Latour's distinction between 'intermediaries' and 'mediators'. An intermediary is for Latour 'what transports meaning or force without transformation; defining its inputs is enough to define its outputs', while with mediators, 'their input is never a good predictor of their output; their specificity has to be taken into account every time' (Latour 2005: 37). Simondon is also concerned with the agency of elements within networks, but he understands the intermediary role of images, material and mental, as transmutations, propagations, and deferrals where the output is never decided by the input – in other words, along similar lines as Latour understands mediators. This is clear from his first paragraph in *Imagination et invention* (1965-1966), where he claims that images 'present themselves according to their own forces, inhabiting consciousness like an intruder who comes to disturb the order in a house where he has not been invited' (ibid.: 7).

11. Simondon, 2005, p. 29. Simondon's concept of individuation is explained and discussed in Chateau, pp. 45-64.


15. Albert Kahn quoted in Amad, p. 144 (my italics).


17. Tom Conley points out this 'cartographic' property of Bazin's aesthetics in Conley, pp. 6-8.


19. Siegfried Kracauer sees the interdependence of these two perspectives as the ideal for modern historiography and illustrates the method with
cinema’s constant shifts between the establishing shot and the close-up. See History: The Last Things Before The Last.

20. Of course, there are many exceptions to this general assessment, as analyzed by Tom Conley in his mapping of cartographic cinema.

21. Deleuze, pp. 42-43. Tom Conley also draws on Deleuze’s discussion for his discussion of maps in films (pp. 10-14).

22. Ibid., p. 43.

23. Nora, p. 11.

24. Ibid., p. 12.

25. Ibid., p. 12.


27. Ibid., pp. 7-8.

28. Vismann.


30. Deleuze, p. 42.


32. Mitchell.


34. Ibid., p. 2.

35. Ibid., p. 103.

36. It was back online by the spring of 2013, accessed 8 April 2015.

37. Ibid., p. 1.

38. Chateau, pp. 57-58.

39. For a discussion of the interdependencies between different forms of individualization in Simondon, see De Boever et al., pp. 36–45.


41. Tarde.

42. ‘Ainsi s’est formée, par un faisceau de trois inventions mutuellement auxiliaires, imprimerie, chemin de fer, télégraphe, la formidable puissance de la presse, ce prodigieux téléphone qui a si démesurément grossi l’ancien auditoire des tribuns et des prédicateurs.’ (ibid.: 12).

Works Cited

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