Finding Fragility in Paris: The Politics of Infrastructure after Haussmann

Winner of the Millstone Prize (2009)

Peter Soppelsa
University of Oklahoma

This essay develops an analytic term coined elsewhere: "the fragility of modernity." The term indicates the special fragility of urban modernity, what historians of technology call "the networked city." Modern urban life increasingly depends on complex heterogeneous systems that combine social organization, technological artifacts, and natural resources in delicate assemblages, recalling Graham's and Marvin's recent and sonorous term "splintered urbanism." Simply put, networked infrastructures are delicate, and because modern urban life has come to depend on them so vitally, this fragility not only compromises subways or water pipes, but also destabilizes urban modernity more broadly—socially and spatially, materially and symbolically.

* The Millstone Prize is awarded to the best interdisciplinary paper presented at the annual meeting. It honors the memory of Amy Millstone, a scholar of nineteenth- and twentieth-century French popular culture who was a prime mover in the Western Society of French History during the 1980s and 1990s and who possessed a singular ability to use literature, music, dance, and film to teach French culture and history to students and colleagues alike.

1 Peter Soppelsa, "The Fragility of Modernity: Infrastructure and Everyday Life in Paris, 1870–1914 (Ph.D. diss., The University of Michigan, Ann Arbor, 2009). This essay was originally delivered as a paper on a panel concerning "The Politics of Disaster in Modern France." The author thanks co-participants Jeff Jackson, Minayo Nasiali, Elinor Accampo, and Richard Keller for stimulating discussion and commentary.

2 Joel A. Tarr and Gabriel Dupuy, eds., Technology and the Rise of the Networked City in Europe and America (Philadelphia: Temple University
Parisians first confronted this fragility under Baron Georges-Eugène Haussmann and the generation of architects and engineers who followed him in the early Third Republic. Between 1853 and 1914, Paris was outfitted with all the infrastructures the twentieth century would take for granted: subways, streetcars, sewers, gas, electricity, water, telegraph and telephone, etc. Although Haussmann and his followers intended infrastructure to "repair" the crisis-ridden nineteenth-century city, networked infrastructures solved some urban problems, but also brought about unexpected dilemmas of their own. Threading these new technical networks through an already dense urban fabric required unraveling the cityscape, showing Parisians the mutability, contingency, and frailty of their built environment.

Such fragility is always present, but becomes most apparent in moments of crisis caused by disasters such as the water shortage and sewer failure of 1900, the devastating 1910 flooding, or more recently the murderous 2003 heat wave, and the 2004 collapse of airport terminal 2E. As Erik Klinenberg and Rebecca Solnit argue, such disasters are neither fully "natural" nor "social" events. The networked city's fragility comes from its heterogeneity; ecology, technology, and society each play some role in precipitating disasters. Cities exhibit what sociologist Charles Perrow famously called "tight coupling" in describing fragile technological systems: failures in one part of the city (e.g., ecology or technology) can precipitate breakdowns in another part (e.g., society). 3 This article argues that the Parisian experience of urban fragility, from Haussmann to the present, has politicized urban infrastructure. During disastrous moments when infrastructures fail and compromise city life, the politics of

---

infrastructure flare up.

Our story begins in January 1872. When *Le Temps* learned that Prefect of the Seine Léon Say was installing new gaslights on the Place de l'Opéra, its editors sneered, "[W]hy must the splendors of the Place de l'Opéra be like a lamp in a tomb?" Though not necessary to light all of Paris evenly, "the major arteries and their off-shoots, the streets which put the principle neighborhoods into contact with one another, these should enjoy integral lighting." They thought the prefect's priorities were skewed. They also connected street lighting with street sweeping: "[I]t is an easy enough fact to establish, that one no longer sweeps the streets of Paris." The "puddles of liquid sludge which accumulate along the edges of the sidewalks" were a health and safety hazard, and "as the municipal council well knows, we hold them responsible for all the unseemly sludge stains and all the slips and falls taken in poorly lit streets." 

In February cold rain threatened to ice-over the streets. Post-war reconstruction was moving slowly, and the authorities were already concerned about road conditions. Now *Le Temps* attacked Director of Public Works Jean-Charles Alphand, who "alone remains passive in the midst of these atmospheric movements: he gave them neither another sweep of the broom nor another pan of asphalt." Alphand pleaded that his crews were waiting out the freeze, but *Le Temps* was not satisfied: "I forcefully engage our excellent Prefect to keep an eye on all this . . . This year we are going to begin, by way of fairly heavy taxes, the liquidation of the Empire: the population cannot ignore to whom we owe these extra charges." The reference to Haussmann and the Prefecture was clear. *Le Temps* evoked a social contract, the exchange of taxes for public services, suggesting that Say should uphold it because Haussmann had not. The newspaper took up the republican cause of keeping the "public" in "public works."

Weeks later *Le Temps* wrote, "We have come back

---

somewhat to the pretended benefits of the Haussmannization of Paris . . . [M]any find that this upheaval, excessively extended to all the largest and best constructed streets, touches on monomania and, before even recognizing the price of these high fantasies, they find grave inconveniences in it." Haussmann's program for streamlining traffic had ironically ended by disrupting it a great deal. Opening the boulevards to heavier vehicle traffic forced pedestrians onto the sidewalks "in order not to be smashed in the unbridled whirlpool of cars." *Le Temps* depicted pedestrians standing on a "steep island with no coast," stranded "something like deportation within a fortified area," evoking the Communards exiled just months before to New Caledonia. By more clearly defining and separating flows of vehicle traffic and foot traffic, Haussmann inadvertently compromised pedestrians: the street defeated the sidewalk. *Le Temps* described:

. . . grand roads vomiting and absorbing torrents of pedestrians and vehicles wildly, with no rule and beyond any direction. If one has the bad fortune to stray into this wasteland in the evening, where the cyclone of vehicles runs wild, one is not certain to make it home in the integrity of one's material person: remember that they count on average two accidents a day, the official figure.

These editorial attacks on Haussmann and his successor Say reveal something else: Besides inadvertently complicating traffic, Haussmann unwittingly politicized public works. Once Paris was networked, equipped with a matrix of roads, rails, pipes, and wires, journalists and citizens recognized infrastructure as the work of the state. The new importance of public works in urban modernity nourished new forms of interaction between the public, the press, and the state. Hence *Le Temps* called out Léon Say early in his term, making infrastructure a priority and showing him he was being watched. Haussmann thus started a political dialogue he could not finish

---

6 “Chronique de Paris," *Le Temps*, 8 March 1872. All quotations in this paragraph from this issue.
about the meaning and impact of public works in the city. How should they function and be regulated, who should pay for them, and whom should they serve?

Over the next three decades, Parisians fought two long, drawn-out battles over infrastructure, showing a city suffering from a distinct Haussmannian hangover. The first was what Norma Evenson called "The Long Debate" over the Métro, the second, what Jacquemet and Guerrand called the "battle" over Paris's sewers. In these already well-documented histories, we find constant struggle and negotiation among multiple parties: the national, departmental, and municipal governments; the press: commercial interests, like the *vidangeurs* (who cleaned the cesspits of Paris) or Paris Landlords Association; the Council of the Ponts et Chaussées; intellectuals wary of modernization, like Albert Robida; and civil associations like the League for an Elevated Métro, the Society of Civil Engineers, and the CGT. Such conflict was framed by burning questions in the public sphere about the meaning of technology in city life, and its power to influence social and spatial patterns.

Historians typically divide the flowering of hundreds of plans and visions for the Métro from the 1870s to 1890s into two competing visions: one campaigning for a locally controlled, passenger-centered, and socially-oriented Métro; the other advising a nationally controlled, mixed-use and free-market Métro. National liberals and municipal socialists not only favored different railway designs, but also disputed who should fund, regulate, and enjoy the Métro, as well as its likely effects on urban development. In two recent articles, Alain Cottereau argued that the "battles" over the Métro were not only fought to win control of the network, but also defended competing visions of urban development and "modes of life," such that the local government's final victory strengthened "local democracy." In

---

the hands of the increasingly socialist city government, the Métro became a powerful tool for building a local welfare state, creating jobs and giving the working classes access to technological mobility and quality living space.\(^8\)

The simultaneous battle over the sewers pitted the prefecture's engineers against many enemies: the municipal council, the parliament, some scientists, the landlords' association, and the vidangeurs, who were protecting their business of emptying cesspits. Comparing these two skirmishes over infrastructure produces a clear picture of infrastructural politics in the late nineteenth century. Development was slowed by increasing conflict over public works, conflict traceable to Haussmannization. It took Parisians several decades to develop ideas of public works more compelling and less controversial than Haussmann's. While many groups perceived their interests in these new networks and sought to influence their design and use, development moved slowly, falling behind population growth and contributing to what Michiel Wagenaar called an "urban crisis."\(^9\)

By the mid-1890s, with crucial improvements to transportation and water infrastructures stalling, many worried about the impression Paris would make at the 1900 Exposition.


In 1896, Minister of Public Works Guyot called the unfinished Métro "shameful," while Chief Water Engineer Humblot argued that increasing the water supply was "a pressing necessity in regard to the approach of the Universal Exposition of 1900: we would certainly not like to show muddy streets, covered in dust and sullied by the detritus of traffic, any more than dried-up fountains, to the numerous foreigners that it will attract to Paris." At this epochal celebration of industrial progress, it was crucial that the host city be a bright beacon of the coming electric century. Paris authorities worried that transportation, water supply, and sewage systems were already strained, lagging behind international standards of development and potentially failing to accommodate the crowds coming to the exposition. At this important hour, the fragility of modernity struck with a vengeance.  

Problems began early. British and German visitors were disappointed to find unfinished fairgrounds dotted with scaffolding on opening day. But things really heated up over the summer. June brought 125 injuries and three deaths on the tramways. In July, *Le Petit Parisien* observed "it's decidedly a series," later reviewing over a dozen accidents under the headline "the murderous tramways." Most accidents were collisions between horse-powered and mechanically-powered trams, often sharing the same rails, moving at different speeds, and piloted by rushed drivers. That summer, several pedestrians were crushed

---


or struck by trams, a canister of compressed air exploded, and a group of passengers panicked when their tram derailed. Finally, the Diatto surface-contact system that powered Paris's new electric streetcars shocked a dozen drivers and electrocuted one horse to death. Humorist Pierre Wolff quipped that "there is at least one tramway accident per day," while foreign guests like American social scientist Edmund James criticized Paris's "inadequate street car system."13

Métro line 1 opened 19 July, and fair-goers swarmed it, enjoying the speedy and affordable ride, but also the cool tunnels—a refuge from the stifling heat of the streets above. The next day was the hottest since 1874 (38C/100F) and the fairgrounds were deserted. Although Friday was then the "chic" day to attend, only about 150,000 visitors came (compared to 700,000 the previous Sunday). Ticket prices dropped from forty-five to twenty cents.14 The heat wave also brought serious drought, which led to a water shortage, sewer failure, pollution of the Seine, and a typhoid outbreak.

After the summer water shortages of 1895 and 1898, both flashpoints for infrastructural politics, the Water Service ensured the new Loing and Lunain aqueduct was ready for 1900—but water ran short in spite of it. The Water Service topped off reservoirs with filtered water from the Seine and Marne, but also tried something new this year. On 21 July, newspapers warned that engineers would shut off the "private service" half of Paris's dual piping system each night from 11:00 p.m. to 6:00 a.m. until 5 August to conserve water. On 24 July, the Academy of Medicine protested, arguing that combined with drought, the shut-offs could seriously compromise sewer function and endanger public health because the sewers were partially flushed


with household wastewater. The newspapers reported "the poisoning of the Seine," whose waters had become a slow-moving "blackened sludge" (boue noirâtre) dotted with bloated animal corpses and other detritus. Vivid descriptions of the dried-up, gooey Seine deployed a language of disgust and outrage. One American visitor reported that "a howl of wrath has gone up from the city."15

Yet it was not the sewers, but the water supply that delivered the summer's greatest blow to public health: a typhoid outbreak. In August, water analysts from the municipal laboratory at Montsouris found an abnormal quantity of typhoid bacteria in their samples, calling the Water Service's mix of eau de source and filtered river water "nothing but a violent poison." Hygienist Dr. Thoinot agreed, arguing that typhoid had increased since 1898, when the Water Service began distributing filtered river water. He counted 556 cases and 105 deaths in 1898, 2,371 cases and 404 deaths in 1899, and 3,148 cases and 568 deaths in 1900.16

During the water shortage, the Métro suffered technical failures and minor accidents—short circuits and fires, lighting failures, delayed trains, and panicked passengers. As tramway


and Métro accidents continued into the fall, *Le Petit Parisien* commented, "[I]t is undeniable that the new mode of mass transit with which we are afflicted constitutes a public danger." On 11 October, a Métro train arrived at the Tuileries station in flames after a short circuit. The Métro's first collision was 19 October near the Concorde station, injuring twenty-nine passengers and one driver. Parisians fanned this news into a roaring blaze of rumors, claiming hundreds were injured, while Prefect of Police Louis Lépine tried to assuage the public with press statements and new regulations.17

Along with heat, drought, water shortage, sewer failure, and typhoid, these Métro and tramway accidents disturbed the Exposition's progressive and technophilic messages. The water system was spreading disease instead of health, as the drought dried up the Seine, backed up the sewers, and added stink to the heat. The city's new electric railways, both tramways and the Métro, showed local engineering to be ingenious, perhaps, but weak and dangerous. Behind the Exposition's glittering display of the "Second Industrial Revolution" was an embarrassing international showcase of infrastructural inadequacy, engineering mistakes and hygienic backwardness. In 1902, George Bechmann, Humblot's successor as Chief Engineer of the Water Service, wrote: "We have not forgotten the crisis that the service of potable water distribution in Paris, the private service, passed through in 1900."18

In addition to pitting Parisians and journalists against the local authorities, the 1900 infrastructural failures also provoked


the cultural politics of infrastructure, that is, the symbolic importance of public works for defining France's national identity, geopolitical position, and modernity. These failures even challenged the notion of the networked city itself or what Graham and Marvin have called "the modern infrastructural ideal" or "the modern unitary city ideal," which they define as "the notion of the ordered, unitary city, mediated by standard ubiquitous infrastructure networks."19

The fragility showcased in 1900 became familiar during the Métro construction and renovation of 1898 to 1914. To cut expropriation costs, most Métro tunnels were routed beneath boulevards where the city already owned the land. This meant tearing up roadways across the city, effectively re-Haussmannizing Paris. Le Temps described "Paris under demolition," alluding to the ravages of the Commune. In 1909 Le Matin wrote, "The capital is flayed, turned upside-down, gutted, broken," using Haussmann's anatomical idiom in city planning to grisly effect. "And while waiting [for construction to finish], we witness the most abracadabra-like incoherence in the organization of works," Le Temps commented, due to "the lack of coordination between administrative services." As L'Éclair put it, "The administration paves, unpaves, repaves. It blocks, unblocks, and re-blocks streets. There is no overall program, no unity of direction." The complaint became common. L'Intransigéant called it "disorganization," while La Libre Parole added "Travaux de Paris: we'll never finish them!"20

Two stock article titles recurred: "Paris-Chantiers," a veritable city of construction sites, and "Les embarras de Paris," suggesting that Parisians felt ashamed or embarrassed by their torn-apart capital. One article called "Les embarras de Paris" employed medieval imagery that suggested the city was regressing instead of progressing. The scaffolds and lifts of

---

19 Graham and Marvin, Splintering Urbanism, 49, 52, and 62.
construction sites became "castles," "towers," "forts." No longer urban, the worksites resembled "villages," even "ruins." *L'Intransigéant* used a vocabulary of "craters" and "mountains" to convey an alienated city, not architectural but geological, not earthly but lunar. Another paper called the capital "gachis" (spoiled or wasted).

These examples show that even before 1910, Parisians were tired of the constant upheaval of urban development—and then, in bitter irony, came the flood of 1910, knocking out Paris's young electric system and all of the new urban railways that depended on it for most of January and February. The flood also brought sewer failure and another water shortage, doing billions of francs in infrastructural damage to the city's roads, sewers, railways, pneumatic and electrical systems. For the Prefecture, this only heaped more cleanup and repair on the already difficult pile of work backed up since 1900. Commenting on the 1910 flooding, journalist Ernest Judet of *L'Éclair* wrote:

> Everyone is beginning to understand that the current catastrophes are not accidents without cause, but are the screaming proof that the innumerable construction sites in which Paris is covered have been engaged at random, thanks to the engineers and entrepreneurs, whose ideas and plans have never been subjected to the appropriate critique of the collective interests of the city.

*Le Matin* posed science and modernity against the "primitive waters," forces which threatened to undo the city's modernity, calling the flood "the 1870 of the engineers," a humiliating defeat like France's loss to Prussia.

Complaints continued after 1910. *L'Intransigéant* reversed the language of sabotage, which typically targeted syndicalists as vandals, and charged the authorities with sabotaging the

---


capital. When another summer heat wave and water shortage arrived in 1911, critiques of the city of worksites merged with critiques bubbling up from 1910. One journalist connected the 1910 flooding with the 1911 water shortage:

Thus are Parisians destined to perish under the water or to die of thirst. The administration is incapable of sparing us the floods and the shortage. And to administer our interests in this way, it spends a half million a year! For, is there a city in the world worse governed, with a population at once worse served and more docile? Paris is dirty, Paris stinks, Paris is encumbered, Paris has too much water, Paris has a shortage of water . . . and Parisians, smiling, are going to bring millions to the taxman and throw ballots into the electoral urns as if to say: Thank you!

Later in the same article he wrote, "It seems that the Republic is incapable of grand conceptions and major works. Since the Empire, in effect, it has done nothing great or useful in Paris." The Empire is the key phrase here, implying that recent works could never equal Haussmann's.

These scripts were replayed throughout the twentieth century. In 1924, amidst the worst flood since 1910, L'Humanité chided the government for "wasting and tossing millions into the pit of militarism," instead of working "to dig emergency canals, to build dikes, to divert certain tributaries, to create the Port of Paris"—all measures recommended in 1910, but delayed since the First World War. L'Humanité also sneered that "capitalist governments show themselves, as always, incompetent, ignorant, imbecilic . . . Their newspapers amuse the rubberneckers [badauds] with close-ups of the catastrophe." For this paper,


26 Ibid.
the mainstream press, tied to the bourgeoisie and its Third Republic, had an improper, lowbrow way of sensationalizing and spectacularizing disaster, turning news into entertainment. Roland Barthes similarly critiqued Paris media coverage of heavy flooding in 1955. And who could forget 1968 when De Gaulle ordered the Latin Quarter paved with asphalt to prevent future barricade building?²⁷

Two more recent examples show how relevant the politics of infrastructure remain for Paris. The 2003 heat wave brought a multifaceted infrastructure-related crisis: a shortage of mortuary labor and burial space, growing concern about the social vulnerability of the elderly and global warming, and strain on France's electric grid and nuclear power plants. It made Parisians rethink the architecture of French apartments, often designed to hold in heat, and the status of air conditioning, long believed unnecessary in France. These material stresses set off a chain reaction of symbolic politics, concerning French exceptionalism and national identity: Why was the heat deadlier in France than in other countries? The British newspaper The Independent thought the crisis emboldened French socialists, writing "this is the first issue on which the opposition has drawn blood since Jacques Chirac's re-election."²⁸ It compelled Health Minister Jean-Francois Mattei's resignation and helped speed the demise of the Chirac presidency.

The following summer, the roof of terminal 2E collapsed at Charles de Gaulle Airport, compromising the French airline industry's ability to compete with London and Frankfurt. It turned the ambitious modern structure from a "show of aesthetics and power" into "an admission of weakness," as Le Monde put it, calling the event "an earthquake for France's image."²⁹ Thus,

²⁹ Charles Bremner, "Paris Terminal May Have to Be Demolished" The Times (London), 25 May 2004; Philip Delves Broughton, "Creaks Spark Fears
while the 2003 heat wave mostly provoked the practical, material politics of infrastructure, sparking questions about whether the government was properly providing for its citizens, the 2004 collapse mostly provoked the politics of infrastructure in the symbolic sense, sparking questions about France's engineering prowess and national identity.

These events suggest that the familiar distinction between the "politics of recognition" and the "politics of redistribution" can help put the politics of infrastructure into clearer relief. In the 2003 heat wave, as in the battles over Paris's Métro and sewers, infrastructure was prey to the "politics of redistribution." Because infrastructure is often provided by the state and distributes resources and benefits such as water, power, and mobility, it becomes the object of material struggles, generating questions about who pays for infrastructures, and who regulates, controls, and benefits from them. Here, infrastructural politics boils down to familiar political struggles over rights and resources. The 2004 terminal collapse, in contrast, like the multiple failures of 1900 or 1910, shows that infrastructure is also subject to a symbolic politics much more like the "politics of recognition" or "politics of representation." In these cases, conflict centers around infrastructure's status as a measure or sign of things like national identity, engineering reputation, modernity, and civilization.

No matter which form of politics is at issue, however, the politics of infrastructure tends to flare up at moments of infrastructural crisis or failure. Examining these moments of failure and the responses to them reveals a running debate on the meaning and place of networked infrastructures in Paris's urban history after Haussmann. While few would want to live in Paris without subways, sewers, and other networked infrastructures, it has not always been easy to live with them, either.

---
