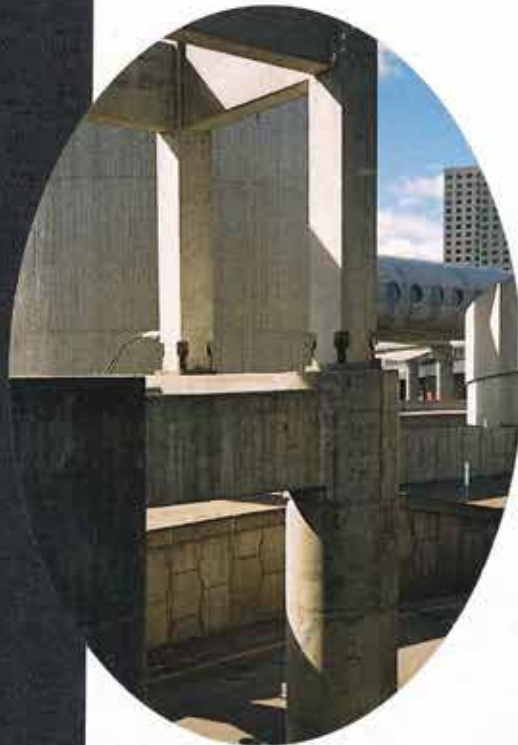


Infrastructure

Space



Infrastructure Takes Command:
Coming out of the Background

Marc Angélil and Cary Siress

Desire is part of the infrastructure¹
—Gilles Deleuze and Félix Guattari

In the mid-1950s, a young Jean-Luc Godard—years before Godard became Godard—traveled to a remote spot high in the Swiss Alps to join crews working on the construction of one of Switzerland’s largest infrastructural projects, the Grande Dixence hydroelectric dam. Godard became ever more engrossed day by day with the epic scale of the task at hand. After having been transferred to a less demanding job on site as a switchboard operator, he soon came upon the idea to document the dam’s construction, which provided the material for his debut film, shot with a borrowed 35-millimeter camera. The short documentary, entitled *Opération béton*, was based on the two-page script “La Campagne du béton” that had been hastily written by a companion also working on the dam, whose felicitous turn of phrase translates as ‘The Campaign of Concrete’ or ‘The Concrete Countryside.’ The double entendre—implying both military-like logistics and an engineered transformation of the Swiss landscape—says much about the role of concrete



Fig. 1: Title shot of *Opération béton*, 1954-55, documentary by Jean-Luc Godard filmed on the construction site of the Grande Dixence hydroelectric dam in the Swiss Alps; original script by Jean-Pierre Laubscher entitled 'La Campagne du béton' dated October 17, 1954 and translated as 'the campaign of concrete' or 'the concrete countryside'; cinematography by Adrién Porchet; released in 1958.

in facilitating the urbanization of the small Alpine country in the ensuing decades, a process led primarily via the construction of such grand infrastructural projects as the Grande Dixence.

Opération béton begins with a scene showing the imposing mountain range of the Alps, followed by a quick cut to the dam underway, a montage meant to put the man-made feat on par with works of nature as if confirming—in an almost Freudian way—that “where nature was, there infrastructure shall be.”² And so we find ourselves “at an altitude of 2,500 meters where a thousand men are fabricating a wall of concrete as high as the Eiffel Tower.”³ So begins the opening lines of Godard’s upbeat foray into the production of what, in effect, induces the sensation of an engineered sublime, the qualities of which the filmmaker narrates strictly through numbers: so many tons of earth moved, so many cubic meters of concrete, and so many linear meters of steel reinforcement, all collected in an industry-inspired litany of figures that presumably left audiences of the time ‘breathless’; the dam required some six million cubic meters of concrete for its completion.⁴ This deference to man’s domination of nature apparently paid off, for Godard convinced the dam’s construction company to buy the movie for a “sufficiently large sum to bankroll himself for the next two years” and with it, fund his next film.⁵ Some Godard aficionados even claim that this fortuitous turn early on in his professional life furnished that thematic repertoire for which the auteur would later become known in the film industry: “labor, capital, nationalism, and the machine-like systems that surround humanity.”⁶

Curiously enough, these themes, as significant as they were in his time and continue to be today, never really surface in the rather objective survey of *Opération béton*, as if Godard was blinded by the ostensibly neutral, technical aesthetic of infrastructure and saw the Grande Dixence only in terms of technology and engineering.⁷ What he seems to have overlooked in the process of filming is the discretionary political power that was needed to assemble suffi-

cient funding as well as a substantial workforce to carry out such an operation, not to mention the social and environmental impact of reformatting the Alps to become an energy-generating landscape. With this oversight, however unwitting it might have been, he failed to see the dam as one specific concretization of more diffuse “discourses, institutions, architectural forms, regulatory decisions, laws, administrative measures, scientific statements, as well as philanthropic propositions” that in tandem determine what is taken for granted and considered indisputable.⁸ For the dam itself, a product of these diffuse forces, stabilized their relations in such a way as to frame the entire undertaking in the irrefutable terms of a daring public works project put to the service of a nation, as well as of the then-burgeoning European electricity grid.

Do we not to a certain extent also share Godard’s nearsighted fascination with infrastructure today? Mention the word ‘infrastructure,’ and more than likely the first thing that routinely comes to mind is a huge dam, a large freeway, a giant power station, or the like, all just out there somewhere, simply there because they are there. Other than the occasional ribbon-cutting ceremony or inconvenient disruption, infrastructure seldom sustains mindful attention, manifesting instead the stuff of an unremarked substrate simply servicing the basic basics of everyday life, thus remaining largely inconspicuous by being always at hand and available without question. Were one to assign a color to infrastructure, it would probably be gray, as Godard would later point out in a short video from 1981 portraying the city of Lausanne in a reduced palette of blue for the lake, green for the mountains, and gray for everything in between.⁹ Paradoxically, infrastructure could be said to command by virtue of its anonymity. To suggest that infrastructure might constitute the discreet conduit of conduct by determining “the gestures, behaviors, opinions, and discourses of living beings” would certainly help explain why all those services upon which our way of life depends appear as a given.¹⁰

What would it bring to pry into this tacit dimension so central to our identities and habits alike, to get to the rather colorless bottom of things, so to speak? Architectural historian Sigfried Giedion took just this task to hand by researching the human impact of industrialization in the nineteenth and early twentieth century, work published in 1948 as *Mechanization Takes Command: A Contribution to an Anonymous History*.¹¹ Rather than approach the built environment through the conventional lens of progressive, heroic episodes of technology and architecture, Giedion probes the often unspecified social and material underside of the industrialized world. Through the mirror of overlooked fragments of industrial history with an emphasis on conventional domestic life, he looks specifically at how this mechanized legacy, as unassuming as it might appear, fundamentally shaped modern orthodox dispositions. By showing how standardized everyday practices are integral to modernization, the idealized unity usually imputed via masterpieces of the architectural canon falls away. In their place, Giedion discloses a mosaic of practices that, for example, led to the conception of the assembly line, the creation of the factory worker, the automation of production processes, the introduction of mechanical comfort, and the mechanics of food production, in order to offer glimpses into how such modest practices “accumulate into forces acting upon whoever moves within the orbit of our civilization.”¹²

One could argue that the scenes shown in *Mechanization Takes Command* function as a veritable ‘mirror stage’ for architecture and engineering, presenting both disciplines with the brute realities undergirding their idealized projections. Psychoanalyst Jacques Lacan suggested that human identity and behavior is carried by the misrecognition that arises in infancy when a child mistakes its mirror image for a unified and ideal figure, whose illusory wholeness stands in contradiction to the fragmented conditions of lived reality. By revealing an apparatus of quantifications, automations, standardizations, and other such transformative agents, it is as if Gie-



Fig. 2: Scene from the film *Pierrot le fou*, 1965, showing a highway fragment stranded in the French countryside with a mast for overhead high-voltage electricity lines in the background; directed by Jean-Luc Godard; cinematography by Raoul Coutard; produced by Georges de Beauregard; starring Jean-Paul Belmondo and Anna Karina.

dion entered the psyche of modern culture. He basically laid bear the forces of a 'technological unconscious' that, as infrastructural substrate, bends bodies, things, and environments around a bundle of supposedly guaranteed relationships that appear as a given.¹³ In sum, Giedion presents "not the ideal, unified, and singular picture of modern society, but a fractured and exposed underside of the systems and processes producing that society."¹⁴

Coming back to Godard, his later movies would become more pointed in their depiction of contemporary life, with infrastructure itself taking on a role as actor in framing the adverse conditions experienced. Take, for example, the shot in *Pierrot le fou* from 1965 showing a defunct fragment of a highway overpass stranded in a field from which somehow a car has fallen to be engulfed in flames below. We are no longer in that sublime Alpine landscape featured a decade earlier, but rather find ourselves somewhere out there in a peri-urban region of France that, although remote, is clearly plugged into an infrastructural network via high-voltage electricity lines running overhead. Despite this allusion to a sense of connectivity—in this case to the power grid itself—audiences are left not so much breathless as they are clueless as to how all of these elements hang together. In effect, we come upon a random moment of encounters that do not seem to follow a coherent story line, the connective logic thereof being just as fugitive as are the characters themselves. Other Godard films of the same period such as *Alphaville* from 1964, *2 ou 3 choses que je sais d'elle* from 1967, or *Week-end* from 1967, likewise implicate infrastructure as an agent in steering the course of lives in their respective stories—the omnipotent computer in *Alphaville*, the subway connecting or separating the *banlieue* from the center of Paris in *2 ou 3 choses que je sais d'elle*, and the road as the scene of a major car crash in *Week-end*. Such works put forth a critical stance vis-à-vis an unquestioned faith in the ubiquitous signs of progress of a technologically advanced society, showing instead how society is shot through with

precarious conditions of its own making that undermine the image of a perfectly functioning world. In resonance with Giedion's earlier excavation of anonymous histories of mechanization, Godard's filmic forays into a later stage of technological dependencies and their social ramifications would seem to have put audiences of his time before a mirror of their shared condition. In so doing, he enacted through such works what could be termed an 'infrastructural mirror stage,' revealing stubborn gaps between narratives of 'progress' that were supposed to suffice as the world's unifying plot and the ever more schizophrenic realities inhabited and produced. In place of a full-body assumed to be simply there and working, Godard presented a *mélange* of part-experiences and fragmentary circumstances of built and lived spaces alike, hinting at a 'de-organ-ized' state where an 'organ-ized' one had been assumed.¹⁵

Having tapped into the infrastructural nerve of modern society, Godard began to use his art form as a proactive political tool to raise public awareness about how 'machine-like systems' have woven themselves into the fabric of everyday life to become indistinguishable from it. In the late 1970s, he explored ways to use television as a medium for raising critical questions about its role in shaping society. The short video *Faut pas rêver*, for example, broadcast on French Public Television in 1977, shows a thoroughly domestic scene with a girl sitting at a kitchen table distractedly talking to her mother while watching TV on a set situated somewhere off-screen. The video suddenly shifts from this ordinary household scene to a text that appears line by line on a screen assumed to be that of the television. The text reads: "when the left is in power, will television still have so little connection to people?" In only two shots, Godard essentially enters the medium that enters the space of every home in order to reveal the ideological functioning of TV, allowing us to see what we usually miss when caught up in this or that show, namely, an infrastructurally-induced passivity. By turning the tables on TV, what Godard seems to ask is how we can get



Fig. 3: Installation at the Musée National d'Art Moderne, Centre Pompidou in Paris, 2012, with a television set showing the video film *Faut pas rêver*, which was created by Jean-Luc Godard and Anne-Marie Miéville in 1977 for French Public Television.

infrastructure to do more than just servicing a generally compliant society, suggesting that there is significantly more that infrastructure can really do.

With the work of Godard and Giedion in mind, we might consider what it would mean to bring infrastructure to the fore of collective consciousness today by acknowledging it as the structure of society that shapes our every way of doing things, be it for better or worse. Should we ever take it upon ourselves to ask what infrastructure can really do, we would have to recognize it, if not desire it, as something potentially more than just a mute provider of those taken-for-granted services upon which we depend. Perhaps then we would be better positioned to fathom how to reframe and reconfigure infrastructure as a common project to serve humanity as a whole. For this is ultimately what is at stake. To deploy an expanded infrastructural logic more proactively and put it to work as a public work, however, would mean that infrastructure, by definition and design, would have to go beyond its current technological mandate, usually specified in particular problem-solving terms alone. Put directly, what else can infrastructure do? Insofar as this question bears on how to harness as-of-yet untapped agencies of what remains in large part a mere background substrate, and given the urgency of tackling those pressing predicaments that are becoming increasingly collective by default, then the technical mandate of solving problems will have to be augmented with more inclusive political, economic, social, environmental, and even aesthetic responsibilities. But before this can happen, it is incumbent upon us to open up new channels for cooperation and to engender a shared desire for a common project of world-making rather than one of world-draining, if infrastructure is to truly take command.

Admittedly a tall order, it is to these ends that the work assembled in this publication is committed. The subject matter of the various essays were debated at a forum entitled *Infrastructure Space* that was held in Detroit from April 7–9, 2016, and organized

by the LafargeHolcim Foundation for Sustainable Construction. The conference was structured according to interrelated scales of infrastructure, with the workshops concerning the building/architectural scale moderated by Georges Teyssot and Laurent Stalder, those pertaining to the urban/metropolitan scale moderated by Jason Young and Jesse LeCavalier, those addressing the regional/territorial scale moderated by Kathy Velikov and Geoffrey Thün, and those covering the global/planetary scale moderated by Neil Brenner and Christian Schmid. In sum, the sessions took the lead in probing that gray anatomy of infrastructure space itself. As for the infrastructure of this book, its contents are arranged not so much according to predefined scalar categories as they are in consonance with thematic threads that surfaced during the event and follow-up discussions, moving—not unlike the above-mentioned phases of Godard's work—from infrastructure conceived as 'thing' to infrastructure as 'networked' system to infrastructure as 'agency'.

The essays are periodically interspersed by an 'atlas' of examples—prepared by Elena Schütz, Leonard Streich, and Julian Schubert from *Something Fantastic*—that playfully aims to read infrastructure through the lens of architecture.

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1. Gilles Deleuze and Félix Guattari, *Anti-Oedipus: Capitalism and Schizophrenia*, trans. Robert Hurley, Mark Seem, and Helen R. Lane (London: Athlone Press, 1984), 104; originally published as *L'Anti-Oedipe: Capitalisme et schizophrénie*, 1972.

2. Peter Sloterdijk, *Sphären series. Plurale Sphärologie: Band III: Schäume* (Frankfurt am Main: Suhrkamp Verlag, 2004), 554; translation by the authors. The original quote reads: "Wo Natur war, soll Infrastruktur werden." For the English translation, see Peter Sloterdijk, *Foams: Spheres Volume III: Plural Spherology*, trans. Wieland Hoban (New York: Semiotext(e), 2016). Sloterdijk is alluding to Sigmund Freud's well-known claim "Where id was, there ego shall be." See Sigmund Freud, New Introductory Lectures on Psychoanalysis 1933, in *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, ed. and trans. James Strachey (London: The Hogarth Press, 1953-1974), vol. 12, 80.
3. *Opération béton* produced by Jean-Luc Godard from 1954-1955, based on a script by Jean-Pierre Laubscher and shot by Adrien Porchet. The documentary film was released in 1958 by Actua Films. The opening line reads: "A 2'500m d'altitude, dans le val des Dix, un millier d'hommes dresse un mur de béton aussi haut que la tour Eiffel: le barrage de la 'GRANDE-DIXENCE'." The following line reads: "Le froid rendant impossible le bétonnage, la 'campagne du béton' tient le chantier en haleine dès la belle saison et se déroule comme une opération militaire."
4. R. James Breiding, *Swiss Made: The Untold Story Behind Switzerland's Success* (London: Profile Books, 2012), 298. See also Marc Angélil and Cary Siress, "Operation Switzerland: How to Build a Clockwork Nation," in trans: *Architecture and Politics*, vol. 18 (March 2011): 64-75.
5. Colin MacCabe, *Godard: A Portrait of the Artist at Seventy* (New York: Farrar, Straus and Giroux, 2003), 84.
6. Richard Brody, *Everything is Cinema: The Working Life of Jean-Luc Godard*. (New York: Henry Holt, 2008), 33.
7. The interpretation of infrastructure in Godard's early documentary builds on exchanges with Sarah Nichols and her analysis of the film in her lecture "Opération Béton" at ETH Zurich on September 28, 2015.
8. Michel Foucault, "The Confession of the Flesh," interview held in 1977 and published in Michel Foucault, *Power/Knowledge: Selected Interviews and Other Writings 1972-1977*, ed. Colin Gordon, trans. Colin Gordon, Leo Marshall, John Mepham, and Kate Soper (New York: Pantheon Books, 1980), 194.
9. Jean-Luc Godard, *Lettre à Freddy Buache*, short video film of approximately 11 minutes, 1981; cinematography by Jean-Bernard Menoud. Godard was hired to make a documentary celebrating the 500th anniversary of the city of Lausanne. The film is essentially Godard's videotaped refusal to accept the assignment to make a promotional film as requested by city officials. The authors would like to express their gratitude to François Charbonnet for calling attention to this particular work.
10. Giorgio Agamben, "What is an Apparatus?," in *What is an Apparatus? and*

Other Essays, trans. David Kishik and Stefan Pedatella (Stanford: Stanford University Press, 2009), 14; originally published as "Que cose un dispositivo?," 2006.

11. Sigfried Giedion, *Mechanization Takes Command: A Contribution to an Anonymous History* (New York: Oxford University Press, 1948).
12. *Ibid.*, 3.
13. Nigel Thrift, "Remembering the Technological Unconscious by Foregrounding Knowledges of Position," *Environment and Planning D: Society and Space*, vol. 22 (February 2004): 175-190.
14. Mirjana Lozanovska, "Thought and Feeling in Giedion's Mechanization Takes Command," in *Proceedings of the Society of Architectural Historians, Australia and New Zealand 30, Open*, eds. Alexandra Brown and Andrew Leach (Gold Coast, Queensland: SAHANZ, 2013), 889.
15. It is as if during this phase of his work in the late 1960s Godard was anticipating what Gilles Deleuze and Félix Guattari would call 'body without organs' or 'corps sans organes'. According to them, every actual body has a limited set of properties, yet is also extended via a "virtual dimension of potential traits, connections, affects, movements, and so forth." This collection of potentials is what they term a 'body without organs'. See Gilles Deleuze and Félix Guattari, *Anti-Oedipus: Capitalism and Schizophrenia*, trans. Robert Hurley, Mark Seem, and Helen R. Lane (Minneapolis: University of Minnesota Press, 1983), 9; originally published as *L'Anti-Oedipe*, in 1972. While Deleuze and Guattari were critical of the paralyzing modes of 'organ-ization' of modern society, they held out hope for ways to break out of culturally established conventions by tapping into this "collection of potentials." Concurrently, Godard was critical of the malfunctioning of modern society despite its common portrayal as being advanced yet he perhaps missed opportunities to reconsider other more nuanced functions of modern infrastructure than those for which it was designed, and to probe its "potential traits, connections, affects, movements, and so forth."