

SKETCHES OF A LINEAR STATE

magnetic mountain

involute spiral

midnight

"That is the corpse,
[...] why corpse?
It's made of wood,
The electricity came from a tractor,
The light always flickered to the rhythm of the engine"

— (Philipp Tolziner, 1995)

The rhythm, a flywheel jumping as fuel ignites in the piston, then slowly relaxing. A coil of copper wire, which, an unintended microphone, catches the jump in amplitude, then passes it on to the light's filaments, which glow brighter for a moment, then dim again. There is this unexpected sensitivity and incidental character in all machines, no matter how simple or provisional.



(left): Contour map of Magnitogorsk and surroundings (SRTM 2013)
(right): Rail lines of Magnitogorsk and surroundings, from (OSM 2023)



"Where is the mountain? ...
It is scattered, across the battlefields of Europe,"

— (Unnamed, 1946)

- but once, there was just the mountain, that dimly magnetic mound rising from the Ural steppe, and, a new mountain, that name given to the radicals of the French Revolution, a name inherited by the Bolsheviks, and, a new mountain, as Jean Jacques David had once built papier-mâché peaks from which Robespierre could descend, they would build a city, from nothing, of a new sort, from whose peaks a multitude of Robespierres-playing-Prometheus could return, transformed.



(left): the Road to the Capitol (right): The Capitol under construction. (Pierre Jeanerette, 1952 or 1953)

Three decades later, a new city was under construction. Punjab's pre-partition capital, Lahore, was in Pakistan, and Jawaharlal Nehru, India's prime minister, wanted to build a new capital, a capital which would symbolise a break from the past.

"the symbolic take over of the Chandigarh site was done on a rainy day in 1950. The Sukhna Choe was in flood. After the flood subsided he along with the District Magistrate and Superintendent of Police of Ambala crossed the Choe from the Mani Majra side on the old Chandigarh Ropar road taking along a motor grader. The motor grader cut into the field about a kilometre length of the road. This also marked the end of the agitation by the villagers of the Chandigarh region to stop the construction "

– (Rajivlochan, Meeta, Kavita Sharma, 2)

The villages of the region, their objections to the new city, vanished almost completely.

Nehru, defending Chandigarh against its many deficiencies, said it "makes you think," it was, in short, a tool for thought, a concrete device designed to provoke the new thoughts India would need to wrest itself free of the colonial legacy. At the same time, the clearance of some fifty villages from the site, a project that included great violence, including the use of live fire on protesters, was a process rich in the traditions of the British Raj.

"In practice we not only want algorithms, we want good algorithms ... one criterion of goodness is the length of time taken to perform the algorithm ... other criteria are the adaptability of the algorithm to computers, its simplicity and elegance, etc."

(Knuth 7)

In this description we can see two parts: first, the mechanical, the time taken to produce a given result, the 'adaptability to computers', the second, the social: simplicity and elegance. Simplicity and elegance is a consequence of conceptual vocabulary, it is specific to a peculiar habitus, and derives its relevance from the social character of work: when an algorithm is comprehensible, it can be communicated, elaborated, adapted, and worked on communally, in Knuth's case, by the community of programmers, but also in the more general sense.

" An independent deputy, the comte de Durfort-Civrac, . . . objected that these new boulevards, which were supposed to aid in repressing disturbances, would also make them more likely because, in order to construct them, it was necessary to assemble a mass of workers. "

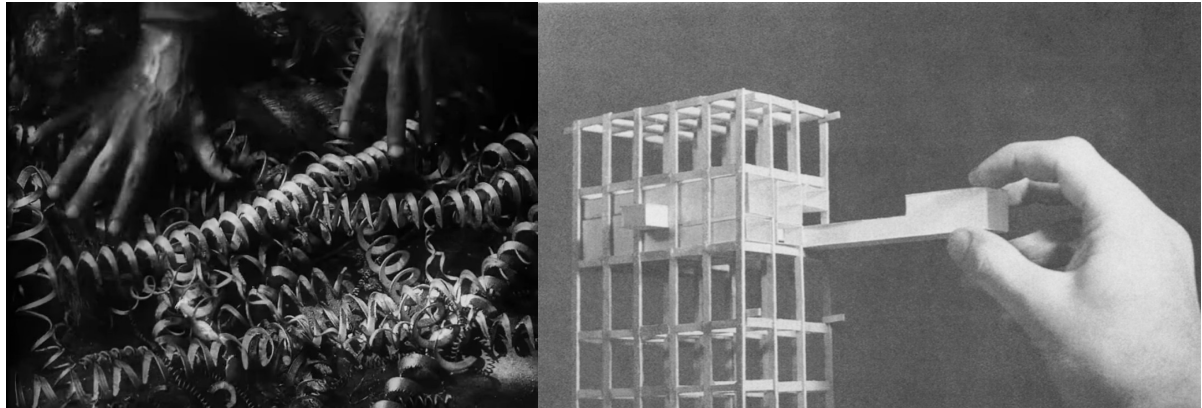
– (qtd. In Benjamin, 128)

Even the simple tools of Haussmann's labourers: the pick, the shovel, the wheelbarrow, the winch, have, in them, an explosive potential. To bring them to bear, a mass must be assembled, organized into a body, which then can threaten to do other things.

A barricade: "At the entrance to a narrow street, an omnibus lies with its four wheels in the air. A pile of crates, which had served perhaps to hold oranges, rises to the right and to the left, and behind them, between the rims of the wheels and the openings, small fires are blazing, continually emitting small blue clouds of smoke."

(qtd. In Benjamin 141)

While Haussmann's wide, radial streets imposed the logic of the star fort on Paris, the linear city operates like a machine. The main line operates as a 'bus', allowing goods and workers to travel directly to any given destination, while the line of parks and gardens (planned, but never built) would operate as insulation, protecting the delicate human components from the pollution and noise of the factory zones.



(left): metal shavings, still from *Stavka (strike)*, 1925.

(right): A depiction of the Modulor system, reproduced in *Prakash*

"The future is certain," goes the old soviet joke, "but the past is unpredictable", but, much like the 'dead hand' of the ossified past, the dead and preserved form of the future has a motile quality, a capacity to entirely transform to fit the needs of the moment, so the planned 'linearity' of Magnitogorsk became a segmented set of truncated sections, shorn of their insulating gardens. The communal facilities (laundry, house-cleaning, dining) shattered into nuclear family units, as the future assumed a traditional guise, and above all, the giant steel works expanded without constraint, voraciously consuming land, material, and labour power.

The smooth linear motion of the city, where workers move without interruption to their workplaces, then return without irritation to their dormitories, is dislocated, banged out of shape, turned into an improvised structure, a 'donkey's path' where the people, at each twist of the dogleg, are shook out of automatic action and forced to analyse, to negotiate, and to decide.

"By relieving the brain of all unnecessary work, a good notation sets it free to concentrate on more advanced problems."

— (Whitehead 59)

The layout of a city then becomes a 'notation of thought', freeing its denizens from thinking certain problems, promoting or prohibiting certain actions or communications, irritating, producing masses or scattering them, arranging chance encounters, isolating, poisoning, protecting, creating an entire strategic terrain in which the inhabitants move.

"The larger of the two chambers of the parliament was to be equipped for a mysterious solar ritual to be held every year ... 'reminding man [Le Corbusier explains] that he is the son of the sun.'"

- (Von Moos 433)

As Le Corbusier's cosmic machismo wed with Whig history, the gargantuan proportions of the capitol buildings took shape, but they developed a peculiar character.

In the city, there are 14 grades of housing, divided along occupational, caste and class lines. "Cleaners were even given their own entrance ... to prevent 'contamination' of the house by the lower caste servants." Like Corbusier's imaginary high-rises in **The City of Tomorrow**, which also included servants, this future will preserve the most atavistic elements of the past.

Le Corbusier, rather vague about politics, except insofar as he liked any administration that could conduct the sort of violence necessary to clear his work sites, was a strange and rather revealing fit for independent India.

The capitol buildings, echoing Lutyen's designs for New Dehli, would be accessed through a 'monumental connecting axis', a grand and bitterly hot road.

• "writings are but a reminiscence of what we know"

(Plato 488)

• Except, they are unpredictable reminiscences, and what we know reassembles and reforms into unknown territory, and even Plato, convinced that all knowledge is innate, could help but produce writing that uses resources unavailable to speech. The 'dumbness' of writing, the inability of writing to speak in its defense, creates a dual character, where the most passive and obliging of techniques are also the most volatile, protean, and explosive.

• "cordoned off by layers of barbed wire and backed up by sand-bags and the military, the Capitol ... is the very site of a beleaguered state."

- (Prakash 152)

• "increased incidents of fire in the dump, that the MOH [Medical Officer of Health] is neither able to prevent nor explain. The fire in March this year lasted a week and covered the entire city in a haze,"

- Petition submitted by Armit Sharma, 2022

• Chandigarh developed the appearance of "a colossal, grave, and dignified ruin," a monument to Nehru's modernizing project, which faltered some years before his death.



Banners of workers in a Magnitogorsk rally. The banner on the left reads "The first brick laid for the first furnace is the best gift for the XVII Party Congress".

• The strange mix of 'shock work', mass politics, and technocracy produced an explosive planning culture, where goods and labour for one project could be seized for another without warning, plans and personnel could be thrown overboard in an instant, and above all, the unpredictable demands of the furnaces had no bounds.

• Magnitogorsk burst the confines of the planned linear city almost from the first day, of which the only remaining trace is the clear division, separated by a lake, of blighted, lunar wasteland created by a century of factory, and the orderly rows of housing blocks.

• "the capital is become an overgrown monster; which, like a dropsical head, will in time leave the body and extremities "

- (Thomas Spence 5)

• "...an angry sea, raving
in bass notes of invisible waves"

- (Mayakovsky 50)

• A 'dignified ruin', wreathed in stinking smoke, and the magnetic mountain, now a set of holes. A successions of plans, all unfulfilled, scattered metal, spalling concrete, with washing hanging from the arches. The Ural lake itself, polluted, sectioned, and diverted. The Suhkna Choe, which is now a shrunken, silt-rich lake. Last, the 'Open Hand', Le Corbusier's grand monument to modernism's universal values, was built, but in 1985, 20 years after his death. This coincided with the then-ruling Congress party's adoption of an open hand as its election symbol.

Benjamin, Walter, et al. *The Arcades Project*. Third Printing, Belknap Press: An Imprint of Harvard UP, 2002.

Sharma, Kavita. *Chandigarh Lifescape: Brief Social History of a Planned City*. Chandigarh administration, 1999.

Prakash, Vikramaditya. *Chandigarh's Le Corbusier*, Mapin Publishing, 2002

Von Moos, Stanislaw. "The Politics of the Open Hand." *The Open Hand*, edited by Russel Walden, MIT Press, 1977.

Steden Voor Die Hielstaat. Directed by Anna Abrahams, interview w. Phillip Tolziner, 1995.

Knuth, Donald. *The Art of Computer Programming, Vol. 1: Fundamental Algorithms*, 3rd Edition. 3rd ed., Addison-Wesley Professional, 1997.

Plato, tr. Benjamin Jowett. *Phaedrus*. Oxford UP, 1923.

Mayakovsky, Vladimir, and Guy Daniels. *Mayakovsky: Plays (European Drama Classics)*. 1st ed., Northwestern UP, 1995.