



Photographs by Giorgio Grappi

THE LOGISTICAL CITY: SOFTWARE, INFRASTRUCTURE, LABOUR

NED ROSSITER



The logistical city is a city of peripheries. These peripheries are occupied by intermodal transport terminals, warehouses, IT infrastructure, container parks and shipping ports. Such logistical facilities do not stand isolated, of course, but are interspersed with suburbs, green belts, roads, railways, water systems and barren land. The interconnection of peripheries on a transnational scale comprises a special kind of globality, one in which the complex network of distribution systems – roads, rail, shipping, aviation – makes concrete the otherwise mysterious abstractions of capitalist operations. Yet for all this materiality, the logistical city goes largely unnoticed in the metropolitan imaginary precisely because the margins of cities tend to be overlooked and made invisible by more spectacular elements – magisterial feats of architecture, harbour views, cultural festivals and so forth. We long ago resigned ourselves to not needing to know how things work or where things come from. And we are in no rush for a reminder. The logistical city ticks along in the background as we get on with our busy daily lives.

The logistical city is distinct from the global city, which is characterised by financial services located in CBDs and cosmopolitan populations whose ethnic peculiarities are integrated more or less seamlessly into the flow of global economies. The logistical city also differs from the industrial city, which is defined by class stratifications across urban spaces and an

economy based on the manufacturing of goods. Like the global city, the logistical city is a city of services, but these services are driven by computational systems oriented around managing the mobility of things produced by the industrial city, and servicing the services of the global city.

Thirty years ago the L.A. School of planners, geographers, sociologists and historians identified many of the features of the logistical city just described, especially 'the emergence of information-age "edge cities," and the hypermobility of international capital and labor flows', as recounted by Steven Erie in his book *Globalizing L.A.: Trade, Infrastructure and Regional Development* (2004). The logistical city nevertheless stands out as a new urban form for the ways in which it stitches together diverse cities and regions across the global north and south, continuously reconfiguring connections according to just-in-time demands of supply-chains and contingencies that disrupt their smooth operation. Whenever a new diagram of relations is set into play, a new logistical world is created in which difference must either be displaced or absorbed. This spatio-temporal elasticity and capacity to adapt to changing conditions is perhaps what marks the logistical city as particularly distinct from other urban forms. Always searching for enhanced efficiencies across its circuits of distribution, the logistical city is an urban laboratory ripe in experimentation. The logistical city can also be understood in terms of

what architect Reinhold Martin calls an 'organizational complex', which consists of technocratic and aesthetic systems designed to modulate the world as 'an organized, informatic pattern' in flexible ways. Not constrained by sovereign rule or national borders, the logistical city is a recombinatory form that attempts to standardize capital accumulation from the micro level of algorithmic apparatuses to the macro level of global infrastructures. Standards are crucial to the universal logic of interoperability across software platforms and infrastructural components. Without them, cargo containers could not transfer with such ease from ship to truck, software operating systems could not exchange data across platforms, and circuit boards could not be manufactured to fit and function in multiple computational devices.

Whoever sets the standard rules the world. Yet standards change and develop over time. New standards are always being established, though only some percolate to the top and become universally adopted. This is where innovation meets political economy. The desire for a trans-scalar smooth world, however, is accompanied by any number of contingencies: labour strikes, software glitches, inventory blowouts and traffic gridlock, to mention just a few that come to mind. In principle, the topological parameter of 'fault tolerance' incorporates such disruptions to make anew the seamlessness of logistical worlds. But there can be no denying that contingency is the nightmare of logistics.

Logistical nightmares can be found across the cities investigated in the Transit Labour project, which examines how circuits of labour are reshaping the contours of regions while coming up against, testing and transforming a multiplicity of borders. Rajarhat New Town is a development underway since the late 1990s on the north-east fringes of Kolkata, situated between the airport and on the edge of Sector V, an IT park developed in the 1970s as an industrial extension of Kolkata's Salt Lake township. The government legislation that authorised both of these developments is complex and fraught with political conflicts and social tensions. Chief among these was the West Bengal Housing Infrastructure Development Corporation's (HIDCO) invocation of a colonial administrative remnant, the Land Acquisition Act of 1894. When combined with a China-inspired neoliberal legislation, the Special Economic Zone (SEZ) Act of 2005, HIDCO was able to legally conjure a zoning technology for Rajarhat designed to attract foreign capital to finance the transformation of fertile agricultural land and fisheries into non-agricultural use. The economic and social displacement of peasant populations numbering

in their tens of thousands recalls for Ranabir Samaddar and his colleagues at the Calcutta Research Group the Marxian critique of 'primitive accumulation', or what David Harvey prefers instead to term 'accumulation by dispossession'. In the case of Rajarhat, the expropriation of land and the partial remobilisation of peasant labour forced by HIDCO into 'service villages' are the conditions of possibility for the logistical city and its information economy.

Following an initial surge which saw the instalment of fibre-optic cable and a skeletal road system, a number of international and national IT firms opened for business in Rajarhat, including Wipro, Accenture, Unitech, IBM and Tata Consultancy Services. Graduates of computing and IT programs working in these firms are largely undertaking beta-testing of new software or BPO (business process outsourcing) work, doing basic data entry and accounting tasks for financial, medical and insurance companies based in Europe and North America. It is worth noting that a logistical city like Rajarhat registers an uneven geography of information that goes one step beyond the international division of labour running along the global north and south axis. Most of the IT related work in Rajarhat, as well as Sector V, is a secondary form of outsourcing internal to the nation state. Parent firms based in Mumbai, Chennai, Bangalore and Hyderabad undertake the more interesting R&D and management related work, while IT workers with similar qualifications are lumped with more menial informatic tasks.

With India's elevation in these sort of high-skill sectors of the information economy, it is hard not to assume a substantial loss of similar jobs in the global north accompanying forms of outsourcing internal to the space of the nation within India. In Australia in recent weeks and months, we have heard much about how the aviation and finance industries are also planning to outsource data-entry and general service related work. Whether it is the global or national scale, the key driver behind these decisions is, of course, the lower cost of labour coupled with cheaper land leases for IT service firms located on the peripheries. And this is where logistical cities such as Rajarhat find their rationale for existence.

Since 2008, however, the rate of development in Rajarhat has slowed considerably due to the effects of the global financial crisis. Partially built apartment towers stand isolated against a backdrop of now arid land dotted with surveyor's pegs and the occasional grazing cattle. Many of the complete residential complexes remain empty as investment owners are located in other Indian cities or live overseas.

A number of IT firms are operating, but their workers are often commuting from elsewhere in Kolkata, as do many of the owners of the makeshift teahouses and eateries servicing the IT workers during their breaks.

As Ishita Dey's research has made clear, some of the women find employment as domestic labour, but for most of the men security and construction work is considered semi-skilled and usually contracted out to migrant workers residing elsewhere in India. Following some initial work filling in the wetlands, this only leaves low-skill construction jobs and teahouses as sources of income for men. No wonder, then, that Rajarhat New Town is the scene of regular acts of infrastructural sabotage, social unrest and political conflict. Not only is the logistical city distant from metropolitan imaginaries, it suffers the intrusion of materiality in ways that unsettle the abstraction of information.

The logistical city is also at the cutting edge of labour reform. Technologies of automation are transforming shipping ports across Australia and elsewhere in the world, shifting the work of wharfies from the dockside to the screen where the oversight of robotic operations is duplicated by human labour clicking through the interface of software applications. Whether machine or flesh, performance indicators are finely calibrated against time and volume. The logistical city does away with the biological and social rhythms of urban life so beloved by Henri Lefebvre, and instead operates by the cold sword of code that measures productivity and worth in real-time.

The year 2009 saw not only the initial peak of the ongoing financial crisis, it also occasioned the entry of Chinese state-owned shipping and logistics company COSCO into a 35 year lease agreement with Greek authorities to access and manage port space at Piraeus, one the largest shipping ports in Southern Europe located 12km outside of Athens. Along with upgrading port facilities and apparently dramatic increases in productivity, local Greek workers have found themselves confronted by employers with substantially different ideas about working conditions, pay rates and workplace safety. As Greece cedes its sovereign authority to more powerful economic actors, Greek citizens and organizations such as unions have diminished ground upon which to contest perceived and experienced inequalities. With software programs devised to manage key performance indicators (KPIs) and global supply chains, algorithmic cultures are key agents that govern subjects and things in logistical operations such as those found at Piraeus, among countless other global sites.

By way of conclusion, the logistical city is caught between expediency and contingency. The machine dream of absolute efficiency runs counter to the unruliness of labour and life. The elasticity of logistical time and space must nevertheless contend with the materialities of society and place, particles and power. Even if the logistical city could overcome the protocological asymmetries across software platforms that prevent cross-sector and global interoperability, it could never entirely eradicate the constituent power of refusal. The logistical city is cold, and without employment. The work has been done, elsewhere, sometimes hundreds if not thousands of kilometres away.

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