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Still Waiting, Still Moving: On Labour, Logistics and Maritime Industries

Abstract: This essay considers how periods, often prolonged, of stasis underscore the passage of people and things in the maritime industries. Examining the role of logistics as a biopolitical technology central to managing the movement of labour and commodities, this essay examines those subjects, times and spaces in the maritime industries that refuse capture and stasis. By stressing the role of logistics within post-Fordist labour regimes of flexibility and transnational relation, the essay argues that this managerial science is strangely out of time, signalling the future-present of labour conditions and state sovereignty. Particular attention is paid to the use of 'flags of convenience' in shipping registration and their marking of vessels as sites of extra-juridical governance where cargo, software and labour power move in and out of the logic of territoriality. Broadly speaking, the essay investigates how logistic methods of governance, measure and management come to bear upon contemporary forms of labour and mobility.

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Driving past stacks of containers organized in long rows arranged in grid-fashion, the impression of lonely canyons of buildings in a city's finance district is distinct. Yet this is no business precinct in some anonymous city, but Beilun port, one of China's largest shipping hubs near the city of Ningbo, which is located a few hours south of Shanghai – the nearest competing deep-water port. We arrive at one of four loading docks. A few massive ships are lined up alongside container cranes. What's striking is the seeming absence of workers. For one of the biggest ports in the world, there was surprisingly little activity – not a lot of movement of containers, and very few workers. But perhaps this shouldn't be such a surprise – financial news reported on the savaging of the shipping industry in the first 6 months of the global economic crisis: shipping companies were collecting 75-80% less on the cost of transporting containers; charter rates plunged to levels that no longer return profits, reproducing the falls in freight rates; smaller shipyards across China were abandoned, with half-finished ships never to be built; inventories of iron ore, electronics, textiles and sports shoes were among the many commodities piling up in the ports across China, with no market destination.[1] Clearly, if you ever wanted to move goods across the oceans, this was the time to do it with prices so low.

In April 2009, *The Times* noted that 'about 10 per cent of the world's 10,650 in-service container ships and bulk carriers are currently sitting empty and at anchor waiting for cargoes that are simply not emerging'.[2] This figure varied according to

[1] See Thomas Schulz, 'Global Crisis Hits Shipping Industry Hard', *Spiegel International*, 5 December, 2008, http://www.spiegel.de/international/business/0,1518,594710,00.html. See also Leo Lewis, 'Worldwide Shipping Rates Set to Tumble 74%', *The Times*, 8 April, 2009, http://business.timesonline.co.uk/tol/business/industry_sectors/transport/article6058358.ece

[2] Lewis, 'Worldwide Shipping Rates Set to Tumble 74%', 2009.

region of trade and the type of goods transported; around 25% of ships transporting 'raw materials in the Pacific are now idle'.[3] Many of these 'parked' ships were in waters off Malaysia, Indonesia and the Philippines,[4] presumably because of cheap oceanic real-estate and less securitized waters than neighbouring China, Taiwan, South Korea and Japan.

If ever the ocean was assumed as porous, unregulated space the increasing connection between territory, resources and sea suggests otherwise. What is striking is the stasis, if not the slowing, of maritime transport in a time when the globalizing nexus of transport and communication is almost universally characterized by metaphors of speed or acceleration. The exigencies of capital and demands of the bottom-line dictate not only the presence of these phantom ships parked in the world's most affordable waters. They also mandate the growing practice of 'slow steaming' as a way of meeting the rising cost of fuel. According to *The Journal of Commerce*, 'slow steaming can save 5 to 7 percent on total operating costs of long-haul loops, including the costs of extra ships and containers required for longer transit times'.[5] Contrary to the easy image of stillness and slowness as a contrast to or escape from the world of capital, stillness or the tendency towards it, in this instance, surpasses or exceeds velocity as a means of accumulation. We are suspicious of attempts to mobilize the topology of stillness as a means of discerning the ontological and epistemological registers of an alternative politics. Stillness is not potentiality. It doesn't necessarily imply the capacity to struggle, subtract or constitute new subjectivities. The radical aporia it presents vouchsafes nothing but the worst kind of deconstructive recursions. Inertia and confusion cannot be the response to the giddying currents of global capitalism. This is why we approach stillness through the grid of logistics. For us, stillness is a figure of unbecoming, to recall the title of a favourite text written in a very different context,[6] that emerges on capital's cutting edge. What are the politics of this emergence? And how do they intersect the connection between territory, sea and resources? This essay confronts these questions by considering the transformations of maritime industries within the pincers of labour and logistics.

Labour, for us, is not merely work, but the name of subjectivity under the domination of the state and capital. Nicholas De Genova reminds us of Marx's glossing of the category of labour as 'energy', 'unrest', 'motion' and 'movement'.[7] In its most expansive sense, labour is a kind of life activity, a creative vocation and existential condition with enduring political significance. What we want to mark at both the conceptual and material levels is the tension between labour's unrest and its subjection to the capture of capital. The latter requires a process of abstraction that drains labour of its subjective energy and makes it fit within homogenous units of

[3] Schulz, 'Global Crisis Hits Shipping Industry Hard', 2008.

[4] Lewis, 'Worldwide Shipping Rates Set to Tumble 74%', 2009.

[5] Joseph Bonney, 'Carriers Move Full Speed into Slow Steaming', *The Journal of Commerce Online*, 12 January, 2010, http://www.joc.com/maritime/carriers-move-full-speed-slow-steaming

[6] Eric Michaels, *Unbecoming: An Aids Diary*, Sydney: Local Consumption, 1990.

[7] Nicholas De Genova, 'The Deportation Regime: Sovereignty, Space, and the Freedom of Movement. Theoretical Overview', in Nicholas De Genova and Nathalie Peutz (eds), *The Deportation Regime: Sovereignty, Space and the Freedom of Movement*, Durham, NC: Duke University Press, 2010.

temporal measure. The struggle between abstract and living labour not only crosses human bodies and souls. It also shapes the heterogeneous domain of global space, including the various territories and waters that merchant vessels move across. It would be a mistake to simply contrast labour's movement with capital as a figure of stasis. The truth is that both have their modes of slowing and acceleration and the relation between them, as much as it is always social, also plays itself out in ratios of time and space. How these ratios are governed or controlled defines the temper of labour in its various material contexts. While these contexts are quite obviously multiple, there is also something common about the development of capital at the global level. Our concern with the specificities of labour in the maritime industries, and in particular its regulation through the managerial science of logistics, is meant to pierce through the limitations of our own ethnographic encounters. At stake is the tracing of a particular contour of labour today into which the more general logic of capital irresistibly feeds.

How this shift between the general and particular occurs, and its relevance for ongoing struggles between living and abstract labour, is a question of governance and sovereignty. Because the shipping industries involve the movement of bodies, goods and vessels across both territorial and extraterritorial spaces, they provide a strategic angle through which to investigate the contemporary transformations of these two forms of power. Our interest in logistics stems from its crucial role in managing the relations between governance and sovereignty in ways that apply to methods of production and patterns of mobility in an era of informational capitalism. The primary task of the global logistics industry is to manage the movement of people and things in the interests of communication, transport and economic efficiencies. Logistics thus becomes central to understanding emerging social configurations as well as their implied technologies and labour regimes. When connected, as it usually is, to the movement of people and goods in and out of territorial spaces, logistics also crosses the global regime of border management, and consequently holds broader implications around the transformations of sovereign power and the governance of transnational worlds. In the case of the shipping industries, where labour regimes are determined by multiple sovereign powers (those pertaining to vessel registration, for instance, as well as those associated with international waters, the territorial location of ports, the citizenship of workers and the global financial system), logistics play a key role in mediating the relations between different kinds of futures.

As is well known, Michel Foucault closed his essay 'Of Other Spaces' by declaring that the 'ship is the heterotopia par excellence'.[8] Our essay works in counterpoint to this extraordinary statement. Foucault writes: 'In civilizations without boats, dreams dry up, espionage takes the place of adventure, and the police take the place of pirates'. It is not that we are unsympathetic to dreams, adventure and pirates. Our inclinations are quite the contrary. Rather, we are unaware of civilizations without boats. In today's world, even a landlocked country such as Switzerland hosts MSC, one of the world's largest shipping lines. Similarly, a nation as remote from the ocean as Mongolia runs a thriving ship registry. The division between land and sea, which Carl Schmitt in his 1942 text *Land und Meer* associated with the rise of British

[8] Michel Foucault, 'Of Other Spaces', *Diacritics* 16.1 (1986): 22-27.

maritime power, is still applicable. [9] No longer, however, does it ground two separate and distinct global orders. Already in the final chapter of his text, Schmitt argued that the rise of air power and electronic communications was eroding the division between land and sea. Today capitalist globalization at once creates a single global order and constantly divides it through multiple and shifting practices of bordering. Paradoxically, these practices of bordering, among them those that establish different legal jurisdictions across land and sea, are essential to maintain the singularity of this same global order.

The ship is a vessel that moves between territorial and oceanic flows. Despite the seeming openness of the borders presented by maritime economies and cultures, there are strong ways in which connections between the sovereign spaces of the territorial state are coextensive with the circuits of movement within shipping. Today new forms of control are taking grip of life at sea. Although there remain exceptions – perpetual fluctuations in market economies and the economic ambitions of pirates, to take two prominent examples – the regimes of labour instantiated by logistics and its concomitant software architectures signal that the ship is no longer some kind of 'other space'. Broadly speaking, our essay traces the contours of this change, investigating how logistic methods of governance, measure and management come to bear upon contemporary forms of labour and mobility. We track the ways in which stillness shadows these patterns of transport and is, in turn, integrated into logistical governance as one of its basic preconditions and most potent technologies of control.

Biopolitics, Software, Movement

At the level of labour management, logistics registers the calculation of time against the performance of tasks and movement of things. This is where Marcel Mauss's techniques of the body and related early twentieth-century studies in body-motion and their technologies of capture (principally the chronophotography of Etienne-Jules Marey) provide the preconditions for labour efficiencies. The breaking down of labour's movement into still frames provides the impetus for its subsequent integration into a dynamic of control – or what Anson Rabinach terms a 'physiognomy of labour power'[10] – in industrial and, later, informational market economies.

The rise of what we would term 'informatized sovereignty' takes on particular hues in the logistical techniques associated with the maritime industries.[11] Code is king. To find out more about the role of software in logistics, we got in touch with two logistics workers in China – one employed by a U.S. automotive company based in Shanghai

[9] Carl Schmitt, *Land und Meer, eine Weltgeschichtliche Betractung*, Leipzig: Phillip Reclam, 1942.

[10] Anson Rabinach, cited in Rheinhold Martin, *The Organizational Complex: Architecture, Media and Corporate Space*, Cambridge, Mass.: MIT Press, 2003, p. 17.

[11] A study of logistics in the aviation industries would, we suspect, produce similar findings. However, with its considerably longer history and thus conflict with shifting epochs, the maritime industries hold greater interest precisely because they were not born in a time of modern logistics, as the aviation industries arguably were.

and the other studying at Shanghai Maritime University, having previously worked in container stowage at the Shanghai Port. Both placed an emphasis on the importance of efficiencies in logistics, with one noting that 'Well organized and highly-efficient workers can eliminate the risk and cost of logistics activities and provide added value service to customer'. This automaton-like response is embodied in software standards for logistics.

Enterprise Resource Planning (ERP) databases are standard platforms used within logistics in combination with customized software applications to manage global supply chains, organizational conditions and labour efficiencies. Key Performance Indicators (KPIs) are software interfaces built into ERP databases to measure worker and organizational efficiencies, meeting of target quotas, financial performance, real-time status of global supply chains, and the capacity of the organization to adapt to changing circumstances. These are all quantitative indicators that register performance with a numerical value, however, and are not able to accommodate more immaterial factors such as a worker's feelings and level of motivation and enthusiasm. It would seem logistics software is still to address the biological spectrum special to the species-being of human life. Yet it in another sense, such immaterialities of labour and life are coded into the quantitative parameters of KPIs through the brute force of instrumentality or calculation: no matter how a worker might feel, quotas have to be met and global supply chains must not be adversely affected. Feeling at once exceeds measure and is constantly drawn back into its purview. This is again the tension of living and abstract labour.

The coded materiality of fulfilling performance quotas and ensuring the smooth operation of supply chains subsists within its own universe of auto-affirmation. The relationship between logistics software and self-regulation by workers assumes closure in the circuit of governance. One of our logistics informants put it this way: 'As per our broker's management experience, every staff is trained to use their internal ERP software to reflect every movement of their work. Moreover, the data from ERP software is also used as a tool or KPI to evaluate staff's performance, thus making them work more efficiently'. This ready inculcation of both disciplinary practices and the logic of control within the organizational culture of the company and its workers is quite revealing. The logistics industry further amplifies such biopolitical technologies by programming the labour control regime into the logistics chain at the level of code. A 'Standard Operation Procedure' (SOP) is incorporated into the KPI of workers.[12] The SOP describes the status of a specific job, dividing it 'into measurable control points'. Our informant provided this example: 'For instance, we would set SOP to our broker, which may require them to finish custom clearance of a normal shipment within 3 working days, if they fail to hit it, their KPI will be influenced and thus influence their payment'.

There is a sense here of how logistics software 'reflects' the movement of labour as the fulfillment of assigned tasks over a set period of time. This sort of labour performance measure is reproduced across many workplace settings. What makes it noteworthy here is the way in which the governance of labour is informatized in such

[12] Standard Operation Procedure also refers, of course, to the routine practices of torture adopted by the U.S. military, supposedly as a technique of interrogation. The shared terminology here should come as no surprise, given the origins of logistics within the military-industrial complex.

a way that the border between undertaking a task and reporting its completion has become closed or indistinct. Labour and performativity are captured in the real-time algorithms of code. With the rise of informatized sovereignty, biopolitical control is immanent to the time of living labour and labour power.[13] There is a technological attempt to eliminate the temporal delay between the execution of duties and their statistical measure. The digital effort to close this gap, to tether labour to the instantaneity and feedback of such measure, is another register of stillness's intimate relation to mobility and ambivalent political status. One logistics interviewee described how their broker uses ERP software to evaluate the KPI of workers:

> Each employee is asked to mark it in the ERP system when they finish their required work. There are two advantages for it: 1) If they fail to finish the logistics activity within SOP time, they check in the ERP system to find which employee did not complete his/her time according to SOP, which help measure employee's performance. 2) Every employee could track in the ERP system to know about the current status/movement of the logistics activities. In short, ERP software visualizes the movement of logistics activities by efforts of every link in the logistics chain.

As noted earlier, ERP software is a quantitative system, and as a closed cybernetic model it refuses the feedback or noise of more immaterial forces such as worker's attitudes, feelings and levels of motivation that would have disruptive effects.[14] A more sophisticated software environment would calculate in such variables precisely because their modulating power operates in a replenishing way, such is the extractive logic of capital and the organic *modus operandi* of life. As it stands, the metaphor of global supply *chains* signals a totalizing vision in which everything can be accounted for, measured and given an economic value. As Sandro Mezzadra and Brett Neilson note, 'the notion of the chain, while it carries a sense of ligature or bondage we wish to maintain, suggests the linkage or articulation of multiple units into a single linear system'.[15] While the cutting edge of logistics seeks to eliminate point to point integration in favour of more complex methods of event processing, supply chain management continues to involve forms of process integration that counterpoint stillness and flow along a traceable line of transactions that can potentially be reversed.[16]

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[13] See also Tiziana Terranova: 'What we seem to have then is the definition of a new biopolitical plane that can be organized through the deployment of *immanent control*, which operates directly within the productive power of the multitude and the clinamen'. *Network Cultures: Politics for the Information Age*, London: Pluto, 2004, p. 122.

[14] Since logistics software operates as a closed environment that does not accommodate feedback as a correctional process through the modification of form, it is not properly a cybernetic system, as developed by Norbert Weiner in his book *Cybernetics; or, Control and Communication in the Human Animal and the Machine*, Cambridge, Mass.: MIT Press, 1948. As Rheinhold Martin notes in his account of Weiner's work on cybernetics, 'The second law of thermodynamics [which Weiner drew on in his study of 'systems of information measurement and management'] holds that the overall level of entropy, or disorder, tends to probabalistically to increase in any closed system'. It is in this respect that one wonders how logistics does not break down into frequent chaos. See Martin, *The Organizational Complex*, p. 21.

[15] Sandro Mezzadra and Brett Neilson, 'Care Workers, Traders, and Body Shoppers', unpublished paper, 2009.

[16] Chengxuan Cao et al., 'Key Issues of a Software Focused Supply Chain', *Industrial Informatics IIEE Conference on Industrial Informatics,* Singapore: National University of Singapore, 2006, pp. 747-752;

A strategy referred to as 'postponement' in management discourse and practices of industrial control is an example of how the oscillation between movement and its arrest are central to the generation of economic value.[17] This is especially the case in electronic manufacturing industries and service providers in computing and mobile telephony, where profits are derived increasingly less from the assembly of hardware and more from product differentiation enabled by the customization of software. Companies such as Dell and Ericsson incorporate 'software-focused' supply chains into their metrics of performance and delivery, where the strategy of postponement effectively renders the commodity in a state of suspension, withdrawn temporarily from circuits of assemblage. As the authors of one study observe, 'by delaying the product differentiation process, companies would be able to base their product on aggregated forecasts, thereby taking advantages of the risk pooling effects, standardize their manufacturing processes, thus enjoying economies of scale, and to be more responsive to changes in customer needs'.[18] In software-focused supply chains, we see here how stillness as delay holds an intimate connection to the replenishment of capital.

In terms of logistics and more traditional supply chains, there is an institutional, discursive and political-economic investment in securitization and risk assessment that underscores the need for linear systems of control. And such linearity and closure is always going to be the condition of undoing for a system that rests on stasis, consistency and control without incorporating contingency and complexity that define the 'far-from-equilibrium' conditions of life-worlds as understood in more advanced cybernetics.[19] The dismal 'failure' of the U.S. led consortia in the war on Iraq embodies the limits of military logistics in the theatre of war. Yet as we have been reminded in recent media reports on the economic crisis, the limits or failures of capital present new opportunities for its ongoing reproduction.

The shady advisory role to U.S. administrations of RAND Corporation, a non-profit global policy think-tank first established by the Douglas Aircraft Company in 1946, is one of many examples of organizations that devised a strategy of institutional consolidation and financial extension by building on the enhanced environment of 'risk' that followed in the aftermath of the September 11 attacks in 2001. In a report on security recommendations for containerized shipping and global supply chains, Henry Willis and David Ortiz set out a logistics framework of 'three independent and interacting networks':

> A physical logistics system for transporting goods; a transaction-based system that procures and distributes goods and that is driven primarily by

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Diane Mollenkopf, Ivan Russo and Robert Frankel, 'The Returns Management Process in Supply Chain Strategy', *International Journal of Physical Distribution and Logistics Management* 37 (2007): 568-592.

[17] Mabel C. Chou et al., 'Analysis of a Software-Focused Products and Service Supply Chain', *IEEE Transactions on Industrial Informatics* 2.4 (2006): 295-302.

[18] Ibid., p. 298.

[19] See Terranova, *Network Cultures*, p. 122. See also Ned Rossiter, *Organized Networks: Media Theory, Creative Labour, New Institutions*, Amsterdam: NAi Publishers / Institute of Network Cultures, 2006, pp. 166-195.

> information flows; and an oversight system that implements and enforces rules of behavior within and among the subsystems through standards, fines, and duties. Network components are *nodes*, such as factories and ports, and *edges*, such as roads and information links.[20]

These RAND authors are clear on the centrality of security for global supply chains, which they envisage as a network of interconnected layers, nodes and edges. The aim of the report is to assess the proliferation of securitization methods for managing the risk of threat and potential attack on populations or the supply chain itself. Security here is no longer restricted to protecting against the traditional threat of 'loss of cargo shipments through theft and misrouting', but is instead focused on both *imminent* and *immanent* threats that move across the globe hidden within shipping containers that enter nations through ports. The security strategy here corresponds to what Melinda Cooper analyses as the preemptive strategies conditioning, in part, the emergence of bioterror.[21] Following the work of François Ewald, Cooper identifies the *catastrophe event* as 'the defining predicament of the neoliberal politics of security'.[22] In the case of maritime industries and their global supply chains, logistics is identified by RAND as the topology of risk that can be related to the discourse on the catastrophe event. Such an event, explains Cooper, provokes 'not so much fear (of an identifiable threat) as a state of alertness, without foreseeable end' in which the 'only possible response to the emergent crisis (of whatever kind – biomedical, environmental, economic) is one of speculative preemption'.[23] There is great business to be found, after all, in such a speculative environment of permanent preemption. The strategy of preemption is one that gambles on arresting the future as an actionable event. And RAND have always been alert to such opportunities, especially when they come in the form of consultancy to business communities and governmental administrations.

At once appraising and questioning the security efforts of maritime and port authorities such as The International Maritime Organization (IMO) and supporting U.S. legislation such as the Maritime Transportation Act of 2002 (MTSA), which designated authority to the U.S. Coast Guard for compliance and enforcement of security measures across U.S. ports, the RAND authors extend their assessment of maritime actors to have initiated security responses to include the World Customs Organization, the World Shipping Council, the Pacific Maritime Association, the United Nations Council on Trade and Development, U.S. Customs and Border Protection, the Transportation Security Administration, along with all 361 U.S. ports and most international ports.[24] The report expresses doubt over the capacity of the security efforts of such organizations to fully address the scope of the security problem, due largely to the oversight of policies on the networked logic that defines the movement of people and things. The authors highlight 'fault tolerance' and 'resilience' as particular omissions in securitization policy in the maritime industries.

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[20] Willis and Ortiz, *Evaluating the Security of the Global Containerized Supply Chain*, 2004.

[21] Melinda Cooper, *Life as Surplus: Biotechnology and Capitalism in the Neoliberal Era*, Seattle: University of Washington Press, 2008, pp. 74-100.

[22] Ibid., p. 83.

[23] Ibid.

[24] Willis and Ortiz, *Evaluating the Security of the Global Containerized Supply Chain*, p. 2.

The former refers to the capacity of logistics to 'respond to disruptions and failures of isolated components without bringing the entire system to a grinding halt'. The latter refers to the 'design function' of a system and its ability 'to return to normal operating conditions quickly after the failure of one or more of its components'. Both are identified as important to the efficiency and security of a system 'under both normal and emergency operating conditions'.[25]

As noted in the earlier examples of 'slow steaming' and the accumulation of empty container ships parked off East Asian coastlines, the global logistics industry has its own special logic of adaptation. As a complex system, logistics accommodates contingency – or what is referred to here as 'emergency operating conditions' – as a force able to produce economies of association, no matter if profits are not directly connected to that which has become immobilized. The slow steaming ship offsets economic losses from smaller cargoes with savings in fuel. The anchored bulk carriers create new lines of profit generation for those countries able to lease their oceanic territories as parking lots during times of reduced traffic in global commodity flows. The instance of the immobilized ship is never equivalent to a systemic-wide failure, but results rather from modulating temporalities across space. The 'grinding halt', in other words, functions as an occasion to discover new and unforeseen frontiers of capital regeneration. Logistics sets capital in motion.

The list of recommendations in Willis and Ortiz's report illuminates the scope of the securitization discourse as it manifests within the maritime industries and its logistics, transaction and oversight layers whose network of relations comprise the governance of global supply chains. Along with recommendations for public sector management (which for RAND means the U.S. Government) of fault tolerance and resilience of global container supply chains – and not, interestingly, the private sector due to potential market failures of providing what the authors assign as a 'public good' – special attention is given to research and development that targets 'new technologies for low-cost, high-volume remote sensing and scanning'.[26] Here, a wide-range of options are canvassed, including anti-tamper seal technology designed to detect port of entry of containers and protect against either fraud or terrorism; x-ray and gamma-ray scanning of cargo shipments in order to make transparent illegal or dangerous cargo such as weapons; and radiation pages, portal sensors and remote monitoring to detect weapons of mass destruction.[27]

Recommendations are also made for the use of RFID (radio-frequency identification) technology, which registers the geographic position of ships and goods and assists in the management of inventories and the efficiency of supply chains. While largely used as a tracking and data storage device, the surveillance of labour through the use of RFID tags is already underway in some service and health industries. The regulation of labour in the maritime industries is, for the time being, left to other digital systems of control such as ERP and KPI software. Combined with an array of other software packages used in the shipping industries, such as platforms that

[25] In these terms – i.e. 'fault tolerance' and 'resilience' – logistics is returned to cybernetics as an 'open' system that accommodates the feedback of noise as a corrective operation, stabilizing the system in a state of 'dynamic equilibrium'. Cf. note 43.

[26] Willis and Ortiz, *Evaluating the Security of the Global Containerized Supply Chain*, p. xiii.

[27] Ibid., pp. 21-23.

provide real-time simulations of vessel movements, the ultimate ambition of such systems is to make visible and knowable the movement of everything. Such transparency is inseparable from economic interests, and belongs to what Nigel Thrift calls the 'geography of calculation' attending the political economy of logistics.[28] The politics of standardization and technologies of measure are central to the history of such calculus and are important components of contemporary logistics.

Borders, Delays, Labour

Containerization is a form of standardization, perhaps one of the most iconic of the contemporary global era. As Barry Levinson recalls in his book *The Box*, the container's creation was marked by labour struggles and attendant changes in economic geography, including the decline of industrial ports such as New York and London and the opening of the East Asian region as a major site of industrial production.[29] Although in train since the late 18th century, containerization is really the hallmark achievement of late 20th century logistics. Given an important fillip by the U.S. military's development of the CONEX (Container Express) system, which was put to effective use in the Vietnam War, it was not until 1968 that the International Organization for Standardization (ISO) corralled key shipping, railroad and trucking companies to begin to agree on global standards.

Four recommendations issued by ISO between January 1968 and October 1970 set the defaults for terminology, dimensions and ratings, identification markings, corner fittings and minimum internal dimensions of containers. It is important to emphasize the slowness and conflict that characterize the lengthy process by which containers of various sizes, materials and degrees of modularity and transferability across transport systems were gradually coordinated under a single set of standards. By the accounts of thinkers like Fredric Jameson and David Harvey, the coming of post-Fordist systems of flexible accumulation in the early 1970s was the result of events such as the oil crisis and the fall of the Bretton Woods system of monetary management.[30] If looked at from the viewpoint of containerization and logistics, these transformations are rather carried on the back of far slower and more contested processes of change.

Andrew Barry observes that the creation of 'a smooth and homogenous technological zone in which the speed of circulation is maximised' is notoriously difficult to achieve.[31] While the aim of standards, classifications and other measures is to ensure that physical entities located in different places and/or times fit together almost magically, they can also impede mobility by creating 'new zones of control

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[28] Nigel Thrift, *Knowing Capitalism*, London: Sage, 2005, p. 220.

[29] Barry Levinson, *The Box: How the Shipping Container Made the World Smaller and the World Economy Bigger*, Princeton: Princeton University Press, 2006.

[30] Fredric Jameson, *Postmodernism, or, the Cultural Logic of Late Capitalism*, Durham: Duke University Press, 1991; David Harvey, *The Condition of Postmodernity: An Enquiry into the Conditions of Cultural Change*, Oxford: Blackwell, 1989.

[31] Andrew Barry, *Political Machines: Governing a Technological Society*, London and New York: Continuum, 2001, p. 63.

and regulation and … new sites, objects and forms of political conflict.'[32] In part, such conflict stems from the tension between attempts to install standardized and standardizing systems and the practical application of those systems in local contexts. The accounts offered by our Shanghainese informants cannot be assumed as universal, even as we are aware that the software standards embedded in logistics protocols are globally expansive and distributed. The question of when and where one gets empirical about logistics is thus not independent from the question of how logistics remakes global space and time. This is a dilemma familiar to anthropologists of distributed phenomena. In his study of the cultural significance of free software, Christopher Kelty writes:

> The study of distributed phenomena does not necessarily imply the detailed, local study of each instance of a phenomenon, nor does it necessitate visiting every relevant geographical site – indeed, such a project is not only extremely difficult, but confuses map and territory ... The decisions about where to go, whom to study, and how to think ... are arbitrary in the precise sense that because the phenomena are so widely distributed, it is possible to make any given node into a source of rich and detailed knowledge about the distributed phenomena itself, not only about the local site.[33]

The same observation applies to the study of global logistics systems in the shipping industries. The tension between standardized and standardizing protocols and their local practical applications does not exhaust the potential for 'new sites, objects and forms of political conflict'. If space and time provide the literal and conceptual domains in which such distribution occurs, then labour provides the theoretical key that opens the practical link between sovereign power and the forms of life that subsist within the expansive system of logistical control. We have already discussed how the emergent logic of informatized sovereignty seeks to close the temporal gap between living and abstract labour, between the performance of a task and its statistical measure. Yet it is the specificity of labour power to remain at once a commodity and a capacity of human bodies. The tension between activity and measure, living and abstract labour, can never be completely eliminated. As much as real-time software control attempts to drain labour of life, to circumscribe the feedback of attitudes, feelings and motivations, these factors remain ineluctably present as qualities of living labour.

It is precisely because the border between labour power and its bodily 'container' must be continuously reaffirmed and redrawn that the political and legal constitution of labour markets is crucial to the functioning of global capitalism. We are not the first to observe that while money and goods are increasingly mobile, human bodies are subject to forms of border control that restrict, filter and stratify their mobility often by means of detention and delay. While the passage of wealthy travellers with the right passports is streamlined by biometric technologies and other forms of databasing, efforts to control the mobility of labour are redoubled by these same means. Increasingly this involves the restriction of mobility within as well as across political spaces. The control of internal migration in China through the *hukou* system of

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[32] Ibid., p. 84.

[33] Christopher M. Kelty, *Two Bits: The Cultural Significance of Free Software*, Durham: Duke University Press, 2008, p. 20.

household registration determined by place of birth is only the most literal instantiation of this.[34] Far from the vision of a borderless world, contemporary globalization is characterized by a proliferation of borders. As Etienne Balibar notes: 'Whereas traditionally, and in conformity with both their juridical definition and "cartographical" representation as incorporated in national memory, they should be *at the edge of the territory*, marking the point where it ends, it seems that borders and the institutional practices corresponding to them have been transported *into the middle of political space*'.[35] What needs to be emphasized is that logistics plays a role in controlling the movement of labour power as much as it applies to the passage of other commodities. It is thus a key technology to consider when examining the politics of border control, the reshaping of labour markets and the demise of the figure of the citizen-worker.[36]

The shipping industries are key instances here since they involve the passage of workers as well as vessels and goods. The emergent powers of informatized sovereignty interact with the older but still effective forms of sovereign power associated with the territorial state and international waters to fashion the governance of transnational worlds implicit in logistical operations. While, as Giorgio Agamben argues, the relation between sovereign power and juridical order is ambiguous, it is more often normative relations that apply in the case of shipping.[37] At stake here is not so much the creation of a formal exception in which labour exploitation occurs beyond legal oversight, but a multiplication of sovereign entities and legal systems that at times coordinate and at others conflict to establish the conditions for labour efficiency and control.

Consider the following scenario, which is not uncommon in the shipping industries. A U.S. owned container vessel registered in Panama and carrying a crew of primarily Filipino workers steams toward the Beilun port of Ningbo. At a certain point it crosses from international waters into Chinese territorial space. The workers who load and unload the cargo work under Chinese labour laws, although they are subject to more globally diffuse forms of labour control implicit in ERP and KPI software. In an important sense, logistical methods of control here preside over the others. Not least because they coordinate the relations between transit times, inventory management and supply chains that extend across international waters into territorial hinterlands. They also provide a means of coordinating cargo-related costs with voyage-related

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[34] Of the many studies of the *hukou* system in China, see, for example, Zhang Li, *Strangers in the City: Reconfigurations of Space, Power, and Social Networks within China's Floating Population*, Stanford, Cal.: Stanford University Press, 2001. See also Pun Ngai, 'Woman Workers and Precarious Employment in Shenzen Special Economic Zone, China', *Gender & Development* 12.2 (2004): 29-36; Xiangming Chen and Jiaming Sun, 'Sociological Perspectives on Urban China: From Familiar Territories to Complex Terrains', *China Information* 20.3 (2006): 519-551; Jack Linchuan Qiu, *Working-Class Network Society: Communication Technology and the Information Have-Less in Urban China*, Cambridge, Mass.: MIT 2009.

[35] Etienne Balibar, *We, the People of Europe: Reflections on Transnational Citizenship*, trans. James Swenson, Princeton: Princeton University Press, 2003, p. 109.

[36] We have written on the 'death of the citizen-worker', especially in relation to informational and migrant labour, in Brett Neilson and Ned Rossiter, 'Precarity as a Political Concept, or, Fordism as Exception', *Theory, Culture & Society* 25.7/8 (2008): 51-72.

[37] Giorgio Agamben, *Homo Sacer: Sovereign Power and Bare Life*, trans. Daniel Heller-Roazen, Stanford: Stanford University Press, 1998.

costs, container system costs and ship system, administration and operation costs. While the most spectacular logistical moment occurs in port, where software protocols dictate the most efficient patterns for loading and unloading containers, there is also constant monitoring of ship movements at sea, which feeds back to coordinate steaming speeds and routes with the availability of berths. Software systems such as Apama, a business event processing platform developed for financial markets, eliminate point to point integration systems with event-driven architectures that can process over one thousand ship position reports per second.[38] This allows real-time detection of space and time-based event patterns that allow optimized route planning, speed changes, fuel efficiency and the coordination of vessel movements on the global scale.

The conditions of labour and life at sea are no less tied into the forms of control exercised through such software architectures than land-based logistics jobs. At stake is not only the position of the seafarer in space and time but also the rhythms of work and the hierarchical relations between crew members (deck, engine and stewards). The ability of a crew to respond to software generated directives rests on modes of flexibility and labour relations that are longstanding in the maritime industries. A seafarer who begins work for a voyage 'signs articles' that oblige him (the gender is usually male) to complete a journey from and to certain ports and to accept penalties if he willingly fails to do so. The terms of these 'articles' also place limitations on the seafarer's right to strike and freedom of movement. As Elmo Hohman puts it in a classic article from 1962, 'a merchant vessel at sea is governed by a rigidly established, centuries-old scheme of authority which is far closer to the discipline of the military services than to the much discussed regimentation of the factory'.[39] The intersection between this form of discipline and logistical forms of governance shape the character of work at sea.

Between the scale of the ship and the globally distributed domain of logistics, there intercede forms of sovereign power that determine the degree and intensity of the intersection between discipline and software control. One of the most important of these involves the open registry system by which states can sell their flags internationally for the registration of ships owned in other jurisdictions. While ship owners have decided to fly another state's flag for strategic reasons as long as there have been shipping records, this 'flag of convenience' system dates to the 1920s when states such as Panama, Honduras and Liberia created open ship registries.[40] More recently these countries have been joined by others such as Cyprus, Malta, the Marshall Islands, the Bahamas and Mongolia. As Elizabeth DeSombre explains, there was a rapid rise in the use of flags of convenience in the 1970s when 'increased competiveness pressures' led ship owners to register their vessels in jurisdictions with 'lower taxes and fees and fewer regulations pertaining to

[38] 'Ships tracked with smart software', BBC News, http://news.bbc.co.uk/2/hi/8413566.stm, 15 December 2009; 'Progress software captains shipping technology sea change', http://web.progress.com/en/inthenews/progress-software-ca-03312009.html, 31 March, 2009.

[39] Elmo P. Hohman, 'Work and Wages of American Merchant Seamen', *Labor and Industrial Relations Review* 15.2 (1962): 221-229.

[40] Rodney P. Carlisle, *Sovereignty for Sale: The Origin and Evolution of Panamanian and Liberian Flags of Convenience*, Annapolis: Naval Institute Press, 1981.

environment, safety and labor practices'.[41] Since that time the practice has become widespread with organizations such as the International Transport Workers' Federation taking a lead role in monitoring and combating the exploitative and dangerous aspects of this offshoring system.

While a state that creates an open ship registry exercises its sovereign power in doing so, the attractiveness of registering a ship in such a jurisdiction often stems precisely from its lack of control over the vessels that fly its flag. William Langewiesche contends that ocean governance 'constitutes an exact reversal of sovereignty's intent and a perfect mockery of national conceits' which places 'the oceans increasingly beyond governmental control'.[42] Such a perspective, in our assessment, places too little emphasis on the differences between governance and sovereignty and the role of logistics in negotiating the relations between the two. It is more accurate to say that flags of convenience utilize certain forms of sovereign power – those vested in the states that issue them – to temporarily and partially remove vessels from the control of states and to subject them to forms of governance implicit in logistical practice and planning.

This removal of vessels from state forms of governance is only ever partial and temporary, precisely because ships are mobile entities that cross both territorial and oceanic spaces. The convention of port state control, for instance, allows the inspection of foreign ships in national ports to 'verify that the condition of the ship and its equipment comply with the requirements of international regulations and that the ship is manned and operated in compliance with these rules'.[43] Under the various regional memorandum of understandings (MOUs) applying to port state control (there exist separate agreements for European ports, the Asia/Pacific and the Indian Ocean), states have the right to detain substandard ships and must publish lists of detained vessels on the relevant MOU websites.

Needless to say these powers have become crossed with various forms of maritime security, border protection and coastal state control, the latter being the jurisdiction of a state to police its territorial waters. While a series of international conventions, including the 2003 International Labour Organization Convention on Seafarers Identity Documents, specify that seafarers holding internationally recognized documents need not undergo immigration procedures in foreign ports, some states continue to require visas. There is continued fear surrounding the permeability of borders and the use of shipping containers to transport clandestine migrants. Port state control becomes mixed with border control. Both employ detention or delay as the primary means of checking mobility and producing governable mobile bodies from seemingly ungovernable flows. Combined with logistical methods of operation that can slow as well as speed voyage times, the net effect is to create hierarchized zones of mobility where the model of transport as a progressive linear movement between points is displaced by forms of passage that involve various kinds of

[41] Elizabeth R. DeSombre, *Flagging Standards: Globalization and Environmental, Safety and Labor Regulations at Sea*, Cambridge: MIT Press, 2006, p. 81.

[42] William Langewiesche, *The Outlaw Sea: A World of Freedom, Chaos, and Crime*, New York: North Point Press, 2004, pp. 6-7.

[43] 'Port State Control', International Maritime Organization, http://www.imo.org/Facilitation/mainframe.asp?topic_id=159.

diversion, stopovers and waiting.[44] Logistics is the crucial hinge between these practices of movement and stillness since it coordinates them, combining warehousing, stockpiling and inventory management with techniques of fast-tracking and quick response to facilitate just-in-time deliveries around the world. The particular tension this raises between practices of freedom and techniques of control creates a knot in which the relevance of logistics for political futures, both on land and at sea, becomes evident.

Piracy, Sovereignty, Freedom

Let us return to our opening assertion that the ship is no longer a heterotopia. We do not want to suggest that the differences between land and sea, work onshore and work offshore, have been fully eliminated. Rather, we contend that logistics plays a constitutive role in managing these differences, as well as those between mobility and stillness, and coordinating them to the ends of economic and productive efficiencies. The conditions of work at sea are caught in a game of evasion and control. The parameters of this game are established by the territorial and legal differences that cross the paths of maritime vessels. The situation is not one of formal exception but of normative fragmentation. Our claim is not that logistics is a unifying practice that covers over or eradicates this fragmentation. Rather, we approach logistics as a technology of governance that works with this fragmentation, sometimes operating in its gaps but more often optimizing and calibrating its inherent discrepancies. As such, it is part of a wider biopolitical fabric 'defined by powers that operate transversally to determine (through relations of force, epistemic relations, voluntary, technical and productive acts) behavioural and normative contexts'.[45] What needs to be noted about these contexts is that they are at once spaces of control and sites of excess. In attempting to close the gap between living labour and its statistical measurement, they also reveal the impossibility of such closure. Consequently, we cannot discuss logistics without also discussing the production of subjectivity. It is not simply a matter of contrasting logistical control with the escape from it, since escape in such contexts will always be compromised, accounted for, integrated back into the database. The subject produced on the cusp of logistical control is a politically ambiguous figure. We find one of its exemplifications in the pirate.

The pirate is a multi-faceted and contradictory figure connected intimately to histories of colonialism, imperialism and contemporary capitalism. Underscored by a raft of discourses and myths that range from celebrations of freedom to the fear of tyranny, at the level of representation the pirate is in many respects a predetermined subject. As Andrew Opitz notes, 'Although the actual history of maritime robbery is sordid and contradictory, the pirate has become a compelling symbol of freedom: freedom from oppressive work routines; freedom from polite behaviour; freedom from institutional controls; freedom from restrictive property laws; freedom from unjust social

[44] For a study on the topology of queues as border technologies of movement and control, see Gillian Fuller, 'The Queue Project: Informationalising Bodies and Bits', *Semiotic Review of Books* 16.3 (2007): 1-5, http://www.chass.utoronto.ca/epc/srb/

[45] Antonio Negri, 'Philosophy of Law against Sovereignty: New Excesses, Old Fragmentations', *Law Critique* 19 (2008): 335-343.

conventions surrounding race and gender roles'.[46] But what happens when the pirate and piracy is situated within the logic of non-representational and collaborative relations that define the production of the common? Here, we find connections with the distributive, peer-to-peer practices associated with digital piracy of software, music, films, books and games. But it is a mistake to take such practices as constituent of insurrectionary power. Rather, they are better understood in terms of the material context of *the commons*, within which the political potential of *the common* subsists. A very specific sense of freedom is attributed to the peer-production of the commons: free culture and the free labour that all too often sustains the special logic of auto-exploitation that cuts across digital cultures and economies. As Lawrence Liang writes:

> The world of free culture and collaboration gets narrated through the tropes of creativity, desire and subjectivity, while the issue of piracy is narrated primarily through the trope of developmentalism and piety. In other words the very categories like the user-producer, which are the strength of the free software and free culture movement are completely denied when we look at every piracy in most parts of the world.[47]

A very different sense of piracy emerges in countries weak in global sovereign power, yet rich in natural resources and indigenous customary knowledge. Such locations as Mexico, Peru, Columbia, Ecuador, Venezuela, Costa Rica, India and the Philippines have found themselves subject to 'bio-prospecting' and 'bio-piracy' from predominantly Euro-American companies whose right to plunder is enforced by the WTO's agreement on trade-related aspects of intellectual property (TRIPS).[48] Ugo Mattei and Laura Nader document a range of cases in which the development of open source projects and practices of transversal self-organization across various social groups and institutional actors contest the imperial rule of intellectual property regimes through the collective production of localized counter-knowledges that make public the environmental and social violation of shared resources.[49] While such actions consist of a representational moment of public declaration, it is the non-representational movement of relations instantiated through the practice of collaborative constitution that interests us here. It is precisely through the mobilization of bodies and brains that we see an expression of freedom as self-governance unhinged from logistical technologies of control. Yet as we noted earlier, the moment of seeming escape opens new frontiers for reabsorption into logistical systems of control. There are no guarantees of safe haven procured through stillness. Instead, we find ourselves traversing endlessly modulating cusps of time. As Internet critic Geert Lovink observes of the ambiguous relation between mobility, time and informational capitalism, 'It seems an illusion to speed up and slow down

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[46] Andrew Opitz, 'Editorial Notes: Pirates and Piracy – Material Realities and Cultural Myths', *darkmatter: in the ruins of imperial culture* 5, 2009, http://www.darkmatter101.org

[47] Lawrence Liang, 'Pirate Aesthetics', in Lipika Bansal, Paul Keller and Geert Lovink (eds) *In the Shade of the Commons: Towards a Culture of Open Network*s, Amsterdam: Waag Society, 2006, p. 66.

[48] See Ugo Mattei and Laura Nader, *Plunder: When the Rule of Law is Illegal*, Oxford: Blackwell, 2008, pp. 205-206. See also Lauren Benton, 'Legal Spaces of Empire: Piracy and the Origins of Ocean Regionalism', *Society for Comparative Study of Society and History* 47.4 (2005): 700-724.

[49] Ibid, pp. 208-211.

simultaneously, but this is exactly how people lead their lives'.[50]

Irrespective of political outcomes in environmental and social justice campaigns, we take the figure of piracy as one that traverses territorial and oceanic spaces and subjectivities irreducible to the friend/enemy distinction. Yet it is not merely the fact that the pirate is difficult to pin down, or keep still, that frames our interest in this figure. The production of subjectivity in complex worlds increasingly governed by logistical systems of control is inseparable from the proliferation of borders that attends the management of circuits of labour. Yet circuits do not necessarily lead back to where they began. As technologies of control and freedom, they maintain the movement of labour, life, finance and things. Contrary to the libertarian cult of openness and infinite freedom (a central myth shared also with piracy), circuits can trigger resistances with explosive potential. When time is captured by new logics of accumulation, the political task is to short-circuit capital.

Since World War II and the modernization of military logistics and Operations Research, contemporary logistics has devised mathematical modeling methods and software architectures to assist in decision-making and the allocation of resources.[51] Preoccupied by efficiencies in movement and labour, logistics is the managerial science of temporal and spatial control. How to insert asymmetrical modalities of scale and time that conflict with this technocratic desire for control is one of the key tasks for politics today. Such work is one of collaborative invention. It is the work of the common. It is the work of creating non-sovereign futures. The pirate and piracy provide a figure of practice that crosses the two domains special to logistics in its historical and contemporary manifestations: sea venturing and software. The pirate waits for shifts in the horizon of possibility. The software application waits to load. Change happens. But the figure of waiting, like that of stillness, does not imply a movement beyond history or narrative. It exists at the point where the ordering of that which passes crosses the passing of that which orders. Logistics itself, we might conclude, is an ordering technology that itself will pass or at least be remade on a temporal horizon. This essay has sought to understand how the constitutive tension of life and abstraction that marks the category of labour power plays a role in this crossing of ordering and passing.

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[50] Geert Lovink, 'MyBrain.net: The Colonization of Real-time and Other Trends in Web 2.0', *Eurozine,* March, 2010, http://www.eurozine.com/articles/2010-03-18-lovink-en.html

[51] See Konrad Becker, 'Strategic Arts', in *Strategic Reality Dictionary: Deep Infopolitics and Cultural Intelligence*, New York: Autonomedia, 2009, pp. 142-143.

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