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# The Factory Without Walls

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Wireless and social networking technologies depend on and help shape the global logistics industry. This worldwide supply chain ensures just-in-time production responds to consumer demand, whether it be books from Amazon or exhaust pipes for Jaguars. If, contrary to theorists of 'immaterial labour', the mass worker is not dead but reconfigured, will networked production and distribution see the rise of networked labour struggles? Drawing on personal experience and ongoing research, Brian Ashton gives a brief introduction to the complexities of the logistics industry

Information Technology has enabled capital to coordinate the production of commodities like never before. It is a seeming contradiction: production is spread across the globe, parts are made here and there and moved thousands of kilometres to be assembled, but this process produces more commodities than ever before. Capital has renewed itself yet again, and in the process it has thrown the left into crisis. While the talk among the intellectuals is of immaterial labour and precarity, capital is busy ironing out the kinks in its new system of production. At the same time, though, it is creating a communication system that enables workers to interact with each other across na-

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tional borders and continents. Just about every worker is now an IT worker, and it is the potential that lies in this fact that poses the greatest threat to capital. It is not about immaterial or material labour. The intellectuals have got to stop creating hierarchies of labour, the mass worker and the social worker, the immaterial worker and the precariat. They would be better employed getting a proper understanding of how the supply chain – some capitalists call it the virtual enterprise – now works. Know thine enemy, as Sun Tzu said in *The Art of War*.

A team of researchers from the Cardiff Business School studied the chain of actions required to make a can of cola. The whole process, starting at the Bauxite mine in Australia and ending with the can in somebody's refrigerator took no less than 319 days. Of that time only three hours were spent on manufacturing, the rest was spent on transport and storage. An advertisement for the shipping company P&O Nedlloyd claims that the journey of one single container can involve literally a hundred people. These range from the guy who loaded the container to the IT people, from the logistics planners to the dockers, through the haulage drivers to the warehouse workers, from the customs officer to the captain of the ship. This highlights time and labour. The control of these two factors is the major concern for those charged with the management of supply chains.

As the Cardiff Business School study highlights, logistics is a major factor in the supply chain. According to the Council of Logistics Management, logistics is:

the process of planning, implementing and controlling the efficient effective flow and storage of raw materials, process inventory, finished goods, extraction/production to the point of consumption.

In the last twenty years there has been a revolution in the world of logistics, a revolution that seems to have escaped the attention of the autonomous left. The cause of this upheaval

was the application of technology to the globalisation of commodity production. Or as Marx put it:

A radical change in the mode of production in one sphere of industry involves a similar change in other spheres. This happens at first in such branches of industry as are connected together by being separate phases of a process, and yet are isolated by the social division of labour, in such a way that each of them produces an independent commodity ... But more especially, the revolution in the modes of production of industry and agriculture made necessary a revolution in the general conditions of the social process of production, i.e., in the means of communication and transport ... The means of communication and transport were so utterly inadequate to the productive requirements of the manufacturing period, with its extended division of social labour, its concentration of the instruments of labour, and of the workmen and its colonial markets, that they became in fact revolutionised ... And in the period of 'modern industry' the means of communication and transport handed down from the manufacturing period became impediments.

*Capital*, vol.1, pages 262-26.

Autonomist marxism sees the struggle of the working class as the driver of capitalist development. In the '70s capital started to attack the concentrations of working class power that some have called the mass worker. It attacked on three fronts. It started to break up the rigidities imposed on production by working class militancy using technology to de-skill the workers and reconfigure the factory layout. It started to relocate some productive capacity to smaller sites, sub-contracting the work to other companies. And it used the state to impose crisis upon the working class. It was largely successful in its project and as the '80s developed, defeat followed defeat for the working class. A political composition forged in battle was dismantled and discarded. It seems to this old car industry worker that it wasn't only capital that discarded us but that quite a number of communist intellectuals turned their backs on us,

too. The consequence is that now we have a generation of anti-capitalists who don't know how to engage with the working class. Despite being surrounded by the class they seem more interested in what goes on in the Mexican jungle, or prefer to go to Genoa and Seattle and give the state machine an opportunity to practice crowd control.

In the '60s and '70s there was constant interaction between working class militants and the left emerging from the universities. This wasn't always positive, but, where there was a synergy, theory and practice had some connection. We learned from each other and good work was produced. Here in Britain work published by Solidarity and Big Flame is evidence of that. In Italy Potere Operaio and Lotta Continua helped to develop an understanding of the strengths and weaknesses of capital's composition. Today we may talk about a globalised production system but how many of us can describe how it works? How does the can of cola get from A to Z? In the '70s we knew how the factory and the transport systems worked and in that knowledge lay our ability to combat capital. Today, it is certainly difficult to grasp exactly how things are made, but it is imperative that we gain deep knowledge of the processes of production and logistics, the supply chains of capital or, to put it another way, the factories without walls. Some capitalists see the supply chain as a virtual factory and want workers to relate to the supply chain rather than perceiving themselves as employees of the separate organisations that make the chain up.

Working class composition comes from struggle, but first capitalists have to bring the workers together and impose the discipline of production upon them. In the present period we can only understand how that discipline is imposed if we take a global approach. The technical composition of capital is spread across the world, as are the workers in the commodity's supply chain. Discipline under such a system is imposed through the application of *kaizen* (continuous improvement) and just-

areas and making them available to the production lines without incurring line-side storage. It is also UCI's task to ensure that line-side stock never exceeds the two-hour volume Jaguar has stipulated. It is UCI workers who drive the fork lift trucks that transfer material within the Halewood plant.

Let's look at the logistics of a particular product going into Halewood, the wheel and tyre assemblies. UCI moves 500,000 assemblies a year into Halewood. The contract includes both external logistics for the supply of alloy wheels from Italy to Pirelli's facility in the UK and the delivery of completed assemblies to Halewood, three times a day, together with the internal logistics at the Jaguar site. UCI chooses from twelve different types of assemblies on receiving automated instructions from Jaguar and delivers the product to the point of fit. The mass worker hasn't been destroyed s/he has just been reconfigured.

Capital gets its power from the extraction of surplus value and the supply chain is the factory without walls where this process takes place. In the past socialists organised and agitated around the centres of commodity production – one thinks of the work done around Fiat's Mirafiori factory in Turin and Big Flame's efforts at Dagenham and Halewood – but is that sort of work going on today? If such agitation is to take place it will have to be on a global scale, but the technology exists to do it. By going global with its supply chains, capital is creating the opportunity for global working class struggle. In order for such struggles to succeed we need to know how the present composition of capital works. The craft worker and the mass worker knew how the system produced commodities in their day; we need to develop such knowledge today.

in-time stock delivery combined with the application of information technologies that police the workers' productivity.

This is reinforced by the change in how commodities are moved through the system. Capital has moved from a push to a pull economy, in other words, it is making things that are being demanded rather than making them to forecast demand. The motto of the pull economy could be, 'If it isn't sold, don't make another one.' The pull economy gives the big supermarket chains enormous power because they control the information that pulls a commodity through the supply chain. When you buy a tin of beans in Asda the information is sent out to all those along the chain in order for another tin of beans to be produced. Of course, millions of such pieces of information are flying through cyberspace every moment of the day. One of the results of the pull economy is an increase in precarious work: if demand is down then lay off workers. Companies have computer programs that calculate the number of workers needed to satisfy a given demand, drawing in extra workers from a pool of casual labour, often supplied by employment agencies. And increasingly they outsource non-core activities to service companies; this is one of the reasons for the mushrooming of the logistics industry in these last years. The automotive industry is moving to a pull economy model and this is one of the main reasons autoworkers in the States are being battered at the moment.

If you spread your supply chains across the globe and reduce your stock levels to just-in-time then you increase the importance of the logistical exercise in the completion of the cycle of accumulation. At the same time you increase the possibility of effective working class struggle: when the truckers on the west coast of the USA struck a year or so back they paralysed the supply chains of Wal-Mart and other chain store giants, sending waves of panic through many a boardroom. The importance of logistics cannot be overestimated; try imagining the supply chain of any product without the logistical input.

The globalisation of production has left many workers believing they can do nothing about it when companies move production to China or India, they stand hypnotised by the lights on the capitalist juggernaut as it runs them over, but this apparent strength of multinational capital is in fact its weakness.

Historically, logistics workers have been carriers of radical thought and transporters of the news of working class struggles. They have, of course, been involved in many a battle themselves. In the last twenty years many of those battles have been defensive, fighting to save jobs and maintain working conditions. The withdrawal of the state from the direct management of the logistics industry was the catalyst for a global attack that continues to this day. As the state withdrew, private capital stepped into the breach and attacked workforces throughout the industry. At the same time these companies have been engaged in a frenzy of mergers and acquisitions that have resulted in the emergence of truly global organisations employing many thousands of workers.

Some idea of the size of these companies can be gleaned from two examples, United Parcel Services (UPS) and Deutsche Post (DP). UPS is a 33.5 billion dollar company that operates in 200 countries and employs more than 340,000 workers. It provides transportation and freight logistics/distribution, international trade, financial services, financial mail facilities and consultancy services. It has grown by benefiting from the outsourcing processes that are common in industry and by acquiring other companies. It plays for big stakes: it bought the Fritz freight company for 450 million dollars. DP is partly owned by the German government, who hold 41.6 percent of the shares. These will be sold to institutional investors over the next few years. DP runs the German postal service, owns DHL, and last year it bought the British registered company Exel. Exel was an acquisitive company itself before being bought out; it had previously bought Tibbett&Britten, the seventh biggest logistics company in the world. This resulted in a company employing

more than 103,000 people. I don't know how many people work for DP, but it must be in the hundreds of thousands.

The Jaguar auto plant in Halewood on Merseyside can perhaps give us an idea of how a supply chain works and how logistics fits into the chain. Halewood was where Ford built the Escort, and where this proletarian worked for seven long years. It was regarded as the basket case of the Ford organisation and the threat of closure was always hanging over it. Ford bought Jaguar and decided to manufacture Jags at Halewood, at the same time it decided to radically alter working practices in the plant. It brought in an American company called Senn-Delaney to alter the mindset of the workforce, and it appears to have been successful because Halewood is now regarded as the best car plant in Europe. If such a company had been brought in during the '70s their work would have been challenged by counter-information from the left.

When I worked in Halewood in the '70s there were 14,000 of us employed on the site. Today Jaguar employs some 2,800 people, but this figure is deceptive because a sizable chunk of the work has been hived off to suppliers who in turn pass some of the work on to smaller suppliers. In a supply chain firms are categorised thus: Original Equipment Manufacturer (OEM), i.e. Jaguar; First Tier Supplier, i.e. Bosch; the smaller suppliers are called second tier, third tier, etc. Linking all these together are the logistics companies. At Halewood UCI Logistics, a subsidiary of the Japanese company Nippon Yusen Kaisha (NYK) runs the logistical set up. As lead logistics supplier, UCI is responsible for inbound logistics to Halewood as well as the internal logistics at the plant itself. In the Ford days internal logistics would have been carried out by Ford workers. The inbound logistics service involves a supply chain operation and the collection of parts and sub-assemblies from suppliers around Europe partly using their own fleet and partly UCI Logistics-appointed partners. The internal logistics service involves offloading parts, movement of components to storage