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Through Unending Halls

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Behemoth: A History of the Factory and the Making of the Modern World by Joshua Freeman
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It was in the early 1960s, I think, that our class at a small-town Gymnasium made a trip to south-western Germany, accompanied by several teachers. We visited Heidelberg and Schwetzingen and similar places without really seeing them; 17-year-old boys have other things on their minds. But we also went to Rüsselsheim, near Frankfurt, for a tour of the Opel car factory. I had never imagined that a place like this could exist: the deafening noise, the dirt, the heat, and in the middle of it all, people stoically performing minute predefined operations on the cars-in-the-making that were slowly but relentlessly moving past their work stations. The high point of the visit was the foundry in the basement – which, as I now learn from Joshua Freeman's marvellous book, was the standard place for foundries in car factories of that era. Here, where the heat seemed unbearable and there was almost no light, half-naked men carried the molten metal, red-hot, from the furnace to the casting stations in small buckets filled to a back-breaking weight. Trained in the classics rather than the real world, I felt I had entered the workshop of Hephaestus. Looking back, I think it was on that day I decided to study sociology, which I then believed could help me and others to improve the lives of those slaving away in the basements of factories everywhere.

Later, when I was a young social scientist, the car industry remained an obsession. I included car manufacturing in my empirical work whenever I could, and I made a point of visiting factories, to remind myself what they were like and replenish my supply of mental images of what I tried, often in vain, to convince my colleagues were the Gothic cathedrals of the 20th century. It was amazing how much they were changing, and how fast. On every visit there was less noise, dirt and dust; much better air; no welding by hand or overhead assembly; hermetically sealed automatic paint shops; heavy lifting done by machines and later by robots. And at the final assembly stage it was now the workers who sat on movable platforms that carried them along with the doors or seats or whatever it was they were fitting. My last visit to the Volkswagen plant at Wolfsburg, more than thirty years ago, ended as usual in final assembly, where the only sounds to be heard were soft music and the first firing of the engines at the end of the line as the new cars were driven away. The workers were mostly women, dressed in jeans and T-shirts. With a big smile and the male chauvinism that may always be part of the culture of car manufacturing, my guide, from the all-powerful works

council, said I was looking at the ‘Wolfsburg marriage market’: ‘The lads drop by here when they have a break to see what’s on offer.’

Many of the changes were a result of technological progress, as well as labour market constraints – in particular the need to feminise the workforce. But politics and industrial relations mattered at least as much. In the 1970s, after the strike wave of 1968 and 1969, governments, managements and trade unions in European manufacturing countries began to take demands for the ‘humanisation’ of industrial work seriously. In Germany, under Brandt and Schmidt, a national research and development campaign, run by a special department at the Ministry of Research and Technology, lavishly funded academic and industrial projects in engineering, management and industrial sociology. The aim was to end Taylorism, and some workers and their representatives gained the right, not just to be informed and consulted, but also to contribute to decisions about work organisation, technology, working hours and training.

Freeman, whose history focuses on the UK, the US, the USSR and China, largely sidesteps the European continent, which is regrettable given the enduring success of manufacturing in countries like Germany and Sweden. Certainly workforce participation and anti-Taylorism had their drawbacks, as did worker co-management. In Sweden, reforms culminated in avant-garde production methods at Volvo and Saab that weren’t only expensive but were disliked by the workers they were supposed to benefit: ‘group work’ on ‘production islands’, for instance, where cars were put together almost from scratch by a team and the workers were encouraged to sign the finished product. For a while, Saabs and Volvos were the favourite cars of European intellectuals, because they were made, it was believed, by ‘happy workers’ – until both firms returned to more conventional methods (which did not in the end prevent them being taken over by GM and Ford, respectively).

In Germany, meanwhile, co-operation between management and the works council at Volkswagen gradually turned into collusion and co-optation. The scandals included multi-million euro payments to the head of the works council and his girlfriend, authorised by the company’s personnel director, Peter Hartz. (In 2002, while at VW, Hartz was appointed by Chancellor Gerhard Schröder to chair a commission on the labour market, which eventually led to the ‘Hartz-IV’ reforms, which cut benefits for the long-term unemployed.) But all this mattered more to the press than it did on the shopfloor, and whatever schemes management, unions and works councils may have cooked up, the workers at least appreciated their new working conditions.

Freeman’s book tells a long and elaborate story that begins in England in the late 18th century, then moves to the United States – from textiles to steel and automobiles – and on to the worldwide victory of Taylorism and Fordism in the first half of the 20th century. That victory extended to the Soviet Union under Stalin, and peaked in the mass production of the Second World War. The Cold War follows, then the rise of China and its own version of capitalism. Throughout his account, Freeman conveys a deep ambivalence towards modern industrialisation: on the one hand, expulsion from the land, proletarianisation, exploitation, repression and cruel discipline; on the other, emancipation from traditional ways of life, new

solidarities, trade unions with the capacity to fight for higher wages and better conditions, and the possibility of industrial citizenship and social reform.

Freeman pays attention not just to the internal organisation of factories, but also to their relationship with and their effect on society. That factories require particular patterns of settlement – new cities or large-scale company housing – does not always figure prominently in accounts of industrialisation. Planning for the sudden arrival of large numbers of people in a previously sparsely populated space was attractive to urbanists, with their visions of a new society and a new industrial worker in need of entertainment, education and culture: a sharp contrast to life in the villages where the first generation of industrial workers were recruited. Architects often designed new factory buildings not just to meet utilitarian necessities, but to make aesthetic statements about the value of what was produced inside them. Factory architecture, we learn from Freeman, especially as it developed in the US, soon became an international style that eventually spread even to the Soviet Union, where factories were designed to celebrate industrial modernity, just as they were in the West.

Freeman's account of 'the making of the modern world' opens our eyes to the degree of international cross-fertilisation, especially in the 1930s and 1940s, when large-scale manufacturing was coming into its own. Henry Ford was a global icon who counted Hitler among his admirers. As soon as he took power, Hitler had tried hard but in vain to make German car manufacturers abandon their small-scale production methods in favour of mass production of a simple car 'for the people' – a *Volkswagen*. Ford's example inspired Hitler to set up a car plant on his model in a place that would later be named Wolfsburg (there were already two much smaller Ford and General Motors plants in Germany, at Cologne and Rüsselsheim), allegedly with second-hand machinery imported from Dearborn, Michigan. In 1938 Hitler awarded Ford the Nazi regime's highest decoration reserved for foreigners, the Great Cross of the German Order of the Eagle.

Another unusual feature of Freeman's story is the space he devotes to the artistic representation of the factory, beginning with Futurism. Photography and cinematography, the newest branches of artistic production, reproducible as mass-produced commodities themselves, were particularly prominent. Photographers and filmmakers did document the drudgery of mass production and the misery of exploitation, but they were also fascinated by the promise of progress embodied by the new cars coming off the conveyor belt, the polished airplane engines and turbines, and the huge workshops with their avant-garde design, such as Frank Lloyd Wright's Johnson Wax HQ in Racine, Wisconsin.

A question that recurs at every turn in Freeman's long story is whether workers' suffering in the early years of industrialisation was really necessary. This debate begins with Adam Smith's discussion of the division of labour, the increase in productivity and the negation of humanity it brings along with it – so that at some point its benefits are undone by the damage to human mental capacities and self-esteem. Capitalists insisted that the waste of a few generations in the living hell of the factories of Manchester was a necessary sacrifice to secure a better future for all. But where does the sacrifice end if capitalism's imperative is the endless accumulation of capital? This wasn't really an issue under socialism: both Stalin and Trotsky considered the use of brute force indispensable to a socialist version of primitive

accumulation, an unfettered reliance on Taylorism and military-style discipline to advance the creation of a socialist working class. The advent of communism, so the story went, would mean the liberation of society from work through a combination of socialised fixed capital and Soviet power. European social democrats, for their part, settled for liberation *in* not *from* work: they settled, in other words, for less managerial control, opportunities for workers to expand their roles, shorter chains of command, and for taking advantage of increases in productivity to slow down the pace of work.

Unsurprisingly, the conflict between labour and capital – or management – over factory organisation and discipline is a prominent theme in Freeman's account. Particular attention is paid to the struggle over the division of the proceeds resulting from the superior productivity that is a consequence of co-operation in large-scale production. Factory work is teamwork: it is impossible to devise a simple formula for dividing its benefits, thus opening the door for bargaining between parties with conflicting interests. Here a crucial parameter is relative power, as brought to bear in – and affected by – national and local institutions handling industrial relations. Power fundamentally shapes the organisation of production. For example, Freeman recounts that in the US after the war, giant factories began to go out of fashion and were replaced with much smaller production sites, widely dispersed geographically. New transportation and co-ordination technologies helped make this possible, as did vertical disintegration and just-in-time parts delivery. But the driving force, according to Freeman, was the management response to the power that organised labour had been allowed to build under the New Deal, most effectively in large factories. To avoid costly concessions to their newly empowered workforces, firms relocated to greenfield sites in places where there was no tradition of unionisation. Here, 'human resource management' might be in a position to sift a hundred thousand job applications in selecting a workforce of 1500. They could make sure that the workers they hired were anti-union, had children and a mortgage – the assumption being that having a mortgage makes for a robust work ethic, or at least makes workers unwilling to go on strike.

Freeman does note, as an aside, that the move away from large factories wasn't universal. It didn't happen in countries and companies with effective industrial democracy, where workers' representatives had a right to veto the relocation of jobs, in return guaranteeing industrial peace. A prime example is, again, Volkswagen's main factory at Wolfsburg, where the already large workforce of 44,000 in 2007 grew to 62,000 ten years later (a little fewer than Freeman claims). This was possible chiefly because the union was able to extract guarantees of investment and continuing employment at the plant, in exchange for its services in managing workers' discontent. Another factor was that the state of Niedersachsen, where Wolfsburg is located, is a privileged shareholder in Volkswagen and sufficiently powerful to make sure jobs remain there. (This is a situation the EU has been trying to put an end to for years, in the name of 'free movement of capital'.)

Of course, it isn't just management that finds huge factories scary; workers can too, especially if they don't have a say in the running of them. In the late 1970s I took a British trade union official on a tour of the Wolfsburg factory. Used to the small, doomed, geographically dispersed and never really integrated British Leyland plants of the time, which were riven by

industrial strife and dependent on public subsidies, the official grew increasingly depressed as we walked through the seemingly unending factory halls – until finally he started complaining about the inhumanity of squeezing so many workers into one space. His frustration only grew after he asked how often, on an average day, the plant reached its production targets: his German counterparts didn’t understand the question because they couldn’t conceive of production targets not being met. In the evening over a beer, he found some relief in violating the *Fawlty Towers* commandment and mentioning the war (‘Back then when you fellows didn’t behave’): as a member of a small special unit of marines, he had landed in Flensburg to help arrest Großadmiral Dönitz, an act of heroism for which, to his surprise, we expressed our deeply felt gratitude.

Freeman’s final chapter is about the ‘giant factories’ of Asia, in particular the Taiwanese-owned Foxconn plants in mainland China. Here, too, the problems posed by size are minimised – through repression. As a historian, Freeman places China’s current labour arrangements in the context of its recent history, in particular the Cultural Revolution, when management was subordinated to the will of the masses and factory discipline replaced with revolutionary ardour. Little of that remains today, unless the harsh regime in the fast-growing private sector of Chinese manufacturing is understood, in part, as a dialectical outgrowth of the economic and political disasters of the 1960s and 1970s.

In Europe in particular there seems to be an even more sinister connection between the politics of liberation if not *from* then *in* work and the new ‘Asian mode of production’. As satisfied consumers of the electronic toys, colourful running shoes and cheap T-shirts that come to us courtesy of modern Asian industrialism, we tend to forget about the way they are produced in China, Vietnam, Taiwan, Indonesia, Cambodia and Myanmar – in factories not owned but used by firms like Apple, Disney, Adidas and Walmart. The hellish Manchester of early industrialisation still exists, but on the global periphery, too far away for school trips. Having outsourced to Asia the misery of long hours and low wages, we as consumers can reap their benefits without bearing the costs as producers (disregarding for the moment those who, in an ironic version of liberation *from* work, lost their jobs as a result of this process).

Much of what Freeman has to say about Asia may be familiar from reports in the media, but gathered in one place the information is truly upsetting. A factory with a workforce of 350,000 producing iPhones and nothing else; residence permits for migrant workers designed to prevent them from organising; workers’ dormitories with strict, quasi-military discipline. No cities of the future here: only barbed wire, uniformed security guards and surveillance cameras. And the suicides: in 2010, 14 young workers jumped to their death from the roof of a Foxconn factory producing iPhones and iPads. Freeman reports that Apple politely reprimanded Foxconn, and Foxconn responded with preventative measures to spare its biggest customer further embarrassment, installing wire mesh on the roofs and balconies of its factory buildings and putting up three million square metres of netting all around them to catch anyone who jumped.

Why are those Asian factories so big? Large factories mean bosses have to put in a lot of effort to control their workers. According to Freeman, it isn’t a matter of economies of scale: the production processes involved aren’t complex enough for that. More likely they are meeting

the demands of customers like Nike and Hewlett-Packard, for which ‘flexibility’ is everything. When Apple made its long-awaited iPhone 6 available, it needed to be able to sell 13 million units in the phone’s first three days on the market. Since ‘freshness’, according to Tim Cook, Apple’s CEO, is a modern gadget’s most important property, it has to be possible to make changes to the design until a very few weeks before it goes on sale. Just-in-time production of this sort requires huge factories with huge workforces stored, as it were, in company-owned dormitories nearby, ready to be called on at any time and ordered to work shifts of 12 hours or more for several weeks in a row. Nowhere is the dirty secret of our prosperous way of life – the way we are spared the pain of producing what we have been made to believe we need at prices we can afford – laid bare more clearly than it is here.

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Not that Freeman leaves his readers without hope. Wages have recently increased in Asia, though turnover continues to be extremely high, indicating a degree of worker dissatisfaction that may become too costly for employers to sustain. The number and size of strikes at Chinese factories seems considerable, giving the lie to the idea of the submissive Chinese worker. Even life in a Foxconn factory seems to have had some of the ‘civilising effect’ on its workers that Freeman argues has always been associated with the factory. By moving away from the village and earning their own money, even in the most dismal of circumstances, the sons and daughters of peasants escape what Marx and Engels called ‘the idiocy of rural life’. Could modernisation, its manifold discontents notwithstanding, spread from the factory to society in China, as it may have done before in other places?

Freeman doesn’t speculate about what may come next in the long story of organised work and production. The ‘satanic mills’ of Foxconn set up at the behest of, among others, the greatest capitalist firm of all time will be a major part of the picture. Just as significant, however, is an entirely new kind of factory, or quasi-factory, where the bulk of the productive capital isn’t centrally owned and factory discipline is replaced by the discipline of the market. In the world of the new platform firm – Uber, TaskRabbit, Deliveroo, that sort of thing – it isn’t the master capitalist who owns the means of production but the skilled worker, once they’ve paid off the loan they took to buy their equipment. Production is local, close to the customer, indeed customised. There is no agglomeration any more, not of production, or of workers and their living spaces. Only management is centralised at the global level. But like the utopian projects of the 1970s that were intended to restore the dignity of the factory worker, management now issues advice, not orders: it helps workers get their jobs done and serves workers instead of pushing them around. Workers, in turn, work when they want, and the ‘alienation’ of their work from their lives, so characteristic of the factory of the industrial age, is for ever a thing of the past.

Or so it is made to appear. In fact, the Taylorist separation of planning and execution is nowhere more rigid than in the new platform firms, where the tools of planning are held solely and incontestably by the management, often incorporated as a separate firm. Execution, meanwhile, is left to subcontractors, who are controlled not just through material incentives, but by the latest behavioural technologies, as embodied in proprietary algorithms stored in the latest, also proprietary, remote-controlled equipment.The virtual factory

integrates workers’ private spaces into the sphere of production. In extreme cases, life can be turned into work without the workers themselves becoming aware of it: the ‘users’ of Facebook, for example, inadvertently produce the platform’s most important resource, the data they leave behind as indelible traces of their increasingly virtual lifestyles, while tens of thousands of would-be ‘influencers’ spend their days concocting images and videos endorsing products in the hope of eventually being paid for it by manufacturers.

Traditional analytic categories such as wage labour or the labour market reach the limits of their usefulness here. In the giant decentralised service factory, you no longer sign an employment contract but are given a socially networked opportunity to do work – this work can include what we produce for Apple, Google, Facebook, Tinder and the like. We believe ourselves to be ‘using’ them when in fact we are being used. Is there a role in this world for labour law, for social protection, collective protest – in other words, for politics? Can we hope for the return of independent craftspeople, ready to organise in modern guilds and resurrected trade unions, or of the gang system of the docks or the aircraft industry as it still existed half a century ago in Britain and, to a lesser extent, the United States? Or could civil law take the place of labour law in regulating the new factories? If our societies still see it as their task to civilise the world of organised production, they’d better get on with it.

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