

HAZARDOUS HISTORIES II

IN THE SECOND PART OF HIS INVESTIGATION INTO THE DANGERS EXPERIENCED BY WORKERS THROUGHOUT OUR HISTORY, NICK COOK LOOKS AT SOME OF THE TREACHEROUS CONDITIONS FACED BY THE ELIZABETHANS UP TO THE PRESENT DAY.

Although some 8,000 English sailors and soldiers died as a result of the Spanish Armada, only about 60 actually perished while fighting the Spanish. The rest were killed by Elizabethan ideas of occupational welfare.

Even before they met the Armada, Queen Elizabeth I had placed the crews on short rations to save money. Weakened by hunger, they were easy prey for the diseases lurking in the unhygienic working environment of the English warship. By the time they had returned to port after seeing off the biggest threat to English sovereignty since William the Conqueror, many had already died of scurvy, typhus and dysentery.

Even those who survived were not exactly welcomed back with open arms. The parsimonious Elizabeth promptly reduced the English fleet from 197 ships to 34 ships and discharged an estimated fourteen thousand men without pay. From Harwich to Plymouth, sea ports were filled with seamen in rags, dying of hunger, starvation and disease. There were no homes fit for heroes. England's saviours were not even given help to reach

their own towns and villages.

Nor were the welfare provisions and legislation of the day exactly helpful. Each parish was supposed to help its own wounded seamen but many claimed they did not have the resources. There was no jobseeker's allowance. Anyone refusing to find work was "whipped at the arse end of a cart" and had the gristle of their right ear burned through with a hot iron.

In stark contrast, Philip of Spain insisted on feeding, clothing and paying his soldiers and sailors in full even though they had lost the conflict.

In all fairness, the commanders of the English fleet did what they could, even digging deep into their own pockets. Howard, Drake and Hawkins funded a hospital for sailors and established the Chatham Chest; the first health insurance and pension scheme in the world, which was funded by a small contribution from each seaman's wage.

But in general it is Elizabeth who typifies the prevailing attitude of the day towards workers, an attitude which persisted right up to the Industrial Revolution and

beyond. Improvements in occupational health, safety and welfare only came as part of a wider working class struggle for political freedom.

WORST JOB?

But being an Elizabethan sailor was not the worst job in history, nor was it even the most hazardous. The next century and a half saw England move towards industrialisation, creating a legion of even less desirable jobs. Which was the worst? Actor Tony Robinson considers this question in his book *The Worst Jobs in History*. Surprisingly, "assistant to Blackadder" did not even feature. The worst job in history, according to Tony Robinson, was leather tanning.

At first, tanning leather doesn't sound too bad but its claim to the title rests on the way it creatively combined hard and skilled physical work with tediousness and, to our refined 21st century sensitivities, an element of disgust which borders on putrid.

The practice of tanning, of course, stretches back much further than the Industrial Revolution. It supplied vellum for the beautiful illuminated manuscripts of medieval times, the harnesses for horse-drawn ploughs and the saddles and reins used by the doomed French aristocracy at Agincourt.

But it was with the Industrial Revolution itself that tanning came to the fore. Leather was everywhere. It could be found in the work boots of the navvies who made the canals and the railways, the aprons of the rat catchers whose job was so important in the new rodent-infested towns and last but by no means least, tanning provided the leather belts that drove the machinery in the new workshops and mills.

A closer look at how tanning was done helps to explain Tony's choice. Firstly tanners had to collect the still-bloody hides from the abattoir. They then salted and trimmed them before dumping them into a sickly-smelling pit of slaked lime and water. When this treatment had sufficiently softened the skin and loosened the hairs – this took weeks – the now heavy and wet hides were hauled out and placed on a fleshing beam. Using a two handled knife, the tanner would scrape off all the hair, then turn the hide over and scrape away all the fat. This was arduous: the knife soon became coated with fat and would slide uselessly over the hide, but so far *not* so totally gut-wrenchingly awful.

However, next came the choicest part of the whole process. The hide was placed in a pit containing 'bate', which is a delightful mixture of dog excrement and water. Its first function was to remove lime from the hide. But why dog excrement? It was chosen because dog faeces contain digestive enzymes from the dog's stomach which permeate the leather and help keep it soft and springy. As you may imagine, a tanner's yard stank several light years higher than heaven. Especially so when,



THE SEWER-HUNTER

Credit: Getty Images

► An illustration of a 'sewer hunter' (or 'tosher') used in Henry Mayhew's *London Labour and the London Poor* in the mid 19th century.

to increase its effectiveness, the dog poo soup was heated by hot water pipes, thus ensuring that the entire neighbourhood did not miss out on the bouquet.

After this pinnacle of stomach-churning intensity, the final treatment of the leather was an anti-climax – a year-long soaking in tannin which was provided by a ‘tea’ of bark.

In 1700, Bernardino Ramazzini, an Italian physician considered one of the founders of occupational medicine, described tanners as: “distressed ... by the incessant stink and foul exhalations, one can see them with cadaverous complexions, swollen bodies, ghastly looks, and oppressed breathing; they are nearly all splenetic. I have observed many cases of dropsy in workers who follow this trade.”

Not surprisingly, tanners tended to be outcasts in their communities. A tanner’s only friends were other tanners. Of course in the 20th century, killjoy health and safety professionals took all fun out of the process by insisting on the use of a synthetic bate.

HUMAN SCAVENGERS

But tanning was not the only competitor for the accolade of worst job in history. The gathering pace of industrialisation and urbanisation created many more. A whole class of human scavengers survived, like dung beetles, on the excrement and waste and dirt generated by the new industrial towns. Dustmen collected the ash and cinders generated by domestic coal fires and took it to a yard where it was sifted by women and children. The finer portion was sold as agricultural fertiliser and the coarser portion was used to make bricks. But according to Henry Mayhew in his 19th century book *London Labour and the London Poor*, this was actually quite a healthy job despite the dirt.

Being a rag man was more physically demanding. They rose in the early hours of the morning to beat other rag men to any rags contained in the piles of rubbish left outside houses. The rags were used to make paper before wood pulp was used and actually made very good paper – much longer lasting than present day paper. But to make this possible, a rag man might walk twenty or thirty miles a day with half a hundred weight of rags on his back.

Less salubrious was bone grubbing. Bone grubbers gathered, as you might guess, old bones. The bones were often rotting and stinking and were sold on to be made into toothbrush handles or teething rings or cheap combs. Less suitable bones were boiled to remove gelatine, their residue crushed for bone fertiliser. But probably the worst of these scavenging jobs was toshing, which was so dangerous it was illegal.

Toshers worked the sewers. Each day they risked drowning in flash floods of sewage and braved foul-smelling and often noxious gases and vapours to fish the excrement for whatever treasures they could find. Examples include coins, lumps of coal, jewellery, cutlery and old bits of metal. They only worked in threes because the sewer rats were particularly vicious.

DIVISION OF LABOUR

But of course all these scavengers were, quite literally, at the bottom of the heap. Higher up the occupational pecking order life was less unpleasant. For example the end of the 18th century has been described as the golden age of domestic weaving communities, with workers often combining weaving with farming, each house having its own loom. The communities were written about in glowing terms, for instance in his 1828 essay *Origin of the New System of Manufacture, Commonly Called Power Loom Weaving*, William Radcliffe wrote: “Their dwellings and small gardens clean and neat, all the family well clad, many cottage families had their cow.”

However, the Industrial Revolution killed this idyll, ending the heyday not just of weavers but of most craftsmen. It replaced crafts with work, crushing the spirit as



► A young boy mule spinning at the Jones Cotton Mill, Manchester, circa 1909.

well as the body, and planted the seeds of our age of occupational stress. According to Adam Smith, it all began with a pin factory. The pins in question were not pins as we know them today but tacks and small nails. In his famous book *The Wealth of Nations* (1776), Smith describes the pin factory as one of the first examples of the division of labour. A single pin maker, performing all the necessary operations, could make only a few hundred pins a day. However, when pin-making was broken down into its component tasks, and each pin maker performed just one task, the daily output of pins rose to 16,000.

But there was a price. Work became mind-numbingly boring. According to Adam Smith, this in turn affected the workers: “The man whose whole life is spent in performing a few simple operations ... Generally becomes as stupid and ignorant as it is possible for a creature to become.”

Factory machines not only dumbed-down skills but, devastatingly, took control of the work away from the workers. Weaving moved from craftsmen’s cottages into Blake’s *Dark satanic mills* where men, women and children were harnessed to machines which dictated their every action and the pace of their work.

Nor was that work physically safe. One of the most dangerous jobs in the weaving mill was that of the mule scavenger, who had to crawl below the loom to collect fallen bits of cotton fluff. The loom was kept running all the time, which vastly increased the hazard. This is graphically illustrated in an account of an accident in 1865 at a mill just outside Manchester. The victim was 13-year-old Joseph Foden (children were commonly used as mule scavengers as they were small enough get among the machinery):

“While engaged sweeping under a Mule his head was caught between a roller beam and the carriage – as the latter was putting up – and completely smashed, death being instantaneous.”

In addition, every worker in the mill breathed in cotton dust, which caused lung disease, worked in noise which effectively isolated them from colleagues, and was subjected to the heat and humidity which was necessary for the cotton.

But the apotheosis of the division of labour was surely the motor car assembly line.

In his book *Working for Ford* (1984, 2nd edition), Huw Beynon interviewed workers to find out what it felt like to work the Ford assembly lines in the UK during the 1970s and 1980s: “When you’re on the line it’s on top of you all the time. You may feel ill, not one hundred per cent, but that line will be one hundred per cent.

“You don’t achieve anything here. A robot could do it. The line here is made for morons. It doesn’t need any thought.”

Lack of control increases stress. Hunter-gatherers, Elizabethan sailors and the scavengers of the Industrial Revolution all had a degree of control over their work that assembly workers do not.

And in the 21st century, management control has invaded work to an unprecedented degree. For example, thanks to computer technology, managers can monitor and control every aspect of an employee’s work. Call centres, where even toilet breaks can be timed, are a prime example.

Control will continue to be one of the main occupational battle lines. But need there be battle lines? Today’s workplace represents a huge opportunity for H&S and occupational health professionals. Helping to design work where the workers have more control could result in jobs that are more humane and ultimately, more productive. It could even bring an end to the hazardous history of work.

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