

Question 1. How Far does Quarry Bank Mill enable you to understand the factory system of textile production introduced during the Industrial Revolution of the late eighteenth and early nineteenth centuries?

Before the factory system was introduced people used the domestic system to produce cotton, where spinning and then weaving was a very slow and simple process. The Domestic system was very relaxed where people could have lunch or go to the bathroom whenever they wanted to, unlike in the factory system, which was very disciplined and regimented. We have to determine if Quarry Bank Mill was typical of other mills at the time, to be able to see how much it tells us of the factory system. Quarry Bank Mill may be an exception to other mills, maybe having better or worse conditions than most. How much can we actually learn about the factory system by studying Quarry Bank Mill?

There were many machines used in the factory and we saw some of these when we visited the mill. The machines we saw included a Spinning Jenny, a Flying Shuttle and a carding and mule machine, although the Spinning Jenny and the Flying Shuttle were from the domestic system, seeing how they were used also helped to understand more of the importance of the factory system noticing the changes from domestic to factory.

We saw machines from different time periods, not just from the industrial revolution. We were told that the carding machine that we saw, although was an 1864 design, it was a 1920s model and the Mule machine was also a 1926 model, so there may have been slight variations between the machines and might have been altered since the mill was opened. So this does not give us an entirely accurate impression of what the factory system was like.

We visited the different rooms and saw that they were quite big. There would have been 16 machines in each row with two or three children operating each machine making it quite crowded. They would have been doing jobs, which were shown or explained to us. There were simple jobs like piecers or can tenters, who would have moved a can of cotton back and forth from carding machines. This tells us that the factory system included many unskilled jobs for children, which was also the case in other mills across Britain.

When we were in the weaving shed only a fraction of machines which were there would have been working in the mill, were on. The noise was horrific so it is difficult to imagine how deafening the noise would have been in the factories compared to the noise of one machine in the domestic system. We would not know what kind of noise level the children had to withstand in the mill as machines in the different rooms were ran at different times when we were present, contrary to when the mill was being run.

Using looms was useful as only one person needed to operate it, which is good for the factory system, as fewer employees were needed to produce a large amount of cotton. The condenser mule had 560 spindles, which would produce as much yarn as hundreds of hand spinners. The mule shed was an unhealthy environment, the air being full of cotton dust where they showed the machines working, so in the factory system the people would be of poor health falling victim to white lung, from cotton dust. This shows that employers in the factory system were not as concerned about the children's health as they were about

producing large amounts of cloth as there were no health regulations, although Greg provided a doctor, as many mills did, so they must have been concerned even though the treatments failed to work.

The building was big and had small windows to let the light in, as the gaslights could not be used for their light to work in because the mill would be very flammable from all the cotton and dust floating about. I could clearly see where an extension had been added, showing that the mill had been successful so far, so they had decided to expand it. A bell and clock was added because the apprentices would need to know the time for where they should be, which shows that the factory system was very regimented. They would have a bell for everything, like what time for work, school, and meals. This all shows a significant change in industrial production, that the factory system was much more disciplined than the domestic system. A steam chimney was also added which proves that power is very important in the factory system of textile production.

There were only very small windows in the mill as Greg would want to keep it humid and hot, therefore the cotton would not snap. When we were there we did not experience how hot it would have been, as they had to take out more windowpanes as a result of the hot weather, presumably to meet today's health and safety regulations. Our time in the weaving shed was recommended to spend less than 15 minutes in there, because of the cotton, dust, noise and the heat. We have to imagine what it would have been like to work in there for about 12 to 13 hours every day and even longer in other mills, which is very difficult to reconstruct. It would probably have posed serious health risks to the apprentices, mainly children.

Understanding how the power was operated in the factory system was shown in the power room where there was a mini model of The River Bollin displaying weir and sluice gates making it usable by controlling the flow in order. Seeing how the water wheel worked through this model, was informative giving us an idea of how everything worked. Although to see the central shaft working was helpful, it was also limited, as it is no longer powered by water. All the machines that we observed were powered by electricity which they definitely would not have been powered by electricity in the 1800s. The water wheel was replaced with two major turbines.

In 1805 the source of power was changed to steam. Greg bought a new steam chimney, which would have been very expensive, which shows that since the mill owner paid so much for this extension that power was very important.

There are a couple more buildings on site, which are Quarry Bank House, opened in 1796 and the apprentice house, opened in 1790. Quarry Bank House was the place where the Gregs lived on site. The apprentice house being on site indicates that in the factory system close supervision was needed. Close supervision is an aspect of the factory system that is different from the domestic system. Samuel Greg housed some of his workers which he might have needed skill from, but he wanted to keep the costs down to be sure of making as much profit as possible. In 1706 there were 205 workers in the mill, however in 1835 the number of workers had increased to 408 labourers. This shows that the mill was successful extending the business, therefore needing more mill workers. As the doors and windows were locked in the apprentice houses they were hot, stuffy and smelly unlike how it was when we visited with open windows for us.

The fact that Greg employed more girls than boys reveals that the factory system required discipline, which girls were usually known for rather than boys. There was not a church on site but the apprentices had to walk 3 miles to get there twice every Sunday, consequently it is obvious that religion was still an important issue, even for child labourers in the factory system. Apprentices had their free time on Sunday, where they could do leisure activities such as a game named five stones, or knucklebones, or football using a pig's bladder. They played with remains of things made such as empty bobbins. This was probably more free time than other mill owners gave. The apprentices were given clean water and food every day, which contributed to their good health. We saw the kind of porridge the apprentices would be given and the pump for the water. The guide told us that other mills would give black dirty water. Dr Peter Hollad was employed by Greg for £21 every year and would give treatments to ill apprentices. Treatment that we saw there were a mixture of brimstone and sulphur, which purged them to clear the system, blistering and leaches to suck blood on swollen ankles, and use goose grease. All of this tells us that the employees were essential to the smooth running of the mill and needed to be as healthy and happy as possible as the important workforce had to work hard. However, by comparing this with life in other mills, it is visible that the general factory system was not as good as this. Not all of the mills provided an education and they were not as concerned about the welfare of their workers as Greg was, so this was not typical of other mills at the time. This means that Quarry Bank Mill does not tell us much about leisure activities and what free time, if any was given to workers in the rest of the factory system.

Quarry Bank Mill was a rural mill and so might not tell us accurately about the factory system, as the mills in the country might have been very different to the mills situated in the city. Quarry Bank Mill is described as being one of the better mills in that time so the factory system generally could have had worse working conditions, different machines and maybe a change in the way things were run. If somebody studied certain mills they would have had a very different impression of the system, with worse treatment. For example, stories of Robert Blinco suggest that Cotton Mill created a very different version of the factory system from that at Quarry Bank Mill, suggesting that conditions were extremely bad for the workers.

The owner of the mill, Samuel Greg, lived on the site, so he was close to his work and his employees, able to easily go to and from the mill. The mill also had a managers office on site where the employees who collected wages, would have to see him every Friday to obtain their wage of 1p an hour, so Greg had a closer relationship with them. Although, not all mills were like this, some mill owners hardly ever had direct contact with their workers, so again this is not typical of the factory system. Also, the majority of workers did not receive wages as they were given in their place, food, clothes, education, shelter, and a doctor supplied if you fell ill.

What we saw at the mill however is controlled by the Gregs and they might want to give us more of a positive impression to show how it was run far better than the other mills during that time were. Perhaps we were not shown everything or with complete accuracy. We have no evidence for or against to prove that the punishments were harsher than we were told they were. So it is useful to visit Quarry Bank Mill and does help us find out about some parts of the factory system, such as size of buildings but what it can tell us about conditions is limited.

