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5.9 Management and information systems (HL)

Digital Taylorism

Frederick Taylor, the 20th century guru of scientific management, focused on the drive for standardisation of tasks and the rigorous pursuit of staff efficiency. His theory of motivation is discussed in unit Subtopic 2.4 (/study/app/y12-business-management-a-hl-may-2024/sid-351-cid-174702/book/the-big-picture-id-39054). The concept was thus: break complex tasks into simple ones, link pay and performance, and monitor everything your workers do. Taylorism has been updated for the digital age. Welcome to digital Taylorism, a 21st century version of his theories, which makes use of surveillance technology to monitor worker output.

Figure 1. Taylorism from the past: worker timecards.

Credit: Monty Rakusen, Getty Images

In the modern gig economy, ride hailing apps and food delivery apps use computerised systems to manage and monitor workers. Managers and owners can analyse worker behaviour in detail, using data to analyse every aspect of performance, such as delivery times. In the logistics and shipping industry, digital Taylorism allows management to use sensors to track performance by tracking locations, timing, driving, delivery success, delivery rates and many other metrics. This may be used to administer piece-rate pay and may act as a monetary incentive to workers, ensuring that they meet targets in order to receive pay or bonuses. In other words, it could be used as an extrinsic motivation tool.

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Figure 2. Delivery workers are monitored with apps that track

performance.

Credit: Luis Alvarez, Getty Images

Algorithms and analytical software systems allow management to acquire data that can be used to instruct employees or conduct appraisals. The data from tracking tools provides information that allows managers to evaluate whether to keep employees, provide additional training or discipline or remove employees who consistently fail to hit targets.

Digital Taylorism is sometimes used without employees' direct knowledge. Programmes on office computers or on cash register apps can monitor keystrokes, record audio and assess time spent on certain programmes in order to check employees' productivity. And as remote working has become more common, workplace surveillance has increased (https://www.theguardian.com/technology/2022/apr/27/remote-work-software-home-surveillance-computer-monitoring-pandemic).

International Mindedness

Privacy laws, which include the use of data on employees, differ around the world (https://www.dlapiperintelligence.com/goingglobal/employment/index.html?t=11-data-privacy). In most countries, however, employers have a legal right to monitor employees, as long as there is a legitimate business interest to do so.

Evaluation of digital Taylorism

Monitoring employees using digital technologies has its benefits for efficiency. But businesses must be careful not to create a culture in which employees feel as if they are constantly being watched. Whilst this type of monitoring may work for some businesses, it can lead to problems for others, particularly with respect to motivation. **Table 1** outlines some of the major advantages and disadvantages of digital Taylorism.

Table 1. Advantages and disadvantages of digital Taylorism.

Advantages of digital Taylorism	Disadvantages of digital Taylorism
Increased efficiency. Workers are monitored and incentivised to increase productivity in order to meet targets; workers can increase their pay when they perform efficiently and well.	**Lower motivation.** Digital Taylorism reduces employee autonomy, which can reduce motivation and increase labour turnover.
Improved appraisal. Management can assess worker performance and productivity using data analytics rather than using less scientific measurements.	**Reduced creativity.** Digital Taylorism may reduce the scope for workers to find creative solutions to problems, as they fear missing targets.
Improved decision-making. Businesses can use data to make informed human resource decisions on employment.	**Dehumanisation and overwork.** Data could be used in a dehumanising manner, turning workers into robots that complete task after task.

Case study

Deliveroo connects restaurants with customers to deliver food; it uses thousands of delivery personnel in the gig economy. Deliveroo delivery drivers work on demand, accepting orders from the app. The app provides the driver with GPS information to the restaurant from where they collect the food, and then provides them with GPS information to the customer to which they deliver the food. The algorithm used in the Deliveroo app acts as the boss, tracking the performance of the delivery personnel.

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Deliveroo uses algorithms to monitor delivery personnel. Delivery drivers receive orders for food via the app. The app then monitors the average time taken to accept orders, ride to the restaurants, the travel time to the customer, the time with the customer, late orders and orders that were not assigned. The algorithm measures a delivery worker against average standards. Drivers receive information that informs them whether they were above or below the average.

Deliveroo has moved to a piece-rate system of pay. The company has shifted the risk of deliveries on to the workers. The piece-rate system means that workers can measure the relationship between their performance and pay. Their pay is influenced by the number of deliveries that they make.

Deliveroo states that the piece-rate system is necessary to manage personnel in the absence of management and that such a system is efficient. However, labour activists have criticised the dehumanising nature of being managed by algorithms and the impact it can have on the treatment of workers as machines. It has been referred to as digital Taylorism.

Questions

1. Define the term Digital Taylorism. [2 marks]
2. Explain **one** way in which the use of algorithms benefits Deliveroo. [2 marks]
3. Explain **one** advantage and **one** disadvantage of digital Taylorism for Deliveroo's drivers. [4 marks]