Ahead of the sun

How the railways, not the state, talked Britain out of local time.

A For most of recorded history, the time of day was a local matter, read from the sun. When the sun stood at its highest point over a town, it was noon there, and a town a few miles to the west reached its own noon a little later. The difference was small but real: Bristol, in the west of England, ran roughly ten minutes behind London, and Penzance further still. Each place kept its own clock by the sky above it, and for communities that rarely needed to coordinate with one another over distance, the idea of a single national time would have seemed not merely unnecessary but faintly absurd.

B The railway changed the calculation. A printed timetable promising a departure at nine o'clock was useless if nine o'clock meant one moment in London and another in Exeter; passengers missed trains, and, more dangerously, two trains running on a single track by local clocks set minutes apart could meet where neither driver expected the other. Safe scheduling demanded a single shared reference against which every station along a line could be set. The electric telegraph, spreading alongside the rails, supplied the means: a time signal sent down the wire could put clocks in distant towns into agreement within the same second, something no earlier technology had been able to do.

C Britain's railways adopted this logic piecemeal and then quickly. The Great Western Railway ran its trains by London time across its network from around 1840, distributing the hour outward from the capital. In 1847 the Railway Clearing House, the body that coordinated traffic between competing companies, recommended that all railways adopt Greenwich Mean Time, or GMT, and within a year most had done so. The new 'railway time' travelled along the lines into the towns they served, carried by station clocks that the public could see and increasingly chose to trust.

D For a period the two times lived side by side, and the friction between them left visible traces. Some town clocks were fitted with a second minute hand, one showing local solar time and the other railway time, so that a traveller could read both at a glance before hurrying to the platform. The tension was practical rather than ideological: shopkeepers, carriers and newspapers found a common clock convenient and adopted it willingly, while a minority clung to the older reckoning. What the double-handed clocks record is not a war over time so much as a transition managed, town by town, in the open.

E It is often supposed that standard time was imposed on the country by government decree. The sequence of events suggests the opposite. By the time Parliament acted, the railways had already standardised the working day across the better part of the kingdom. The Statutes (Definition of Time) Act of 1880 made GMT the legal time for Great Britain, but it did so decades after the change had taken hold in practice. The law in this case followed the fact; it ratified a settlement that commerce and the railways had reached on their own, rather than engineering one from above.

F The pattern recurred, with local variations, elsewhere. In the United States the problem was larger, for a continent spanned many more degrees of longitude and supported hundreds of separate local times. The solution again came from the railroads rather than the legislature. On 18 November 1883, the American railway companies, acting in concert, divided the country into a handful of standard zones and reset their clocks accordingly, a coordination so abrupt that the day was remembered for its 'two noons'. The federal government did not give these zones the force of law until the Standard Time Act of 1918, thirty-five years later.

G The final step was international. In 1884 delegates met at the International Meridian Conference in Washington and agreed to count longitude from a single prime meridian running through Greenwich, providing the fixed reference from which a global system of time zones could be measured. The Canadian engineer Sandford Fleming had argued forcefully for exactly such a worldwide standard. A traveller today, adjusting a watch by a whole hour at a border, treats the uniform clock as part of the natural order. It is worth remembering that it is nothing of the kind: a recent invention, driven by the timetable and the wire, and accepted because it was useful long before it was ever the law.

ANSWER THE QUESTIONS

Questions 1–5 · True / False / Not Given

Do the following statements agree with the information in the passage? Write True, False, or Not Given.

1 Before the railways, the time kept in one British town could differ from that kept in another.

2 The telegraph made it possible to set clocks in distant towns to the same moment.

3 The Great Western Railway was the first railway in the world to run on a single standard time.

4 Parliament made Greenwich Mean Time the legal time of Great Britain before the railways had adopted it.

5 The United States Congress created the American time zones in 1883.

Questions 6–9 · Multiple choice

Choose the correct answer, A, B, C or D.

6 According to paragraph B, why did printed timetables make local solar time impractical?

- **A** Trains travelled too fast for their speed to be timed accurately by the sun.
- **B** A single stated departure time meant a different moment in each town, so safe scheduling needed one shared reference.
- **C** Passengers were unable to read the older style of station clock.
- **D** The telegraph could not yet send a signal far enough to be useful.

7 What does the example of clocks with a second minute hand illustrate?

- **A** That railway time was less accurate than local solar time.
- **B** That the public refused to accept the new railway time.
- **C** That local and railway time were displayed together during a period of transition.
- **D** That town councils were legally required to show both times.

8 What is the passage's main argument about the role of government in standardising British time?

- **A** Government resisted the change for as long as it could.
- **B** Legislation ratified a change that the railways and commerce had already brought about.
- **C** Parliament designed the system of time zones in detail.
- **D** The law and the railways acted at the same moment.

9 According to paragraph G, what did the 1884 International Meridian Conference establish?

- **A** A worldwide ban on local solar time.
- **B** A single prime meridian at Greenwich as the reference for a global system of time zones.
- **C** The exact number of time zones each country must use.
- **D** The legal time of the United States.

Questions 10–11 · Sentence completion

Complete each sentence using no more than two words from the passage.

10 In 1847 the Railway Clearing House recommended that all railways adopt , which most had done within a year.

11 The 1884 conference agreed to count longitude from a prime meridian running through .

Questions 12–14 · Matching information

The passage has seven paragraphs, A–G. Which paragraph contains the following information? Choose the correct letter.

12 A description of how the time of day was reckoned before the railway age.

13 An account of how standard time zones were introduced in a country other than Britain.

14 The argument that official legislation came only after the practical change had already taken place.

ANSWER KEY

1. True
2. True
3. Not Given
4. False
5. False
6. B
7. C
8. B
9. B
10. GMT
11. Greenwich
12. A
13. F
14. E