

Changing the clocks: Latitudes and attitudes

Next month the US (most of it, at least) and many other countries will adjust their clocks by one hour, a semiannual practice that is being challenged by people on either side of the Atlantic. In recent years we have looked into the interplay between the practice and physics, physiology, and sociology,¹⁻³ and we have found problems with the way opponents approach the issue. Some allege on the basis of poorly interpreted statistics (that nonetheless receive flashy headlines) that clock changing is harmful.³ They seem to forget the discomforts that would arise at some latitudes from having a rigid clock and the way that clock adjustments provide a useful solution.

Human physiology suggests that the start of the day should be linked to sunrise. At low latitudes, the oscillation of sunrise times is small; therefore, clock changing is unnecessary. It is no surprise that a US senator from a southern state, Republican Marco Rubio from Florida, is the primary sponsor of a bill that would make daylight saving time permanent or that Brazil and most of Mexico recently abandoned clock changing. At high latitudes, on the other hand, the oscillation is too large for the practice to make much of an impact on the long summer and short winter daytimes.

But at midlatitudes, the situation is more complicated. At the latitude of New York City, for example, sunrise times oscillate by three hours over the course of the year. At those latitudes, it is hard to pick a start time that works for both seasons without changing the clocks: What works in the summer might be too dark and cold in the winter, and what works in the winter might be too bright and hot in the summer.

When people started advocating for shifting the clocks, they promised better alignment of the Sun and human schedules and more daylight for leisure time on summer evenings. And the practice delivered it. But it wasn't until World War I that Germany decided to imple-

ment clock changing, and eventually many other countries followed. Today the majority of Europeans and Americans, as well as people in several other countries, continue the practice.

People can make their clocks and schedules rigid, but the same cannot be said for sunrise times. The bottom line is simple: Changing the clocks helps people accommodate the otherwise extreme sunrise times in the winter and summer. The practice can be seen as a compromise.

References

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