

Early to bed early to rise... depends on the TV schedule in your time zone

6 March 2008

Most of the nation is once again readying itself for losing an hour of sleep with the arrival of Daylight Saving Time. This is a “shock” not only to those of us who value our sleep, but also (very temporarily) to all levels of the economy, from the individual to the world.

In their forthcoming article for the *Journal of Labor Economics*, “Cues for Timing and Coordination: Latitude, Letterman, and Longitude,” authors Daniel S. Hamermesh, Caitlin Knowles Myers, and Mark L. Pocock look at the brief fight between American’s natural timing cues—the circadian rhythms determined by the sun—and the man-made cues brought on within the last century, mainly by the creation of time zones and the television broadcast schedule. In this relatively brief time, they find, the markers for how we structure our day have been dramatically altered.

How did these man-made cues come about? Daylight Saving Time has its roots in the Standard Time Act of 1918; the DST component, which was a wartime energy-saving measure, was repealed after World War I. The current plan was signed into law by President Johnson in 1966 as the Uniform Time Act. Last year, Daylight Saving was extended by four weeks.

Although the prime-time television schedule is a “relic of the technology of radio transmission”—it was created when signals could not be broadcast across the country—it remains a powerful cue. Reflecting on his own weekday television watching schedule, Hamermesh recalled, “I lived twenty years in the Eastern Time Zone, I used to stay up until 11:45 p.m. to watch the monologue on the Tonight Show. Living in Texas, I typically turn out the lights at 10:45 p.m., when the monologue is done.”

For their study, the authors turned to data provided by the unprecedented Bureau of Labor Statistics’ American Time Use Survey (ATUS), which

enabled them to observe how Americans split their time between their three most time-consuming activities: work, sleep, and television watching.

After merging ATUS with sunrise and sunset data, the authors found that while natural daylight patterns have some effect on people’s life patterns, the demands of global business—market openings, etc—and regular television schedule demarcate the boundaries of most Americans’ lives. Says Hamermesh, he and his colleagues were “amazed how little daylight matters nowadays, and how much artificial time zones matter.”

In the case of outliers, such as Arizona’s unique time pattern, residents tend to adjust their sleep and work patterns to an adjacent zone. Hamermesh, Myers, and Pocock conclude that while the “natural cue of daylight has some effect on timing...the entirely artificial cue of the timing of television programs has still larger effects.” They also find that those places, like Hawaii and Arizona, that don’t “spring ahead” find themselves tied to the schedule of their neighbours, a further sign that coordination is tied to artificial cues, and not natural cues like the sun.

Your Daily Shows...additional findings about artificial cues:

-- If you are in the “professional service” sector (finance, information, business services), you are more likely to follow the time zone cue, while you are in other services sector (education, health, leisure, and hospitality), you are probably more responsive to television cues.

-- The probability that you are watching TV between 11-11:15 p.m. decreases with age, but the probability that you are at work between 8 and 8:15 a.m. increases until retirement age.

-- Marital status and children don’t have an effect on TV viewing at 11 p.m., but married individuals

are less likely to be sleeping at 7 a.m. and more likely to be at work at 8 a.m.

-- Individuals in early television zones (Central and Mountain) are 6.4 percentage points less likely to be watching television between 11 and 11:15 p.m. than those in later zones, but if the sunset is pushed back by an hour the probability of watching TV at 11pm only increases by about one percentage point.

Source: University of Chicago

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