

# **SPRING FORWARD**

**The Annual Madness  
of Daylight Saving Time**

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## PREFACE

It was a Saturday night in October. I knew I was supposed to wait until 2 a.m. on Sunday, but I was tired, and no one else was likely to consult the kitchen clock before sunrise, so I turned back the time by one hour. And I realized I had no idea what I was doing.

“You were breaking the law,” a neighbor told me, when I confessed to him on Sunday morning. He offered to lie for me if the Feds came around asking questions.

I wasn’t seeking an alibi. I wanted to understand my crime.

During the next week, I asked a lot of people if they understood exactly what we’d done to our clocks, or why. No one did, but a lot of them blamed the farmers. None of us actually knew any farmers. And if we talked about it for any length of time, most of us realized we didn’t know why farmers would want to delay the time of sunrise from April through October, when everyone in the Northern Hemisphere enjoys later sunsets than, say, in January.

“Because they don’t need more sun in January. Farmers don’t farm in the snow,” explained one friend. Which made sense until he added, “Of course, it doesn’t snow much in Texas or Florida.”

Were we saving daylight when the sunrise was earlier or when it was later? Unclear. When had Americans started to fuss with their clocks? Also unclear. Who saved what when?

One of my friends, a devoted fan of long, late summer evenings, asked me to stop talking to her about Daylight Saving. “It hurts my head when I try to think about it,” she said, “and I am starting to think maybe it’s a bad idea. Plus, I can’t remember whether I am supposed to be tired after I change my clocks in the spring or the fall. If days are longer in summer, shouldn’t we gain an hour when we Spring Forward?”

“You can change the hour of sunrise, but you can’t change the time of sunrise,” I said. I was quoting a very thin, serious man I’d met at a dinner party. He was a financial wizard and had a rigorous meditation practice. “Time is quantifiable, but that doesn’t mean time is a quantity.”

I looked at my friend to see if I was making sense. She was cradling her head in her hands.

I persisted, and a number of my friends stopped taking my calls. Others told me to lay off the farmers and pick on the other perpetrators of Daylight Saving – bus-riding schoolchildren, big-government liberals, and Richard Nixon. This seemed an unlikely coalition, but I Googled the culprits. “We still observe Daylight Savings [sic] Time largely because the FDR-mentality socialists tell us it must be a money-saving proposition or else FDR would not have created it,” opined one of the thousands of columnists and bloggers I encountered who consider Daylight Saving a conspiratorial infringement on their natural rights or an insult to God. The writer had adopted the suggestive pseudonym Jon Christian Ryter. He came to typify for me the anger and confusion the topic stirred up in many Americans. And like most of his compatriots, he also added an unnecessary “s” to Daylight Saving, perhaps because the plural made the

whole proposition seem even more preposterous. “Not only does Daylight Savings [sic] Time not ‘save’ anything,” he wrote in October 2003, but he mysteriously alleged that “in today’s communal lifestyle it actually costs every American a few bucks or more a day during the summer months.”

The very thought of Daylight Saving Time seemed to give a lot of people a terrible headache, which made them mad, which made them more likely to make things up. According to Ryter, “the farmers liked it. It made sense to them. . . . But the utopians were absolutely convinced that the savings they gleaned in agrarian America were applicable in urban America.” And though he blamed Richard Nixon for “the grandest time shuffling experiment of all time,” he still considered Daylight Saving “one of those ongoing liberal myths. . . . In the view of the ecoalarmist, ‘time shuffling’ conserves the world’s resources. It doesn’t.”

I didn’t know much, but I was pretty sure Richard Nixon wasn’t a true-blue liberal. And a colleague at work had mentioned that she’d always heard that farmers hated Daylight Saving Time. She had family in Iowa, which is the equivalent of a Ph.D. in agriculture, so I began to have some serious doubts about the few things I thought I knew. I decided a little more research was in order. Also, I was having trouble reaching my friends by telephone or e-mail.

A quick search of the Worldwide Web made it clear that Daylight Saving as we practice it in the United States began in World War I, World War II, in the early years of the American intervention in Vietnam, at the height of the energy crisis of the early 1970s, or during Ronald Reagan’s presidency. It was first proposed by a Pittsburgh

industrialist, Woodrow Wilson, a man on a horse in London, a Manhattan socialite, Benjamin Franklin, one of the Caesars, or the anonymous makers of ancient Chinese water clocks.

The confusion about Daylight Saving Time was worldwide. It even confounded the British, who like to think of themselves as the originators of the scheme. “To the clear-headed it is incredible,” editorialized the London *Times* in March 1947, “that anyone should have to think whether he must put his watch an hour backwards or forwards.” Although they had been observing Daylight Saving every year for thirty years by then, there were still many “muddle-headed” Brits “who have annually to decide whether they are to gain or lose an hour’s sleep.” A few days later, a reader alerted the editors of the *Times* to a solution. “There is a *memoria technica* for ‘The Annual Problem’ of shifting clock hands. It is: ‘Spring forward, Fall back.’ Your constant reader, Archimedes.”

It was a memorable mnemonic, but by 1947, the Daylight dilemma in America was much screwier than even Archimedes could have imagined. The United States Congress had already twice passed and repealed a national Daylight Saving act, and many state legislatures annually entertained both new Daylight Saving legislation and new or stricter prohibitions against the practice. Major league baseball was pitted against the moviemakers in Hollywood. The much maligned and misunderstood farmers had even taken their case to the Supreme Court, which ruled decisively, but fueled the controversy rather than quelling it.

That one unaccountable hour consumed a lot of energy. It became a burning political, religious, and financial issue, and as any wildfire will, it took its toll. By 1965, after the debate about Daylight had roiled for more than fifty years, word came from the U.S. Naval Laboratory – the most eminent and strategically significant center for the calibration of time in the country – that the dissension over Daylight Saving had made the world’s greatest economic and military superpower the world’s worst timekeeper.

All this, and Richard Nixon waiting in the wings.

It seems like such a simple gesture. Spring forward, fall back. Does anyone know what we’re doing?

## THE INFINITE HOUR

*In a minute there is time  
For decisions and revisions which a minute will reverse.*  
T.S. Eliot, 1917

Sunlight is a boon to us all, and sunlight is a limited commodity. Why waste it? This was the simple logic of Daylight Saving Time.

Although the federal government has long enjoyed a reputation for squandering the nation's resources, in 1918, the U. S. House of Representatives voted 252 to 40 to pass a law "To Save Daylight." The idea was simple. From late spring to early autumn, the sun rose before most people did, and it set before they were ready to go to sleep. Many people repelled the first light of day with shutters and shades and later relied on candles and electric lights to illuminate their evenings. Why not shift that first, unwelcome hour of light from the morning to the evening? If the nation's timepieces were simply advanced by one hour, the apparent time of both sunrise and sunset would be delayed. In effect, the nation would have one less hour of light before noon, and one more hour of light after noon. On Thursday, 15 March 1918, this is what the Congress asked Americans to do.

It was easier done than said.

The next day, the *New York Times* capped off its year-long editorial campaign on behalf of Daylight Saving with an attempt to quell anxiety about the controversial federal mandate. "The new daylight saving system will work out in practice as follows:

The man who leaves his home at 8 o'clock in the morning will still leave at 8 by the clock, but at 7 by sun time, but when the man goes home at 5 o'clock in the afternoon by the clock he will be going home at 4 o'clock sun time, and those people who work until 6 o'clock throughout the country will be going home at 5 o'clock sun time, but it will still be 6 o'clock by the clock."

Confusion attended Daylight Saving from the start, and federal legislation didn't resolve it. Instead, the new law galvanized the opposition, an unlikely coalition of miners and farmers, Populists and Republicans, ministers and movie moguls — individuals with competing economic ambitions and contradictory political agendas. When the Congress poked its finger into the face of every clock in the country, millions of Americans winced. United by a determination to beat back the big hand of government, the opponents of Daylight Saving raised holy hell, vowing to return the nation to real time, normal time, farm time, sun time — the time they liked to think of as "God's time."

"Nobody is opposed to it," insisted the *New York Times*, three weeks before the nation's first Daylight Saving law took effect, "except possibly a few people who are opposed on principle to any alteration of established habits." Like almost everything ever uttered about Daylight Saving, this wasn't true; however, it was an honest attempt to slander the scheme's opponents as foes of progress. And there were millions of self-proclaimed conservatives on the other side. The *Springfield (Mass.) Republican* spoke for many of them when it noted that President Woodrow Wilson, a Democrat, "has

indorsed the daylight saving plan. Perhaps he sympathizes with the average man, who cannot save anything else, with the present high cost of living.”

Before it became the law, Daylight Saving was considered a joke. Even today, even its most ardent advocates believe that when Ben Franklin took pen in hand and wrote the first detailed proposal to save daylight—a 1784 letter to the editors of the *Journal of Paris*—he had his tongue in his cheek. Franklin called for a tax on every Parisian window shuttered after sunrise to “encourage the economy of using sunshine instead of candles.” Replete with calculations of the hypothetical savings in wax and tallow, Franklin’s modest proposal is furnished with a crude method of enforcement. “Every morning, let all the bells in every church be set ringing; and if that is not sufficient?, let cannon be fired in every street, to wake the sluggards effectually, and make them open their eyes to see their true interest.”

But thrift was never a joke to Franklin. The idea of saving daylight had first occurred to him in London thirty years earlier, as he recalls in *The Autobiography*. “I observ’d there was not one shop open tho’ it had been Day-light & the Sun up above three Hours. The Inhabitants of London chusing voluntarily to live much by Candle Light, and sleep by Sunshine; and yet often complain a little absurdly, of the Duty on Candles and the high Price of Tallow.” Conceding that individual citizens might consider the cost of candles and lamp oil “trifling Matters not worth minding,” Franklin urged these wastrels to remember that, as with any small saving, “the great Number of Instances in a populous City, and its frequent Repetition give it Weight & Consequence;

perhaps they will not censure very severely those who bestow some of Attention to Affairs of this seemingly low nature.”

As usual, Franklin’s call for moderation was ignored. It was not until 1909 that the first American Daylight Saving legislation was drafted. And its sponsors were severely censured. When they brought their proposal to the floor of the House of Representatives, “they were repulsed,” noted a congressional observer for the *London Times*. “The statement may be hazarded that the House will reject the proposal as ‘freak legislation.’” By then, Daylight Saving had already established itself as a perennial legislative loser in Britain.

The uncanny idea of falsifying clocks to delay the apparent time of sunset had been hatched by the English architect William Willett. An avid golfer and hunter, Willett rode his horse through the deserted streets of London every day at dawn. Most Londoners were asleep, he noticed, and their windows were shuttered. One morning, the first rays of sunshine struck him like a bolt of lightning--according to the legend perpetrated by Willett and his admirers, which resembles in its details the conversion of Saul of Tarsus, who was temporarily blinded by a heavenly light on his way to persecute some Christians and turned into St. Paul, propagator of the faith. And Willett sounded like a man on an apostolic crusade. “Light is one of the great gifts of the Creator,” he wrote. “Against our ever-besieging enemy, disease, light and fresh air act

as guards in our defence, and when the conflict is close, supply us with the most effective weapons with which to overcome the invader.”

Willett’s epiphany – “the sun shines upon the land for several hours each day while we are asleep, and is rapidly nearing the horizon, having already passed its western limit, when we reach home after the work day is over” – turned him into a missionary. In 1907, he published his influential pamphlet, “The Waste of Daylight,” which included a detailed proposal for “The Daylight Saving Act,” and was appended by dozens of endorsements from prominent British esquires and honorables. Willett wanted to push the clocks ahead by 80 minutes every spring to increase people’s exposure to the healing properties of sunlight. He brought to this proposal a convert’s enthusiasm, and a marked inability to distinguish between the sublime and the ridiculous. “That so many as 210 hours of daylight are to all intents and purposes wasted every year, is a defect in our civilisation. Let England recognise and remedy it,” he wrote, promising that the “benefits afforded by parks and open spaces will be doubled,” and “opportunities for rifle practice will have been created, which under existing conditions cannot be contemplated.”

When the editors of the *New York Times* first heard about this proposal in 1907, they pronounced Willett’s idea “little less than an act of madness.” Soldiering on against his critics, Willett did seem more than a little Quixotic. “Even the blind keenly realize the difference between the daylight and darkness,” he claimed. “They are always cheered by the former, but depressed by the latter.” British legislators first debated and roundly rejected the Daylight Saving Act in 1908. Willett got right back on

his horse, lobbying and lecturing for the cause until his death in 1915. He did not live to see the day when “everyone, rich and poor alike will find their ordinary expenditure on electric light, gas, oil, and candles considerably reduced.” When the House of Parliament entertained a 1916 version of Willett’s proposal, which would have required citizens to alter their clocks four times – skipping ahead twenty minutes every Sunday in April to achieve “Summer Time” incrementally – Britain’s Royal Astronomer was still joking about it. He expressed his disapproval by tacking on an amendment to make winters warmer. “And let it be further enacted,” he wrote, “that between the months of October and March the thermometer should be put up ten degrees.”

But the outbreak of World War I in 1914 had tempered the British sense of humor, and the Royal Astronomer’s clause was ruled out of order. Parliament passed a revised draft of the 1916 Daylight Act, which was to take effect April 1917. No one gave a nod to Ben Franklin’s comic inspiration – that the sun “*gave light as soon as he rose*. This is what I claim as my discovery.” Franklin had expected “neither place, pension, exclusive privilege, nor any other reward whatever” for his part in saving daylight. “I expect only to have the honour of it.” William Willett expected even less. He had also eschewed fame and personal profit, but he lacked Franklin’s light touch, piously predicting that the first nation to enact his proposal would enjoy “the honour of bringing similar blessings within easier reach of a great proportion of mankind.” Willett believed, in his small way, that he had contributed to the greatness of Great Britain.

Britain's finest hour was spoiled by a German sneak attack. "'German Summer Time' began on Monday," reported the London *Times* in early May 1916. Trying to assuage this injury to English pride, the *Times* noted that, in Germany, "the change required no legislation, but was merely 'ordained' by the Federal Council in the exercise of powers which it enjoys during the war." The Germans shrugged off the criticism of their undemocratic process and gleefully reported that "the change has been well received, and is regarded as an appropriate stimulus to war work." Frankfurt's daily *Zeitung* acknowledged the decade-long British debate about Daylight Saving, but added, "it is characteristic of England that she could not rouse herself to a decision."

"While daylight surrounds us," wrote William Willett, "cheerfulness reigns." His vision of the peaceable kingdom did not come to pass. But by the time the United States declared war on Germany in the spring of 1917, more than a dozen European nations had adopted some form of his Daylight Saving plan. The scheme's American advocates, who had long been dismissed as caddies for the interests of the leisure class, shifted the battle from the golf links to the trenches. "Millions of dollars will be saved by the people of the United States," announced the newly elected president of the American Association for the Advancement of Science, "and our 'preparedness' along industrial lines will be augmented." He predicted an annual saving of \$25 million in energy costs. He achieved this figure by unscientifically doubling a dubious British

estimate of \$12.5 million in fuel conservation during Great Britain's first year of Daylight Saving. Plus, as he pointed out, \$25 million was "enough to build two super-dreadnoughts each year."

Even under normal circumstances, it would have been difficult to calculate the fuel economy achieved by Daylight Saving. Energy consumption is notoriously variable from year to year, fluctuating as unpredictably as the weather. During World War I, credit for the total fuel saving should have been impossible to sort out, as consumption was severely restricted by the industrial conservation programs and civilian rationing measures the federal government had imposed. Within a year, though, Daylight advocates upped the ante, claiming that the scheme would save the United States \$1 per citizen per year, or \$110 million. And contrary to the established principles of economics, it was touted by the *New York Times* as "the only reform ever proposed that did not involve expenditures by somebody . . . the only one that didn't involve the making of money by somebody."

The rhetoric of the campaign to impose Daylight Saving on the United States was distinguished by deliberate misrepresentation and preposterous exaggeration. "Among the *Fifty-Two Convincing Reasons for the Daylight Saving Bill*," according to the May 1918 issue of *Current Opinion* were "expediting the training of the national forces, speeding up production in the plants making war material and stimulating work in the ship-building yards." Precisely how the primitive gesture of mechanically altering clock time would increase the pace and efficiency of all human endeavors went undocumented. But it seemed to become true by repetition. "General efficiency will, of

course, be increased by any improvement in the health, morals and social welfare of the workers," asserted the *Report of the Special Committee on Daylight Saving Plan* prepared for Congress by the Boston Chamber of Commerce. The logic of the campaign was circular, which made it easier to spin. "That children will profit by the change hardly needs to be urged," asserted these Bostonians, who also foresaw great advantages for the most vulnerable members of the society. "Working mothers and fathers obtain an extra hour for outdoor play with their children . . . Working girls will be on the way home in the daylight instead of the dark," and there would be "lessened eye-strain for workers and school children . . . lessened risk of accident in industrial establishments . . . lessened risk of accident due to transportation and traffic conditions."

On the other side, the rhetoric of the campaign to defeat Daylight Saving was distinguished by deliberate misrepresentation and preposterous exaggeration. The opponents foresaw the disruption of international trade and the discombobulation of transcontinental communications. Moreover, "it upsets all astronomical data, making the almanac almost useless. It causes great confusion in the navy and the merchant marine service." These arguments from isolationists might have been more persuasive if Americans did not share their seas and skies and telegraph lines with Canadians and Europeans, who were already observing Daylight Saving. But by 1918, the popular objections to Daylight Saving had congealed into a kind of litany of illogic, which was repeated in thousands of letters written to newspapers that spring, as Congress debated the fate of the national legislation. "It prevents people from enjoying the air in the morning, when it is fresh and healthful, by compelling them to go in shop or office one

hour before it is necessary,” warned one naysayer from Brooklyn. “It upsets the schedule of all large manufacturing plants, as their working hours are arranged so as to take advantage of the summer daylight hours. It is the direct cause of overcrowding of transit lines during rush hours, as it causes everybody to go to work at the same time, where as under normal conditions different factories have different arrangement of working hours, thereby lessening the overcrowding of cars.”

The mechanics of Daylight Saving were devastatingly simple, but both sides were confounded by the physics of the proposition. How could you save time by losing an hour? If you were “springing forward,” why did you end up delaying the time of sunrise and sunset? And why not save daylight in the winter, when there is a lot less of it? From the cacophony of questions and confusion across the country, there emerged a kind of chaotic public debate, with both sides attempting to commodify the time that would be lost or gained. The president of the American Association for the Advancement of Science premised his enthusiastic endorsement on the inarguable benefits of more light—“light is a physical stimulus,” he said, “just as darkness is a depressive influence”—as if Daylight Saving could actually increase the amount of available light on the planet. Testifying before the Welfare Committee of the New York Board of Aldermen, a Mrs. Dunlap attempted a more humble defense of the home front. “She opposed it because it made the housewife prepare supper in the hottest part of the day and the laborer had to go to bed in the hottest part of the evening,” effectively losing an hour of much needed sleep. Not so, replied the advocates. “Our last hour of sleep will be sounder and more beneficial than it is under present conditions because

there will be less light." Not so, replied the dissenters. "It robs everyone of two hours' sleep, as one hour in the morning, when it is cool and restful, is worth two hours in the evening, when it is hot and restless, thereby causing a great increase in the nervous diseases."

One thing was certain: from the beginning, it was absolutely unnecessary. Everybody knew it. "Daylight saving was brought about by a shift of the clock applying to the whole country," observed a university professor in the *American Economic Review*, "although theoretically all that was necessary was for each individual to get up an hour earlier and make his day's progress on that basis!" In the *International Journal of Ethics*, a legal scholar dubbed the peculiar annual ritual of altering clock time a "modern expedient," an exercise in efficiency. "Rather than change all the hours of work, the community prefers to employ a simple fiction as to the time," he hypothesized. But you didn't need an advanced degree to see what was really happening. A letter writer to the *New York Times* compared Daylight Saving to "a man cheating himself at solitaire and thinking he has won." And when his hometown of Portage, Wisconsin, decided to "spring forward" and join the rest of the nation on "fast time," Charles Gale simply refused to adjust his timepieces, reported the *New York World*. "I'm fooled enough," he told his daughter, "without fooling myself on purpose."

Before Daylight Saving became law, the combatants in the preposterous public debate had torn apart the twinned ideals of God and Country and divvied them up.

“Changing the clock,” argued the opponents, “was flying in the face of Providence.” In another historical moment, that might have been a winning argument. But bullets and bombs were flying across Europe, and Congress had declared war on Germany, so Daylight’s proponents wrapped themselves in the flag, appropriated the war effort, and successfully turned the House vote in March 1918 into a loyalty test. And they won.

Soon, though, above the din of the nationalistic jingo, Americans heard the jangle of coins in the pockets of those patriots. The lofty humanitarian goals of Daylight Saving – to get working girls safely home before dark, to reunite dads and moms with the kids before shadows fell on the backyard garden, to safeguard the physical and mental health of industrial workers by increasing their daily opportunity for sports and recreation – also resembled an innovative strategy for boosting retail sales. It was not exactly for nothing that chambers of commerce and other merchants’ associations had figured among the earliest and staunchest supporters of Daylight Saving. The most powerful members of these civic organizations, the giant department stores--arguably the most significant economic institutions on the urban landscape – also were the most significant source of advertising revenue for urban newspapers, whose editors were eventually converted to the Daylight cause.

In the spring of 1918, the opportunists knocked, besieging Americans with new ways to squander their anticipated savings. "A reliable clock with a loud alarm is the best way of making sure you will not be an hour behind time, when the plan goes into effect," advised one of the thousands of newspaper advertisements placed by department stores eager to capitalize on the confusion. "Alarm clocks at Bamberger's, some with radium dials, priced from 1.15 to 4.50." Working girls were encouraged to stop and shop on their way home to update their wardrobes with dresses specifically designed for the brighter summer evenings. "The French call it the five-to-midnight ensemble," announced the *New York Times* in an article about the new neither-day-nor-nighttime fashions. "We in America are more prone to speak of it as a daylight-dining ensemble." Daylight specials offered discounts on garden spades, watering cans, baseball bats, golf clubs, and even new homes. "Daylight Saving means an extra rest hour each afternoon to every business man," proclaimed one Long Island residential-development ad that ran daily in New York newspapers throughout the spring. "Will you waste this chance for wholesome country by living in the stuffy city?"

If you didn't want to purchase any patriotic paraphernalia, there was somebody prepared to sell you some leisure. The secretary of baseball's National League foresaw "sixty minutes of extra sunshine a day for the people of the United States during the five best months in the year for outdoor sports and recreation. It will be a means of drawing more people to the game, and the national pastime should thrive accordingly. There will be fewer games called on account of darkness and the more or less discomfort of trying to follow the contest in the twilight of the Fall will be obviated."

By early 1918, several professional baseball teams had begun to revise their schedules to take advantage of the extended evenings and boost attendance. This maneuver incited the ire of the estimable Charles Lathrop Pack, who called both the National and American leagues to task. In a forcefully worded rebuke, he reminded them that the “law was intended to increase the daylight usefulness in war work, and was not intended to give extra hours for recreation. . . . Slackers of the worst type is the brand placed upon baseball league owners or managers who plan to move down the schedule time of starting games this Summer.” Charles Lathrop Pack was something of a player himself. As historian Michael O’Malley points out in *Keeping Watch*, in 1918, Pack was president of the War Garden Commission, a patriotically named “lobbying organization for the makers of garden products – tools, seeds, fertilizers, canning and preserving equipment . . . who stood to gain dramatically from any increase in wartime gardening.”

It should have been a fad – the hula hoop of government programs. That’s how these stories typically turn out: One man’s lonely passion meets with ridicule and then catches on, and finally the novelty is pumped up with possibilities and expectations and ambitions until it is so wildly over-inflated it simply explodes. Bloated as it was with hot air from both sides, Daylight Saving proved to be resilient; it just grew and grew and grew into an ever bigger problem.

There was no shortage of contemporary controversies competing for people's affections and disaffections. Women didn't have the vote, children were working without the benefit of labor laws, Bolsheviks seemed to be sneaking into every city, the Black Sox scandal had tainted baseball, and you couldn't get a decent drink anywhere in the country. By passing the Volstead Act and ratifying the Eighteenth Amendment to the Constitution, the same Congress that passed the Daylight law and led a reluctant nation to war also forbid the sale, import, or export of intoxicating liquors. But the war did end. And in 1920, the Nineteenth Amendment resolved the century-long struggle for equal suffrage by granting women the vote. In 1921, major-league baseball appointed a commissioner to keep itself clean. By 1933, even Prohibition was put to rest with the passage of the Twenty-First Amendment. But in 1937, when anthropologist Margaret Mead was in Bali studying the indigenous people's public-opinion mechanisms, she deemed them to be quite logical when compared to "our society's tradition of emotional involvement in every type of issue, from the revision of the Constitution to Daylight Saving Time."

Nothing fuels a controversy like confusion, and another thirty years later, after another world war had been fought, passions on both sides of the Daylight debate were still enflamed and the nation was absurdly out of sync with itself. In 1965, eighteen states observed Daylight Saving, so that their clocks ran one hour ahead of Standard Time for six months of the year; eighteen other states half-heartedly participated, which meant that the clocks in some cities and towns in these states ran one hour ahead of Standard Time for periods ranging from three to six months every year and some

didn't; twelve states did not practice Daylight Saving at all, keeping their clocks one hour behind the clocks in the observant states; and in areas of Texas and North Dakota, local residents adopted "daylight in reverse," so that their clocks ran one hour behind Standard Time, and two hours behind Daylight Saving Time. In that year, *The Nation* estimated that "100 million Americans were out of step with the other 80 million" and quoted a U.S. Naval Observatory official who had dubbed the United States "the world's worst timekeeper."

The controversy was not limited to exotic locations or the esoteric domains of science and technology. It was still heating up the heartland of America. In 1966, while campaigning on behalf of a Republican candidate for the House of Representatives in Council Bluffs, Iowa, the scandal magnet Richard Nixon immediately attracted the attention of unhappy farmers. The *New York Times* reported that "one of the big issues out here is daylight saving time," which the Democratic governor had recently re-imposed on Iowans for the first time in almost fifty years. "Mr. Nixon, speaking at a breakfast rally, began by saying it seemed terribly early. It was 11 A.M. central daylight time or 10 A.M. standard time, referred to here as God's time. 'But what time is it?' Mr. Nixon asked. 'I'm confused.' This brought laughter from the audience." How confusing it must have been for those Iowa farmers seven years later, when Richard Nixon embraced Daylight Saving more wholeheartedly than had any other president in American history.

To this day, Daylight Saving accrues dubious credit for fossil-fuel savings and dubious blame for school bus accidents; it is seasonally cited as a contributing factor in the ups and downs of the Dow Jones and the Nielsen ratings. One fact is indisputable: Daylight Saving did not displace God as the nation's timekeeper. Americans had been forced off sun time—God's time—several decades before the federal government attempted to create a coherent national timekeeping policy in 1918.

Standard Time was introduced to the United States by the railroads in 1883, effectively abolishing the habit of looking to the heavens for temporal guidance. And by 1918, most Americans had grown accustomed to the inaccurate but useful shorthand of organizing time into standardized geographic zones.

Prior to 1883, local timekeeping was more art than science. As measured by sundials or, less precisely, by anyone looking up and gauging the distance between the sun's position and its typical high point at midday, sun time varies by location. Thus, before the railroads imposed Standard Time zones across the country, when it was (apparently) noon in Chicago, it was 11:39 in St. Paul and 12:31 in Pittsburgh; when it was noon in Washington, D.C., it was 11:43 a.m. in Savannah and 12:24 p.m. in Boston. Moreover, affordable wind-up clocks and watches were not precision instruments, and their keepers were not infallible. People typically wound and reset their watches at least once a day, a daily occasion for losing or gaining a few minutes. And unless they kept sundials—a technology especially ill-suited to life in apartments stacked up along the shadowy streets of high-rising cities—people had to choose a local clock to use as

their standard. Even in relatively rural areas, this was not as simple as it sounds. Was it noon when the first or the twelfth church bell bonged? Big balls – the precursors to the Times Square New Year inaugurator – were installed on towers and attached to steeples, but most people couldn't leave their homes or factories to witness the official onset of afternoon. And it mattered exactly where you were when you heard the bell or spotted the ball; in the mid-nineteenth century, the *Chicago Tribune* countenanced twenty-seven distinct local times in the state of Illinois alone.

Railroad operators attempted to iron out this mess. They instituted Railroad Time, which made it much easier for the operators of individual rail lines to produce reliable timetables. It did not do much to ease timekeeping. Soon, America's major rail stations were festooned with clocks – one to display local time, and one clock for each rail company--each one showing a different time. In Pittsburgh, for example, six to eight different time standards governed departure and arrival times. Did the trains run on time? According to the Friendship Association of European Model Railroaders, it would have been hard to prove they didn't.

The Pennsylvania Railroad in the East used Philadelphia time, which was 5 minutes slower than New York time and 5 minutes faster than Baltimore time. The Baltimore & Ohio used Baltimore time for trains running out of Baltimore, Columbus time for trains in Ohio, Vincennes time for trains running west of Cincinnati, and it scheduled some of its trains under New York time, Philadelphia time, and Chicago time. The Michigan Central Railroad operated its trains on Detroit time. In the Chicago district the New York Central and the Pennsylvania used Columbus time which was 6 minutes faster than Cincinnati time and 19 minutes faster than Chicago time.

This was imperfect; the nation's railroads were juggling more than one hundred standard times. Several trains could depart a single station at the same moment at altogether different times.

In 1883, Standard Time made it noon in Chicago and St. Paul at the same moment that it was 1 p.m. in Pittsburgh, Boston, Washington, D.C., and Savannah, creating the impression of uniform regional time-distances from east to west across the map of America. By the spring of 1918, although there were still people who refused to abandon their reckoning of sun time and did not adjust their watches or town clocks to conform to their designated time-zone time, the principle of Standard Time was well established and generally observed.

Standard Time did not become law until the federal government enacted the national legislation "To Save Daylight and to Provide Standard Time for the United States" in 1918. The congressional decision to link the formalization of Standard Time to the adoption of Daylight Saving permanently complicated the controversy that the legislation was supposed to resolve. And it didn't serve the Congress. Americans were left with the distinct impression that the bully who had torn up the Biblical timetables was big government, not big business.

In categorical terms, time zones and Daylight Saving were both national initiatives designed to coordinate timekeeping practices. But whereas Standard Time

had evolved over thirty-five years, Daylight Saving was a newer, more controversial, and much more mind-bending idea. And the nation was not eased into the transition. On Friday, 16 March 1918, the day after the House of Representatives passed it, the Senate approved the Daylight Saving legislation, which was an amended version of a bill the Senate had already passed. On Monday, 19 March, President Woodrow Wilson signed it into law. Less than two weeks later, citizens would be required to misalign the hands of their watches and clocks. At 2 a.m. Standard Time on 31 March, under the cover of darkness, Americans were to make it appear that it was 3 a.m. On the last Sunday of October, again at 2 a.m., they would undo the illusion.

This single act of Congress required people to adopt Standard Time and, at the same moment, to perform a manual adjustment so that their clocks would not run on Standard Time. With Daylight Saving Time in effect, every clock in the newly legislated Standard Time zones was off by an hour, and those clocks would be wrong for seven of the twelve months of the year.

“The railroads are relieved of possible complication in the time tables by the fact that the change goes into effect at 2 A.M., which is an hour when no train leaves any of the stations in New York,” reported the still optimistic *New York Times* on the day before the law took effect.

The latest train out of the Grand Central Station before 2 A.M. is one for Albany, leaving at 12:25 for Albany and scheduled, according to the time table, to arrive at 5:05. When the train gets into Albany, however it will be 6:05. The earliest train leaving the Grand Central after the change goes into effect will be a New Haven train leaving at 6 A.M. — and travelers taking this train will miss it by an hour if they fail to shove their clocks ahead in time. The Pennsylvania Railroad has a train coming in from Boston at 2:20 A.M. and leaving for Boston at 2:30 A.M. This train

tomorrow morning, however, will be an hour late in arriving and an hour late in leaving, although in actual time it will not be a minute later either coming or going. On the following morning, however, the time schedules, remaining unchanged, the train arrivals and departures will fall automatically in conformance with the clocks.

According to the headline, "No Confusion Expected."

Also unexpected was the nation's decision to abandon Daylight Saving the next year.