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**Four-Day Work Week: Old Lessons, New Questions Symposium:
Redefining Work: Implications of the Four-Day Work Week - The
Four-Day Work Week: Views from the Ground**

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The Four-Day Work Week: Old Lessons, New Questions

ROBERT C. BIRD

The four-day work week is quickly gaining popularity. The blogosphere is alive with pages describing numerous benefits and recommending it as a practice whose time has come. With Utah's adoption of the four-day work week, as well as numerous government and private entities considering the shift, "Thank God It's Thursday" appears poised to become a characteristic of the modern workplace.

Not so fast. The fact remains that the four-day work week is not particularly novel, questionably beneficial, and far from inevitable. Academics and practitioners alike were no less enthusiastic about the four-day work week in the early 1970s. Interest faded as quickly as it appeared. The litany of academic studies reporting mixed results that followed beg the question of whether this radical experiment should be tried again.

Yet, new interest in energy and conservation benefits may give a new lease on the four-day work week. It is this issue, as well as some modern and sophisticated research on the subject, that show the four-day work week's renewed promise. Proponents of the four-day work week can look optimistically toward the future, but they must also consider carefully the lessons of a similar movement that peaked and fizzled just a generation ago.

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The Four-Day Work Week: Old Lessons, New Questions

ROBERT C. BIRD*

I. INTRODUCTION

The four-day work week is quickly gaining popularity. A popular article by *Scientific American*, mentioning this very Symposium, reports that the four-day work week is receiving widespread attention and support.¹ Adoption, it suggests, is a “no-brainer.”² *Time*, also referring to this Symposium, reports that the four-day work week is “winning fans.”³ An online article by *Daily Finance* describes the four-day work week as “[c]oming soon to a town near you.”⁴ Another publication states that the four-day work week is “catching on across the U.S.”⁵ A blogger asks whether the four-day work week is “inevitable” and seems to believe that it is.⁶ An academic examining the concept calls the four-day work week an idea “[w]hose [t]ime [h]as [c]ome,” and lists no less than sixteen reasons to adopt it.⁷ There is even an acronym for the schedule, “TGIT,” short for “Thank God It’s Thursday.”⁸ After reading these and other publications, one gets the distinct impression that the four-day work week is a novel, beneficial, and inevitable trend shaping the modern workplace.

Not so fast. The fact remains that the four-day work week is not novel, questionably beneficial, and far from inevitable. The popular press, with academics in tow, has been down this path before. One writer predicted that the four-day work week would arrive “[s]ooner [t]han [y]ou [t]hink” and mentioned “an all-out drive being planned by most unions to shoot for

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¹ Lynne Peeples, *Should Thursday Be the New Friday? The Environmental and Economic Pluses of the 4-Day Workweek*, SCI. AM., July 24, 2009, <http://www.scientificamerican.com/article.cfm?id=four-day-workweek-energy-environment-economics-utah>.

² *Id.*

³ Bryan Walsh, *The Four-Day Workweek Is Winning Fans*, TIME, Sept. 7, 2009, http://www.time.com/time/magazine/article/0,9171,1919162,00.html?iid=digg_share.

⁴ Bruce Watson, *The Four-Day Work Week: Coming Soon to a Town Near You*, DAILY FIN., Aug. 29, 2009, <http://www.dailyfinance.com/2009/08/29/the-four-day-work-week-coming-soon-to-a-town-near-you>.

⁵ David Silverberg, *Four-Day Work Week Catching on Across U.S.*, DIGITAL J., Aug. 9, 2009, <http://www.digitaljournal.com/article/277125>.

⁶ Posting of Joseph Romm to Grist, <http://www.grist.org> (Aug. 7, 2009, 09:30 EST).

⁷ Posting of Aaron Newton to The Oil Drum, <http://www.theoil Drum.com/node/2996> (Sept. 20, 2007, 10:00 EST).

⁸ Walsh, *supra* note 3.

the four-day week.”⁹ A well-known expert on the topic concluded that the shortened work week would “sweep the country—and much faster than the five-day week replaced the six-day week.”¹⁰ This expert stated that the four-day work week is “undoubtedly a benchmark along the route to fewer and fewer working hours . . . and it will become widespread eventually, we feel sure.”¹¹ Another writer concluded that “[t]he short work week has arrived.”¹² One company boldly declared that the four-day work week “will be here . . . to stay until it goes to three.”¹³ One academic characterized the shift to a four-day work week as “[i]nevitable.”¹⁴ A Fortune 500 executive lamented that “[t]he 4-day workweek is here and we’d better get into it *today* before it is crammed down our throats *tomorrow*.”¹⁵ All of these predictions were penned in the early 1970s.¹⁶ Nearly forty years later, none of these prophecies has come true.

Unfortunately, much of what we know about the benefits of a four-day work week relies upon this past knowledge, and not all of that knowledge is generalizable. As one scholar of the era warned, “[s]ince much of the writing on the four-day workweek is filled with missionary zeal, it is critical to use the literature with caution—separating fact from opinion, hope from reality, and the short run from the long run.”¹⁷ Nearly forty years later, the proliferation of news sources and the ease of publication have the potential to make the border between fact and fiction even more porous. Scholarship on the four-day work week must approach the issue with even more caution, not less, and question whether the benefits assumed from adoption of a four-day work week are more fantasy than reality.

The purpose of this Article is to question today’s four-day fervor by taking heed of lessons learned from the last time it was in vogue. Part II

⁹ Wilbur Cross, *The Four-Day Work Week Is Coming Sooner Than You Think*, BUS. MGMT., Apr. 1971, at 14, 15.

¹⁰ *Id.* at 15 (quoting Riva Poor, a Cambridge, Massachusetts management consultant).

¹¹ Riva Poor, *Introduction to 4 DAYS, 40 HOURS: REPORTING A REVOLUTION IN WORK AND LEISURE*, at xiii, xiv (2d ed. 1972) [hereinafter 4 DAYS, 40 HOURS]. Poor predicted that within five years, eighty percent of American industry would convert to a four-day work week. *Business: On the Way to a Four-Day Week*, TIME, Mar. 1, 1971, available at <http://www.time.com/time/magazine/article/0,9171,878936-1,00.html>. For updated commentary appearing in this Symposium Issue, see generally Riva Poor, *How and Why Flexible Work Weeks Came About*, 42 CONN. L. REV. 1047 (2010).

¹² Charles H. Vervalin, *The Short Work Week Has Arrived*, HYDROCARBON PROCESSING, Aug. 1972, at 112.

¹³ Cross, *supra* note 9, at 15 (citing an advertisement by the CNA Financial Corporation).

¹⁴ Walter A. Kleinschrod, ‘A Four-Day Work Week Is Inevitable,’ 31 ADMIN. MGMT. 22, 22 (1970) (interviewing Howard Coughlin, six-time president of the AFL-CIO, who, in 1970, predicted a “breakthrough [in the four-day work week] in the next few years”).

¹⁵ Kenneth E. Wheeler & Philip D. Bogdonoff, *How To Handle a 4-Day Conversion*, in 4 DAYS, 40 HOURS, *supra* note 11, at 133, 148.

¹⁶ The “all-out drive” planned by the unions described in the text above had a planned success date of 1974. Cross, *supra* note 9, at 15.

¹⁷ Don Hellriegel, *The Four-Day Workweek: A Review and Assessment*, 20 MSU BUS. TOPICS 39, 47 (1972).

briefly defines the scope of the four-day work week and explores the history of the development of working time to the modern era. Part III discusses the significant scholarship that has examined the impact of the four-day work week, with an emphasis on research conducted during and after the heyday of the prior four-day work week movement. Part IV briefly addresses one of the newly emerging issues related to the four-day work week, that of energy conservation. Finally, Part V concludes that, while a four-day work week still holds promise, efforts to proceed with a four-day work week in the twenty-first century are based on both fact and conjecture.

II. THE FOUR-DAY WORK WEEK: DEFINITION AND DEVELOPMENT

The four-day work week is a subset of the broader concept of alternative work arrangements. Alternative work arrangements can include a variety of options such as leaves of absence, part-time work, and telecommuting.¹⁸ A flextime schedule is another common arrangement, which typically grants employees the choice of when they can start and complete their work day.¹⁹ That discretion is limited, however, by an employer-imposed “core time” during which the employee must work during the day.²⁰ For example, a flex schedule could require that employees work during the hours of 10:00 a.m. and 3:00 p.m., but permit the employees to arrive early or leave late to finish their mandatory time.²¹ Some employers permit a carryover of hours within a fixed period. For example, an employer may require a forty-hour work week, but not require that eight hours be completed each day.

The four-day work week, in contrast to flex scheduling, falls within the classification of the compressed work week. Under this regime, a weekly schedule is reduced to four or even three days per week. During the days worked, the employee works longer hours each day to compensate.²² There are a number of possible compressed work weeks, and scholars often refer to these schedules using a simple notation system. A typical five-day, forty-hour work week is known as a “5/40.” Other work schedules include a “3/36” or a “4/32,” with employees working three days for twelve hours per day or four days for eight hours per day, respectively.²³ The phrase “four-day work week” could mean two types of schedules. It could refer to

¹⁸ Gary N. Powell & Lisa A. Mainiero, *Managerial Decision Making Regarding Alternative Work Arrangements*, 72 J. OCCUPATIONAL & ORG. PSYCHOL. 41, 42 (1999); Dawn R. Swink, *Telecommuter Law: A New Frontier in Legal Liability*, 38 AM. BUS. L.J. 857, 859 (2001).

¹⁹ Boris B. Baltes et al., *Flexible and Compressed Workweek Schedules: A Meta-Analysis of Their Effects on Work-Related Criteria*, 84 J. APPLIED PSYCHOL. 496, 497 (1999).

²⁰ *Id.*

²¹ *Id.*

²² *Id.* at 497–98.

²³ *Id.* at 498.

a reduced 4/32 work week consisting of eight-hour shifts, or the completion of a full-time, forty-hour week in four days, a “4/40” work week. The latter appears to be the most common expression of the “four-day work week” idea, and it is the 4/40 schedule that will be the focus of this Article.

Many assume that a 4/40 work week will consist of a static four-day work week and a three-day weekend that begins on a Friday. No doubt this is what employees have in mind when expressing great enthusiasm for the modified schedule. Yet, virtually any combination is possible under the 4/40 umbrella. Schedules could involve an extra day off in the middle of the week, a weekend work day with two weekdays off, or rotating days off to share the three-day weekend across the workforce.

Utah was the first state in the nation to adopt a four-day work week,²⁴ but it is of course not the first enterprise to think about workplace scheduling. The prevailing 5/40 schedule of modern times appears almost decadently easy when compared to generations past. During the late 1700s, a virtually unbearable 6/96 schedule was common, as employees would work fourteen- to sixteen-hour days, six days per week.²⁵ The early part of the nineteenth century witnessed labor union protests that aggressively sought a reduction in working hours.²⁶ Employers responded by predicting the collapse of American society.²⁷ Increased leisure, they predicted, would inevitably lead to mischievousness by idle workers.²⁸ Employers also predicted production cost increases, business failures, and mass unemployment.²⁹ Despite limited changes in certain industries, the twelve-hour work day performed six days per week remained the norm until after the Civil War.³⁰ Unions eventually fought for and won an eight-hour, six-day work week. By 1920, industrial union members commonly worked only a forty-eight-hour week.³¹

After 1920, changes accelerated. Unions obtained a five-day work week for the first time, with Henry Ford first adopting the schedule in 1927.³² Adoptions by leading firms, combined with the Depression-era

²⁴ Jessica Marquez, *Utah: Closed Fridays*, 87 WORKFORCE MGMT. 1, 1 (2008).

²⁵ Hellriegel, *supra* note 17, at 39.

²⁶ *Id.*

²⁷ *Id.*

²⁸ *Id.* This view has not entirely disappeared. See James A. Wilson, *The Meaning of the 4-Day Week: Retreat from Work or Assent to Leisure?*, PITT. BUS. REV., Mar.–Apr. 1972, at 1, 3 (noting that workers’ time spent away from their jobs might suffer from a “horrible vacuum in inactivity”).

²⁹ Hellriegel, *supra* note 17, at 39.

³⁰ *Id.* at 39–40.

³¹ See Ben A. Buisman, *4-Day, 40-Hour Workweek: Its Effect on Management and Labor*, 54 PERSONNEL J. 565, 565 (1975) (noting that union members were working six eight-hour days per week).

³² Hellriegel, *supra* note 17, at 40. According to one author, the first “5-day firm” started in Massachusetts in 1908. Riva Poor, *Reporting a Revolution in Work and Leisure: 27 4-Day Firms*, in 4 DAYS, 40 HOURS, *supra* note 11, at 3, 28.

government legislation regulating work time,³³ resulted in a well-established five-day, forty-hour week throughout most of the United States.³⁴

During the mid-twentieth century, isolated firms experimented with the 4/40. In 1940, the Mobil and Gulf Oil Companies adopted the schedule for their truck drivers, and it remains the first documented adoption of the four-day work week.³⁵ A few firms tried the four-day work week during the 1960s, and in 1969, interest developed rapidly. The authors of a 1967 book predicted that a shorter work week would become the norm by the year 2000.³⁶

By the early 1970s, hundreds of companies were converting to the four-day work week, with new adoptions occurring at the rate of sixty to seventy per month.³⁷ Curiously, the most intense interest in compressed work weeks coincided with a dramatic increase in oil prices sparked by a mass embargo led by the Arab members of OPEC.³⁸ Oil prices then may have motivated the same concerns about commuting and operations that modern authors express today.

During the early 1970s, some benefits attributed to the four-day work week were absurdly large. One tire company attributed a 400% increase in sales that was “still climbing at a rapid rate” to the four-day work week.³⁹ A New England textile mill attributed its very survival to adoption of the four-day work week.⁴⁰ One company claimed that the four-day work week cut absenteeism in half,⁴¹ while another reported that the four-day work week virtually eliminated it.⁴² The four-day work week not only cured recruitment problems, but also sparked a veritable boom in interest. “Dozens of people[,]” a manager said, “came knocking on our door— intrigued by the idea of having three-day weekends all year long.”⁴³ Companies claimed productivity gains of ten and even twenty-five percent because of the four-day work week.⁴⁴ There was a “general conclusion”

³³ See Fair Labor Standards Act of 1938, ch. 676, 52 Stat. 1060 (codified as amended at 29 U.S.C. §§ 201, 206–207, 212 (2006)) (establishing a minimum wage, guaranteed overtime for certain jobs, and prohibiting most employment of minors).

³⁴ Buisman, *supra* note 31, at 565; Hellriegel, *supra* note 17, at 40.

³⁵ Hellriegel, *supra* note 17, at 40.

³⁶ HERMAN KAHN & ANTHONY J. WIEMER, *THE YEAR 2000*, at 173, 194–97 (9th ed. 1970).

³⁷ Hellriegel, *supra* note 17, at 40.

³⁸ Jeffrey P. Bialos, *Oil Imports and National Security: The Legal and Policy Framework for Ensuring United States Access to Strategic Resource*, 11 U. PA. J. INT'L BUS. L. 235, 246–48 (1989).

³⁹ Cross, *supra* note 9, at 15.

⁴⁰ L. Erick Kanter, *An Industrial Pioneer Rescued by the 4-Day Week*, in 4 DAYS, 40 HOURS, *supra* note 11, at 79, 79–80, 87.

⁴¹ Buisman, *supra* note 31, at 566.

⁴² Cross, *supra* note 9, at 38.

⁴³ *Id.* (citing an interview with Grant Doherty, a sales promotion manager at Kyanize Paints).

⁴⁴ *Id.*

that “productivity and profits typically increase after the reduced work week is implemented.”⁴⁵

III. THE “FIRST WAVE” OF SCHOLARSHIP ON THE FOUR-DAY WORK WEEK

Where businesspeople ventured, academics soon followed. Following the corporate interest of a four-day work week was a trail of academic research exploring its outcomes and implications. A 1996 annotated bibliography of compressed work weeks reveals that out of 162 articles collected by the author, most were written during the 1970s and early 1980s.⁴⁶ These studies focused largely, though by no means exclusively, on the attitudes, perceived personal benefits, and perceived job satisfaction related to the adoption of the four-day work week.

Some research, specifically those studies focusing on managers, was quite positive. One study used a questionnaire of managers to examine the impact of the four-day work week on various employee-related job variables.⁴⁷ The study concluded that the managers positively associated the four-day work week with increased productivity, increased job satisfaction, and reduced absenteeism.⁴⁸ The authors concluded that “[m]anagers’ positive perceptions of the four-day work week within firms currently operating under such a plan strongly indicated that alternative work schedules are viable alternatives to the traditional five-day workweek.”⁴⁹

More commonly, researchers explored the perceptions of employees. For example, a typical study explored whether the four-day work week changes employee job satisfaction.⁵⁰ Using an employee questionnaire, the authors found that employees were “substantially more satisfied with their jobs” as a result of the conversion to the four-day work week.⁵¹ This improved satisfaction was not sensitive to demographic characteristics such as age, gender, education, income, or marital status.⁵²

No less interesting were the benefits and costs that employees cited. The study found that employees associated the four-day work week with more time for leisure, personal tasks, family, and housework.⁵³ The effect

⁴⁵ B.J. Hodge & Richard D. Tellier, *Employee Reactions to the Four-Day Week*, 18 CAL. MGMT. REV. 25, 25 (1975).

⁴⁶ Rudy Hung, *An Annotated Bibliography of Compressed Workweeks*, INT’L J. MANPOWER, July 1996, at 43.

⁴⁷ Richard I. Hartman & K. Mark Weaver, *Four Factors Influencing Conversion to a Four-Day Work Week*, 16 HUM. RESOURCE MGMT. 24, 24–25 (1977).

⁴⁸ *Id.* at 26.

⁴⁹ *Id.* at 27.

⁵⁰ See Hodge & Tellier, *supra* note 45, at 25.

⁵¹ *Id.* at 27.

⁵² *Id.* at 27–28.

⁵³ *Id.* at 29–30.

labeled “facilitates work accomplishment” was not found to be statistically significant.⁵⁴ Conversely, the negative and statistically significant effects of the four-day work week were all work-related.⁵⁵ Employees’ complaints of fatigue and detraction from work accomplishments, and a general dislike of the longer work day were all significantly correlated with the four-day work week.⁵⁶ Benefits of the four-day work week improved workers’ personal lives while costs impaired work performance. It appears that a significant reason why employees like the four-day work week so much is because it gives them more time and pleasure while away from work, and not necessarily greater job satisfaction while working.⁵⁷

One study found that workers with the lowest job levels, tenure, and income are the ones who have the most positive attitudes toward the four-day work week.⁵⁸ The inference from this conclusion, supported by prior work in the area, was that these employees would have the lowest overall job and salary satisfaction, as well as the weakest identification with their employers.⁵⁹ This would support the idea of an “escape hypothesis,” whereby some employees view the four-day work week as simply a way to spend as much time away from their jobs as possible.⁶⁰ Regardless of the source, the weight of the evidence appeared to be that the four-day work week made both managers and employees happy.

While these and similar publications carefully reported positive attitudinal responses, no publication comes close to the enthusiastic praise for the four-day work week by the editor of, and many contributors to, a 1972 book entitled, *4 days, 40 hours: Reporting a Revolution in Work and Leisure*.⁶¹ The text leads off with a Foreword by Paul A. Samuelson, who, at the time of the book’s publication, had just been awarded the Nobel

⁵⁴ *Id.* at 29.

⁵⁵ *Id.*

⁵⁶ *Id.*

⁵⁷ See Robert E. Allen & Douglass K. Hawes, *Attitudes Toward Work, Leisure and the Four Day Workweek*, 18 HUM. RESOURCE MGMT. 5, 9 (1979) (“Interest in the compressed workweek appears to be more strongly influenced by the workers orientation toward leisure.”); Thomas A. Mahoney et al., *Workers’ Perceptions of the Four-Day Week*, 18 CAL. MGMT. REV. 31, 35 (1975) (“It does not appear that employee reactions to the four-day-week proposal are related to their jobs or satisfaction with their jobs. Rather, it appears that reactions are more a function of perceptions of and demands for leisure.”).

⁵⁸ Randall B. Dunham & Donald L. Hawk, *The Four-Day/Forty-Hour Week: Who Wants It?*, 20 ACAD. MGMT. J. 644, 652–53 (1977).

⁵⁹ *Id.*

⁶⁰ An alternate theory of work preference is the “enrichment hypothesis.” This hypothesis states that employees perceive the four-day work week positively because their jobs are enriched by the change through attainment of greater autonomy and supervisory authority than would have been available under a five-day schedule. Janina C. Latack & Lawrence W. Foster, *Implementation of Compressed Work Schedules: Participation and Job Redesign as Critical Factors for Employee Acceptance*, 38 PERSONNEL PSYCHOL. 75, 77 (1985).

⁶¹ See Poor, *Introduction to 4 DAYS, 40 HOURS*, *supra* note 11, at xiii–xiv (stating that “4-40 provides the leisure that workers crave, without harming firms—in fact with positive benefits to them”).

Prize in Economics.⁶² Professor Samuelson likened the four-day work week to the great inventions of mankind:

Progress comes from technical invention, and we shall be ever grateful to the discoverer of fire, the inventor of the electric dynamo, and the perfector of hollandaise sauce. But there are also momentous *social inventions* [as well] . . . Without language we should still live in the cave, and all honour to that unknown genius who discovered that disputes of precedence could be settled by the toss of a coin.

The 4-day week is precisely such a social invention. Just as double entry bookkeeping may have done as much for the standard of modern life as the development of smelting, so will new ideas that enable mankind to find the good life be needed in our present age of anxiety.⁶³

This enthusiasm continues virtually unabated throughout the book.⁶⁴ One of four chapters authored or co-authored by Editor Riva Poor calls the four-day work week a “[r]evolution in [w]ork and [l]eisure.”⁶⁵ The editor’s second chapter calls firms that were adopting the four-day work week in the 1970s “pioneers.”⁶⁶ One author describes how an industrial “pioneer” was “rescued” from extinction by the four-day work week.⁶⁷ Another proclaims that the four-day work week will “give all of us a new way of life in America.”⁶⁸ Poor explains in her introduction that, while “authoritative studies take years to develop[,]” they are not useful during the years of immediate public interest.⁶⁹ This book, by contrast, states that it is “chart[ing] this new development in society *now* while it is first happening; and we take particular satisfaction in knowing that we are the first to recognize that the four-day movement is sufficiently important to document, and the first to analyse it for the public.”⁷⁰

⁶² Paul A. Samuelson, *Foreword* to 4 DAYS, 40 HOURS, *supra* note 11, at ix, ix.

⁶³ *Id.* (emphasis added). As for the benefits of the four-day work week, Professor Samuelson explains that “[t]here is no need for me to stress these many economic aspects of the 4-day week. The experts who have contributed to this book have dealt informatively with these and other matters.” *Id.* at x.

⁶⁴ See D. Quinn Mills, *Does Organized Labour Want the 4-Day Week?*, in 4 DAYS, 40 HOURS, *supra* note 11, at 99, 108 (discussing an exception and concluding that “[o]n balance, in my judgement [sic] it is unlikely that the 4-day week will become a characteristic feature of our economy unless it is coupled with a reduction in hours generally”).

⁶⁵ Riva Poor, *Reporting a Revolution in Work and Leisure*, in 4 DAYS, 40 HOURS, *supra* note 11, at 3, 3.

⁶⁶ Riva Poor, *Profiles of 39 4-Day Pioneers*, in 4 DAYS, 40 HOURS, *supra* note 11, at 30, 30.

⁶⁷ Kanter, *supra* note 40, at 87.

⁶⁸ Millard C. Fought, *The 3-Day Revolution to Come: 3-Day Workweek, 4-Day Weekend*, in 4 DAYS, 40 HOURS, *supra* note 11, at 149, 158.

⁶⁹ Poor, *Introduction* to 4 DAYS, 40 HOURS, *supra* note 11, at xiii.

⁷⁰ *Id.*

The editor's earnest belief in the topic shows in some of the book's chapters. One chapter merely lists companies that adopted the four-day work week with a brief self-reported comment from firm representatives.⁷¹ Another chapter offers slightly more in-depth profiles about firms' experiences with the four-day work week.⁷² Still, others offer enthusiastic but anecdotal examples based upon the experience of one company or person.⁷³

Issues with this book, however, should not be overstated. The information provided in *40 days, 40 hours* offers good insights on a broad range of risks and rewards of the four-day work week. It was also one of the first major compilations of four-day work week evidence at a time when interest was rapidly increasing. Results from questionnaires and company profiles in the book also provide helpful advice for managers wishing to implement and manage the new schedule. Nonetheless, some of the chapters therein cannot replace the systematic quantitative analysis of academic study that best provides evidence that may be generalized.

Even during this optimistic period (cautiously for some, hastily for others), however, some scholars remained skeptical. Martin J. Gannon openly questioned the utility of these reported attitudes.⁷⁴ Gannon wrote in 1974 that "the 4/40 drive represents a classic case where a new program has been accepted uncritically."⁷⁵ He credits much of the enthusiasm to the "Hawthorne Effect," the notion that individuals subjected to the study of a new system report beneficial effects simply because the system is novel and they are being studied to measure it.⁷⁶ When a firm introduces the four-day work week system, employee morale immediately increases and the system is declared a success.⁷⁷ Managers who would normally demand strong evidence before making such a radical change in the workplace uncritically accept the new system.⁷⁸ The result is a new work week imposed with little experimental evidence to support the change.

⁷¹ See Poor, *Profiles*, *supra* note 66, at 30.

⁷² See Theo Richmond, *Profiles of Some Australian 4-Day Pioneers*, in 4 DAYS, 40 HOURS, *supra* note 11, at 194, 194-95.

⁷³ See, e.g., Kanter, *supra* note 40, at 79 (discussing a famous and once thriving company's experience with a four-day work week); Ray Richard, *The 4-Day Week at a 7-Day Hospital*, in 4 DAYS, 40 HOURS, *supra* note 11, at 88, 88-92 (discussing a hospital's experience with the four-day work week); John L. Schohl, *4 Days On, 4 Days Off*, in 4 DAYS, 40 HOURS, *supra* note 11, at 93, 93 (introducing a modified version of the four-day work week).

⁷⁴ Martin J. Gannon, *Four Days, Forty Hours: A Case Study*, CAL. MGMT. REV., Winter 1974, at 74, 80.

⁷⁵ *Id.*

⁷⁶ See *id.* at 75; see also Kenneth L. Leonard, *Is Patient Satisfaction Sensitive to Changes in the Quality of Care? An Exploitation of the Hawthorne Effect*, 27 J. HEALTH ECON. 444, 450 (2008) (describing the beneficial impact of the Hawthorne Effect on doctors treating patients in the presence of observers); Carl R. Metzgar, *Placebos, Back Belts and the Hawthorne Effect*, 40 PROF. SAFETY 26, 28 (1995) (describing the origination and definition of the Hawthorne Effect).

⁷⁷ Gannon, *supra* note 74, at 75.

⁷⁸ *Id.*

There is reason to believe that any increase in morale from the four-day work week program may be ephemeral. Moving to a four-day work week may alleviate existing symptoms of workplace problems, but not the underlying causes.⁷⁹ Once the novelty wears off, morale will eventually return to pre-four-day work week levels as employees view the four-day work week as an entitlement rather than a privilege.⁸⁰ Just as workers no longer celebrate the reduction of the work week from six to five days, so will employees in time take the four-day work week simply for granted.

Gannon warns that fatigue may also be a problem. Even what he calls “staunch advocates” of the four-day work week found that employees cite fatigue as one of the most significant disadvantages.⁸¹ Gannon also questioned productivity, citing a 1965 study of 1233 companies that found no gains in productivity from shorter work weeks.⁸² Apparently aware of the then-prevailing fervor over the four-day work week, Gannon notes that the “study takes on added significance due to the fact that it was published before the advent of the 4/40 work week. Hence, it is relatively unmarred by ideological assumptions and biases.”⁸³

Myron Fottler also questioned the very high employee acceptance rates of the four-day work week, most notably the results from a study reporting ninety-two percent employee approval of the four-day work week system.⁸⁴ Fottler notes that, in prior studies, when employees were given the opportunity to accept or reject the four-day work week after a trial period, employee acceptance dropped significantly.⁸⁵ Administering his own survey, Fottler found the same results. Employees given the opportunity to vote six months after the implementation of four-day work week revealed that only fifty-six percent voted to continue the program.⁸⁶ This is not the ringing endorsement cited in other studies, especially during a time when the Hawthorne Effect would still be a strong influence over workers.⁸⁷

⁷⁹ *Id.* at 76.

⁸⁰ *Id.*

⁸¹ *Id.* at 77 (citing Riva Poor & James L. Steele, *Work and Leisure: The Reactions of People at 4-Day Firms, in 4 DAYS, 40 HOURS*, *supra* note 11, at 57, 65).

⁸² *See id.* (“David Brown[’s] . . . conclusion is that shorter workweeks are less likely to involve a large sacrifice of output if hours are decreased rather than increased.” (internal citation omitted)).

⁸³ *Id.*

⁸⁴ Myron D. Fottler, *Employee Acceptance of a Four-Day Workweek*, 20 *ACAD. MGMT. J.* 656, 657 (1977) (citing Poor & Steele, *supra* note 81, at 58). Poor and Steele appear to wisely attribute these inflated numbers to the Hawthorne Effect, stating that “[t]his high positive proportion (over 92%), like many of the other results reported in this study, is well above the 67% that we can normally expect from the introduction of almost any attempted improvement, regardless of type.” Poor & Steele, *supra* note 81, at 58.

⁸⁵ Fottler, *supra* note 84, at 657.

⁸⁶ *Id.* at 658–60.

⁸⁷ *Id.* at 666.

Another study three years later reinforced Fottler's work.⁸⁸ Like other research, the authors surveyed the attitudes of 4/40 employees. This research, however, surveyed respondents on a variety of measures at thirteen-month and twenty-five-month intervals.⁸⁹ This research also tested a control group of employees at the same company who remained on a traditional five-day schedule.⁹⁰

The results were illuminating. The thirteen-month survey found four-day work week employees were more satisfied with their autonomy, personal worth, job security, and salary than the comparison group.⁹¹ Employees also reported less anxiety and higher productivity than the comparison group.⁹² When the employees were surveyed again after twenty-five months, almost all claimed that the improvements disappeared.⁹³ While nine measured criteria showed significant improvements after thirteen months, only one criterion showed significant net differences after twenty-five months.⁹⁴ The authors concluded that, while no one study should definitively resolve the effectiveness of the four-day work week, the data suggested that a variety of claimed benefits from the shortened work week exist only in the short run.⁹⁵

After a number of publications during the 1970s,⁹⁶ which ranged from the thoughtfully skeptical to the openly uncritical, a well-timed meta-analysis of compressed work week research appeared in 1981.⁹⁷ This analysis sought to compile findings from the most relevant studies published during the prior decade and draw some overall conclusions. Predictably, the meta-analysis found strong support for positive employee attitudes toward the idea of a compressed work week, positive effects on one's personal life, and increased or improved opportunities for leisure.⁹⁸

⁸⁸ See generally John M. Ivancevich & Herbert L. Lyon, *The Shortened Workweek: A Field Experiment*, 62 J. APPLIED PSYCHOL. 34 (1977). Ivancevich and Lyon's study attempted to replicate and extend an earlier and similar investigation in John M. Ivancevich, *Effects of the Shorter Workweek on Selected Satisfaction and Performance Measures*, 59 J. APPLIED PSYCHOL. 717 (1974).

⁸⁹ Ivancevich & Lyon, *supra* note 88, at 35.

⁹⁰ *Id.*

⁹¹ *Id.* at 35–36.

⁹² *Id.* at 36.

⁹³ *Id.* Absenteeism showed no change throughout the period studied. *Id.*

⁹⁴ *Id.* Personal worth remained statistically significant during both the thirteen-month and the twenty-five-month survey. *Id.*

⁹⁵ *Id.* at 36–37.

⁹⁶ Rudy Hung reports that seventy-eight articles discussing the four-day work week were published between 1970 and 1979. Hung, *supra* note 46. A large number of these articles appear to be brief summaries, case studies, or publications of a trade journal orientation.

⁹⁷ See Simcha Ronen & Sophia B. Primps, *The Compressed Work Week as Organizational Change: Behavioral and Attitudinal Outcomes*, 6 ACAD. MGMT. REV. 61, 62 (1981). A meta-analysis is a research method that combines and analyzes the results of several studies that address the same or similar research hypothesis. See Qingxiang Ma & Liping Liu, *The Technology Acceptance Model: A Meta-Analysis of Empirical Findings*, 16 J. ORG'L & END USER COMPUTING 59, 62 (2004).

⁹⁸ Ten of eleven studies examined found employees displaying positive attitudes toward compressed work weeks. Ronen & Primps, *supra* note 97, at 72. Four of six studies examined

Beyond these variables, however, studies reported more ambiguous results. Of nine studies that investigated job satisfaction, only five reported improvements to some degree, and the authors commented that two of the five sets of results used the same data.⁹⁹ Of seven studies that examined the broad category of “Productivity/Service,” the authors found that only four revealed positive results.¹⁰⁰ Neither of the two studies that specifically measured productivity found a change in productivity after the implementation of a compressed work week.¹⁰¹ Reductions in absenteeism were reported in only three of the five studies examined, and all five studies examining fatigue found that it had increased with the adoption of the new schedule.¹⁰² Another publication compiling studies on productivity and absenteeism in 1986 found similarly ambiguous results.¹⁰³

By the mid 1980s, academic interest in the four-day work week was on the decline. Hung’s bibliography reports fifty-one publications between 1980 and 1989, compared with seventy-eight the previous decade.¹⁰⁴ Of these publications, twenty-eight were published between 1980 and 1984; only twenty-three appeared during the latter half of the decade.¹⁰⁵ Although a decline appears evident, this does not mean, of course, that all scholarship on the four-day work week ceased. Instead, studies of the 4/40 work week appear to have been subsumed into broader research on the workplace as one of many variables.

Scholars have expanded their reach beyond happiness, leisure, and productivity metrics and explored a variety of intriguing questions about the four-day work week. An emerging literature has examined the implementation of compressed work week staffing and scheduling through a series of algorithms that account for various constraints such as the number of consecutive days off, the frequency of non-work weekends, and the maximum number of consecutive days an employee can work.¹⁰⁶ Others use formulae to show that compressed work weeks can improve

reported a positive effect on home and personal life. *Id.* at 69. All six studies that surveyed attitudes toward leisure reported positive results. *Id.*

⁹⁹ *Id.* at 63, 68.

¹⁰⁰ *Id.* at 72.

¹⁰¹ *Id.* at 71.

¹⁰² *Id.* Curiously, the authors state that “[t]here is strong evidence for concluding that there is a decrease in absenteeism associated with the [compressed work week].” *Id.* at 73.

¹⁰³ Richard E. Kopelman, *Alternative Work Schedules and Productivity: A Review of the Evidence*, 5 NAT’L PRODUCTIVITY REV. 150, 152–53 (1986) (indicating that the average change in productivity and absenteeism among five studies was zero percent).

¹⁰⁴ Hung, *supra* note 46.

¹⁰⁵ *Id.*

¹⁰⁶ See Hesham K. Alfares, *Compressed Workweek Scheduling with Days-Off Consecutivity, Weekend-Off Frequency, and Work Stretch Constraints*, 44 INFOR 175, 175–76 (2006) (analyzing a three-day work week with a seven-factor classification and two weekend-off frequency constraints, and developing an algorithm “to minimize the number and cost of the workforce”); see also generally A.T. Ernst et al., *Staff Scheduling and Rostering: A Review of Applications, Methods and Models*, 153 EUR. J. OPERATIONAL RES. 3 (2004) (presenting numerous modules to create a roster to analyze constraints).

efficiency through a reduction in labor cost.¹⁰⁷ Research on the compressed work week has also appeared in a recent investigation on absenteeism, finding that employees working on a compressed schedule, shift work, or flexible hours had higher levels of absenteeism when compared to more traditional work arrangements.¹⁰⁸

Another thought-provoking question is the impact of flexible work policies on gender and family issues. Some early work appears to express dated attitudes and to subordinate such issues to more pressing male-oriented concerns.¹⁰⁹ Later work, such as that by Jennifer Glass, provocatively explains how family-friendly policies might actually widen the gender wage gap. Glass concludes that work/family policies “do not increase mothers’ success in the labor market” or close the significant gender wage gap.¹¹⁰ At best, such policies are benign or neutral for certain workers.¹¹¹ A real risk, however, exists in that diminished employee “face time” inhibits the development of “lucrative managerial and professional careers.”¹¹² Gains in productivity achieved by the working mother may be more than neutralized by the negative reaction of managers expecting continuous availability of workers.¹¹³ Taking advantage of such policies may signal to managers that the employee has a “weaker commitment and dedication” to her employer.¹¹⁴ There may even be a backlash against workers who use policies such as the four-day work week that might be family-friendly.¹¹⁵ Employees without family needs might express feelings of inequity because such a program favors individuals with children to the

¹⁰⁷ Rudy Hung, *Using Compressed Workweeks to Save Labour Cost*, 170 EUR. J. OPERATIONAL RES. 319 (2006) (illustrating how compressed work weeks can reduce costs).

¹⁰⁸ Georges Dionne & Benoit Dostie, *New Evidence on the Determinants of Absenteeism Using Linked Employer-Employee Data*, 61 INDUS. & LAB. REL. REV. 108, 118 (2007).

¹⁰⁹ See Gannon, *supra* note 74, at 77 (stating that “[a]lthough working mothers and single workers are particularly fatigued by the 4/40 schedule, a more affected and more important group is that composed of moonlighters”); J. Philip Wernette, *What About the Four-Day Work Week?*, 6 MGMT. PERSONNEL Q. 13, 16 (1968) (expressing concern for the impact of the four-day work week on home life and querying, “Should the housewives . . . have a shorter work week to correspond with that of their working husbands and fathers?”).

¹¹⁰ Jennifer Glass, *Blessing or Curse?: Work-Family Policies and Mother’s Wage Growth over Time*, 31 WORK & OCCUPATIONS 367, 389–90 (2004). See also generally Vicki Schultz, *Feminism and Workplace Flexibility*, 42 CONN. L. REV. 1203 (2010).

¹¹¹ Glass, *supra* note 110, at 390.

¹¹² *Id.*

¹¹³ *Id.*

¹¹⁴ *Id.* See also Elizabeth D. Almer et al., *Is It the Kids or the Schedule?: The Incremental Effect of Families and Flexible Scheduling on Perceived Career Success*, 54 J. BUS. ETHICS. 51, 60 (2004) (stating that “individuals [using flexible work arrangements] may be viewed as signaling that they value their careers less because they have arranged their schedules to accommodate family needs, and this in turn affects the likelihood that they will advance in the firm”); Erin L. Kelly & Alexandra Kalev, *Managing Flexible Work Arrangements in US Organizations: Formalized Discretion or ‘A Right to Ask,’* 4 SOCIO-ECON. REV. 379, 407 (2006) (indicating that “[e]thnic and racial minorities, and women, especially mothers, may find it more difficult to be recognized as a ‘high performer’ and to win [flexible work arrangements] under this system [of supervisory assessment of work performance]”).

¹¹⁵ Almer et al., *supra* note 114, at 53.

disadvantage of individuals without children.¹¹⁶

A firm-wide mandatory four-day work week schedule might suppress these problems. If, however, a company ever chose to make the four-day work week schedule optional, rather than mandatory, gender and family issues could certainly arise. One problem may be that men and women would put the extra day off to different use. If men use flexible scheduling to work when they are most productive and women use flexible scheduling to coordinate childrearing, women are at a competitive disadvantage in the utilization of a four-day work week.¹¹⁷ Katie Winder, the author of an empirical study on the matter, finds that the correlation between job flexibility and wages is twice as large for men as it is for women, even when comparing employees in the same firm, with the same occupation, and at the same wage level.¹¹⁸

Another issue involves shift work, the increasingly common practice of working beyond the traditional nine-to-five working day, particularly the overnight hours. Shift work places significant health, social, and familial strains on workers.¹¹⁹ A four-day work week might amplify these strains by requiring workers to not only work evening and overnight hours, but also to do so for a longer period of time. Furthermore, shift workers often serve on rotating shifts. A compressed work week may require quicker shift rotations throughout the day, evening, and overnight, imposing more difficult adjustments on the circadian rhythms of employees forced to work the rotation.¹²⁰ Some studies have found that a compressed work week aggravates the negative effects of a rotating shift

¹¹⁶ *Id.* See also Unmarried America, www.unmarriedamerica.com (last visited Apr. 21, 2010) (serving as an information clearinghouse for general advice on a variety of social and economic issues for unmarried adults).

¹¹⁷ An example familiar to university professors bears mentioning:

An analogy from academia that find applicable is the policy of delaying the tenure clock when a faculty member has a child. Many are concerned that new fathers use this time to do research, whereas new mothers use the time off the clock to care for their child. If this is the case, both new mothers and fathers are made better off by the policy, but the fathers will likely experience greater market gains.

Katie L. Winder, *Flexible Scheduling and the Gender Wage Gap*, 9 B.E. J. ECON. ANALYSIS & POL'Y 1, 1 n.2 (2009). But see Kelly & Kalev, *supra* note 114, at 407–08 (“Ironically, workers with extensive family responsibilities, in particular, might improve their performance with the benefit of [flexible work arrangements] that allows them to work when and where they are most productive and focused.”).

¹¹⁸ Winder, *supra* note 117, at 2.

¹¹⁹ See Robert C. Bird, *A Shift Too Far: The Failure To Recognize Shiftwork Maladaptation Syndrome as an Injury Under Workers Compensation Law*, 21 MIDWEST L.J. 1, 1–8 (2007) (describing health effects and shift work maladaptation syndrome); Robert C. Bird & Niki Mirtorabi, *Shiftwork and the Law*, 27 BERKELEY J. EMP. & LAB. L. 383, 389–95 (2006) (describing the debilitating impact of shift work causing sleep disruption, sleep deprivation, cardiovascular disorders, gastrointestinal disorders, reproductive disorders, diabetes, epilepsy, asthma, mental disorders, and accidents both on and off the job); Carlla S. Smith et al., *Shiftwork and Working Hours*, in HANDBOOK OF OCCUPATIONAL HEALTH PSYCHOLOGY 163, 167–68 (James Campbell Quick & Lois E. Tetrick eds., 2003) (discussing health issues related to shift work).

¹²⁰ See Smith et al., *supra* note 119, at 172–73 (describing the effects of eight-hour versus twelve-hour shift systems).

schedule.¹²¹ The implementation of a four-day work week in a shift work environment must be better explored to fully understand any interactive effects.¹²²

Other unresolved issues remain. For instance, there is a significant body of research examining the effect of extended work days including nine-, ten-, and twelve-hour shifts.¹²³ Further research should examine the impact of additional hours and whether an optimal “sweet spot” for extended work days exists that maximizes benefits while minimizing fatigue and other risks to the employee. The impact of the four-day work week on older workers is also an important and relatively unexplored question.¹²⁴ While perception of older workers’ job satisfaction is an interesting question,¹²⁵ the more pressing issue of the health effects of long work on an aged population should be resolved before implementation of a four-day work week.¹²⁶ In addition, more research needs to be done to examine the four-day work week as applied to specific industries, as the nature of the business might impact the feasibility of the compressed work week.¹²⁷

¹²¹ See Stephen J. Havlovic et al., *Repercussions of Work Schedule Congruence Among Full-Time, Part-Time, and Contingent Nurses*, 27 HEALTH CARE MGMT. REV. 30, 38 (2002) (“This study demonstrates the intertwining dynamics of shift and work week arrangements. . . . The impact of rotating longer shifts under this type of work intensity appears to be negative and inappropriate.”); Irena Iskra-Golec et al., *Health, Well-Being and Burnout of ICU Nurses on 12-h and 8-h Shifts*, 10 WORK & STRESS 251, 254–55 (1996) (finding that compressed work schedules compounded some negative effects of shift work for intensive care nurses). *But see* Jon L. Pierce & Randall B. Dunham, *The 12-Hour Day: A 48-Hour, Eight-Day Week*, 35 ACAD. MGMT. J. 1086, 1094 (1992) (“Our findings suggest that combining a compressed [work week] and a shift schedule may mitigate some of the negative effects frequently associated with shift work and capitalize on some of the positive effects associated with compression.”).

¹²² See, e.g., W. McEwan Young, *Shift Work and Flexible Schedules: Are They Compatible?*, 119 INT’L LAB. REV. 1, 14–15 (1980) (analyzing the pros and cons of a flexible work week).

¹²³ See, e.g., EDITH J.C. JOSTEN, *THE EFFECTS OF EXTENDED WORKDAYS* 149 (2002) (examining the impact of extended work days, including fatigue, health, and performance on office jobs, nursing, and industrial work).

¹²⁴ Not everyone seems to hold the opinion of older workers in high regard:

The most common complaint for workers who do not profess to be totally satisfied with the 4-day week is that the new work shifts . . . are too long and tiring. None of these people (with the exception of one grouchy old lady in her 60’s) would admit, however, that they would actually prefer returning to the 5-day week.

Kanter, *supra* note 40, at 53.

¹²⁵ Compare James G. Goodale & A.K. Aagaard, *Factors Relating to Varying Reactions to the 4-Day Workweek*, 60 J. APPLIED PSYCHOL. 33, 37 (1975) (finding that older employees were more negative toward a four-day work week than younger employees), with Richard D. Tellier, *The Four-Day Workweek and the Elderly: A Cross-Sectional Study*, 29 J. GERONTOLOGY 430, 433 (1974) (reporting that older employees are more satisfied with their jobs than younger workers after the adoption of a four-day work week).

¹²⁶ See Ronen & Primps, *supra* note 97, at 69 (reviewing multiple studies addressing the impact of compressed work weeks on age and concluding that “[i]t seems that fatigue may be a factor mediating the age/attitude relationship”).

¹²⁷ See, e.g., Linda Duxbury & George Haines, Jr., *Predicting Alternative Work Arrangements from Salient Attitudes: A Study of Decision Makers in the Public Sector*, 23 J. BUS. RES. 83, 84–85 (1991) (studying the public sector); Havlovic et al., *supra* note 121, at 30 (studying nursing); Rosemary

Also, the four-day work week is not the only option. Some have examined the impact of a three-day, thirty-six-hour work week comprising twelve-hour shifts. One intriguing study found that employees working a twelve-and-one-half-hour shift, three days per week (a “3/38” schedule) did not suffer from fatigue problems and had reduced sick time, overtime, and personal leave time.¹²⁸ Employee errors actually decreased over time and employees remained just as productive.¹²⁹ Other research compares three-day weeks with four-day weeks and finds benefits for each system.¹³⁰ If a four-day work week has been so positively received, and if writers conveniently ignore potential attendant risks, a four-day weekend would spark even greater enthusiasm.

In spite of these questions and the limits of some prior research, the results reported by researchers remain positive. A 1999 meta-analysis of compressed work week schedules concludes that “compressed workweek schedules had primarily positive and no negative effects on work-related criteria.”¹³¹ One of the most recent studies on the four-day work week, and one generating significant publicity,¹³² finds that employees working a four-day work week report lower levels of work/family conflict than their counterparts working other schedules.¹³³ Although significant questions remain about the efficacy and impact of the four-day work week, meaningful studies continue to illuminate unanswered questions.

IV. LOOKING AHEAD: THE FOUR-DAY WORK WEEK AND ENERGY CONSERVATION

The focus of the four-day work week has recently shifted in an intriguing and worthwhile direction. Instead of focusing solely on the impact on workers and their employers, external effects on the environment and energy consumption are now also being considered.

A. Venne, *The Impact of the Compressed Workweek on Absenteeism: The Case of Ontario Prison Guards on a Twelve-Hour Shift*, 52 REL. INDUSTRIELLES 382 (1997) (studying prisons).

¹²⁸ Latack & Foster, *supra* note 60, at 88–89.

¹²⁹ *See id.* at 89; Pierce & Dunham, *supra* note 121, at 1094.

¹³⁰ *See* Rudy Hung, *Managing Compressed Workweeks: A Comparison of 4-Day and 3-4 Workweeks*, 9 INT’L J. TECH. MGMT. 261, 262–65 (1994) (authoring a categorical comparison of four-day and alternate three-day/four-day work weeks on criteria such as recruitment, fatigue, and shift rotation); *see also* Rudy Hung, *Compressed Workweeks in Office-Type Environments*, 44 WORK STUDY 5, 6–7 (1995) (discussing varying work schedule arrangements in the office setting).

¹³¹ Baltes et al., *supra* note 19, at 510.

¹³² *See* News Release, Brigham Young Univ., BYU Study Reveals Results of City’s Four-Day Work Week (June 9, 2008), available at <http://byunews.byu.edu/archive08-jun-4ten.aspx> (providing links to interviews given by the authors on CBS News, NPR, USA Today, and other news outlets).

¹³³ Rex L. Facer II & Lori Wadsworth, *Alternative Work Schedules and Work-Family Balance*, 28 REV. PUB. PERSONNEL ADMIN. 166, 175 (2008). For further discussion at this Symposium, see generally Rex L. Facer II & Lori L. Wadsworth, *Four-Day Work Weeks: Current Research and Practice*, 42 CONN. L. REV. 1031 (2010).

Indeed, these once largely ignored societal impacts are now being viewed as a major impetus for converting to the four-day work week.

In spite of the optimism, questions remain regarding the effect of the four-day work week on the environment and energy consumption. The predominant model for energy savings for the four-day work week appears to be the following: whenever an enterprise institutes a four-day work week, that enterprise closes its factory, office, or building for the remaining fifth day. Employees drive twenty percent less, reduce congestion by twenty percent, and firms consume twenty percent less energy each day the office is closed. The resulting environmental benefits from reduced energy consumption are nothing short of enormous—a twenty-percent decline in overall energy consumption for activities related or indirectly related to the operation any four-day work week enterprise. Of course, this is an optimistic model, but one of comparison from which to show that environmental benefits might not be robustly realized.

Any savings from reduced energy consumption must take into account the imperfections and limits inherent in power savings. Even vacant buildings never completely shut down. Heat and electricity must be consumed to keep a building at a minimum temperature as well as to power basic emergency functions. Even when a building is free to be shut down to minimum consumption status, actually doing so may be a difficult task. For example, when Utah implemented the four-day work week, the goal was to reduce energy consumption by the predicted twenty percent. In fact, almost a year later, Utah has managed no more than a thirteen percent reduction.¹³⁴ This is because the 900 Utah state buildings are unique and energy managers have not yet determined how to shut them all down.¹³⁵ The massive heating and air conditioning units appear to pose a particular problem.¹³⁶

Private companies not saddled with the difficulties of infrastructure may not be able to fully close their doors because of norms and demands of their management and certain departments. Supervisors may need to be available to facilitate intra-organizational communication, such as a common contact for blocks of employees working different four-day shift schedules.¹³⁷ Supervisors might need to be available for inter-organization communication, as five-day organizations initiate and expect daily communication with the enterprise.¹³⁸ Entire departments, such as

¹³⁴ Jenny Brundin, *Utah Finds Surprising Benefits in a 4-Day Workweek*, NPR, Apr. 10, 2009, <http://www.npr.org/templates/story/story.php?storyId=102938615>.

¹³⁵ *Id.*

¹³⁶ *Id.*

¹³⁷ See Dunham & Hawk, *supra* note 58, at 654 (stating that a four-day work week is inappropriate for supervisors and has a detrimental effect on inter-organizational contact).

¹³⁸ See *id.* (describing the supervisors' concern that a four-day work week interferes with intra- or inter-organizational relations).

marketing, might require constant contact with the five-day world in order to sustain sales and maintain connections with potential customers.¹³⁹

Managers may also feel a sense of obligation to work a five-day schedule because a compressed work week is either inappropriate for their job or has a detrimental effect on their productivity.¹⁴⁰ Demands on non-supervisory employees might also require a five-day presence. Employees like those in shipping and receiving must interact with the five-day environment in order to respond to incoming and outgoing goods.¹⁴¹ Maintenance personnel must be available to address unexpected problems with the plant and equipment. These contingencies limit a firm's ability to institute an energy-saving initiative through a one-day facility closure.

Of course, all of these benefits assume that an enterprise can close its doors even for a moment. Hospitals, law enforcement agencies, utilities, and prisons, for example, cannot simply curtail energy consumption because its employees work four days per week instead of five. For the thousands of local, city, and state entities that provide essential and continuous services throughout the country, potential power savings from the four-day work week are not possible.

Also, benefits from reduced energy consumption do not sufficiently consider the conduct of idle workers. Workers on their new day off will, at a minimum, consume heat, water, and electricity at home that would have remained unused during a five-day work week. Furthermore, workers will almost certainly not remain at their residences. Employees shouldering a reduced, rather than a compressed, work week may be forced to take second jobs to cover costs. That job will inevitably require a commute, thereby negating potential energy savings and traffic reduction from the four-day work week.

More fortunate employees will likely pursue an aggressive (and energy consuming) leisure agenda. One early study of four-day employees reported that the most frequently anticipated use of a three-day weekend would be to take long weekend vacations.¹⁴² Other frequently cited activities included sightseeing, visiting relatives, and going fishing or hunting.¹⁴³ All of these activities require significant energy use through travel and are likely the very activities that were previously not readily available under a five-day schedule.¹⁴⁴ The four-day work week may do

¹³⁹ Buisman, *supra* note 31, at 566. *But see* Ronald H. Rotenberg & Dennis Martin, *The Rearranged Work Week—What Effect on Marketing?*, 42 BUS. Q. 58, 61 (1977) (concluding that the "rearranged work week" has not created long-lasting problems with customer satisfaction or inter-departmental communications with marketing).

¹⁴⁰ Dunham & Hawk, *supra* note 58, at 654.

¹⁴¹ Buisman, *supra* note 31, at 566.

¹⁴² Allen & Hawes, *supra* note 57, at 8.

¹⁴³ *Id.* This might also include shopping, as one-third of workers employed under a four-day work week reported that their spending increased after the adoption of the new schedule. *Id.* at 10.

¹⁴⁴ *See id.* at 8.

more to shift the burden of energy costs from the employer to the employee than it does to reduce overall energy consumption.

Thus, the possibility exists that overall environmental effects from the four-day work week might be much less beneficial than originally anticipated.¹⁴⁵ This conclusion is far from certain, however. More study is necessary to determine the complete consumption and environmental impact of the four-day work week.

V. CONCLUSION

Whatever happened to all the four-day work week proposals so widely popular almost forty years ago? Like many trends, interest in the four-day work week peaked and faded away. After a “meteoric rise to fame and public attention” in the early 1970s, interest in compressed work weeks peaked in 1973.¹⁴⁶ By 1975, interest in the four-day work week had substantially cooled, with firm executives reporting displeasure with the results of the change.¹⁴⁷ One-third of firms that adopted the compressed work week reported that they discontinued use shortly thereafter.¹⁴⁸ By 1980, participation in compressed work weeks for all U.S. employees remained at an insignificant 2.7%.¹⁴⁹

Today, we find ourselves at the crest of a new wave of interest. Replacing the near messianic zeal of an early book is the commentary of the global blogosphere. Like their unreservedly enthusiastic counterparts from the early 1970s, writers today are quick to attribute great benefits to a four-day work week with only passing consideration to its costs, implications, and the substantial and decidedly mixed prior research on the subject. So much of the enthusiasm about the four-day work week from employees appears to originate from the surface benefit of an additional day off from work. That additional day off comes at a price, however, and one wonders that if workers were polled about their perceptions of a new

¹⁴⁵ Della Watson, *Could a Four-Day Work Week Actually Harm the Environment?*, SIERRA CLUB, Feb. 10, 2009, <http://www.opposingviews.com/articles/opinion-could-a-four-day-work-week-actually-harm-the-environment>.

¹⁴⁶ Kopelman, *supra* note 103, at 151. Kopelman reports that during 1973, an estimated 3000 companies tried the compressed work week and other firms were converting to it at the rate of 150 per month. *Id.*

¹⁴⁷ *Id.* Quoting a *Wall Street Journal* article, Gannon recounts the experience of an executive with the four-day work week:

When John Roberts went to the four-day week, it was in the forefront of a trend. And now it's turning out that the company may also have been in the forefront of a trend when it went back to the five-day week. A number of companies that quickly embraced the highly touted four-day workweek a year or two ago are discovering it may present far more problems than anyone foresaw

Gannon, *supra* note 74, at 75 (quoting William Buckley, *For Some Companies the Four-Day Week Is a Four-Day Headache*, WALL ST. J., Apr. 30, 1973, at 1).

¹⁴⁸ Kopelman, *supra* note 103, at 151.

¹⁴⁹ *Id.*

“ten-hour work day,” would their responses be so enthusiastic? Unfortunately, we do not know enough about the impact of the four-day work week, and what we do know is far from uniformly positive.

Almost forty years ago, firms and employees embraced the four-day work week as an innovative standard in workplace organization. The fervor to adopt the four-day work week disappeared almost as quickly as it arrived. Today, with the zeal of a prior era long forgotten, a new flood of interest may propel the four-day work week back into prominence. This Symposium can play an important role in shaping the debate about the four-day work week and perhaps can cause managers and advocates alike to think twice before rushing into drastic and unproven changes to the modern workplace. Our knowledge is not much more definitive than it was forty years ago. One expert’s comment in 1971 rings true today; he could not help but “warn[] that there is still ‘gross ignorance of the power of this evolutionary technique in labor utilization.’”¹⁵⁰ We would be wise to heed the lessons learned from the past and tread carefully when considering the future of the four-day work week.

¹⁵⁰ Cross, *supra* note 9, at 38.