Uncertainty by the Hour

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"*You're waiting on your job to control your life... how much sleep Gavin will get to what groceries I'll be able to buy this month*." – Jannette Navarro, Starbucks Barista[1]

Technology has made work ever-present. Cell-phones tether salaried workers to endless 24/7 workweeks, caffeinated by Starbucks baristas who are among the millions of workers scrambling for hours with head-spinning erratic schedules. The nature of work has changed for all of us. And for the majority of American workers, work has become a transaction paid by the hour. Growing steadily since the 1970s, three in five American workers—that's 75 million people—are now paid by the hour.[2] Over 26 million hourly workers are part-time—and they earn lower wages and are more likely to be women, Black or Latino, and working poor than their full-time co-workers.[3] Working hourly has become an especially precarious proposition as low-wage sectors like retail, restaurants and healthcare, which employ over one-quarter of all workers,[4] use sophisticated workforce technologies to micro-adjust workers' schedules to match the ebb and flow of commerce.

Many employers today have shifted the risk of doing business onto their frontline workers, who pay in hours, stress and insecurity.[5] Workers increasingly can't predict when they will work and when they won't—they are called in or sent home at a moment's notice. Expected to be available whenever business is in operation, many workers are nevertheless getting scheduled for fewer and fewer hours. Part-time workers live with the constant anxiety of whether enough hours will be doled out at the right times; when they'll get their schedule and if it will change; and, for working parents, who will take care of the kids when the desperately needed on-call shift pans out.

These working conditions are wide-spread. In a recent national survey of early career workers, three-quarters of hourly workers reported fluctuations in the number of hours they worked a week during the past month, and on average, those hours fluctuated by 49 percent. For part-time workers, hours fluctuated an astonishing 87 percent.[6] Not only are work hours unstable, they are also unpredictable: 41 percent of all hourly workers reported that they know their work schedule a week or less in advance of the upcoming workweek. And all of this happens with very little say from the worker. Half of hourly workers reported that their employer determines when their workday starts and ends, while only 16 percent reported that they decide the timing of their hours either freely or within parameters set by their employer.

With ever-changing hours and schedules, work is omnipresent, yet completely uncertain. These practices fuel under-employment and generate profound economic insecurity, experienced most severely by a workforce that is near poverty, primarily female, and disproportionately people of color. For millions of Americans, today's workweek is a moving target that disrupts their daily lives, without any guarantees of a steady income.

No longer a time clock

"You're paying eight hours of work for one hour of product moving in the facility."

- A Radio Frequency Identification Device (RFID) company executive who supplies the technology to forklifts.[7]

New technologies in the retail sector give a glimpse into the future of work across the economy. RFID technology makes the global supply chain visible by tracking the movement of goods on forklifts and barges, across borders and oceans, through warehouses, to your living room. Self-checkout stations are replacing cashiers and sensor technologies will soon replace self-checkout by allowing purchases to be scanned through your phone when you leave the store.[8] Online shopping is competing with brick and mortar stores—pushing workers from the sales floor into warehouses. While workplace technologies will likely swallow many jobs that are growing in numbers today, retail alone employs 10 percent of the private sector workforce.[9] Though the structure of work is changing, 'employers' still exist – and there are tens of millions of employees who are desperate for work standards that respond to their daily struggle to keep up with stagnating incomes and a rising cost of living.[10]

Integrated timekeeping systems became common in the 1990s, and over the last 15 years, workplace technologies have rapidly evolved from barcodes to biometrics, from paper schedules to the cloud. The early days of the Internet helped to network workforce management systems that are now workforce optimization systems linked to RFIDs and smart phones. These technologies generate massive amounts of data that have transformed employers' perceptions of labor, business operations and profit-making strategies.[11] Workforce management has become increasingly centralized in corporate offices and technology systems, shifting decision-making away from frontline managers. Workers at Walmart and Amazon are now tasked through handheld devices that monitor their speed. Managers track the constant flow of real-time data and, in some companies, may spend more time monitoring their 'decision support' systems than engaging directly with workers or customers.

Workforce optimization systems create workers' schedules according to various metrics that include projections based on recent trends and last year's sales. Employers now can dip into an increasingly networked, accessible pool of unemployed and chronically underemployed workers and use them for the minimum possible amount of time—calculated to the hour. With the goal to curb clocked time, managers use data analysis to identify where they can skim workers' hours in order to stay within razor-thin labor budgets. Relying on a large part-time workforce scheduled for short, four-hour shifts, managers will shorten or lengthen these shifts at the last minute.

Workers' individual productivity is also monitored more precisely than ever: the software tracks workers' sales-per-hour and the number of items scanned per minute at cash registers. Those who sell more or work faster are in turn rewarded with a few more hours each week, or a more preferential schedule.[12] This may seem like a system in which workers are compensated according to how much they produce, like a garment piecework system.[13] In contrast, American service industry workers' productivity per hour far exceeds the hours and earnings they receive. Burt Flickinger, a highly regarded retail industry analyst, has said just-in-time scheduling is more like sharecropping: workers are working harder during their short shifts, hoping that their increased productivity will be rewarded, but their only compensation for increased productivity is more hours at low pay.[14] Even this so-called reward is an illusion, because the management system is designed to keep most workers part-time: sometimes workers will receive more hours, but not enough to add up to financial stability. Supervisors may do a favor for workers by overriding the computer software and accommodating reasonable scheduling requests, but they may also punish workers for those requests by cutting their hours. Richard Sennett has claimed that so-called flexibility "creates new forms of unequal arbitrary power."[15]

Though technology has facilitated this rapidly shifting terrain in work, people are the ones who make decisions about the values, metrics and capacities that are programmed into these systems. Without baseline protections on work hours, employers' use of workforce technologies is pushing the boundaries of existing labor law and of what makes a healthy, fair workplace, generating new forms of wage theft and new mechanisms of occupational segregation. Workers don't have enough bargaining power, and public policies are decades behind the realities of working today. We propose an intervention to instill in these systems values about work with dignity, metrics that treat workers as assets, and protections that make employers accountable to workers, not just shareholders.

Technology for a Fair Workweek?

"It boggles my mind. There's just some basic things they can't get together. Especially being a mom—working five hours here, seven-and-a-half hours there. You just never know when you're going to work. I live off hope." – Allison Santana, Starbucks barista[16]

Far from achieving a Taylorist vision of scientific management, just-in-time scheduling can generate inefficiencies and undermine profit-making. When used in excess, it fuels incredibly high turnover—anywhere from 80–500 percent—that can generate significant long-term costs for employers.[17] Replacing staff can cost as much as 30 percent of the employee's annualized earnings, and that's not counting lost sales and productivity.[18]

Given these additional costs, just-in-time scheduling may not necessarily be an efficient labor management practice or a rational business decision. In fact, some operations management experts find that having too many temporary or part-time workers in proportion to full-time workers undermines sales and profit.[19] Technology experts acknowledge that many employers "over-optimize" their workforce management, which results in harsh scheduling practices. These experts are promoting an approach to workforce optimization that balances the baseline needs of workers and business.[20]

Ironically, the solution to the inefficiencies in turnover may lie in the very technologies that drive unpredictable schedules. There's radical potential in workforce management technologies, like Kronos, Dayforce, Reflexis and Workbrain, to elevate the quality of work in low-wage sectors. New business tools and analytics permit employers to aggregate and analyze massive amounts of data, enabling them to predict variations in demand (and thus labor needs) more precisely than ever. And recent research suggests that labor demands may not only be predictable, but also fairly stable, even in seemingly volatile industries such as retail.[21]

However, securing fair scheduling for hourly workers in the future requires more than just high-road models in workforce optimization. A political shift in power is necessary to build a greater voice for workers, who can win updated policy protections that set new fundamental work-hour standards.

What is a 21st Century Workweek?

Employers have *chosen* to use these powerful tools to treat their workers as a cost to be minimized, if not eliminated, instead of using these tools to capture the predictability and stability in labor demand that already exists and deliver it to workers through more predictable and stable hours. With basic protections in place to ensure stability, adequacy and predictability of workers' schedules, employers can use the technology to identify steady patterns of demand, and allow for worker input, contingent and insecure work could be transformed into family-sustaining flexible employment, where workers have a base of stable hours and unprecedented input into how much and when they work. What are some of the metrics and protections that lead to a fair workweek?

> **Flip the script.** Frontline managers should be held accountable for managing around the stability in the business, not the variability. They should be rewarded for anticipating stability in demand using workforce technology and delivering it to workers through predictable, stable schedules. Staffing could be 'optimized' over a longer period of time, (a week, month, or quarter), which would reduce pressures on managers to make last-minute adjustments to workers' schedules.
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> **Enough hours for everyone.** Scheduling technology can allow workers to schedule themselves and directly input scheduling changes. Yet, employee-driven labor scheduling only works if companies make adequate hours available. Otherwise, employees will simply be competing with one another for scraps of hours, while employers enjoy credit for implementing a more responsive scheduling system. At Costco and unionized Macy's, even part-time workers receive core minimum hours.
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> **Workers need input.** Scheduling software can create work schedules that balance the needs of business with the availability and scheduling requests of workers more accurately than ever. Managers expect maximum flexibility by preferencing workers with open availability, workers who have limitations on their schedules – who are more often

women and workers of color - pay a price in their paychecks and fewer opportunities to advance. Despite today's technologies, it remains an employer's responsibility to ensure that human resource systems do not buttress structural racism and sexism.

Functional flexibility. Labor flexibility can be achieved through functional flexibility, which is realized through the internal reallocation of workers from one job function to another, rather than numeric flexibility, which is accomplished through adjustments to headcount and workers' hours. For example, Costco cross-trains a large proportion of its employees so that managers have flexibility *within* their warehouses, and has said that good labor practices like this cost less, not more.

Workers need a voice. If workers have an organized voice, whether through a union or another organizational form, they can help guide the use of the technologies in their workplace. All employees are entitled to form Occupational Health and Safety Committees to "provide a method by which employees can utilize their knowledge of workplace operations to assist agency management to improve policies, conditions, and practices."[22] Through such committees, workers should have access to data analytics that will enable them to propose credible alternatives to just-in-time scheduling that can lead to healthier work schedules.

There is a growing case being made that a 'good jobs strategy' is better for business. Yet, for all we talk about Costco and the hundreds of millions of dollars that it saves in a stable full-time, fairly-paid workforce, we are still just talking about Costco. When will other retailers step up? Moving employers in some sectors to voluntarily shift to a full-time workforce seems far off. We need to do more than just illustrate the potential of a high-road.

Technology and Democratizing the Workplace

Whether or not a workforce is organized makes a tremendous difference in how employers use new technologies. In an organized workplace, employers must contend with guidelines, baseline protections and pushback in how they utilize their technologies. Yet, bargaining is tough when the low-road is the industry norm. High turnover rates accompanying just-in-time scheduling further undermine workers' ability to organize. Accordingly, we need new strategies to build an organized voice of workers, and more nimble tactics to spark change.

Workers striking and speaking out for a fair workweek has turned the media into a bullhorn, and moved workplace grievances to being settled in the spotlight. With routine scheduling practices in major companies becoming sensational news stories, the National Retail Federation is giving up on the subterfuge that the flexibility of working just-in-time is something preferred by workers. And Starbucks' swift response to the PR nightmare of Jannette Navarro's story shows that companies clearly do have a choice—though baristas are rightly pushing for more substantive reforms.

This mounting media attention to just-in-time scheduling has created the public case for new labor protections for work hours. It's been 75 years since significant work-hour standards were legislated. Workers have been organizing for just hours in recent years, and 2014 marked the breakthrough introduction of federal and local legislation that foreshadows the kind of change that's ahead.

An Intervention

New protections and greater voice for workers are needed to realize the potential that workforce technologies have for restoring a fair workweek for millions of hourly workers. When technology is something solely controlled by management to increase profit, in a context where workers are almost all unorganized, a future of work where most workers are pushed even further to the margins of society is all but guaranteed. How and whether we intervene to address these worrisome trends holds important implications for the future of work. Will we allow employers' unfettered use of new technology to destabilize employment in key growth industries? Or will we develop a strategy to guide how technology is used in the workplace, and advance a path where technology enhances workers' voice in determining the conditions of their labor?

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