

Issue: Workplace Surveillance

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Pub. Date: November 5, 2018
Access Date: November 21, 2018
DOI: 10.1177/237455680433.n1

Source URL: <http://businessresearcher.sagepub.com/sbr-1946-108297-2908049/20181105/workplace-surveillance>

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Will new techniques spark resentment?

Executive Summary

Workplace surveillance and company monitoring of employees are expanding and evolving, aided by technological innovations and enabled by privacy laws that have not kept pace with those developments. A recent survey estimates 98 percent of U.S. and U.K. workplaces have some form of digital surveillance, such as tracking employees through sociometric badges or biometric scanners, scanning emails and social media posts, monitoring computer keystrokes, surveilling with a video camera or monitoring movement through GPS on phones. Businesses use these technologies to improve performance, efficiency and security. But they run a risk that employees will resent what they perceive to be Big Brother-style intrusiveness, and companies also must stay in compliance with a confusing mix of state and federal laws on surveillance.

Among the key takeaways:

- New “people analytics” technology uses artificial intelligence and machine learning to crunch monitoring data and put it to use; about 70 percent of companies worldwide are putting this into place.
- Experts say keeping employees informed about the reasons for monitoring is a better approach than secrecy, because it earns trust and buy-in and avoids low morale, loss of productivity and negative publicity.
- U.S. law has not kept up with technological change, but U.S. companies with employees in Europe are subject to restrictive new digital privacy laws enacted there.

Full Report



Sam Bengston has a microchip embedded in his hand before a horde of cameras last year. (Three Square Market)

When software engineer Sam Bengston, 27, told his family and tech-oriented friends that he had volunteered to have a microchip embedded in his hand as part of his job 18 months ago, they “were not too shocked about it,” he says. The reaction from strangers on Facebook and other social media platforms was a different story.

Bengston was one of the first of nearly 100 employees at [Three Square Market](#), a technology company in River Falls, Wis., that produces

self-service kiosks, to be “chipped,” with the near-painless insertion captured on camera for The Washington Post. ¹ The comments then began: “People said, ‘Why would you do this?’ They assumed I was being tracked,” he says – even though the chip does not have GPS capabilities. Some religious objectors compared the chip to the “mark of the beast,” a sign of the antichrist and the end of days according to the Bible’s Book of Revelation, to condemn the practice.

Today, he says, the furor has largely died down, with people more interested in the potential benefits of carrying a radio frequency identification (RFID) chip under one’s skin – such as being able to open locked doors or buy snacks with the wave of a hand, rather than fumbling for a key card or cash. He especially appreciates not having to remember or create passwords when he logs on to his computer.

But bigger changes are yet to come, as Bengston helps develop Three Square Market’s new chip, expected out sometime next year as part of an additional product line aimed at the medical market. This chip, built in response to requests from potential customers worldwide, is expected to include monitoring of vital signs, encrypted storage for sensitive data such as passports and – yes – GPS tracking, which the company hopes to provide to dementia patients. ² When it is ready, Bengston expects to have the newer, bigger chip inserted, replacing the one he has now.

“The technology is exploding every day and is transforming data and the HR role.”

Microchipping employees is not (yet) common in the workplace. Three Square President Patrick McMullan says since his company began chipping its employees last year, he has heard of just two other U.S. companies following suit. Three Square also was not the first: in 2006, CityWatcher.com, a surveillance firm in Cincinnati, drew headlines for embedding chips in the forearms of two employees. ³ Today, about half of Three Square’s workforce has volunteered to be part of the chip experiment. The other half use RFID-enabled wristbands or badges, similar to what many other companies are using to tell who is in a building or accessing software. (McMullan says there are no repercussions for employees who choose not to be chipped. And chipping without consent is illegal in Wisconsin, as well as California, Missouri, North Dakota, and Oklahoma. ⁴)

Microchip development shows how advances in technology are driving changes to worker monitoring. Companies increasingly are surveilling their employees, for various reasons and in different ways. Such measures can lead to greater productivity and safety. But employers face potential pitfalls, including employee backlash, negative publicity and accusations of Orwellian intrusiveness; possible exposure of sensitive employee data to hackers; and the chance for missteps in the murky legal landscape surrounding employee privacy rights.

“Between employers and hackers, privacy is disappearing fast. I don’t expect it to last beyond my lifetime,” says Lewis Maltby, a lawyer who heads the National Workrights Institute, which advocates for employee rights and raises concerns about what it regards as the growing use of indiscriminate surveillance.

Today’s emerging technologies allow for often-invisible, near-constant monitoring of workers’ actions, speech and even moods, which can “create a lot of issues for both the employer and employee,” said Paul Stephens, director of policy and advocacy at the Privacy Rights Clearinghouse, a San Diego consumer privacy watchdog group. Stephens said such practices are “unnecessarily invasive.” ⁵

Earlier Surveillance

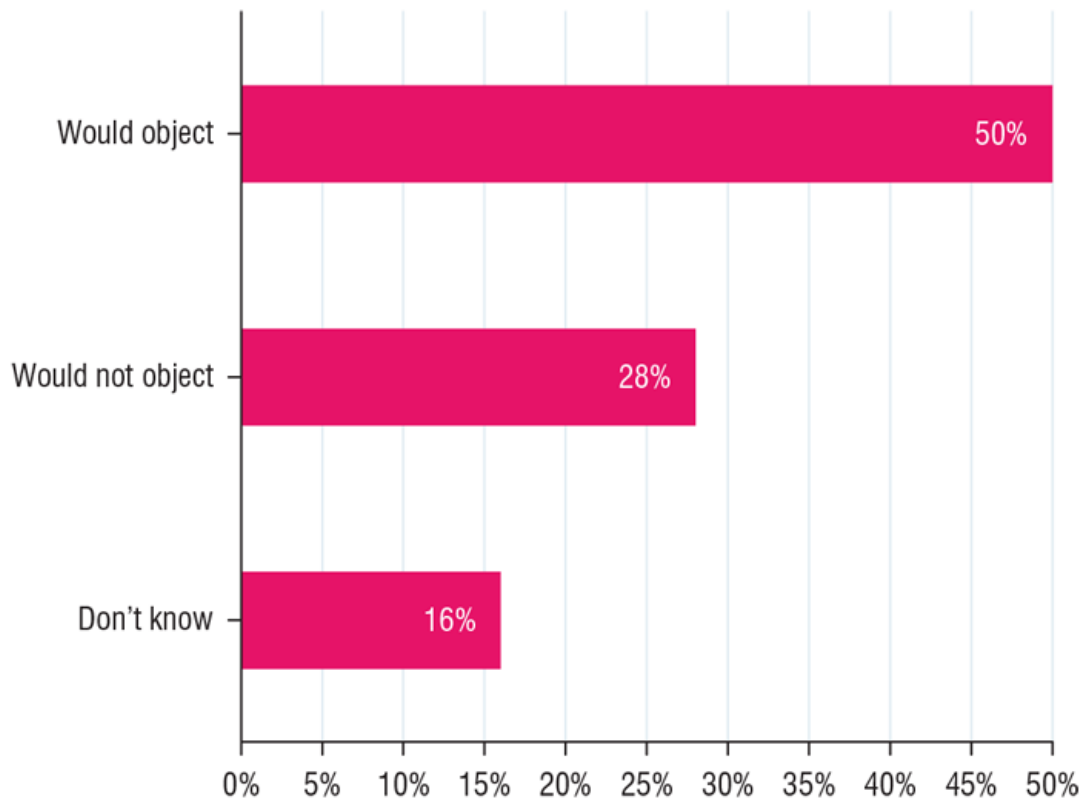
Workplace surveillance is not new. A century ago, Henry Ford used a stopwatch to track factory employees in an effort to achieve greater efficiency on the assembly line he was developing at his automotive company. Even earlier, in the 1800s, employers hired Pinkerton detectives to infiltrate and monitor union employees the companies viewed as threats. ⁶

Over time, machines stepped in to automate surveillance: time clocks to see when employees punched in and out, video cameras to monitor security, answering machines to record phone calls. With the computer revolution, digital technology began streamlining these functions; today, capabilities have advanced even further, and new ones have been added.

In addition to the closed-circuit cameras of old, “computer vision” uses artificial intelligence in cameras to spot in real time whether an employee is wearing safety gear and to notify a supervisor if he or she is not. ⁷ Another software tool commandeers computer webcams to take pictures every 10 minutes of employees who are working from home. ⁸ Some companies hide tiny cameras in everything from coat hooks to air fresheners, picture frames and coffee pots. ⁹

Half Oppose Wearable Tracking Devices

Percentage of employees who would/wouldn’t object to using wearable technology



Source: "Workplace Privacy & Protection: Is Your Employer Watching Your Every Move?" 20th HR Metrics & Analytics Summit, 2018, chart 8, <https://tinyurl.com/v7ojwnm>

Half of all employees surveyed would object to wearing technology that tracks their physical movements in the workplace, according to a 2018 global survey.

Employers have long monitored work-related phone calls and email, but today's software can scan them to determine an employee's mood and report findings to the boss.¹⁰ Everything, from an employee's Fitbit readings to the tone of voice used in a conversation with a co-worker to the way a worker gazes at an object on screen, can be monitored.

"The technology is exploding every day and is transforming data and the HR role," says Baskaran Ambalavanan, a human resources tech specialist and vice president of Hila Solutions, a technology consulting company.

A 2018 survey of IT professionals in the United States and United Kingdom by software firm Alfresco found 98 percent of companies with more than 500 employees were monitoring employees' digital activity.¹¹ In 2001, according to data from the American Management Association, 80 percent of U.S. companies were monitoring email, computer and/or phone use.¹²

"It's at the point where virtually every major employer in America has some form of electronic surveillance in place," says Maltby, the lawyer for the National Workrights Institute, which is based in Princeton, N.J.

Recent Advances

A wide variety of monitoring tools are in use today, while others are still in the planning stages.

Online retail giant [Amazon](#) has patented – but not yet deployed – smart wristbands to track employees; the bands will sense warehouse workers' hand movements and buzz if an employee is moving to the wrong item.¹³ [Walmart](#) has patented, though it has not yet deployed, a tool that listens in on customer-employee conversations at cash registers to help gauge employee performance and customer satisfaction.¹⁴

Currently in workplaces:

- Body heat and motion sensors that can determine when employees are sitting at their desks – or not. "Tens of thousands" of [OccuEye](#) devices have been placed in hundreds of offices worldwide to reveal how employees are using their workplace, which can help employers design and use office space more efficiently – or, critics might allege, check up on employee movements.¹⁵

- GPS tracking, which today is shifting from vehicles to employee smartphone apps. A 2012 study by the Aberdeen Group, a tech research firm, found 62 percent of companies with field employees such as delivery drivers or sales staff used GPS tracking, more than double the 30 percent reported in 2008.¹⁶
- Drones to monitor remote workers, such as railroad employees.¹⁷
- Sociometric wristbands or badges equipped with microphones to process the tone, volume and speed of workers' conversations, as well as employee movements. [Hitachi](#), the Japanese conglomerate, has developed a badge-like "happiness meter" and a "Happiness Planet" phone app to suss out an employee's mood.¹⁸
- Fitness trackers, which in some cases are mandatory. A PricewaterhouseCoopers survey in 2016 estimated more than 75 million wearables were expected in the workplace by 2020; Gartner, a Connecticut-based global research firm, predicted two years ago that by 2018, some 2 million workers would be required to wear health trackers on the job.¹⁹
- Eye tracking using smart eyeglasses with multiple sets of cameras that can see not only what an employee sees, but how he or she sees it, whether focused or distracted.²⁰
- Brain-wave tracking via sensors in headgear. Chinese companies are using this technology to monitor employee performance, such as whether a worker is tired and needs a break.²¹
- Biometrics such as fingerprints, facial recognition and iris scans, which are used by 62 percent of organizations surveyed to regulate employee access to buildings and data centers, according to [Spiceworks](#), an Austin, Texas-based IT networking firm; another 24 percent plan to add biometrics by 2020.²²
- In addition, companies are monitoring digital activity done on work devices or using the company's Web server, including email and Web browsing. At least 66 percent of companies track internet use, 45 percent log keystrokes and 43 percent monitor email.²³

Companies also monitor employees' use of social media. Only 26 states have laws forbidding employers from requiring employees or applicants to turn over social media passwords.²⁴



Ben Waber of Humanyze

New "people analytics" software is available that can pull much of this data together, harnessing the power of artificial intelligence and machine learning to make sense of monitoring results and other HR data about an employee. As a result, businesses can better identify who might be a candidate for promotion, might need additional help – or be a candidate for firing.²⁵

Sixty-nine percent of 11,000 global companies surveyed worldwide in a Global Human Capital Trends survey by the consulting firm [Deloitte](#) are creating people analytics capabilities, up from 10 to 15 percent in prior years of the report; 17 percent already are using these tools.²⁶

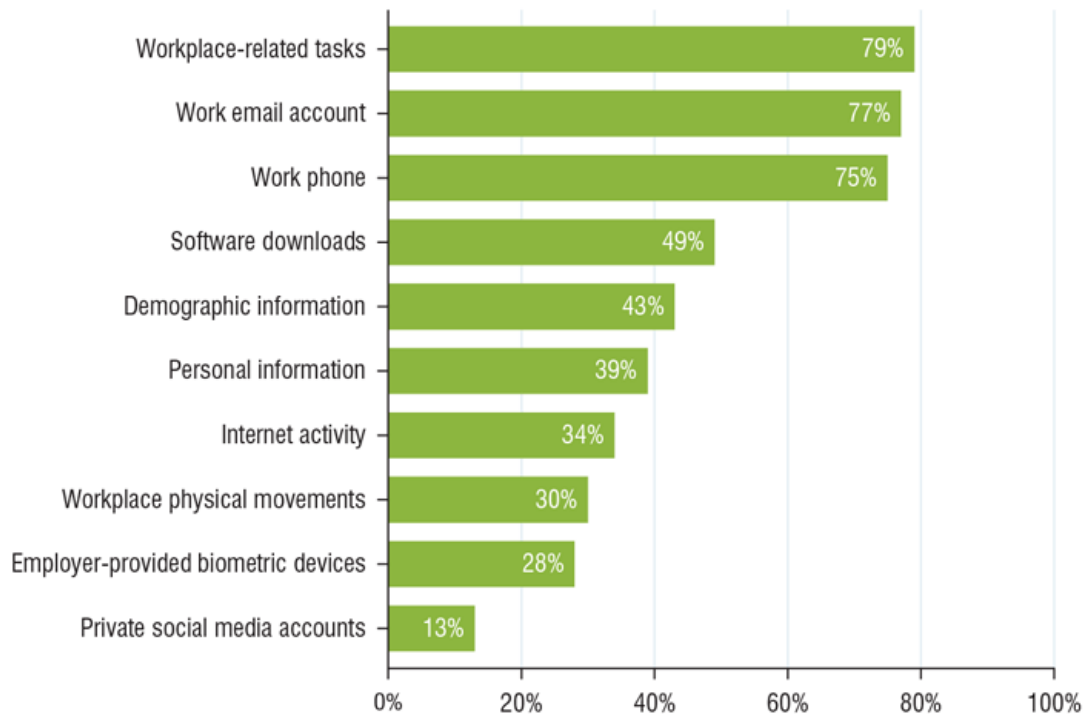
Besides learning more about an individual employee's performance, companies can use data gleaned from observing employee activity to make improvements in security, productivity and efficiency, advocates argue.²⁷

"Every aspect of business is becoming more data-driven. There's no reason the people side of business shouldn't be the same," said Ben Waber, founder and CEO of [Humanyze](#), which produces sociometric badges and people analytics software.²⁸

Humanyze tools helped [Bank of America](#) call centers discover that when teams took breaks together, productivity improved and staff turnover dropped. Three months after Bank of America instituted shared breaks, employees were handling calls 23 percent faster, stress dropped by 19 percent and turnover fell by 28 percent, potentially saving the company billions of dollars over time, according to Humanyze research.²⁹ Similarly, Hitachi says its happiness meter helped a client company adjust employee break times to let people of similar ages relax together; the change tripled productivity.³⁰

Employees Have Mixed Views on Surveillance

Percentage who call monitoring of various activities acceptable



Source: "Workplace Privacy & Protection: Is Your Employer Watching Your Every Move?" 20th HR Metrics & Analytics Summit, 2018, chart 5, <https://tinyurl.com/y7ojwnm>

Only a small minority of employees think it is acceptable for their employer to monitor their private social media accounts, while three-quarters accept monitoring of work email or phone use, according to a 2018 global survey.

Other examples:

- By tracking the movements of health care workers at Florida Hospital Celebration Health through smart badges, managers discovered some stations did not have enough medicines stocked, causing nurses to waste time tracking down extra supplies.³¹
- In 2009, [UPS](#) put about 200 sensors in each of its delivery trucks to track driving speed and other variables. Managers used the information to figure out how drivers could deliver more during their shifts. Four years later, UPS had upped its daily deliveries by 1.4 million additional packages, using 1,000 fewer drivers.³²
- Point-of-sale video surveillance systems at chain restaurants resulted in a 22 percent average drop in theft and a 7 percent hike in revenue, according to a 2013 study.³³
- Among the Chinese companies monitoring workers' brainwaves, a power plant claimed the practice had boosted profits by \$315 million by allowing for more efficient use of the employees' time. The company said it used brainwave data to determine when employees were stressed or tired, then arranged break times accordingly so that they were working at peak efficiency.³⁴

But beyond potential benefits lie possible downsides. Chief among these: the specter of Big Brother, which casts a shadow on many of the technologies, but perhaps most especially on the use of sociometric badges that track an employee's every movement and utterance. The data, along with other monitored metrics, such as time spent online, is then fed into a behind-the-scenes analysis program to judge workplace performance.

"Especially with these new universal monitoring devices, your boss is virtually following you around every minute of the day," says Maltby, the National Workrights Institute lawyer. "Every word you say to a friend at the lunch table or to your spouse on the phone is recorded."

Humanize says the data from its badges that is given to bosses is aggregated, not identified by person, and that the actual content of conversations is not recorded, only the tone, length and so on. Maltby is skeptical.

"It's so new that no one really knows what's going on," he says. "Are they really keeping the data anonymous? Employers generally want to know everything. If there's a device that each employee is wearing that's collecting every place that each individual employee goes through the day, I have a hard time imagining the employers not wanting to see it."

If the data is not stored anonymously, says Maltby, “privacy will be virtually extinct in the workplace.”



Lewis Maltby

Too little privacy can lead to the opposite of employers’ goal of better job performance, Kenneth Goh, a professor of organizational behavior at the University of Western Ontario’s Ivey Business School, told the CBC.

Goh said studies have shown that workers “thrive when they have some degree of privacy. They do more trial-and-error learning, they’re more willing to make mistakes in private.” He said that tracking on and off the job, such as with Fitbits, is “too Orwellian” and that employees are at risk of losing “the privacy of our actions, our movements, our physiological and emotional states.”³⁵

Maltby says it should not be surprising that being surveilled can hurt employee morale, especially if workers find out it has been done secretly. “You don’t need to have an MBA from Wharton to figure out if someone finds out that their boss has been reading their personal emails to their husband, it’s not going to be a motivator,” he says.

Employees who resent monitoring are more likely to become stressed, alienated and less satisfied with their jobs, according to researchers.³⁶ Ethan Bernstein, an assistant professor of leadership and organizational behavior at Harvard Business School, found in his research that privacy was as essential as transparency for employees; he said those without it felt “exposed and vulnerable,” causing them to become so secretive that some even hid achievements.³⁷

Researchers from George Washington University found that electronic performance monitoring led to decreased job satisfaction and increased counterproductive work behaviors, such as theft, absenteeism and cyberloafing.³⁸ Upset employees also may take their concerns public, resulting in negative publicity and possible brand damage. Amazon, for example, has been hit hard by employee accounts of “constant surveillance,” among other complaints.³⁹

Another concern: data hacking, which can expose not only an employee’s financial and health information, but also biometric data, such as fingerprints or iris scans, which increasingly are being collected by employers. A 2015 data breach at the federal government’s Office of Personnel Management, for example, resulted in the theft of 5.6 million fingerprints.⁴⁰ A 2018 survey by the HR Metrics & Analytics Summit found 48 percent of employees did not trust their company to protect their data.⁴¹

Ethical monitoring?

How should companies approach monitoring? Are there ethical ways to surveil employees? The first step is open communication, says Kate Bischoff, a Minneapolis employment attorney.

“Companies are already looked at as the Goliath in any situation and the employee is always the David,” she says. “Well, now we have the Goliath as Big Brother, too – and that puts a lot of fear into employees. We have to make sure employees understand that this is something to help the business – and to help them as well.”

Bischoff cites the London Daily Telegraph newspaper’s 2016 decision to put OccupEye sensors under staffers’ desks without prior notification. Workers complained, the news went viral and the Telegraph pulled the sensors.⁴² However, says Bischoff, the company did not install the devices to spy on workers, but rather to help save money – and jobs – by determining a more efficient use of space. “Had they told them, ‘We’re trying to figure out if we can reduce our real estate so that we don’t have to fire you,’ people wouldn’t have freaked out or contacted BuzzFeed,” she says.

Watch video with University of North Carolina communications professor Steve May on technology and surveillance:



Ambalavanan, the Hila Solutions HR tech specialist, agrees that businesses gain “a better buy-in” through communication with employees. He recommends companies have clear policies covering when and how employees might be monitored; have employees read and sign off on them; and have a forum or some other way to address employee concerns “before they become news.”

Another issue for employers is compliance with employee privacy laws.

The law, unfortunately, “doesn’t do a very good job” of addressing surveillance and monitoring, says Bischoff. Some federal regulations cover aspects of the myriad issues raised, while some states have adopted laws to try, in piecemeal fashion, to deal with concerns.

Alaska, Connecticut, Illinois, Massachusetts, New Hampshire and Washington are among states that have passed regulations governing how employers handle workers’ biometric data. ⁴³ (Illinois’ law, which was the first, is particularly tough, and has resulted in more than 60 class-action lawsuits against employers. ⁴⁴) Connecticut and Delaware prohibit employers from monitoring employee email or internet access without prior written notice. ⁴⁵ California, meanwhile, has led the nation in consumer privacy regulations, including requirements for notification regarding GPS monitoring. This law helped a California salesperson, Myrna Arias, win a settlement with her employer, [Intermex Wire Transfer](#), after the company fired her for deleting a GPS tracking app from her company-issued smartphone. ⁴⁶

In general, though, the law has not kept up with the rapid pace of technology, Bischoff says.

“Between employers and hackers, privacy is disappearing fast.”

The federal regulation most on point is the Electronic Communications Privacy Act of 1986, which regulates the monitoring of employees’ personal communications. “The only problem is, it applies to telephones because that’s all there was in 1986,” says Maltby. “You would think sometime in the last 34 years, Congress might have gotten around to saying, ‘Let’s apply the same concept to other forms of electronic communication.’ But despite a great deal of urging by lots of people, it never happened.”

Bischoff says privacy is “a difficult concept for Congress to tackle” because of the complexity of the issues. There isn’t necessarily a partisan angle at play either, she adds, saying that while Republicans are currently in power, “it’s not clear that Democrats would put this on the top of their agenda, either.”

In Europe, on the other hand, a far-reaching electronic privacy law, the General Data Protection Regulation (GDPR), went into effect on May 25. This law regulates what companies can do with peoples’ data and how long it can be kept, with penalties for violators of up to 20 million euros (about \$23 million). Though it is a European Union regulation, it covers any company, including U.S.-based ones, with employees in Europe. ⁴⁷

“This kind of privacy legislation does affect what we do here in the U.S.,” says Bischoff, since many companies have European-based workers.

Another factor for employers to consider: whether a labor union is present. Where that is the case, surveillance practices must be part of collective bargaining and employers cannot surveil employees who are organizing, says Felicia Davis, partner in the employment division at Paul Hastings LLP, a Los Angeles-based law firm.

Paula Brantner, a senior adviser to Workplace Fairness, an employee-rights advocacy group in Silver Spring, Md., says that unions have been able to “create some boundaries and limitations for the employer.” Employers with unionized workforces can still monitor their workers, but it must be done with employees’ consent and knowledge, she says.

In general, says Davis, employers need to “make sure that employees know that they are being monitored or may be monitored. The actual law on it will vary from state to state in terms of whether [businesses] have to do it,” she says, but notification is a good defense against any potential invasion-of-privacy claims.

Employers also need to make sure that they are not so enticed by the latest, shiny new technology that they institute something unnecessary, says Maltby. “Employers – maybe Americans in general – we love technology,” he says. But sometimes technology solutions “are not nearly as good as some of the old-fashioned ones.”

Brantner agrees. “Some of the technology is very far-reaching,” she says, “but that doesn’t mean you have to institute everything that’s available.”

About the Author

Lorna Collier is a business and health writer whose reporting has appeared in the Chicago Tribune, AARP Bulletin, U.S. News & World Report, CNN.com, Workforce Management, Crain’s Chicago Business, Monitor on Psychology and many other publications. She can be reached on Twitter at @lornacollier or via email (lorna@lornacollier.com). Previously, she reported for Business Researcher on [workplace violence](#).

Chronology

1888-1992	Early efforts to use technology for workplace surveillance
1888	The first time clock is invented by Willard Le Grand Bundy to track workers' time on the job.
1911	Frederick Winslow Taylor, a mechanical engineer and efficiency expert, publishes <i>Principles of Scientific Management</i> , touting time and motion studies of workers to improve job performance.
1914	Auto pioneer Henry Ford starts the Ford Motor Co.'s Sociological Department; staffers monitor employees at work and at home.
1935	The National Labor Relations Act, protecting the rights of workers to bargain and preventing employers from surveilling union activity, is enacted.
1975-1978	Microcomputers (also known as PCs) are introduced into the workplace.
1986	The federal Electronic Communications Privacy Act passes, making the intercepting and monitoring of electronic communications unlawful; business communications generally are exempt, particularly if carried out on company-owned devices.
1991	The World Wide Web is created by Tim Berners-Lee.
1992	Mosaic – the first internet browser with a graphical user interface – is developed, driving internet growth in business among companies and consumers.
Late 1990s-Present	Widespread adoption of surveillance in businesses.
2001	An American Management Association survey of 435 employers finds nearly 80 percent surveil employees, with about 62 percent monitoring internet use.
2006	Wisconsin is the first state to ban mandatory radio frequency identification (RFID) microchipping of employees.
2008	Illinois passes the Biometric Information Privacy Act, making it the first state to restrict how business gather, use and store employee's fingerprints, DNA or other biometric data.... The federal Genetic Information Nondiscrimination Act (GINA), which restricts the way employers use employees' genetic information, is enacted.
2014	The software company Sociometric Solutions (later Humanyze) develops a sociometric ID badge for employees that can track movements and conversations.
2017	A California woman, Myrna Arias, settles a lawsuit against a former employer for firing her after she removed a GPS tracking app from her company-issued cellphone to prevent 24/7 surveillance.
2018	An amendment to Illinois' Biometric Information Privacy Act proposed to make employers exempt from restrictions governing the collection and maintenance of biometric data, which critics say would gut worker protections; the amendment is pending.

Resources for Further Study

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Books

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The Next Step

Devices

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Legal Action

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Organizations

American Management Association

1601 Broadway, New York, NY 10019
1-877-566-9441

www.amanet.org

customerservice@amanet.org

@amanet

Professional management organization that provides training, seminars, podcasts and other services, plus information about management topics, including workplace surveillance.

Electronic Frontier Foundation

815 Eddy St., San Francisco, CA 94109

1-415-436-9333

www.eff.org

info@eff.org

@EFF

Organization focused on civil liberties in a digital world; answers legal inquiries and provides advocacy, online privacy tools and other resources.

Electronic Privacy Information Center (EPIC)

1718 Connecticut Ave., N.W., Suite 200, Washington, DC 20009

1-202-483-1140

www.epic.org

info@epic.org

@EPICPrivacy

An independent research center aimed at focusing attention on privacy and human rights issues; maintains other sites such as privacy.org and privacycoalition.org.

National Workrights Institute

128 Stone Cliff Road, Princeton, NJ 08540

1-609-683-0313

www.workrights.org

info@workrights.org

@usworkrights

Founded in 2000 by former staff of the American Civil Liberties Union's National Taskforce on Civil Liberties in the Workplace, this advocacy organization provides legal databases and information about workplace privacy and human rights issues.

Privacy Rights Clearinghouse

3033 5th Ave., Suite 223, San Diego, CA 92103

1-619-298-3396

www.privacyrights.org

admin@privacyrights.org

@PrivacyToday

Privacy-rights organization that responds to consumer complaints and questions about privacy issues; maintains a database of articles, reports and other resources.

Society for Human Resource Management (SHRM)

1800 Duke St., Alexandria, VA 22314

1-800-283-SHRM (7476)

www.shrm.org

@SHRM

The world's largest HR professional organization, with 300,000 members in 165 countries; it has a large database of articles about workplace surveillance and monitoring.

Workplace Fairness

8121 Georgia Ave., Suite 600, Silver Spring, MD 20910

1-240-772-1205

www.workplacefairness.org

@work_fairness

Organization promoting employee rights; it maintains a database of employment lawyers and guides to workplace issues, including surveillance.

Notes

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