

Engagement in the Robot Era

"A pointsman's back straightened itself upright suddenly against a tramway standard by Mr. Bloom's window. Couldn't they invent something automatic so that the wheel itself much handier? Well but that fellow would lose his job then? Well but then another fellow would get a job making the new invention?"

James Joyce
Ulysses

A BRIEF HISTORY OF WORKFORCE AUTOMATION

Author James Joyce captures the paradox of automation and its impact on employment in his 1922 novel, *Ulysses*. Historically speaking, an increase in automation has always led to an increase in worker productivity. Advances in agricultural automation in the early 19th century are often credited with creating the available workforce to staff the factories of the early Industrial Revolution. In the 1830s, it took approximately 300 labor hours to produce 100 bushels of wheat, but with significant advances in automation, by the 1890s, it took approximately 45 labor hours to produce the same amount of wheat.¹ By the 1930s, that was reduced to a mere 15 hours. Put another way, in the century from 1830 to 1930, the heart of the Industrial Revolution, agricultural labor productivity increased by 2,000 percent due to improvements in automation and technology available at the time.

Automation hardly limited itself to food crops. Within industry, automation has been used to greatly increase production and bring innovation to the masses. Perhaps most famously, Henry Ford utilized automated conveyor belts to create an assembly line that broke down the automobile manufacturing process into 84 discrete steps, with each worker performing just one step.² Ford was able to reduce the amount of time it took to build an automobile from more than 12 hours to just under two and a half hours — a 480 percent increase in productivity. This innovative approach helped Ford churn out more than 28,000 cars per week by the middle of the 1920s.³



In 2016, Tesla opened what has been described as one of the most robotics-driven factories in the world. Dr. Jeffrey K. Liker, Professor of Industrial and Operations Engineering at the University of Michigan, described Tesla's worldview as, "Manufacturing is seen as a technical engineering problem and the solution is

automation, automation, and more automation."⁴ The belief was that with this automation, Tesla would be able to mass produce its Model 3 cars at a pace that would give it scale and bring the company to profitability. However, despite all its automation, the company has struggled to deliver on its promises. While Ford produced 28,000 cars per week in the 1920s, Tesla has produced 28,000 Model 3 cars in total since it began building them in July 2017.⁵

¹ https://www.agclassroom.org/gan/timeline/farm_tech.htm

² <https://corporate.ford.com/innovation/100-years-moving-assembly-line.html>

³ <https://detroithistorical.org/learn/encyclopedia-of-detroit/ford-motor-company>

⁴ Liker, J. (2018, March 07). Tesla vs. TPS: Seeking the Soul in the New Machine. Retrieved from <https://www.industryweek.com/operations/tesla-vs-tps-seeking-soul-new-machine>

⁵ Mitchell, R. (2018, September 14). As Tesla struggles to exit 'production hell,' buyers complain of delivery limbo. Retrieved from <http://www.latimes.com/business/autos/la-fi-hy-tesla-sales-delivery-problems-20180912-story.html#>.

*"Excessive automation at Tesla was a mistake. To be precise, my mistake. Humans are underrated."*⁶

Elon Musk
CEO
Tesla

AUTOMATION IS ONLY PART OF THE STORY

So how could Ford produce approximately 28,000 cars per week between 1914 and 1924, but Tesla has struggled to produce 28,000 cars in total in 2018? Employees matter. Tesla CEO Elon Musk said on Twitter that "Excessive automation at Tesla was a mistake. To be precise, my mistake. Humans are underrated."⁶ No matter how much automation is put in place, humans still play an important role. Who knew that more than anyone? Henry Ford. Ford did not invent the assembly line. Credit for that can go back to the ancient Chinese, where history shows crossbows being made on an assembly line using interchangeable parts as far back as the second century B.C.⁷ Ford cannot even take credit for inventing the assembly line in the automotive industry. Ransom Olds patented it for his automotive manufacturing facility and was able to produce 20 cars per day — a 500 percent increase.⁸

What made Ford special was his recognition that human behaviors had to change alongside technological innovations in order to reap the benefits of automation. Ford hired Frederick Winslow Taylor, the "father" of Scientific Management, to conduct time and motion studies so that Ford's workers could be more efficient in their use of the technology. Not only did Ford increase machine automation on the factory floor, he increased human automation as well. The tasks that each employee performed were simple, repeatable, and efficient. They required less training and a less-skilled worker. And while this process led to monotony, the introduction of scientific management to the factory floor contributed to increased productivity and prosperity. This was the fulfillment of the Taylor theory of Scientific Management — "The greatest prosperity can exist only as the result of the greatest possible productivity of the men and machines of the establishment."⁹ The combination of human efficiency alongside automation is what led to the automotive revolution pioneered by Ford, and it's what Tesla missed.

Automation does not stand on its own, however, and there is a real impact on workers who encounter it. Going back to agricultural industrialization, fewer workers were needed on the farms, and the farms themselves could be more productive and increase their output. The history books say that those workers became available to work in the nascent factories. But what is missed in that story is what happened to the workers between the time they left the farms and arrived at the factories. Real economic hardship accompanied the transition. Recent research has shown that it took three generations for displaced farmers to enjoy the benefits of moving to industrial work once they were displaced from the farms.¹⁰ In addition, the Industrial Revolution led to the growth of automation and production in several sectors, most notably textiles. This automation resulted in the loss of work for skilled laborers such as weavers, loomers, and others. While many of these laborers were ultimately able to find work in the factories, the jobs were often for significantly depressed wages. The lesson here is that jobs that are lost to automation are not immediately replaceable with jobs that automation creates.

⁶ Musk, Elon (elonmusk). "Yes, excessive automation at Tesla was a mistake. To be precise, my mistake. Humans are underrated." 13 April 2018, 3:54 p.m. Tweet.

⁷ <https://www.aeragon.com/02/02-04.html>.

⁸ <https://robohub.org/the-evolution-of-assembly-lines-a-brief-history/>.

⁹ Taylor, F. W. (1914). *The principles of scientific management*. Harper (p.12).

¹⁰ Frey, C. B., Berger, T., & Chen, C. (2017). *Political Machinery: Automation Anxiety and the 2016 US Presidential Election*.

A 2017 McKinsey research report claimed that **up to one-third of jobs could be lost by 2030, and technology could replace 800 million jobs worldwide.**¹³

RESISTANCE TO AUTOMATION

When we think of today as being the “Age of Robots,” it’s important to keep this idea in historical perspective. As long as there has been technology in the workforce, there have been workers who’ve been threatened by its emergence. People feeling threatened today by robots and artificial intelligence is not a new reaction. As early as the middle of the 18th century, there is evidence of worker resistance to automation. In 1768, a sawmill in Limehouse, England, was burned down by sawyers who believed the factory was depriving them of their jobs. In 1772, a textile factory in Manchester, England, was burned down by an angry mob. Perhaps most famously, the Luddites in early 19th century England famously destroyed machines they felt were replacing human workers. All they were able to accomplish was attracting the attention of the British Army. More than 12,000 soldiers were deployed to quell the violence. Violent reactions to automation were not reserved for only the English. In the late 19th century, French industrial workers who wore wooden shoes known as “sabots” would occasionally throw their shoes into the machines of the French Industrial Revolution, causing the machines to break — the first true act of “sabotage.” And the introduction of assembly line tactics in the early 20th century meatpacking industry in Chicago were met with resistance, strikes, and occasionally violence.

THE ROBOTS ARE COMING!

Today, many people view workplace automation as a threat to continued and sustained employment. And with good reason. News reports, magazine articles, and even late-night talk show hosts warn of the looming threat of robots. These threats are causing anxiety among American workers. A 2014 poll of unemployed workers found that 37 percent of respondents felt that automation was one of the main reasons they remained unemployed.¹¹ A 2013 study by the University of Oxford estimated that up to 47 percent of current jobs could be replaced by automation within the next 20 years.¹² A 2017 McKinsey research report claimed that up to one-third of jobs could be lost by 2030, and technology could replace 800 million jobs worldwide.¹³ And a recent report by PwC found that 38 percent of jobs could be lost in the U.S. due to automation.¹⁴

THE ROBOTS ARE COMING?

At the same time that these doomsday scenarios are being played out, there is research that suggests we shouldn’t panic. A 2017 study in the *Australian Economic Review* found that the total amount of work has not decreased since the introduction of computer-based technologies.¹⁵ If robots were really coming for our jobs, we should have seen a drop in total employment already. This fear comes from what is known as the “Lump of Labor” fallacy — the erroneous belief that there are a fixed number of jobs available, and if someone (or something) takes one job, then that employment opportunity is lost for everyone and forever. The Lump of Labor fallacy was first written about by economist Frederick Schloss back in ’91. Not 1991; Schloss published his text on the Lump of Labor fallacy in 1891.

¹¹ Ibid.

¹² <https://www.nytimes.com/2017/12/11/style/robots-jobs-children.html>.

¹³ <https://www.cnbc.com/2017/11/29/one-third-of-us-workers-could-be-jobless-by-2030-due-to-automation.html>.

¹⁴ <https://money.cnn.com/2017/03/24/technology/robots-jobs-us-workers-uk/index.html>.

¹⁵ Borland, J., & Coelli, M. (2017). “Are robots taking our jobs?” *Australian Economic Review*, 50(4), 377-397.

If the employee response to increased automation is disengagement, the negative impact on organizations can be significant.

The two main points are this: For as long as there has been technology, a fear has existed that technology is going to replace “all the jobs.” At the same time, for as long as people have held that fear, some economists and scholars have argued, “not so fast ...” and pointed to the history and patterns of jobs changing instead of being replaced.

Whether or not the robots are really coming to take jobs is in some ways irrelevant. What matters are employees’ perceptions. And there may be good news for employers. The Pew Research Center in 2016 found that 65 percent of people thought that robots would either “definitely” or “probably” be performing the work that humans did today. However, when the question was turned around, 80 percent of these same respondents thought that they would be working in their current job in the future.¹⁶ In other words, people perceive robots as coming to take jobs — just not *their* jobs.

What does any of this have to do with Employee Engagement? On one level, engagement can be considered a way to measure the concerns that employees have over the introduction of automation into the workforce. Fortunately, gone are the days when new forms of automation led to violent reactions by workers. But the way that employees work, and how engaged they are in that work, can have a real and significant impact on the productivity of firms. Kumar and Pansari (2015) found that organizations with high levels of engagement experienced significantly higher profit growth than did their peers with disengaged employees.¹⁷ In addition, Gallup (2013) found that organizations with 9.3 engaged employees for each disengaged employee earned a 147 percent higher earnings per share than did their competition.¹⁸

WHAT IS EMPLOYEE ENGAGEMENT (REALLY)?

Before going further, let’s define employee engagement. By now, as a practitioner, you’ve probably heard the term, but maybe not a clear definition. Perhaps one reason is that there is not one definition of employee engagement everyone agrees on. Shuck, Osam, Zigarmi, and Nimon (2017) define employee engagement as a “positive, active, work-related psychological state operationalized by the maintenance, intensity, and direction of cognitive, emotional, and behavioral energy.”¹⁹ In laymen’s terms, employee engagement refers to a state that the employee is in during which they are focused, bring intensity and energy to their jobs, and are emotionally invested in their work. As a state, an individual’s engagement can change over time. The most dominant factor in this definition relates to the energy and emotional components that distinguish employee engagement from job satisfaction. This is consistent with other scholars’ definitions of employee engagement. For example, Schaufeli, Salanova, González-Romá, and Bakker (2002) define employee engagement as being characterized by “vigor, dedication, and absorption.”²⁰ Erickson (2005) argues that employee engagement is willingness of the employees to expend discretionary effort within the framework of their work.²¹ Further complicating the discussion is that the terms employee engagement, work engagement, job engagement, and organizational engagement are often used interchangeably. Many

¹⁶ Investors Business Daily, Seitz, P. (2016, March 10). Americans Freaking Out About Robots Taking Jobs, But Not Their Jobs. p. 1. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=bwh&AN=113630783>.

¹⁷ V. Kumar and Anita Pansari, *MITSloan Management Review*, Measuring the Benefits of Employee Engagement (June 2015), found at <https://sloanreview.mit.edu/article/measuring-the-benefits-of-employee-engagement/>.

¹⁸ Gallup, How Employee Engagement Drives Growth (June 2013), found at <https://www.gallup.com/workplace/236927/employee-engagement-drives-growth.aspx>.

¹⁹ Shuck, B., Osam, K., Zigarmi, D., & Nimon, K. (2017). Definitional and conceptual muddling: Identifying the positionality of employee engagement and defining the construct. *Human Resource Development Review*, 16(3), 263-293. p.269.

²⁰ Schaufeli, W. B., Salanova, M., González-Romá, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. *Journal of Happiness studies*, 3(1), 71-92. p.74.

²¹ Macey, W. H., & Schneider, B. (2008). The meaning of employee engagement. *Industrial and Organizational Psychology*, 1(1), 3-30.



If part of an employee's identity is wrapped up in his or her occupation, and the occupation is threatened by automation, **then it could have a gradual impact on employee engagement.**

HR professionals adopt the view espoused by Justice Potter Stewart, who famously wrote (regarding a topic very different from employee engagement), “I shall not today attempt further to define the kinds of material I understand to be embraced within that shorthand description, and perhaps I could never succeed in intelligibly doing so. But I know it when I see it.”

What is important to note when conducting a survey of the literature is what employee engagement is not. Employee engagement is not the same as employee satisfaction. Can employees work with vigor, be dedicated to their jobs, and be absorbed in their work — and still be disgruntled? Yes, absolutely. And can employees be happy, content, and satisfied, but not willing to expend an ounce of extra effort on their work? Again, absolutely. The first example is one of an engaged but dissatisfied employee. The other example is one of a satisfied disengaged employee. That’s why perks like foosball tables, free food, and goat yoga don’t do anything to drive employee engagement. They might and often do drive employee satisfaction, but as far as engagement is concerned, these sorts of perks do not contribute to the intensity and emotional involvement with their employer that is characteristic of an engaged employee.

EMPLOYEE ENGAGEMENT AND SOCIAL IDENTITY THEORY

Two well-regarded theories from the world of psychology come into play concerning employee engagement in the Age of Robots. The first is Social Identity Theory, which states that an individual’s identity is in part defined by the groups that they belong to. Social Identity Theory was first proposed as an independent psychological theory to explain self-identification by Tajfel and Turner (1979), who examined what they described as the two extremes of social behavior: intergroup versus interpersonal behavior. Members of a group discriminate positively toward the groups they belong to (the “in-group”) and discriminate negatively toward the groups that they do not belong to (the “out-group”). In other words, individuals act with bias depending on how they perceive their position within the group. Two groups that employees belong to are their occupation (what they do) and their organization (for whom they do what they do). Occupational Identity is especially relevant in the Age of Robots, as the introduction of automation can be perceived as a direct threat to certain occupations.

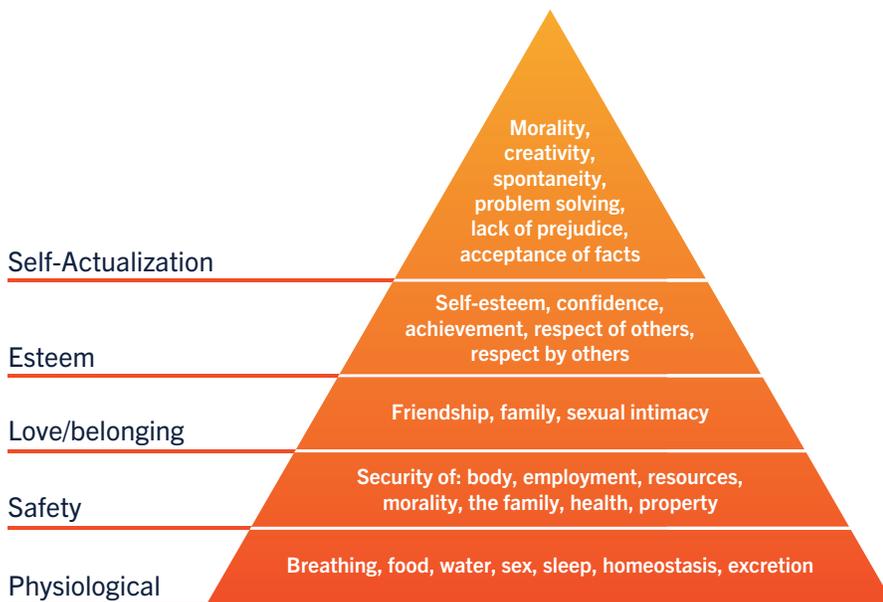
One of the ways that engagement can be affected is by employees’ perception of their occupation and their organization. The principles of Occupational Identity state that an individual’s identity is in part linked to the occupation they perform. “I am a teacher” or “I am a firefighter” or “I am a banker” are all examples in which the perception of self is linked to occupation. Studies have shown that the stronger employees identify with their occupation, the more productive they are. There’s a difference in productivity between people who say, “I am a teacher” and those who say, “I teach.” Individuals who state “I am a teacher” identify with their occupation in a strong, permanent manner. Teaching not only describes what they do, but also describes who they identify themselves as being. While a subtle difference, it is an important one when it comes to productivity. When a person’s work is part of their identity, they dedicate more of themselves to the work at hand. Several studies have shown that identification with one’s occupation is an antecedent to identification with one’s organization. One reason for this is that people tend to have an occupation prior to having an employer, or at the very least have the same occupation across multiple employers.

Additionally, individuals are seldom suddenly replaced through automation. Instead, certain aspects of an individual’s work are automated with machinery or robots. Then more elements. Then more, until finally the worker is redundant to the robot. Very seldom does an organization simply roll out automation and eliminate jobs en masse. Instead, organizations tend to implement automation gradually, slowly chipping away at employee responsibilities. This can have two areas of impact as it pertains to employee engagement. First, when employees start to lose some of their job responsibilities to automation, the employer has an opportunity to provide new training opportunities for employees and a responsibility to clearly communicate the benefits of these changes. Giving employees the ability to expand their skill sets and take on new challenges has been shown to improve employee engagement. The process of taking on new responsibilities that leverage newly acquired knowledge leads to employees attacking their roles with renewed (or new) vigor and intensity — traits of employee engagement.

EMPLOYEE ENGAGEMENT AND MASLOW’S HIERARCHY OF NEEDS

Considerable attention has been paid to the Motivational Theories first proposed by Abraham Maslow in his 1943 work, “A Theory of Human Motivation.” Maslow proposed five hierarchical needs that relate to human motivation: Physiological Needs, Safety needs, Love Needs, Esteem Needs, and Self-Actualization Needs.²² Physiological Needs relate to the basic needs that an individual requires, such as food and shelter, or as Maslow points out, “A person who is lacking food, safety, love, and esteem would most probably hunger for food more strongly than for anything else.”²³ Once the need for food has been satisfied, an individual can turn his or her attention toward other needs, such as Safety Needs. Outside of the extremes of issues such as protection from violence, wild animals, and tyranny, Maslow refers to the safety desires of an individual as being the **“common preference for a job with tenure.”**²⁴ An individual prefers a world in which there is predictability, order, and stability. Love Needs pertain to the desire for affection

and belongingness. Outside of one’s immediate family, including one’s partner, Maslow refers to the Love Need as receiving positive and affectionate feeling from the members of the group that they belong to. This is an interesting tie-in with Social Identity Theory and the way that an individual self-identifies as being part of a group. Following Love, an individual seeks to fulfill their Esteem Needs. Maslow argues that an individual has a need for self-esteem that is “soundly based upon real capacity, achievement and respect from others.”²⁵ Finally, Maslow addresses Self-Actualization, which he defines as the desire for self-fulfillment or the “desire to become more and more what one is, to become everything that one is capable of becoming.”²⁶ Maslow argues that only



²² Abraham Maslow, A Theory of Human Motivation.

²³ Ibid, p. 373.

²⁴ Ibid, p. 379, emphasis added.

²⁵ Ibid, p. 381.

²⁶ Ibid, p. 382.

those individuals who have their physiological, safety, love, and esteem needs met can pursue their needs for self-actualization.

While Maslow argued that these needs are hierarchical, he also acknowledges that the hierarchy is not rigid, and that especially among higher-order needs, what motivates some individuals may not be the same as what motivates other individuals. Employee engagement falls somewhere in the self-actualization stage, as it relates to the employee's state of positive emotional and behavioral energy. Employees cannot be thinking about how to expend their discretionary effort on their work if they are worried for their employment safety.

WORKFORCE AUTOMATION THREATS TO EMPLOYEE ENGAGEMENT

This is where the introduction of workforce automation tools can negatively impact employee engagement. If employees feel threatened by the introduction of automation — if they are concerned for their ability to provide for their physiological needs because they are not safe in their position — then their engagement will drop. When organizations begin to deploy robots, they need to take steps to make sure that employees continue to feel safe. Safety relates to more than just physical safety — emotional safety and security also come into play. One way that employees can feel emotionally safe is by believing they are not at risk of losing their jobs for the foreseeable future. Providing emotional security in a time of uncertainty can go a long way toward mitigating the concerns that employees may have about their safety in their position and can help to drive engagement. The best way to achieve this is through a well-thought-out and executed change management program that emphasizes communication and training.

There is one other element of employee engagement that is particularly relevant in the Age of Robots: engagement contagion. In several studies [see, for example, Bakker, Demerouti, and Schaufeli (2005); Bakker and Xanthopoulou (2009); Bakker, Schaufeli, Sixma, and Bosveld (2001)], scholars have found that as employee engagement changes for some members of a team, other team members begin to change as well. This happens in both positive (more engaged) and negative (less engaged) ways. Engagement contagion has even been shown to exist between spouses who work for different employers. When one person experiences greater or less engagement, the spouse will also begin to experience similar levels of engagement and disengagement.

Employers rarely replace an entire workforce all at once with automation. Instead, some positions are augmented with robots, and then eventually those positions are replaced by robots. Employers can help employees whose positions are being augmented by robots stay engaged by providing additional training and opportunities to learn new skills. The contagion effect is reason enough to want to keep the employees whose jobs are being augmented — and potentially eventually replaced — engaged. If they become disengaged, the contagion effect suggests that employees whose jobs are not directly impacted by the deployment of robots will also start to experience negative engagement. This can help explain why productivity in ancillary departments can sometimes slide immediately after the introduction of automation — workers in those departments are “catching” the engagement experience of the employees who are directly involved.

Employee engagement has been found to be contagious.

The introduction of robots can also lead to a change in the identity of an organization. An organization can go from being one that places a great deal of emphasis on worker contributions and a large labor force to one that places a great deal of emphasis on automation. Workers can feel that the identity of the organization changes. This weakening of workers' identity with the organization can erode employee engagement, as employees tend to work harder, be more productive, and expend more energy when they have a strong organizational identity. When that organizational identity starts to change, employees' attachment to the organization changes as well.

To mitigate this effect, consistent, transparent communication is critical. Organizations should clearly communicate what the intent and goals of the workforce automation projects are. This can help reduce negative narratives that might arise in an information vacuum. This is especially true for middle management, as they have the most contact with the frontline workers who will bear the brunt of the effects of automation.

The era of robots is upon us. However, when it comes to workforce automation, the era of improved automation and machines has always been upon us. As long as there have been workforce automation tools, there have been concerns about motivating employees and making sure they were engaged. Sometimes, the threat of automation and the threat of depressed wages is what demotivates and disengages employees. Elizabeth Gurley Flynn, author of the 1915 book *Sabotage: The Conscious Withdrawal of the Workers' Industrial Efficiency*, recounts the following story:

An old fellow came to work on the railroad and the boss said, "Well, what can you do?"

"I can do 'most anything," said the big husky fellow.

"Well," said the boss, "can you handle a pick and a shovel?"

"Oh, sure. How much do you pay on this job?"

"A dollar a day."

"Is that all? Well, all right. I need that job pretty bad. I guess I will take it." So he took his pick and went leisurely to work. Soon the boss came along and said:

"Say, can't you work any faster than that?"

"Sure I can."

"Well, why don't you?"

"This is my dollar-a-day clip."

"Well," said the boss, "let's see what the \$1.25-a-day clip looks like." That went a little better. Then the boss said, "Let's see what the \$1.50-a-day clip looks like." The man showed him. "That was fine," said the boss. "Well, maybe we will call it \$1.50-a-day." The man volunteered the information that his \$2-a-day clip was "a hummer."

Today, there is less emphasis on the role that automation plays in depressing wages, but employees still have concerns. A recent study by Graetz and Michaels found that in the past 30 years, employee productivity has increased by 0.37 percent annually because of an increase in automation.²⁷ Meaning that without the implementation of workforce automation tools, there would be 0.37 percent more jobs every year to match the same amount of output. To put this in perspective, during the Industrial Revolution, the number of positions lost to automation was 0.35 percent annually. While there are jobs being lost to automation, it's not happening at a historically unprecedented pace. At the same time, the perceived threat is real. Consider this from *Time* magazine:

*The number of jobs lost to more efficient machines is only part of the problem. What worries many job experts more is that automation may prevent the economy from creating enough new jobs ... Today's new industries have comparatively few jobs for the unskilled or semiskilled, just the class of workers whose jobs are being eliminated by automation.*²⁸

What should be noted is that this was published in 1961. Close to 60 years ago, the same concerns regarding workforce automation were being expressed. Sixty years before that, the same concerns were voiced. Sixty years before that, the same. And it is likely that 60 years from now, the same concerns will be raised. Workers will be concerned that the robots are taking everyone's jobs and that we've reached the point of no return. And 60 years from that, we will likely see the same concerns voiced again. The age of automation is upon us. It always has been and always will be. But now we have the tools and knowledge to know how to combat the effects on employee engagement so that organizations can be sure to get the most out of their employees at all times.



WHAT'S NEXT?

Where do we go from here? Just like Henry Ford's factories, organizations today need to embrace technology and automation to drive productivity. Prior to the introduction of the assembly line, Ford employed 14,000 workers. Today, there are more than 200,000 employees at Ford.²⁹ It cannot be said that introducing automation in and of itself eliminates jobs. It could be argued that if Ford had not introduced the assembly line, the company wouldn't have remained competitive. The question is less whether companies should introduce automation, but rather, how they should introduce automation to remain competitive from a productivity perspective without losing an edge from an employee engagement perspective. The simple answer is the implementation of a **sound change management process** to accompany the introduction of new automation technologies.

²⁷ Harvard Business Review, *Robots Seem to Be Improving Productivity, Not Costing Jobs* (June 2015), found at <https://hbr.org/2015/06/robots-seem-to-be-improving-productivity-not-costing-jobs>.

²⁸ Time, *Business: The Automation Jobless* (February 24, 1961), found at <http://content.time.com/time/subscriber/article/0,33009,828815-1,00.html>.

²⁹ <https://www.statista.com/statistics/297324/number-of-ford-employees/>.

When employees begin to see new technologies being introduced that could potentially threaten their jobs, **companies need to communicate their vision for the automation and why they're deploying workforce automation.**

THE IMPORTANCE OF CHANGE MANAGEMENT

Perhaps the most important part of any change management program, as it relates to raising employee engagement during times of change, is to create an effective communication plan. When employees begin to see new technologies being introduced that could potentially threaten their jobs, companies need to communicate their vision for the automation and why they're deploying workforce automation. These two steps can help dispel rumors about the size and scale of the automation and help limit the engagement contagion. If employees understand the why, what, and how of the automation technologies being implemented, employee engagement can be positively affected. From a Motivational Theory perspective, communication can help unaffected employees feel safe, which allows them to continue to dedicate their extra effort to the work at hand. If the company doesn't communicate, employees are still going to talk and spread rumors about what the company's intentions are. It's better, then, for the company to at least lead the conversation so its vision can be shared.

Second, developing an effective training program is essential to mitigating any potential employee engagement issues that can arise when an organization rolls out workforce automation. The gradual replacement of employee work duties with automation tools can be perceived as a threat to employees who are losing their responsibilities. Those employees can often see the handwriting on the wall and understand that their jobs may be at jeopardy. This impacts their engagement and can have a contagion effect on the rest of the unit. Organizations can get in front of this by training employees in new skills. Training gives employees the opportunity to secure their position within the organization, leading to a greater sense of psychological safety. These feelings of safety can contribute to greater engagement. Another way training can help enhance engagement is by providing employees with renewed vigor. The American Society for Training and Development conducted a survey of 776 HR executives worldwide and found that employee engagement could be enhanced by, among other things, providing a meaningful work environment, providing learning and development opportunities, and focusing on the experiences of the employee. When employees are involved in training, they feel energized by the opportunity to expand their skill sets and take on new responsibilities. In environments where workforce automation is being deployed, it would be natural for employees to feel the opposite. Training programs then become a significant way to improve engagement.

Finally, companies need to implement strong resistance management programs when deploying workforce automation tools. Gone are the days when workers would burn down a place of employment because of automation. However, resistance can take many different forms, each of which can have a negative impact on employee engagement. The contagion effect means that resistance in one area of the company can bleed over to different, unrelated areas. Employees may resist learning how to integrate their work with the work of the automation tools, delaying its implementation and costing the company time and money. Effective communication is one way to mitigate resistance. Offering training programs is another. By combining these, companies can prevent resistance and show how the implementation of workforce automation tools will help the company be more competitive, thereby helping to save jobs, not eliminate them.

THE VIEW FORWARD

When researchers at organizations such as PwC report that upward of 30 percent of jobs worldwide will be lost to automation by 2030³⁰ or that 375 million people may need to find new work because of automation,³¹ both inflammatory statistics intended to grab headlines, what they fail to mention is that the nature of work has been changing hand in hand with labor automation for hundreds of years. Many of us work today in jobs and fields that we didn't see coming, a number of which are a result of increased automation. According to the World Economic Forum, up to 65 percent of children in grade school will end up working in jobs that do not yet exist.³² Those jobs — jobs that we cannot even conceive of yet — will largely be a result of advances in technology and automation. If your employees think that the robots are coming for their jobs, getting them engaged now and keeping them engaged during a time of transition can help increase profitability, improve employee retention, and create a work environment where employees welcome, rather than reject, advances in technology.

³⁰ <https://www.pwc.co.uk/services/economics-policy/insights/the-impact-of-automation-on-jobs.html>.

³¹ Manyika, J., Lund, S., Chui, M., Bughin, J., Woetzel, J., Batra, P., Ko, R., Sanghvi, S. (2017). Jobs lost, jobs gained: What the future of work will mean for jobs, skills, and wages. Retrieved from <https://www.mckinsey.com/featured-insights/future-of-work/jobs-lost-jobs-gained-what-the-future-of-work-will-mean-for-jobs-skills-and-wages>.

³² Chapter 1: The Future of Jobs and Skills. (2016), Retrieved from <http://reports.weforum.org/future-of-jobs-2016/chapter-1-the-future-of-jobs-and-skills/#view/fn-1>,



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