

The Future of Work and the Experience Advantage

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Discussions about the future of work glamorize technology and idolize the young billionaire and startup founder. But the more that the *future of work* becomes our reality — that is, becomes just *work* — we may realize that we have discounted our older members of the workforce and along with them one of our greatest assets: human organic cognition and the wisdom that comes with experience.

Some context here is essential.

Change at Breakneck Speed: Where Models Break Down

The world is moving faster. We are living longer. Technology and globalization are reshaping our world. Anything routine or predictable, physically or cognitively, is or soon will be achieved by an algorithm. Meanwhile, our old sequential model of education–career–retirement is being challenged by three integrated forces. First, our educational system, built on a one-time knowledge transfer to people in single-career tracks, is insufficient in a world of career webs that demand continual learning. Second, leaps in human longevity require an extended career arc, which may have greater volatility. Third, most people's resources are inadequate to fund the longer retirement that is now possible because of longer life spans. In short, there is a tremendous amount of change taking place and, consequently, our outlook and expectations need updating.

Education Becomes (Lifelong) Learning

At one time, life's trajectory was straightforward. We were educated in the first third of our lives and then it was off to work, which continued on until we hit the next stage, retirement. Education was how we acquired the skills and knowledge necessary to get on the career escalator; change was relatively slow, so we rode that escalator fairly easily to retirement. Life expectancy and retirement age were close cousins.

Today, the rate of change is faster, and a single dose of education is not enough. *Education*, in fact, implies an end state of being educated, whereas *learning* is the continual acquisition of knowledge both, tacit (know-how) and explicit (know-what). The generation of explicit knowledge, already easily accessible from our devices, is ripe for automation.

Out of this reality, as we move from the third to the fourth industrial revolution, comes a silver lining for our increasingly seasoned workforce: the tacit knowledge advantage of wisdom.

How We Got Here: Our Industrial Revolutions

We are now entering the fourth industrial revolution. The first industrial revolution, that of the steam engine, lasted 86 years; the second industrial revolution, involving electrification and mass manufacturing, lasted 100 years; the third industrial revolution, marked by computerization and the automation of manufacturing, lasted just under 50 years.


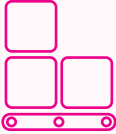


Now comes the fourth industrial revolution, which began in 2015. It is marked by a merger of digital, biological, and physical systems. Obviously still nascent and unfolding, this industrial revolution will include (and already has begun to include) paradigm-changing innovations such as driverless cars, the Internet of things, 3D printing, and artificial intelligence. Arising out of such advances will be another in-demand commodity: wisdom, to align these capabilities with what is best for humanity. Ethics and judgment will become paramount.

Third and Fourth Industrial Revolution Infrastructure and Youth Bias

In building the third industrial revolution — computerization — and the early infrastructure for the fourth industrial revolution, we exclusively valued technical skills — in science, technology, engineering, and math (STEM) — more often

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Future of Work: 4th Industrial Revolution and The Experience (Wisdom) Advantage

	1st End of the 18th century	2nd Start of the 20th century	3rd Start of 1970s	4th 2015 - Today
				
Technological Innovation	Steam Engine Mechanical Manufacturing	Electricity, Mass Production, Division of Labor	Computer, Automation of Manufacturing	Cyber-Physical Systems, Internet of Things
Work Prep	Learn a Skill	Join a Trade	Pick a Good Major	Learn to Learn, Adapt + Create New Value
Skills	Physical Labor, Basic Engineering	Routine Skilled Labor, Business- Reduce Risk	Deep STEM Expertise Disciplinary	Learning Agility, Human Skills, Wisdom Tacit Knowledge

Complexity 

Nearly every top 10 list of future important work skills... favors uniquely human abilities often referred to as “soft skills.” These are hard-to-codify abilities, traits, and mind sets, like empathy, social and emotional intelligence, judgment, design mindset, sense-making, collaboration, and communication.

found in younger digital natives. The median age of employees at Apple is 31; Amazon, 31; Google, 30; LinkedIn, 29; Salesforce, 29; and Facebook, 28¹ (while the median age in the workforce is 42² and growing older every year). The age bias in the technology world is not subtle: Mark Zuckerberg, founder of Facebook, said in 2007, “I want to stress the importance of being young and technical. If you want to found a successful company, you should only hire young people with technical expertise. Young people are just smarter.”³

Such a comment is highly telling, as has been some of the company’s other high-profile actions and stances in ensuing years. More than half the world is connected to the Internet and, of that half, more than 70 percent are on social media platforms such as Facebook.⁴ Many people rely on these platforms for information about the world, yet the executives of Facebook, to name just one company, appear to be just beginning to understand their responsibility to humanity.

The Fourth Industrial Revolution, Uniquely Human Skills, and the Experience Premium

The accelerating technological power of the fourth industrial revolution has received considerable attention and triggered dystopian predictions of a “useless class of humans.”⁵ If (imperfect) prediction models⁶ (Frey, Osborne) are at all correct and some large percentage of our work tasks can be automated, then which skills, abilities, capabilities, and knowledge should we value?

The response in education is a knee-jerk lunging at technical skills, but the workforce is

crying out for uniquely human skills. Nearly every top 10 list of future important work skills — for example, those of the World Economic Forum, the Institute for the Future, and the online learning platform Udemy — favors uniquely human abilities often referred to as “soft skills.” These are hard-to-codify abilities, traits, and mind sets, like empathy, social and emotional intelligence, judgment, design mindset, sense-making, collaboration, and communication. They require both training and practice — otherwise known as experience. As Donna Patricia Eiby of the Future Work Skills Academy explains, “Although not yet empirical evidence, we are starting to see successful outcomes in mixed-modality learning experiences that include knowledge infusion followed by both solo and collaborative challenge-based practice. Virtual reality may also have enormous potential as a learning modality.”

Consider the Superlatives

In focusing on technology, which favors youth, the value of experience is typically discounted. But it is interesting to consider counterexamples from two youth-obsessed industries: sports and fashion. Tom Brady is more than a decade older than the median age of starting NFL quarterbacks, and Bill Belichick is 15 years older than the median age of NFL head coaches. They are not just keeping up with younger players, they are breaking records with their Super Bowl wins. How? Perhaps they win the mental game by having more experience to map through when making a decision. As Belichick says, “The less

Bowl wins. How? Perhaps they win the mental game by having more experience to map through when making a decision. As Belichick says, “The less versatile you are, the better you have to be at what you do well.”

Is this where the depth of experience meets learning agility? Diana Nyad was successful in her fifth attempt at being the first human to swim from Cuba to Florida without a shark tank. Nyad reflected, “I believe endurance grows ... What you are capable of is infinitely higher at this age [64] than when you are a young twenty-something.”

In fashion, most modeling agencies, seeking to capture the fleeting beauty they see in youth, have an explicit practice of not hiring models older than 21. Yet at 97, Iris Apfel just signed a modeling contract. Why do they want Apfel? Because she has something more enduring than beauty. “I’m not pretty,” she said, “and I’ll never be pretty, but it doesn’t matter. I have something much better: I have style.”

Perhaps Brady, Belichick, Nyad, and Apfel have leveraged their deep understanding of their endeavors, along with their ability to map through many possible options before responding, to outpace their competitors (Brady and Belichick), their conditions (Nyad), or their presumed context (Apfel). Applying this logic to the Wild West of the accelerating change in the workplace, might we not consider valuing human learning agility, applied to those deep databases, a bit more? Or as Mickey McManus, Autodesk research fellow, says, “[When considering artificial intelligence] we see a thin slice of perception

from a pie that includes analogy, generalization from small data sets, mental models, etc. Underestimate organic cognition at your peril.” McManus clearly agrees with Janine Benyus of the Biomimicry Institute, who observes, “We cannot ignore 3 billion years of R&D.” ●

¹ <https://www.businessinsider.com/median-tech-employee-age-chart-2017-8>

² <https://www.bls.gov/emp/tables/median-age-labor-force.htm>

³ <https://venturebeat.com/2007/03/26/start-up-advice-for-entrepreneurs-from-y-combinator-startup-school/>

⁴ <https://www.statista.com/statistics/241552/share-of-global-population-using-facebook-by-region/>

⁵ <https://ideas.ted.com/the-rise-of-the-useless-class/>

⁶ https://www.oxfordmartin.ox.ac.uk/downloads/academic/The_Future_of_Employment.pdf



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