Preparing Students to Lose Their Jobs

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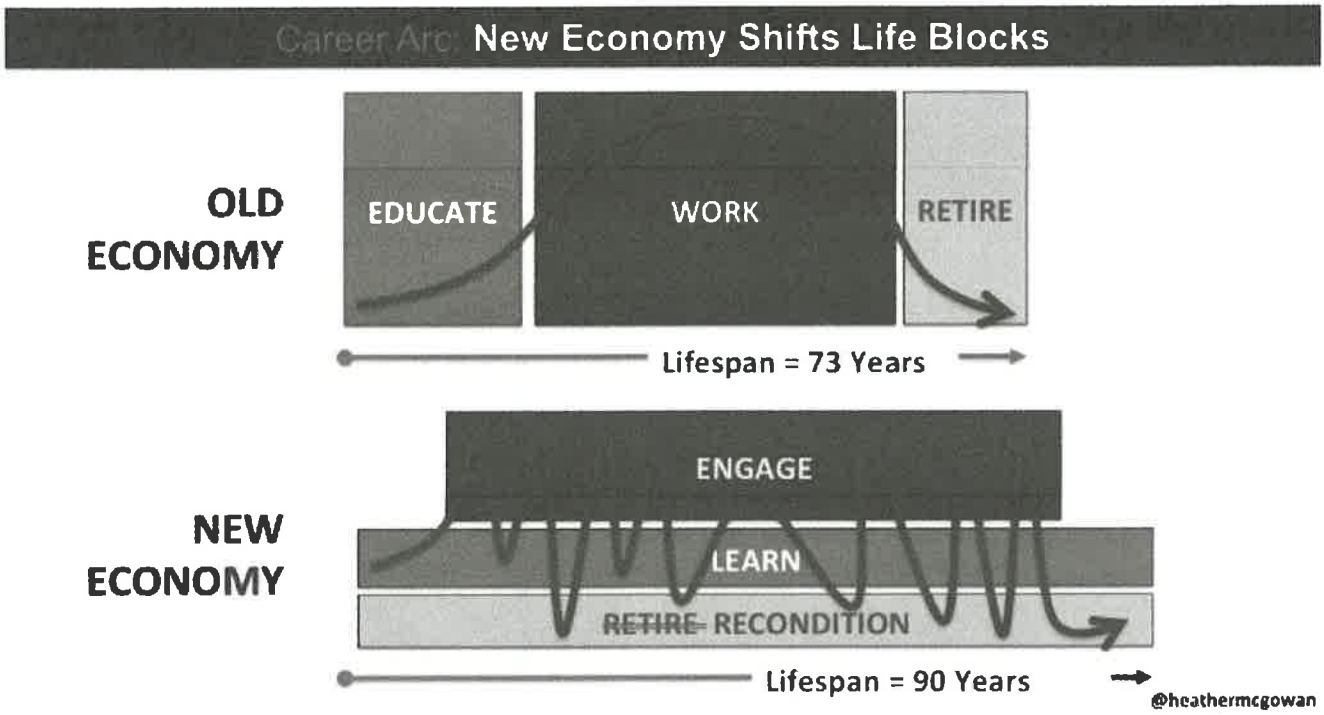

By Heather McGowan & Chris Shipley based upon a prior article with Alan Ritacco

If you are a young college graduate entering the workforce today, odds are, you're going to lose your job. Often.

In fact, students entering the workforce today can expect to have as many as 17 different jobs in at least five industries, according to *The New Work Mindset*, a report issued by the Foundation for Young Australians.

That's not simply a statistic for young Aussies—that report is based upon research from both the World Economic Forum and the McKinsey Global

Initiative—applicable to all developed economies. Further, the US Bureau of Labor Statistics reports 1.5million involuntary and 3 million voluntary job "separations" each month. In just about every part of the world, job loss and job change is the new normal. Why do we act like it is not? For compelling insights from a recent graduate we found How Schools Train Us To Fail In The Real World an inspiring post.

The model of education built on the process of codifying knowledge, inventorying skills, and transferring existing understanding to create a deployable workforce is coming to an end. It must. With more than 80% of the economy facing disruption through digital transformation, more students will find themselves doing work that does not yet exist. Just as high-paying social media jobs, for example, were not imagined even a decade ago, how can schools teach skills and knowledge important to jobs we can't begin to see, let alone understand. And even then, these new jobs might be fleeting. In the not so distant future, chat bots may work along side and potentially replace humans doing the work of social media management. In other words, that social media job that was hard to imagine ten years ago may be completely transformed in the next ten years, if it still exists at all.

A report by Deloitte University Press on the impact of this digital transformation predicts that 50% of the content in an undergraduate degree will be obsolete within five years. This dramatic change whipsaws workers from job to job, from employer to employer, career to career. In this reality, learning and adapting are the best – and perhaps only - path to worker resilience across a long arc of experience and uniquely distinct careers. And the need to adapt will become even more apparent as workers live longer; those in today's workforce can reasonably expect their careers to extend a decade or more past today's average mid-sixties retirement age.

Work Transformed: Adaptation to Atomization, Automation, and

Augmentation

That volatile change rate is driven by three interlocking factors that we see transforming work:

1. ***Atomization:*** The unbundling of work from secure and benefits-rich jobs. Instead, works will be broken into fragments that can be done anywhere in the world by the lowest cost provider. We see examples of atomized work at every skill level, from driving a car for Uber or Lyft (unskilled) or providing digital skills for UpWork or Fiverr (skilled) to conducting business analysis or strategy for Catalant the "Uber for MBAs" (highly skilled). Research by Lawrence F. Katz (Harvard University) and Alan B. Krueger (Princeton University and NBER) found that between 2005 and 2015, ninety-four percent (94%) of net new work was in the alternative or gig category. This trend toward unbundled work shows no signs of slowing. This is not something that will happen, but something that has happened.
2. ***Automation:*** Work done entirely by machine. We are well acquainted with factory robots that replace human laborers, and might assume that knowledge labor is immune to automation. Not so. Automated Insights, for example, is a software solution that writes reports (so-called "natural language generation") from asset of data. Since 2014, the Associated Press has used Automated Insights to produce the majority of its corporate earnings reports in order to "free journalists to do more journalism and less data processing". Other examples include customer service chat bots such as IKEA's Anna and Amazon's Alexa as well as virtual assistants such as Clara. We are just beginning to feel the impacts of automation of physical and knowledge-based tasks.
3. ***Augmentation:*** Partnership between machine intelligence and human workers to more efficiently and accurately perform a job. IBM's Watson works as a tutor to college students and aids clinicians in reading MRIs.

> The da Vinci Robot assists surgeons in complex procedures where exacting precision is required. In years to come, augmentation, in some form or another, will touch virtually ever aspect of work.

So how is a student to keep up with all that change? They will have to continuously adapt to rising non-biological intelligence. A 1990-2007 study by Daron Acemoglu (MIT) and Pascual Restrepo (Boston University) estimated that adding one robot per 1,000 workers has led to unemployment for up to six workers and has caused a decrease in wages by up to 0.50 percent. McKinsey recently reported that currently available technologies could replace 45% of human work today. The oft-cited Oxford study by Osborne-Frey puts that number at 47% over the next couple of decades and Martin Ford pegs it at 75% by the end of this century. It is important to understand, though, that no matter what the number, technology isn't necessarily replacing jobs; automation of tasks is reshaping what human work entails (although there may be all together less human work). Human work, then, should focus on uniquely human skills enabling human and machine to work side by side, each doing what they do best. This trend has existed throughout history as we create more value with fewer human workers.

As machine intelligence advances, humans will offload work to machines, and then adapt, re-skill, and redeploy to new, uniquely human work. That process of adaptation requires a foundation in learning agility and a mindset that prepares them for change. You might think of it this way: Mindsets are like operating systems and skill sets are applications. Higher education and workforce development have operated like application development; skills are defined in curriculum and applied to the student. . This approach is reaching its useful end. Just like an old computer becomes obsolete, so will this application transfer process Instead, schools need to focus on providing students with an operating system upgrade, developing fundamental abilities

to acquire and shed rapidly changing skills requirements (a metaphoric app update). This foundation instills the ability and agency to continuously learn and adapt. This is a big shift in how we think about preparing a workforce.

Is the Academy Adapting to the Future of Work?

Yet we wonder: are institutions of higher education embracing this changing reality?

Surely, colleges and universities understand the changing marketplace that greets their students. Still, breaking old paradigms is no easy task, and with few sound models, many schools are slow-walking meaningful change.

We found a handful of examples.

For example, Becker College, a small private college outside of Boston, has realigned not just its curriculum, but also its institutional ethos, to embrace change as the norm and to instill in its students an Agile Mindset.

In architecting this transformation, the college assumed its graduates will face frequent industry disruption cycles, and asked these questions:

- How do we help students continually adapt to change?
- How can we develop in them the ability and agility to learn continuously throughout their career?
- How can we instill an entrepreneurial outlook so graduates continually seek to create new value for themselves and the organizations for which they work?

For Becker, the answer to each of these questions rests in the **Agile Mindset**. Agile mindset focuses on cultivating adaptive learners who can leverage the uniquely human skills of **Empathy** (to find new needs), **Divergent thinking** (to find and frame problems not yet known),

Entrepreneurial outlook (to turn discovered needs into sustainable value), and **Social and emotional intelligence** (to adapt and thrive in a world that is increasingly volatile, uncertain, complex, and ambiguous).

In his recently-released book, Robot Proof: Higher Education in the Age of Artificial Intelligence, Northeastern University President Joseph E. Aoun proposes a new framework for higher education that he calls "Humanics" to compliment Northeastern's long history of experiential learning through coops.

> *"Humanics are data literacy, technological literacy, and human literacy. Students will need data literacy to manage the flow of big data, and technological literacy to know how their machines work, but human literacy—the humanities, communication, and design—to function as a human being. Life-long learning opportunities will support their ability to adapt to change."*

Jefferson University (the merger of Philadelphia University and Thomas Jefferson University) defines its signature pedagogy as Nexus Learning: active, collaborative, real world, and infused with the liberal arts. This approach focuses on applied theory through tackling real world challenges in transdisciplinary teams—the heart and soul of the formation of the interdisciplinary colleges that make up the institution.

The Continuous Reinvention of Self

The right mindset provides safe harbor in a sea of disruption. It enables graduates to make sense of shifting context and to recast their story so that they can march back to relevance. This continuous reinvention will dominate the future of work, and developing empathy for yourself and the grit to manage your internal critic will separate those who are successful in the future with those who struggle.

While the programs highlighted here are not unique, they stand in relatively small company. Much of our higher education offerings, particularly in the United States, are professionally oriented, programmatic pipelines from classroom to jobs. And the problem is: those jobs are disappearing to technology disruption. If students are to thrive, they must learn that job loss is frequent and change is necessary. They will learn best if faculty, too, transform themselves from the sage on the stage to an expedition leader and coach, helping students socially and emotionally build resilience, grit, and adaptability to navigate the unknown waters of the future of work.

For sure, the blocks of life – learn, work, retire - have shifted 90 degrees and how we move through them has changed as well. For higher education to survive, we need to focus less on preparing students for their first job and focus instead on preparing them intellectually, socially and emotionally to continuously adapt and re-invent themselves for the now much longer arc of their career—where job losses (and adaptations to new jobs) are the norm.

This new normal is now one of Thomas Friedman's key talking points

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You can read the extended version of this piece, written with Alan Ritacco, on Academic Impressions here. And learn more by registering for the upcoming webcast: The Future of Work and the Academy in which Heather McGowan speaks with University of Massachusetts, Dartmouth Chancellor Robert E Johnson about the future of work and learning.

We welcome and value your considered comments, and to insure that