
Chapter 2

THE END of WORK as WE KNOW IT

by Andy Hines

This article argues that work is going through a transformation. It makes the case by analyzing three key assumptions about the role of work (1) work is central to individual's identity (2) work structures daily life, and (3) work is the primary source of income. Three driving forces are challenging those assumptions -- the rise of automation and machine intelligence, shifts in individual values, and the rise of a new economy -- are described. The conclusion is that challenges to these assumptions are indeed underway and at varying stages of maturity. The implications for career development suggest a dual approach of maintaining a short-term focus on careers and gradually expanding the notion of career development into a more integrated, holistic approach of life planning.

Career advisors are continuously challenged with providing guidance that balances the short-and long-term interests of clients. This special issue focuses on the long-term, and this article explores the long-term future of work, suggesting that transformation change is ahead. My interest in the topic as an educator is that I am concerned that students are being prepared for the past rather than the future. In particular, efforts to make higher education more practical and oriented to providing good jobs may actually be misaligned with the long-term future. This article attempts to make a plausible case for how the future may be different, such that career development can start planning for a transition to this future.

My first project on the future of work was back in 1990 as a researcher for Joseph Coates' Future Work. Rarely has a year passed that I have not had some occasion to engage the topic, including reading several provocative pieces, such as Jeremy Rifkin's *The End of Work*. I became convinced that a goal of our economic system and policy-making of full employment was the exact opposite of what it should be -- namely full unemployment. Reversing the full employment assumption opened up a huge range of creative possibilities for imaging how the future could be different, and exploring for a more preferable future. Nonetheless, to use the scenario planning parlance, until recently it remained a key uncertainty.

Three years ago, the Houston Foresight program had a day long-conference "After Capitalism" which discussed potential organizing principles for a new economic arrangement. The supporting researching suggested that a new economic approach in which jobs were no longer central to its functioning was no longer an uncertainty, but rather a question of timing. It shifted from *if* to *when*. It brings to mind the lesson of scenario pioneer Pierre Wack that a first set of scenarios identifies the uncertainties -- the famous example being the rise of OPEC and the Arab Oil Embargo, and that the second, having become convinced of the inevitability of the uncertainty, becomes a question of focusing on timing.

Thus, this article takes the position that *the end of work as we know it* is no longer an uncertainty, but a question of timing. *As we know it* is saying something different than the end of work, period. It suggests a transformational change in the nature and purpose of work – not that it’s going away completely. It’s transformational because three core assumptions about what work provides are being challenged. Work is central to individual’s identity. *So, what do you do?* is the most common question one receives after giving their name. Work is a significant component of who we are. Work structures daily life. It provides a structure or organizing principle for the day/week, etc. Our schedules are typically organized around our work. Work is the primary source of income. It serves as the primary mechanism by which the economy distributes wealth. These assumptions are being challenged on many fronts, described in the next section.

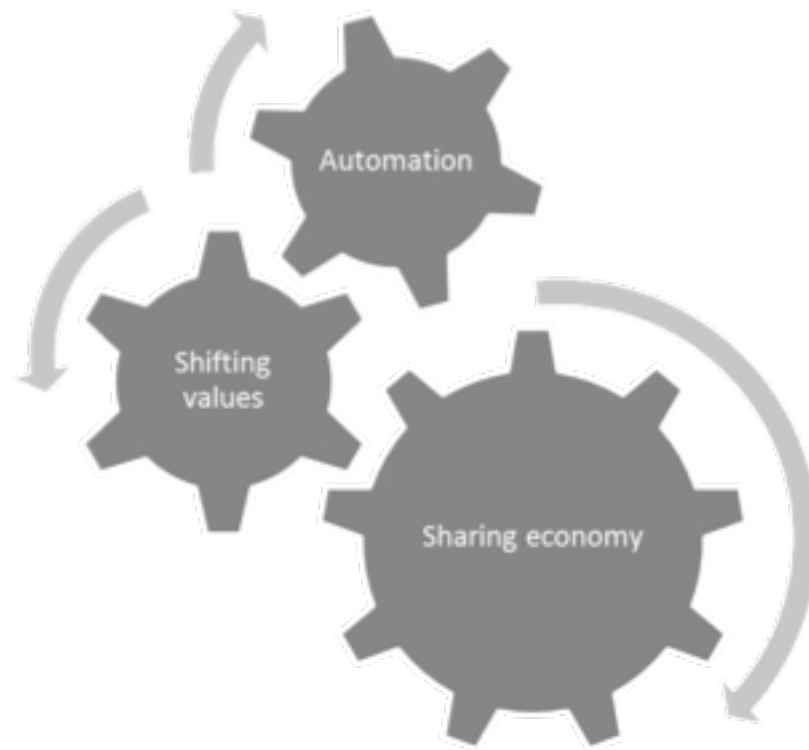


Figure 1. Three forces driving transformation

Forces driving transformation

In teaching aspiring futurists at the University of Houston’s Foresight program, we suggest that when indicators or signals of change are coming from multiples sources, sectors, and directs, we should pay strict attention. Indeed the notion of changes in the nature of work is coming from lots of places. Let’s focus on three big ones. See **Figure 1. Three forces driving transformation.**

Rise of automation and machine intelligence

Volumes have been written about this topic and it is the subject of much debate and discussion today. The mainstream view is aptly summed up in the opening to a Pew Report *AI, Robotics, and the Future of Jobs*: “Experts envision automation and intelligent digital agents permeating vast areas of our work and personal lives by 2025, but they are divided on whether these advances will displace more jobs than they create.”

The group most clearly affected in the present is the middle class. Demand for jobs is bifurcating into those for highly educated workers who excel in abstract tasks (which intelligent machines cannot yet do) at one end, for manual task-intensive jobs — like food services, cleaning and security at the other.

Perhaps the most cogent argument for how job creation could outpace elimination comes from Brynjolfsson and McAfee's *Race Against The Machine* and *The Second Machine Age*. But it won't be easy. They suggest 19 steps for "accelerating organizational innovation and human capital creation to keep pace with technology," ranging from changes in education, encouraging entrepreneurship, infrastructure investments, and policy changes in laws, regulations, and taxes.

A more radical outlook on the potential for automation and machine intelligence comes from futurist Ray Kurzweil's notion of the singularity, which forecasts that machine intelligence will surpass human intelligence within the next few decades. But he also envisions that more jobs will be created than destroyed. I more or less agree with the position that current economic system could be capable of creating enough jobs to keep pace with automation, but it's not the right question --at least for the long term (and I think the authors above might agree with this caveat, as they are talking more about the transition from here to there).

The changes from automation and machine intelligence combined with values shifts and changes in the economy, described below, are decreasing the central importance of jobs as the principal factor of social and economic life. The jobs could be created, but moving into the future, our current conceptions of jobs will have morphed to a degree where it's not the central question that it is today.

I arrived at the position on the changing nature of jobs during research that I carried out with a team of 20 students, faculty, and alum of the Houston Foresight Program took on exploring *the future of student needs relating to higher education*. Six teams looking at various aspects of student life worked independently on their forecast and came to share their results. In all cases, the impact of ICT/AI/Big Data/ predictive analytics/sensors/ automation was a huge driver. The teams challenged themselves, but try as they might, simply couldn't come up with a plausible alternative barring economic collapse.

Another concept, the blurring of student life, is depicted in **Figure 2. Blurring of student life.**

For our purposes here, let's say that the capabilities for automation are going to be quite dramatic and will infiltrate into knowledge work. As the context of the future changes, racing against the machines will be seen as the wrong game to play.

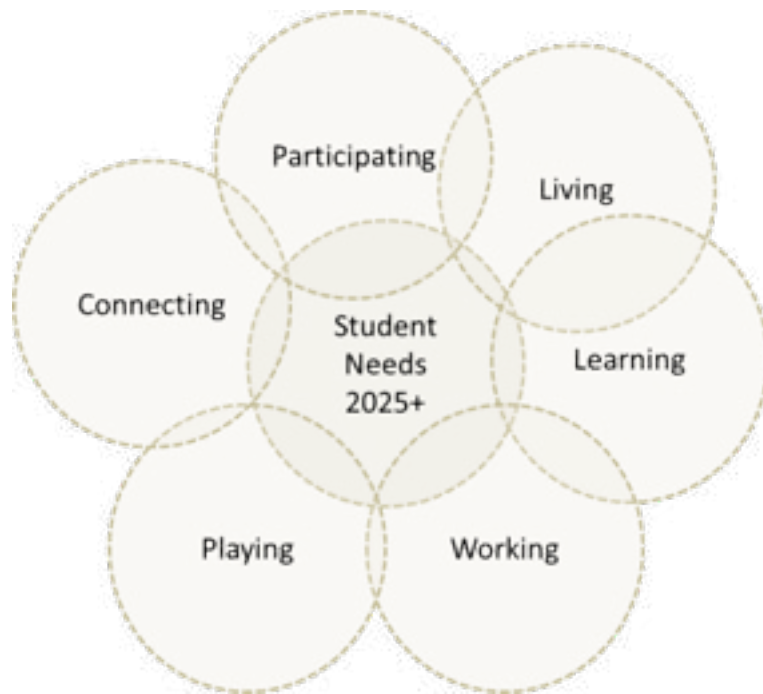


Figure 2. Blurring of student life

Shifts in individual values

Another stream of research I’ve been pursuing over the last couple of decades is shifts in individual values. The basic argument is that there is a long-term shift in values toward postmodern and integral values ranging from 25-30 per cent of people in affluent countries today that will increasingly mainstream over the next generation. **Figure 3** summarizes the **Four Types of Values**.

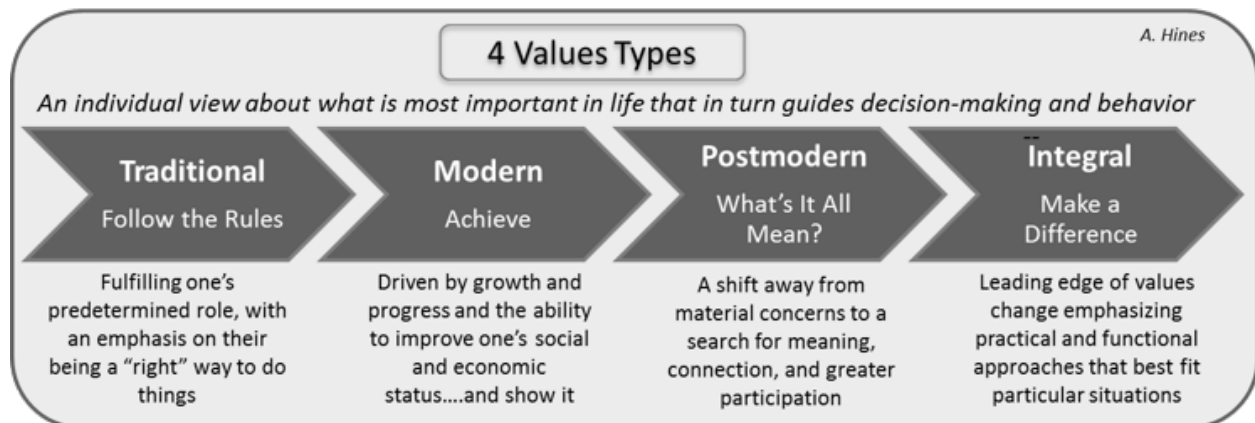


Figure 3. The Four Types of Values.

As people with postmodern and integral values become the leaders and the mainstream of the future, their priorities will create a different landscape that will in turn shape views on the question of jobs. The following changes are relevant to views on work and jobs. Perhaps foremost is that it indicates a changing relationship between consumers and consumption. At its simplest, the postmoderns/integrals are questioning whether they really need to own something or can they just access it when they need it. In values terms, the modern values holder wants to possess goods to demonstrate their belonging and status. The postmoderns, and especially the integrals, are less concerned with their status – having felt they have achieved it, and thus less concerned with collecting goods and possessions. Note, I’m saying *less* concerned, not unconcerned. So the postmoderns/integrals look at sharing as an interesting option – “do I really need to own that?” “Do I need to have my music physically on my device, or am I willing to pay for a subscription and have it streamed?” Perhaps the prototype of sharing is ZipCar, built on the idea in the urban areas, where parking is scarce and expensive, possession is actually a pain!

This disenchantment with consumerism, along with the relative affluence of postmoderns/integrals, are leading them to be increasingly willing to trade off money and material goods for time to enjoy experiences and invest in relationships. This is not necessarily extreme, e.g., recycling underwear—they appreciate the need for goods and services—but rather a sense that the consumption relationship needs to be reoriented such that consumption is not the end, but a means to various ends.

A second shift is the desire for greater *connection*. Life feels out of control. Many have the desire to get reconnected with what is really important in their life. The busy-ness of daily life and the need to *keep up* has reached a point where people feel they’ve lost touch with their priorities. Thus they are seeking to scale back, focus, and enjoy those activities they are involved—and not feeling like they are always rushing to the next thing. They want to spend more time with family and friends, get more involved in their community, know who their neighbors are, and who they do business with—in general they want to become more re-engaged with their daily lives.

A third shift is toward self-expression. Disillusionment with modern life and consumerism has led individuals to turn inward and reassess the meaning of their lives. There is a sense of emptiness from adding yet another material possession—and the data shows that having more money and goods—beyond poverty level—adds nothing to one’s happiness. Thus, there is a search for deeper purpose in one’s life. This pursuit is seen as a worthy one that has intrinsic value, and people want to tell the world about it.

The shift is from a passive to an active orientation; they want to express their views, their values, their purpose, and their creativity. Thus, the flourishing of social media—an ideal conduit for self-expression. And the emergence of *identity* products that tell the world who they are and what they’re about. They buy hybrid vehicles to show their support for the environment. They buy fair trade coffee to show their support for that cause. Self-expression is taking many forms – it’s not showing off, but sharing, in hopes of influencing, because they believe in what they are doing.

Finally, this rethinking of priorities could be summed up as *enoughness*. Think of enoughness as voluntary simplicity with a bit of an edge to it. Whereas voluntary simplicity suggested a benevolent, altruistic adoption of a simpler lifestyle, enoughness gets to a similar end point, but only partly from choice, as necessity in the form of the Great Recession is mixed into the equation.

The recession has forced people to confront their consumption patterns.

People are accepting and even embracing a need limits—*maybe growth can't continue forever?* There is a sense of *having enough* or being fed up with the status quo. It goes beyond material goods to the real precious resource of the next decade: time! People feel their lives are getting out of control, and they want to take back that control and set limits. The recession has provided the *perfect* opportunity to experiment with doing with less—stuff and activities. It may turn out in hindsight, that this is the most impactful of the five thematic changes in the consumer landscape.

These values shifts suggest a re-prioritization about what is really important in life. They suggest an opening for reconsidering the central importance of jobs, and a desire for a more balanced life. Of course, this will happen as taking a voluntary vow of poverty, but should the nature of the economy change, such that having a job is less possible or important, these value shifts are in perfect alignment.

The economy is transforming

There is a growing literature describing ideas of what the next economy is going to look like. Underneath these attempts to describe what's next is an assumption that the current economic system, which served us well in the past, is no longer working so well in the current and emerging context.



Concepts for the next economy

I have identified roughly three-dozen names or *concepts for the next economy* (some of the **main ones in the figure above**). The common thread is the rise of *sharing* as a central principle.

New models such as open source, peer-to-peer (Lending Club and Prosper, the two largest P2P lenders in the US, issued \$2.4 billion in loans in 2013) and crowdsourcing are emerging with Zipcar, Kickstarter, Uber, and Air BNB the poster children that hint at what's coming.

The sharing concept is extending into how organizations are operating. Frederic Laloux's *Reinventing Organizations* profiles a dozen organizations embracing integral values as the foundation of how they run their organizations. A striking characteristic of these organizations is that they operate using self-management in which peers share responsibility without the need for hierarchy.

In addition to sharing, sustainability and the triple bottom line are central as well. The key shift is away from a single-minded focus on economic growth to a more balanced approach that considers social and environmental well-being as equally important. Less emphasis on economic growth suggests less emphasis on jobs.

An important note on this emerging economy is that less emphasis on growth does not necessarily suggest rising scarcity. While certainly there are resource issues to be addressed, the overall picture suggests a growing ability to produce wealth –albeit with an accompanying need to produce jobs. The notion of abundance is aptly captured by former *Wired* editor Chris Anderson in a post *The Tragically Neglected Economics of Abundance* and more recently by Peter Diamandis' *Abundance*. The challenge is not one of creating wealth, but distributing it – without relying on jobs to do it.

Implications for work

Let's return to the three foundational assumptions about work and see how they fare in the context described above.

Challenges to work is central to individual's identity

The assumption that jobs will continue to be the central focus of one's identity is already being challenged. Work does not become unimportant, but assumes a more equal role among other components of one's identity. The values shifts in particular suggest that individuals, in rethinking priorities, are already wrestling with the notion of what's really important in their life. The postmoderns/integrals are in the process of attaching less importance to jobs for their sense of self. The declining importance of jobs to identity is a relative one. In exploring student needs, we identified a *blurring* trend. We divided student daily life into six aspects: living, learning, working, playing, connecting, and participating [in civic life]. We found that the boundaries between all these aspects were blurring. It is increasingly difficult to pin down whether one is at play or working or learning. For instance, during a class we played a MOOG game exploring options for improving R&D in the future. We were learning (being in class), playing (having a lot of fun), working (client was using our input), and connecting (we met dozens of other players among the thousands playing). In the future, we are increasingly going to experience these moments where it's hard to classify or explain what we are doing. This is going to challenge traditional approaches to accounting for time – should one *punch in* while playing an online game that may provide ideas for an innovation project at work. There are less clear distinctions between our activities – the days of going to work and focusing 100 per cent on it are already gone for many. One might argue that the talk about work-life balance misses the point as it assumes separation between work and non-work is possible. Rather than separating them, the postmoderns/integrals

in particular will seek to integrate them into a more holistic approach to their daily life.

Challenge to work structures daily life

The assumption that work will continue to structure daily life is already blowing up. As work shifts out of the workplace to the home, coffee shops, and virtual spaces, our daily routines have become less stable. A common, and perhaps conservative estimate is that 40 per cent of the workforce will be contingent, that is part-timers, freelancers, temporaries. The free agent model is emerging for workers with skills in demand, in which they move from project to project rather than making a long-term commitment to a single organization. As the traditional eight-hour workday at the office disappears, our schedules have become less certain. This *death of the schedule* trend is being driven by technological advances that are driving a shift in our orientation to time and our lives. The coordinating and logistic capabilities are moving us to a just-in-time world that operates around the globe and around-the-clock. Traditional schedules are increasingly crumbling. In a previous piece for this journal, I explored *retirement as an obsolete concept*. The key argument was that Boomers at or approaching retirement age are thinking about what to do next -- and the answer is not *retiring*. They are not following the traditional lifestage schedule of school->work & family>retirement.

Challenges to work is the primary source of income

The assumption that work will continue to be the primary source of income is perhaps the most robust of the three assumptions being explored. While there are signs that this assumption is weakening, it will likely take the longest to be reversed. The exponential growth of computing and communications power along with advanced in AI, predictive analytics, and other information technologies promise to increase the productive capacity of the economy while likely reducing the numbers of people and jobs required to do it. Within the paradigm of the current economy, committed to economic growth and full employment, this will be seen as bad news. Within a new economic paradigm, this will be seen as an opportunity to shift wealth distribution away from jobs. A new organizing principle for distributed wealth has not yet emerged. Ideas about a new economic order have yet to adequately address the key need of how to decouple wealth distribution and jobs. Put simply, the issue is how to distribute wealth without jobs. New models are emerging in how people get paid already, such as the move to project-based work. And the *gift economy* concept relies on people to voluntarily pay for goods and services that they feel have provided value for them. Several years ago, the band Radiohead provided an early indicator of this trend by releasing an album for download and asking those who did so to send money if they felt it was valuable to them, netting an average of \$6 per download. A more recent indicator is that the Swiss are considering a referendum on providing a guaranteed basic income of about US\$2,800 per month. Idea of paying citizens a yearly stipend is gaining support in Switzerland. Supporters suggest that a basic income is a better way to distribute wealth than jobs. For instance, in France there are three million people who don't have a job, and five million who work too much.

Implications for career development

The principle of using a balanced approach to client's short- and long-term needs remains a reliable strategy. The changes suggested here are still in their stages, thus it would be foolish to suggest that clients quit their jobs or stop planning for a future career.

That said, there is some advice to be provided to clients to prepare them for this emerging future.

Perhaps the single biggest implication is to expand the notion of career planning to life planning. The notion of career may come to be seen as limiting. Rather than preparing for a job or career, help clients prepare for life, of which work is one piece. In the transition to the end of work, clients are likely to experience more frequent and extended periods where they are out of work. A balanced approach to life planning could provide opportunities for these times to be useful and fulfilling. If they are financially prepared for these times, they may use them to pursue other interests or develop skills in new areas.

There will continue to be a need to help clients learn and prepare for *work* in the sense that we will still do activities traditionally thought of as work, but those activities will be done as a source of fulfillment or contribution to the greater good, rather than the source of a paycheck. Career advisors should be monitor the pace of developments to the *end of work*. The most challenging development suggested here -- shifting the basis of the economy -- merits special scrutiny. A new economic order could use automation as the lever to shift wealth distribution from jobs, thus accelerating the move to the end of work. As long as the existing economic order lasts, it is likely policymakers will desperately search for ways to create jobs, ultimately a losing battle, and a lost opportunity. In closing, it's critical to remember that the end of work as we know it does not mean that people will run out of useful things to do, but rather that they will not require jobs in order to be useful.

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