

Looking to the Future: How Work and Society Might Change

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As part of my doctoral studies, I took a course in Philosophy at Harvard University in the mid-1960's, where I was introduced to *Walden Two* (Skinner, 1948). Skinner described, perhaps tongue in cheek, a utopian society in which work was defined as whatever people wanted to do, no matter how well they did it. People were issued tokens for their self-defined work, which allowed them to purchase life necessities. This echoed a concept written in the 1930s by F. Buckminster Fuller (cited in The Buckminster Fuller Institute, 2020) that I had encountered a year earlier during my master's work:

We should do away with the absolutely specious notion that everybody has to earn a living. It is a fact today that one in ten thousand of us can make a technological breakthrough capable of supporting all the rest. The youth of today are absolutely right in recognizing this nonsense of earning a living. We keep inventing jobs because of this false idea that everybody has to be employed at some kind of drudgery because, according to Malthusian Darwinian theory he must justify his right to exist. So we have inspectors of inspectors and people making instruments for inspectors to inspect inspectors.

These ideas have not taken root in economics or sociology. As a result, it is scary for most people to contemplate the future and the changes that are almost certain to occur. These changes are likely to occur not only in paid workplaces, but also in volunteer work and in leisure work, an emerging concept that is consistent with the thoughts expressed by Fuller and Skinner.

In this essay, I suggest, based mostly on trends already occurring, a future of 2030 in a broad range of fields. What is particularly comforting for me in undertaking this task is that no one can prove me wrong—at least, not until 2030. Given how quickly our environment and circumstances can change (note the rapidity in which societies globally changed from Covid-19), these predictions

may be too conservative, and we will experience the impact of the changes even before 2030.

Further, this task is also, to some degree, folly, as understood by Meno (2006) who said, "The most important things in your life are almost always impossible to predict" (p. 297). In undertaking this almost impossible task, I have listened to podcasts, viewed videos, and read articles. These helped to form my ideas. But none of the ideas comes specifically from anything that I have read. I take a sectoral approach to anticipating future scenarios and what it will mean for our concept of work and its impact on employment.

Sustainability and Climate control

A major area calling for immediate attention is creating sustainable systems that will counter the effects of climate control. Shots from space underscore a relatively simple (but expensive) fix. Throughout the world, most roads are black, as are most roofs—with the exception of year-around sunny locations that have already discovered that white roofs and roads reflect the sun, creating cooler homes and cities. Doing a conversion would be costly and time-consuming and may have some negative impact on the environment as more heat is captured in the atmosphere. More research is needed on the path that has the greatest benefit to the climate. Other concepts that have been suggested are to put large mirrors into orbit around the earth and to place microbubbles on the surface of the ocean, both approaches designed to reflect the heat from the sun away from the earth.

Carbon dioxide is another factor that causes climate change, especially as deforestation occurs. A natural answer to this is to plant more trees, requiring, for example, that as the forest industry harvests a tree, at least two get planted in its stead. Communities and NGO's can also have an impact here by planting trees. Iceland is experimenting with a technological approach to removing carbon dioxide from its environment. The mechanism

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in use captures carbon dioxide and forces it into volcanic rock. After a period of two years, the carbon dioxide turns into limestone. This approach is currently limited, but the concept may have potential for larger impact in the future.

Humanity's love of eating livestock, especially beef, is a source of methane that is harmful to our climate. Further, humans can use vegetation much more efficiently than can livestock. Therefore, it is likely, as a matter of survival, that meat, as a source of protein, is likely to be rationed to encourage humans to be vegan or vegetarian.

As agricultural land is lost to urbanization, urban agriculture has become more prevalent and will need to become even more widely embraced. This can be done in personal yards, in community shared land in boulevards and parks, and on rooftops. Instead of planting ornamental trees and foliage, productive plants can be planted, e.g., fruit trees, grape vines, raspberry bushes, and so on. Zoning laws can be changed to allow for chickens, goats, ducks, rabbits, snakes, and so on to be raised in cities. Where there is access to water, farming of shrimp, oysters, mussels, fish, and so on, can be undertaken.

If not totally replaced, the use of fossil fuels (coal, oil, gas) will almost certainly be reduced, to be replaced by wind, agricultural resources (such as corn), water, and solar sources for energy. The barriers to a more rapid replacement are mostly political, not technological. Moving out away from coal, for example, will influence the employment of 7 million coal workers plus many more who are employed indirectly in coal mining. Further, some countries have large resources of coal, resulting in low energy costs. Such countries also, typically, have huge infrastructures used for converting the coal to energy.

The planet has become a global trash can. This cannot continue. In spite of multiple efforts to increase recycling, only about 30% of U.S. Americans recycle. The top five countries for recycling, in order are Germany (56.1%), Austria, South Korea, Wales, and Switzerland (49.7%) (Parker, 2020). Institutions, governments, NGOs, communities, and individuals must get more serious about recycling and composting. My wife and I do all three, and our trash has been reduced to about 10% of our total discards in a month. Another way to reduce trash is to reduce the number of *use and throw out* products. I remember in my childhood that clothes were patched, shoes were re-soled, products were repaired, tailors were used to make adjustments in size, and so on. Our future will need to find a way to reduce what we discard.

It is unclear what impact these practices will have on employment. We will have fewer coal miners, oil and gas miners, trash collectors, large land farmers, ocean-based fishers, meat packers, butchers, and others. On the other hand, we will see more foresters, plant geneticists, wind-mill manufacturers, solar panel manufacturers, urban farmers, recycle and compost collectors, and others. It is actually possible that employment in this sector will expand.

Artificial Intelligence

Artificial intelligence, or AI, is not a new concept. When I was employed by the Research and Evaluation Department of the City University of New York in the mid-60s, a colleague was working, with some success, to create an AI system that would provide marriage counseling solely through the software with no human interaction. We are all familiar with a rather simple form of AI when we make a phone call to a vendor, and the call is answered by a software program. A good system will significantly reduce human interaction, providing faster answers for the caller and reducing personnel needs for the provider. These systems will continue to get better, both in accuracy and speed of response, reducing customer service costs for the provider. The software will be a continuous learner as the system is updated continuously when fed new information. Call centers may completely disappear, with a major loss of employment, particularly in developing countries.

A major area for AI is autonomous vehicles. (Those interested in this topic will find a fascinating YouTube video at <https://fortune.com/2021/10/28/truck-driver-shortage-supply-chain-80000/>.) The advances made in this area could result in the elimination of the current truck driver shortages; while increasing over-the-road safety experiences of both truck drivers and other vehicles on the road, elimination of taxis, buses, Uber, and Lyft, replaced by robot cars. There will also be fewer insurance workers, estimators, and auto body workers with greater on-the-road safety. Goodkind (2021) estimated a shortage of 80,000 truck drivers and an annual turnover rate of 92%. Certainly, as over-the-road autonomous semis become normal, not only will the shortage be overcome, but there will be many drivers losing their jobs. However, capital investments will be extremely high to convert to autonomous semis. Other transportation jobs to be affected by autonomous vehicles will be taxis, Uber and Lyft drivers, bus drivers, mobility transportation drivers, and any occupation dependent on a vehicle. It might even be the case that individual ownership of cars will give way

to publicly available autonomous vehicles on demand. Several such vehicles are already experimentally in use. The primary barrier I see to the growth of autonomous vehicles, at least in the U.S., is the power of the car manufacturing lobby. With autonomous vehicles, and the major decline in individual ownership, car manufacturing, distribution, and sales occupations will decline significantly. Parking lot attendants and valets will no longer be needed, nor will door attendants as people will call for a car on demand. Considerable urban space will be freed up with the reduction in the number of cars needed to transport the population as the cars will constantly be on the move.

Robotics can be seen as an offshoot to AI. We are already experiencing the use of robotics, particularly in repetitive manufacturing tasks. And we experience it in simple household tasks, such as robotic vacuum cleaners. We see the use of robots in certain medical situations, decreasing surgical errors, reducing the invasiveness of surgery, and allowing for more accurate micro-surgery. Robots can be used to sterilize hospital rooms, especially surgery rooms, more completely and faster, reducing the number of deaths due to staph infections. Robotic technology is also improving the functioning of prosthetics. But we should expect to see a dramatic improvement of what robots are capable of.

QR codes are popping up everywhere, reducing the need for personnel in many areas, including entertainment. But, even more, restaurants are becoming personnel-free, driven, in part, from a lack of personnel and the requirement to have a contact free environment because of Covid. QR codes provide paperless menus, patrons can order directly from their booths without the need for a server, the food can be prepared with robots as is occurring now in fast food environments, the food can be delivered by an electric track directly to the patrons' booth, tables can be cleared by patrons by placing empty utensils directly on the track to be returned to the cleanup area, and billing can be done automatically at the booth—all without any contact with humans. While cooking is currently limited to a simple, routine menu, greater sophistication is likely to occur in the future.

Through robotic innovation, warehouses can already be made personnel-free to pick orders and ship them. As this happens on a broader scale, places like Amazon, grocery store, warehouse-like department stores (like Sam's Club and Costco), and discount stores (like Target and Walmart) will face large-scale layoffs, and, presumably, reduce costs to consumers. Delivery systems, like the post office, FedEx, and UPS, will take advantage of

autonomous vehicles and computerized delivery systems, even to individual homes, so drivers and jumpers will no longer be needed.

Robotics will also reduce, if not eliminate, the need for dock workers, both at ports but also at individual businesses. There will be greater efficiency and effectiveness, reducing bottle necks in the supply chain.

Another technology-related advance that we should expect is improved cyber-security. The need for such software has already been shown through increased cyber-attacks, use of ransomware, and hacking of personal information. Improved cyber-security will be needed to protect personal privacy, protect financial wellbeing, and inhibit national security threats. This is an area that will call for many more trained professionals.

Workplace Environment

The Covid-19 pandemic surprised many people as we have been forced to work remotely through virtual systems. Overall productivity in the U.S. during the pandemic went up. Self-report of workers has largely indicated an increase in productivity. Productivity by company show mixed results. So, we don't know whether the forced remote work environment will continue. Workers like the fact that they don't have to dress to go to work (I often wear a good shirt with basketball shorts for all of my zoom work). They don't have to drive, meaning that they can be nomad workers, working from any place they desire, including more remote locations with lower housing costs. (There could be one million by 2035.) This movement is also increasing cross-border movement, especially when countries make policies to provide visas for such a movement. This modern program began in the summer of 2020 by Estonia, followed by Barbados, Bermuda, Costa Rica, Anguilla, Antigua, and most of Eastern Europe. By October, 2021, more than 30 countries provided such visas.

Remote workers do not need to drive their cars as much, which has both personal and climate benefits. Parents can be present to multi-task with childcare (including supervising of homework where schooling is remote), benefiting nursing mothers, and allowing two-parent families to share in the childcare. This provides more parent-child contact and reduces the costs of professional childcare. Another learning from the forced remote working is that business travel is not needed, at least to the extent prior to the pandemic. While I teach in Thailand, I have not been able to travel to Thailand since the first lockdown.

Most of our doctoral students are from China, and they are not allowed to travel to Thailand. Not only are the institution and the students saving money in transportation, housing, and food, but, from my perspective, the instruction is much more intimate as I can see each student more readily on Zoom or Teams than I can in person. It is likely, in the future, that full, in-person training and education will no longer occur, but some form of hybridization will take its place. There will also be increased efforts to improve internet access for everyone, at no cost, to reduce gaps in education quality that currently exists, both within countries and between countries.

Not all companies are happy with this arrangement. They find that teamwork works well for those workers who were already part of the company before remote work was required, but it is much less effective for newly onboarded employees. Innovation also seems to be less present when remote work occurs. And there are still many companies who do not trust their employees to be task-focused when they are out of sight. As improved spyware is created that can determine the ways in which company-owned computers are used, and mini-cameras are installed, companies may become more comfortable with remote, virtual work, and it may improve. One of the consequences of remote work may be the decline in urbanization. As I live in downtown Minneapolis, I witnessed first-hand the impact of remote work and schooling. Activity on the sidewalks and in the streets disappeared. The city became a form of ghost-town. Now, it is coming back to a degree, but it is not at all like it was before the pandemic. We have experienced urbanization globally for many decades, indeed hundreds of years. Are we now moving toward an era of ruralization?

Rapid changes in the workplace will require workers to be resilient in moving into new careers multiple times. And the stress that this may cause workers, as well as the stress of working remotely performing multiple tasks, may encourage the adoption of spirituality practices or meditation to relieve that stress.

The workplace is also likely to create a challenge for employers. With fewer qualified workers for more jobs with higher qualifications required, employers will battle for those who are available, causing an intellectual capital war between companies and countries. A further impact of this battle is that, to attract employees, employers will offer improved benefits: daycare, improved retirement, automatic add-ons (for benefits and for gratuities). Restaurants locally, at least, are increasingly adding a mandatory addition to the bill to cover a higher base pay, healthcare, and so on. This will not be experienced,

perhaps in those countries in which many of these benefits are either mandated or offered by the government. We will also see fewer companies hiring employees. Instead, they will hire contract workers, thus requiring less of a long-term commitment. We may also see a growth in small- or micro-business entrepreneurs, as a result.

An HR issue that has long plagued businesses is how to evaluate employees. All of the existing systems have major flaws. An emerging system that could grow is a system that provides immediate feedback to supervisors, peers, and subordinates. Contiguity is an important aspect of feedback that can now be provided using software and iPhone technology to do so. While this isn't really an evaluation system, it is a feedback system that can prompt immediate improvement in performance.

Diversity and Inclusion

One of the factors that causes inequity in the workplace and in society, generally, is the perception of the importance of a university education. By 2030, however, there may be a societal recognition that a university education is more of a luxury than a necessity. This is likely to lead to a greater awareness of the importance of vocation education and structured on-the-job training. Self-directed learning is also likely to grow in importance.

Perhaps this is wishful thinking, but I hope that diversity, broadly, will be fully accepted by 2030, including equity based on gender, race, sexual orientation, ability/disability, ethnicity, class, age, and any other form of discrimination that causes toxic environments in our workplaces, communities, schools, and any other place in which we find ourselves.

Healthcare

Our attention today is largely focused on Covid-19. But, by 2030, it is probably (more hopeful thinking) that it will be relegated to the status of many other viruses that we take for granted year-by-year. Masks will likely be commonplace for everyone. Vaccinations will have lost their political potency, and they will be taken routinely, as we do other vaccines. If there is a breakthrough, medications will have been developed to control the symptoms.

At long last, major progress will have been made toward preventing and curing many forms of cancer. This will be contingent on the appropriate level of funding for research and development.

Healthcare, itself, will change dramatically, with most visits and even interventions being offered remotely. We have found during the pandemic that these can be undertaken effectively. With ongoing improvement in technology, this is likely to improve and expand. Further, we will finally experience universal healthcare, where everyone will receive the level of care needed for a high level of quality of life. Is it also possible that advancements in treatments of dementia, cancer, heart health, blood pressure, diabetes, and obesity will prolong life span with a higher quality of life?

A very controversial area of medical advancement is genetic interventions. Controlling several of the life-threatening diseases that we currently experience will require genetic interventions. These could be major processes that could save lives. But it will also highlight genetic tendencies that cannot be treated. Such information may increase insurance costs or even prevent people from getting insurance. It may also lead to increased demand for abortions or the freedom of parents to determine genetic outcomes for their offspring. The ethical dilemmas that this will create for individuals, as well as for medical personnel, are enormous.

Society

There are many sources that disrupt the health of the societies in which we live. We have never found a cure for these. Is it possible that we can find a cure by 2030? It is unlikely, but I like to wish. We have not discovered how we can live together safely. As a result, we rely on police or military power to try to control our populations. But we have not discovered a reliable way to do this. As a result, we experience riots, mass shootings, corruption, unchecked criminality, and so on. We experience similar results through authoritarian politics in many countries around the world. This is not healthy for anyone, including those in power.

We experience disruptive movement of people around the world, resulting in huge numbers of refugees and immigrants. Forced immigration results from war, civil unrest, economic hardship, and food shortages. These people are often not wanted by either the sending or the receiving countries. What are they to do to live? How are their children to be educated? We must find an answer to this problem; even waiting to 2030 to do this is too late.

Population disruption is already occurring from climate warming and is likely to grow. Events such as flooding, earthquakes, fires, volcanoes, hurricanes, cyclones, and tornadoes will all lead to population movement,

internally as well as externally. These events will also increase the demand for firefighters, emergency workers, and construction workers as well as many others, unless we develop robots to do these tasks.

Entertainment

Has the pandemic seen the demise of the movie theatre, in-person music halls, theatre venues? Before the pandemic, my wife and I would frequently attend movies. During the pandemic, we became comfortable watching movies streamed on our TV. Except for blockbuster movies, theatres are not drawing the way they did previously. This is not likely to cause a decline in employees, but it will definitely require a shift in employment. There will no longer be the need for someone to pop the popcorn and pour the drinks and then serve them at horrendous markups.

Virtual reality masks are likely to become more accessible as they are improved and become lighter. They are likely to improve the entertainment experience for many. In fact, they are likely to find a home in organizational training departments as software is developed for simulations.

Finally, outdoor eating, with fireplaces and heaters, food trucks, and home delivery are likely to replace the in-restaurant experience as people become more comfortable with such experiences and recognize the increased safety by avoiding in-restaurant experiences.

What's Next?

This essay is obviously not a comprehensive coverage of what we can expect to experience by 2030, nor is it perhaps visionary enough. Changes are likely to be much more impactful than I've been able to envision. Think of the unexpected impact of such events as the Internet, desktop computers, laptops, iPhones, and even Covid, itself. Only a few people who were truly visionary were able to anticipate such changes.

So, what does this call on us to do moving forward. Perhaps most importantly, we have to be resilient, visionary, and willing to change as circumstances require. Those of us who are academics must be prepared to redevelop our curricula regularly and as dramatically as circumstances demand. We may even be required to accept Fuller's and Skinner's predictions and be prepared to redefine what it means to work.

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Note: Many of the ideas in this essay were drawn from a workshop presentation:

McLean, G. N., & Abadi, M. (2021, Nov. 16). Work in the future and HRD's role. Asian conference of the Academy of Human Resource Development. Kuala Lumpur, Malaysia (virtual).

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McLean has written over 600 publications and over 50 books and reports. He was a co-editor of *Practicing Organization Development*, 1st Ed. (a best-seller in the U.S.) and is author of *Organization Development: Principles, Processes, Performance*, recipient of AHRD's Book of the Year Award. He co-edited a book in 2017: *Urban Farming in Malaysia*. He is a co-editor of a 7-book series on *Asian Women in Leadership* and is co-editor on each of the 7 books.



He earned two graduate degrees from Teachers College, Columbia University and an additional master's degree from United Theological Seminary in New Brighton, MN. His major employment experiences have included Professor of Business Education, Adult Education, and HRD, University of Minnesota for 39 years; Senior Professor and Coordinator of International HRD Programs at Texas A&M University in College Station, TX, for five years; "Renowned Scholar" in the Graduate School of Management at the International Islamic University of Malaysia in Kuala Lumpur for six months. He currently serves as full-time professor in the PhD OD program in the Graduate School of Management at Assumption University (Bangkok) and is an adjunct professor in the PhD program in Human Resource and Organization Development at the National Institute for Development Administration, Bangkok, Thailand.

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He was President for the Academy of Human Resource Development (AHRD) and as President for the International Management Development Association (IMDA). He was an independent consultant, primarily in international HRD, training, organization development, strategic planning, and quality transformation, for 51 years.

He has received numerous recognitions for his teaching, research, and service, especially as Morse Alumni Distinguished Teaching Professor at the University of Minnesota; induction into the Academy of HRD's Scholar Hall of Fame; and receipt of an honorary Ph.D. in HRD from NIDA, bestowed by the Crown Princess of Thailand.

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