Major changes ahead

When you look at recent history, the changes in our daily lives have been breathtaking. Nine years ago, the iPhone hadn’t been invented yet and so there were no mobile devices to keep people staring at their screens as they walk around in public. Facebook was a college phenomenon, there was no Twitter, and the cloud was that fluffy white thing passing by overhead. No apps, nobody was talking about self-driving cars, solar panels were rare, and light bulbs were incandescent rather than LED. America was heavily dependent on foreign oil, and you had to ride a cab rather than in the passenger seat of a stranger’s car if you wanted to get home from the airport.

What will be the next breakthrough technologies that will rock our world? An article in SingularityHUB, published by Singularity University, offers a handful of predictions that are already in the early stages of changing our world today.

The first is clean energy, whose widespread adoption would dramatically disrupt the traditional oil and gas and coal industries, and make electricity dramatically cheaper for all of us. The article says that every two years, solar installation rates have been doubling, and the cost of photovoltaic modules are falling by about 20%. These panels are expected to halve in price by 2022, and they will be far more efficient in the amount of energy they capture. By 2030, the article estimates that solar power will be able to provide 100% of today’s energy needs, and by 2035 energy will be almost free—kind of like cell phone calls are today.

The second big change is the fall of China as the world’s manufacturer, led by a return to locally-sourced manufacturing. This will be driven by advances in robotics that are already finding their way to the factory floor. The Chinese government is aware of the trend, and currently has an experimental facility that is being labeled as the world’s first “zero-labor factor” factory, where robots replace humans doing the hard rote work of assembling cars and appliances.

Unfortunately for China, the robots in Guangdong Province are no more productive than the robots here in the U.S. or anywhere else in the world. They work 24 hours a day, and are unlikely to join labor unions. Their cost is going down yearly. So why would a company in the U.S. outsource manufacturing to China and incur the long shipping times and high transportation costs when they can assemble the finished goods right next to the customer base? Manufacturing will once again become a local activity.

A third change will be what the industry is calling digital manufacturing—which you know as 3D printers. The parts that the robots will be assembling have traditionally been made with lathes, saws, milling machines and drill presses, which physically remove material to obtain the desired shape. Digital manufacturing produces those same components using the opposite approach, with powdered metal, droplets of plastic and other materials brought in to add materials to a frame.

The article says that in the early 2020s—less than a decade from now—households will buy low-priced 3D printers, and order things online. The online services will send instructions to the 3D printers to manufacture the item right there in the spare bedroom. Eventually, these printers may take jobs from the robots, who by then might be intelligent enough to organize their own protest rallies.

Source:

https://www.linkedin.com/pulse/technologies-shift-global-balance-power-next-20-years-vivek-wadhwa