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What will the world be like 50 years from now?

The next fifty years are going to be a wild ride in technology as innovation continues to accelerate. Emergence of alternative forms of currency dubbed cryptocurrency, flirt with the idea of eliminating banks, inflation, or centralized control. Vehicles are getting closer and closer to being completely autonomous. Monumental discoveries in health and how to keep people alive longer and healthier. Advanced prosthetics or stem-cell research are granting those with disabilities options that were previously not on the table. Entertainment with the implementation of augmented or virtual reality toe the line of being complexly immersive. And lastly, as the world population continues to grow, ocean acidification, pollution of fresh water, demand for food, all pile on an already burdened planet; will self-driving cars or virtual reality actually be a necessity in the coming years? Regardless if we make it to the year 2068, this paper will be interesting to look back on.

Self-driving cars are booming into everyday life and becoming more and more of a modern-day reality. Companies like Uber have dismantled the taxi industry entirely and are now setting their sights on eliminating the need for humans to control the vehicle entirely. Having vehicles completely autonomous opens the door for all modes of transportation and how they are implemented. Long haul trucking, postal services, ride sharing, mass transit, are all subjects of conversation as we move into the coming years. Will self-driving cars improve our everyday life or are we getting ahead of ourselves as we risk jobs, careers, and most pressing of all, human life.

We have all seen many demonstrations of robotics and how when used correctly increase profit and productivity. Especially when it comes to repetitive tasks or tasks that need extreme amounts of precision. One could make the argument that driving from one location to another location is done with small, repetitive, mind numbing, procedures. Therefore, it makes since that we would have our transportation autonomous. As more and more autonomous vehicles start to become common place on the road it will be easy to see how life and quality will improve. In 2016, 10,497 people died in alcohol-impaired driving crashes, accounting for 28% of all traffic-related deaths in the United States[CDC]. Autonomous vehicles would absolutely help these numbers decrease over time. Not only with people who choose to drive impaired but also a autonomous vehicle would be able to react to other impaired drivers on the road in a much more effective manner. We must also take into the account of other substances. Marijuana is become more legalized around the US and as this happens the amount of people driving impaired increases. Same goes for all controlled substances or even prescription drugs. We must also recognize people with preexisting conditions like diabetes or heart murmurs who run the risk of falling into a diabetic coma or heart attack while behind the wheel. We must remember that humans are prone to mistake, and we will never be perfect. If people’s lifes are at risk I would hope that we as humans would be taking corrective steps in in preventing these situations from happening. Fortunately, autonomous vehicles solve all these issues. In the coming years it would not be a stretch to say “I fell asleep behind the wheel” as a good thing. Autonomous vehicles make the accident-prone humans less involved in unintentional accidents.

About 56.7 million people — 19 percent of the population — had a disability in 2010, according to a broad definition of disability, with more than half of them reporting the disability was severe, according to a comprehensive report on this population released today by the U.S. Census Bureau [Bernstein]. One of the major issues with those who suffer from disabilities is independence. Relying on others or government agencies that are completely over stretched is a large and cumbersome burden that those with disabilities must overcome. Autonomous vehicles provide the visually impaired, quadriplegics, or those who suffer from any debilitating disabilities are now able to freely travel with safety with no risk at any time with relative ease. Having Autonomous vehicles readily available will allow those with disabilities a new-found form of independence.

With the automation of all vehicles on the road, traffic will either be eliminated or drastically reduce. A study done by the popular television show “Myth busters” proved that by driving in a circle, evenly spaced, traveling at the same speed results in a section that slows to a complete halt. This happens from a small slowdown that continues to compound. If one car slows down just two miles per hour, the car behind will slow down four miles per hour and etc. The average US commuter spends 42 hours in traffic per year and loses $1,400 idling away gas [Frank]. Autonomous vehicles will have the ability to react faster and smoother then a human. Thus, eliminating slowdowns from rubbernecking, merging, inattentiveness, near collisions, unnecessary breaking, or tailgating.

A completely autonomous self-driving Uber recently plowed into a woman at high speed ending her life [Wakabayashi]. The video footage of the incident shows that the self-driving car either never recognized the woman being there or never registered the woman as an object worth stopping the vehicle for. Tesla with their automated cruise control had an incident where in a person died as a result of the automation not stopping when it should have [Guardian]. At a fork in the freeway the Tesla being piloted by the cruse control, slammed into the median of the fork. It seems like at this point we are in a critical point in this new technology wherein we must tread carefully. It may be important to pump the breaks (no pun intended) on the automation of all vehicles until we have all the kinks worked out. The technology is brand new and it seams that some if not all “red tape” has been side stepped. Its easy to get carried away with future talk, especially when there is means of having great profit as a result. Therefore, it is important to change the race from first to be rolling on the road without a human to never kill a human again.

A recent article came out that raised an interesting question on automation of vehicles and where the algorithm of the self-driving cars places certain humans in a ranking system. In other words, if certain events unfold that make a collation inevitable; dose the autonomous car get to choose who or what is more “valuable” to collide with. Imagine a situation where a tree falls in front of the car unexpectedly; the car can choose to hit the tree at full speed killing the driver, or swerve to the side avoiding the tree and saving the drivers life but colliding with a cyclist sharing the road and killing the cyclist. Because of this gray area, there is an extremely open ethical issue with the situation. At a certain point we will have to develop a ranking system on the lives of each and every human and that as well opens another door to more ethical issues. Although self-driving cars will eventually decrease the amount of people being killed in vehicle related deaths it is important to practice Murphy’s Law and prepare for the unexpected.

We also must think of the impact on class with this new technology. I certainly can’t afford a tesla and I can only imagine the cost of the first autonomous cars once they start rolling out. Despite the resent events of these vehicles being responsible for killing people, the argument of these cars being better drivers will certainly prevail. This will in turn make self-driving cars be complimented with cheaper insurance. On the other side of this we must examine the fact that insurance will go up for people without autonomous vehicles. As the technology on autonomous cars develops and gets better, insurance for the self-driving cars will only be for non-autonomous vehicles that are using the same road. It would not be unruly to say that in the coming years the division of class will result in a large portion of people being priced out of being able to commute to work. This in turn will result in poverty-stricken areas to increase in size creating a large wealth division. Animosity will build towards those without autonomous vehicles due in part because moving into the future the only reason deaths occur on the road is a result of those who can’t afford the ticket price of a self-driving car. Self-driving cars will create problems in class division moving into the future.

To move 10.55 billion tons of freight annually requires over 3.4 million heavy-duty Class 8 trucks and over 3.5 million truck drivers [American]. With the expansion of autonomous semi-trucks, the trucking industry will complexly fall apart. Trucking companies will be able to run autonomous semis 24-7 safely. This coupled with being able to slash the cost of labor and insurance will render the need for long haul truck drivers useless. The population of the United states of America being 325.7 million in 2017 The trucking industry makes up close to 7% of that population. That entire population will add to the 4.1% unemployment rate making it skyrocket to levels that reflect the 2008 housing crisis [ATA]. That of course is only talking about long haul trucking drivers. This doesn’t include current Lyft, Uber, and other taxi industries, but maritime, train, flight, and other postal services like UPS, FedEx, and USPS. This begs the question as we thrust completely automated vehicles into the faces of the American people; are we ready to handle a huge amount of people without a viable or relevant skill rendered obsolete by autonomous vehicles?

My opinion of the situation is to stop the race for money but continue the progress. We may have bitten of more then we can chew at the moment but there is no reason to stop eating. Many more tests need to be ran to make sure that the vehicles never have an issue with collisions. There is absolutely no reason to rush when people’s safety is at stake. However, the benefit that comes from autonomous vehicles outweighs (in my opinion) any negativity. I am sure people who worked at the newspaper were upset at the internet making their career obsolete, but I am willing to bet they use the internet in present day. Same correlation can be made for the trucking industry. If anything, the current long-haul truck drivers should take that lesson to hart and work on other competitive skillsets. The qualities of life always improve with automation. As for the issue for the lower class being able to afford a self-driving car and potentially priced out, my counter point is Henry Ford did not make is fortune by building expensive cars but rather cheap reliable cars. Give time for development to catch up to the progress being achieved.

Our bodies are highly complex systems that run often non-stop for an average of seventy years. That number is increasing the further we move into better understanding and implementation of medicine. A question that always remains is what keep our body’s running well and long? We know that exercise and diet are crucial however, how often do we run into conflicting diets or exercises almost daily. Obesity affects 34% of the united states population [Kennedy]. Clearly, we have much to learn on the subject of what we need and what we do. How much do genetics play into health and are we able to change these genetics. On the subject of genetics, the number of test-tube babies is increasing which allow the choice of characteristics or features. This can easily allow variation from person to person to decrease. Like discussed earlier there is a large portion of the US that has severe disabilities. Research into stem cells could greatly benefit people with hearing, site, and motor skills. People who have lost appendages either from birth or later in life are now having highly complex robotics as replacements. Some of which are tied into the muscular system of the body allowing control with thinking. Technological strides in medicinal are providing millions of people an option that was never there in the past.

At this point I would make cases as to what the coming years will hold when it comes to medicine and health. However, it would be obtuse to make such claims. Following medicine right now and some of the steps we are taking are beyond my competition. It never ceases to amaze me what some of the strides in health are making. It has reached the point where I could say “Did you hear about the \_\_\_\_\_?” and no matter what I place there it would blow my mind. The future of health and medicine is the most unpredictable and by far the most interesting to follow. At the rate medicine and health is going it would not be crazy to say in fifty years from now, half of my body is robotic, and the other half was cloned from Michel Jordon.

The Atari was released on September 11, 1977 [Wikipedia]. Its revolutionary game Pong involved only three moving objects at a time. Forty years later we have the emergence of virtual reality entertainment. This subject is much like the medicine subject as in it wouldn’t be fair to make any claims as to what the next fifty years would hold. I do however, have a few wild guesses or at the very least something I would like to see. Having used the HTC Vive it failed to really impress me, but I will say that the potential is astronomical. As the technology gets better and portable the ability to walk around in everyday life with the use of a computer over your eyes could only help but improve. Being able to use a GPS without having to glance at a phone. Price match at any physical store. Questions can be answered on the fly. Truly immersive entertainment where in you are a part of the show, movie, video game, being able to “walk around” the set or even be able to dictate the outcomes based on actions taken in the entertain medium. These are all possibilities that were never even thought of when pong entered the homes of the American people.

With talk of augmented or virtual reality come the ever-changing workplace. As a student being able to learn biology 101 from Richard Dawkins in present time from anywhere in the world as if you were sitting in the front of his class. “Being” at the office, saying hi to Carol at reception, while laying on your home couch. It would be interesting to see in the next few years when they stop calling it augmented reality and as if it is the only reality we have. We maybe wont ever be able to teleport from one space to the next but what’s the difference if the technology accelerates to a point where we can be anywhere anytime, so long as there is a camera with virtual reality capabilities. I currently have a roommate who works for HTC in the Vive department and he as confirmed with me that they are about to roll out a new Vive that is half the size and weight. Truly remarkable progress considering it only came out a few short years ago. I don’t think that any of the things that I previously wrote about are completely unreachable in the next fifty years.

I can reach into my wallet and take a 2.61 inches wide and 6.14 inches long piece of paper and trade it for a product or service. I am of course talking about tangible currency like a $100 or $20-dollar bill. Currency is not a new subject in human evolution as it has been around for thousands of years. It works by having only once source produce the currency and back the currency with something of value such as a rare earth metal like gold. However, in the case of the united states, in 1971 gold no longer backed the United States Doller [Federal]. Which raises the question; What is our money actually worth? In the last ten years we have heard small side conversations about a digital form of currency explode into what seems like a rolling snowball gathering greater and greater mass and momentum. Currency will always have its place among humans but in the next fifty years will we still be walking around with specifically measured and designed pieces of paper valued at perhaps nothing? Or perhaps we will be using nothing but computational power also valued at nothing.

The next fifty years will also unfold many issues with our environment as strain on the planet we inhabit reaches new levels. The current world population of 7.3 billion is expected to reach 9.7 billion in 2050 [Nations]. Even at this moment the amount of people living without food or water readily available is extremely high. In the US, as fracking continues to pollute water supply’s as Flint Michigan has not had clean drinking water since 2014 [Wikipedia]. The solution was to only drink plastic water bottles which in turn pollute the planet. Farmers are having an extremely difficult time keeping up with the demand for food while having to continue to work for less and less profits. The only real way to keep up with the demand is to cut corners on either safety or product. Global sea levels are rising at an alarming rate. The two major causes of global sea level rise are thermal expansion caused by warming of the ocean (since water expands as it warms) and increased melting of land-based ice, such as glaciers and ice sheets. The oceans are absorbing more than 90 percent of the increased atmospheric heat associated with emissions from human activity. With continued ocean and atmospheric warming, sea levels will likely rise for many centuries at rates higher than that of the current century.  In the United States, [almost 40 percent](https://oceanservice.noaa.gov/facts/population.html) of the population lives in relatively high-population-density coastal areas, where sea level plays a role in flooding, shoreline erosion, and hazards from storms. Globally, eight of the world's ten largest cities are near a coast, according to the U.N. Atlas of the Oceans [NOAA]. Obviously, this is a pressing matter that will continue to gain urgency as the next few years. Miami Florida is currently a little over six feet above sea level. At the rate at which our sea level is rising Miami will be under water before 2050.

Often we mock and laugh at what people in the 1950’s thought the year 2000 would be like. No there are no robot maids, flying cars, towns built way up in the sky. Trying to imagine what the future will be like is often much more difficult to hash over then watching an episode of the Jetson’s. The biggest changes that we have in modern day are changes that nobody could even explain fifty years ago. Will the year 2068 have autonomous vehicles taking humans with stylish augmented reality glasses that was all payed for using cryptocurrency? Or will the impact we are taking on our plant now be so severe we have to set our main sights on protecting what remains. If any lesson is to be learned from our past is to not make bold claims in be prepared for the unexpected. We might not have robot maids named Judy, but we do have robot vacuums named Roomba’s, which is close.

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