



How will Automation Affect Our Cities?

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"We need to get automation and make it subordinate to human needs, not the profit motive. It's about seizing the bakery rather than stealing the bread." With robots presumably kneading the dough. ¹

It's seen in science fiction. Movies like Blade Runner, I, Robot, and the iconic Terminator, narrate the writer's imagination of what dystopian societies could look like if they were run by androids. A place where humans interact in a world co-populated by machines that can out perform us, think quicker than us, and never tire. It's a "slice of life" view of people existing in the mundane similar to the present. On the other side, we find the pessimistic apocalyptic doom lands that lead to Mad Max scenarios of society. The question is, how do we modify our present to become a system capable of supporting a society with the eventual mass conversion to artificial intelligence? How do we adapt to progress in the real world regardless of what stories can illustrate?

With innovations like IBM's Watson computer that can beat human at Jeopardy, science fiction has begun to write itself into reality. We are behind the progress, leading to calls of preventive legislation for robot rights and laws. Current studies claim that 38% of jobs in the United States are at risk of being replaced by machines within the next 15 years. Humanity needs to answer this existential crisis of finding meaning in an automated society.

How technology will affect the job market in 20 years



Architects 1.8%



City Bus Drivers 67%



Accountants 93.5%



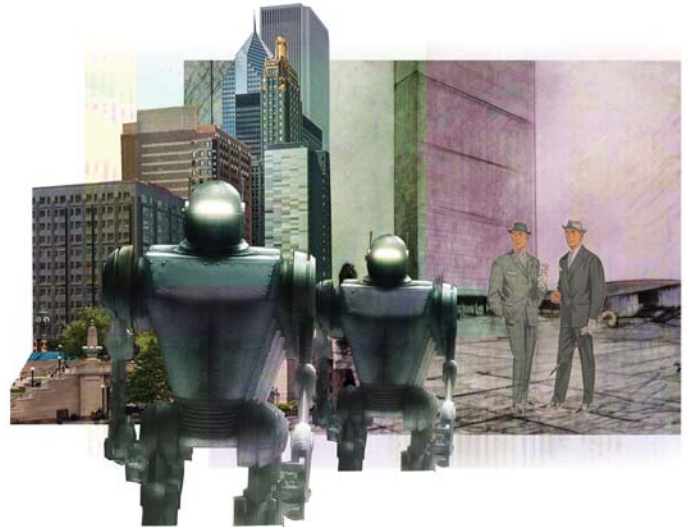
Lawyers 3.5%

¹ "Brian Merchant and Brian Merchant Is Senior Editor of Motherboard, VICE's Science and Technology Channel, "Fully automated luxury communism," The Guardian, March 18, 2015

The articles I researched tried to answer the question:
What do we do when we reach these forecasted
percentages of work displacement due to automation?

One opinion was a form of Universal Basic Income:

Championed by many, including Elon Musk, the idea suggests a system that provides everyone with monthly funds to sustain the basic needs for survival. If implemented today, it would allow people with financial issues to focus on improving their lives and pursue their interests without worrying about food or housing. There are different versions of how this would be funded so I will not be addressing that. The idea has real relevance when considering an extreme scenario where 50% of the Job sector becomes displaced by robots. It would be a means of upholding the capitalist system we currently have in place and maintain a market where the products created by robots are still being consumed.



“the only utopian demand can be for the full automation of everything and common ownership of that which is automated.”²

Where machines do the heavy lifting not for profit but for the people

I like this quote and sentiment because it views the future of automation as a tool, not as a doomsday. It’s not necessarily an “us versus them” scenario like the movies. At least, not yet.

Another prediction is that jobs may increase as they did during the industrial revolution, “or at the very least make no overall impact”. This argument gives humanity more credit for being creative beings that find ways to adapt and survive. While manual tasks may be replaced, the need for personality and interactions will still require human intervention. This view predicts a creation of more service jobs that rely on character. This happened during the industrial revolution, new jobs formed due to the increase in production efficiency. People flocked to cities.

“Computers create about as many jobs as they eliminate. In other words, automation is not causing persistent unemployment.”³

So, what does all of this mean to the Urban Environment?

Automated vehicles are just around the corner, threatening 20% of American Jobs that rely on driving. This shift will not only change how those 20% find new work but also how the car will be viewed. On a micro level: Car designs can be moving living rooms. Macro level: Less car centric cities. There will potentially be little need for individuals to own automobiles within cities. Increasing popularity of rideshare programs have become as common as a bike share programs, which also are spreading in popularity in dense communities. Andy Cohen, Gensler CEO, believes that the built environment will be able to shift its focus from the car and “free up space that is currently dedicated to parking”⁴ and driving.

²Brian Merchant and Brian Merchant Is Senior Editor of Motherboard, VICE’s Science and Technology Channel, “Fully automated luxury communism,” The Guardian, March 18, 2015

³James Bessen, “The Automation Paradox,” The Atlantic, January 19, 2016

⁴Adam Peterson, “Future Cars Will Force Us to Redesign Future Cities,” Architectural Digest, May 25, 2017

“According to a 2012 M.I.T. study, there are about 500 million parking spots in the U.S. alone... and remember, the average parking space in America is 7.5 to 9 feet wide and 10 to 20 feet long.”⁵

Following these predictions, the combination of driverless rideshare cars capable of running “almost continuously with minimal downtime for charging” or finding parking themselves, the emphasis of convenient parking will become unnecessary. The mass amounts of space devoted to parking are still required by zoning but could be discontinued down the road. After this shift to driverless cars, downtown underground parking can be converted to “data centers” or “recreational facilities”,⁶ Cohen suggests.

“We can now design the front door of the building for a beautiful entrance experience”⁶ where everyone has a chauffeur to drop them off.

Even more optimistic of a prediction from the Huffington Post, states that living standards within the United States could increase “with the gains in productivity.”⁷ With less “work” and greater advancements in science, we could see healthier communities and a society that nears closer to the ideal, dare I say, utopian future.



⁵Adam Peterson, “Future Cars Will Force Us to Redesign Future Cities,” Architectural Digest, May 25, 2017

⁶Bill Radke Shane Mehling, “What would Seattle look like without any parking?” KUOW News and Information

⁷Bill Teuber, “The Coming of the Second Machine Age,” The Huffington Post, January 22, 2014