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Position Paper Week 12: Automation and Creative Destruction in Tech

The term known as “*creative destruction*” originated in the 1940’s by economist Joseph Schumpeter in his work ***Capitalism, Socialism and Democracy*** (1942), he wrote:

The opening up of new markets, foreign or domestic, and the organizational development from the craft shop to such concerns as U.S. Steel illustrate the same process of industrial mutation—if I may use that biological term—that incessantly revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one. This process of Creative Destruction is the essential fact about capitalism. (p. 83)

The principle of creative destruction is that acknowledging that lost jobs, ruined companies, and vanishing industries are inherent parts of the growth system. And that over time, societies that allow creative destruction to operate grow more productive and richer; their citizens see the benefits of new and better products, shorter work weeks, better jobs, and higher living standards. That being said, the purpose of this paper is to present, analyze and response to the topic of creative destruction in Tech discussed in 4 relevant articles.

The article “Creative Destruction”, by Richard Alm and W. Michael Cox, highlights the impact of this concept on societies over the past two centuries. One clear example of this is how transportation has evolved over time and how much it has benefited society. Every new mode of transportation has taken a toll on the past existing jobs and industries. As the article says, “In 1900, the peak year for the occupation, the country employed 109,000 carriage and harness makers. In 1910, 238,000 Americans worked as blacksmiths. Today, those jobs are largely obsolete. After eclipsing canals and other forms of transport, railroads lost out in competition with cars, long-haul trucks, and airplanes. In 1920, 2.1 million Americans earned their paychecks working for railroads, compared with fewer than 200,000 today.”

Similarly to the transportation industry, the same has happened in one industry after another, and this is due to the inevitable but necessary advances in technology. Lots of professions has been displaced, however many more have been created. With the invention of the internet, hundred of thousands of webmasters an occupation that did not exists as recently as 1900 has been created, giving people the new opportunity and ways to make a living. As the article says, “Producers survive by streamlining production with newer and better tools that make workers more productive. Companies that no longer deliver what consumers want at competitive prices lose customers, and eventually wither and die.”, “The essential point to grasp is that in dealing with capitalism we are dealing with an evolutionary process”. However, societies will always be tempted to block the process of creative destructive, implementing policies to resist economic changes.

Following this last point, from the article titled ***Fear of artificial intelligence vs. the ethics and art of creative destruction*** we get a closer perspective of this concept in relation to AI. As the article says, “given that AI has the capacity to significantly accelerate scientific discovery, improve health outcomes, and reduce crises, I have long believed ethics requires that we deploy the technology. However, given that we are also well aware that high unemployment levels are inhumane, contain considerable moral hazard, and risk for civil unrest, AI should be deployed surgically and with great care. I do not support wide deployment of AI for the primary purpose of replacing human workers. I believe technology should be tapped to serve humans and other species, with exceptions reserved for contained areas such as defense and space research where humans are at risk, or in areas such as surgery where machine precision in some cases are superior to humans and therefore of service”.

This being said, some of the unnecessary fear existing due to new coming technologies is unjustified given the obvious advantages and positives these innovations bring. One important point though is that, hence the question is not whether or not deploy AI in the workplace, but rather, how, which and with whom. Certain constrains and boundaries will be necessary in how to implement AI in the workplace to ensure the most ethical path forward for AI systems. The article ***Creative Destruction, Revisited: AI is an Unstoppable Force in the Capital Markets*** by Axel Pierron, successfully adds to this idea. Since is undouble that AI prompts fear and loathing, it also inspires hope, ambition, and market opportunism in others.

As a solution to possible threats and issues posed due to AI, as the article says, “is to rely on human monitoring and oversight of the AI output”. As well as implementing within the AI some level of reporting or an audit trail. So that the system could explain how it clustered the various data that have been provided to it based on their importance, priority, and weight in its model. This is done in response to the possible problem of accountability for AI failure.

In conclusion, with the constant improvement and advances in technologies the consequences of creative destruction are inevitable. It is necessary not just for society but to humanity to be able adapt to the new concepts and innovations of time, hence giving way for evolution. That jobs will be displaced and eventually lost, and people will have to find other ways for making a living, is the natural course of time. However, the point to take away from this is how these innovations are use. AI and similar technologies show not be deployed for the primary purpose of replacing human workers, but rather to facilitate and improve existing jobs as well as creating new ones.