

THE QUESTION OF INEQUALITY IN A ROBOT SOCIETY

Understanding Value Creation and Distributing Rewards Fairly to Remain Human

It is the best of times, it is the worst of times. This Dickensian-style opening statement aims to effectively capture the *zeitgeist* of an imminently robotic world that would press us hard to define what it means to be ‘human’. Will a robot society erode our moral matrix that is essential to us being human? Will it bring the worst out of us if our well-being is threatened? The questions are many but there are no certain answers as there is no certainty about future. We would do well to begin by asking ourselves whether we have been human enough in a pre-robot society.

The various reports on growing distributional disparities within countries, both developing and developed, show that the storied ‘1 per cent versus the 99 percent’ confrontation has boiled over to herald an “age of anger”¹. Economic inequality has been soaring in the recent decades, thanks to value-extracting activities masquerading as value-creating ones. While it would be far-fetched to imagine a world where human beings are reduced to mere power generators for robots, as shown in the sci-fi movie *The Matrix*, exacerbation of inequality is very much on the horizon. Some proactive measures have to be initiated in the realm of economics to prevent the slide into dystopia. Addressing inequality in the economic sphere head-on can potentially ease the pains of transition.

Through this essay, I intend to spur my readers to reflect upon the evolution of our industrial world over the last two centuries by looking at the economic processes that generate, perpetuate and escalate inequality in a world of unprecedented opulence. Having done the task myself, I am convinced that welcoming robots into our present world order to create a new future would require some serious socio-political changes right from the outset – changes that will not be done by artificial intelligence (AI), but will purely be the outcome of the *human agency*. I present my learnings in this essay.

KNOWLEDGE ECONOMY AND VALUE CREATION – A CONTRARIAN VIEW:

When we worry about the future of humanity in a world of robots, one of the central concerns is about the future of work. Here, we are particularly concerned about the plight of the blue-collar workers whose political clout as a class has eroded significantly in the last couple of decades and of the millions of casual footloose workers, *the precariat*,² who have been forced to live on the margins of the so-called knowledge economy. We ought to pay attention to a very important aspect about the role of ordinary workers in such an economy.

The seemingly settled debate about who creates “value” in a capitalist society favours the capitalist entrepreneur, completely ignoring the contribution of the workers in the process of knowledge-creation within the business enterprise and in turn to wealth-creation. Unsurprisingly, this is the view Drucker subscribes to: “Despite all evidence to the contrary, the belief is still deeply ingrained that industrial, blue-collar worker, rather than knowledge is the creator of all wealth.” Such an argument fails to recognize that innovation, knowledge-creation and value-creation are continuous, collective and cumulative processes involving

¹ This is the title of a recent book by Pankaj Mishra. *Age of Anger: A History of the Present (2017)*

² Precariat is a portmanteau, a made-up word from the combination of precarious and proletariat

various participants as Mariana Mazzucato, expert in innovation economics, has persuasively argued in her book *The Value of Everything: Making and Taking in the Global Economy*. Workers generate, imbibe and embody industrial knowledge that keeps the wheels of capitalism moving.

In his ground-breaking work *Capital in the Twenty-First Century*, the French economist Thomas Piketty draws attention to two important features of modern capitalism – the rise of patrimonial capital and economic rents. When these two features are combined with the power and commercial possibilities of vertical integration, it is quite possible that companies with deep pockets and a vast army of technical manpower can become the biggest owners and operators of robots in a wide range of domains. The concentration of ownership will mean that when robots become the principal value-creators in the economy, the monetary benefits will accrue to a small bunch of capitalists. The larger question of ‘value creation for whom?’ and the distribution of attendant rewards will invariably be built on the foundations of a deeply unequal society.

The ill-founded yet widely accepted view that the capitalist and the knowledge worker (who is seen as the most vital cog in an entrepreneurial society by Peter Drucker) are the principal creators of economic value has justified the unfair and lopsided distribution of income and wealth in the world today. What lies at the heart of the rot in the current capitalist order is the inability to separate value-creation from value-extraction and the consequent distributional implications.

AUTOMATION, ARTIFICIAL INTELLIGENCE AND WORLDVIEW OF THE ECONOMIC ELITE:

Unlike management thinkers like Peter Drucker, who naively opine that “with knowledge being universally accessible, there are no excuses for non-performance”, socially-sensitive thinkers like Karl Marx and Mahatma Gandhi displayed an unvarnished understanding about their own structurally unequal and stratified societies. They understood that the lack of control over the means of production resulting in alienation from the production process can have a dehumanizing effect by killing human will and spirit. This does not augur well for creative production of knowledge in the workplace. After many decades of machine-led economic progress, what we are witnessing is not just mechanization of production but also the numbing of human mind itself because workers are not treated as value-creating human resources, but merely as replaceable factors of production in the process of wealth-creation.³ The demoralized workers operate under an ever-present threat of automation, which means they are just an innovation away from downward mobility.

Drucker is spot on when he says the following: “Precisely because technology is an extension of human beings, basic technological change always both expresses our worldview and, in turn, changes it.” Even as Drucker exudes a sense of optimism that technology is not destiny, many technologies we have developed over the years have only reduced human beings to pieces of commercial data in a world of big-data analytics and the developments seem irreversible. They have the power to accentuate deep-seated forms of discrimination and exclusion such as racism.

³<https://www.weforum.org/agenda/2016/11/70-of-employees-say-they-are-disengaged-at-work-heres-how-to-motivate-them/>

Machine learning and artificial intelligence are not free-thinking technologies impervious to human prejudice. Today, algorithm-driven social and economic decisions are so pervasive but what goes into those algorithms are value judgements and human bias.⁴ The mathematician and data scientist, Cathy O’Neil in her book *Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy* explains this in a succinct and categorical way: they are just opinions coded into math. While it is believed that robots are capable of self-learning and evolving, the inputs they receive will always have strong human content and biases that accompany such content. The point I am striving to convey is that when robots begin to be perceived as creators of economic value, there is the danger of systematic human prejudice and stereotypes acquiring an indelible scientific coating at the expense of a just social order.

Thanks to tech giants and large corporations who want an endless cycle of production and consumption to go on, regardless of what happens to carrying capacity of the planet, we have come to believe that all technological change is a net positive for humanity. Fundamental changes in technology have come to express the worldview of the influential tech-savvy elite. The enthusiastic march towards the adoption of artificial intelligence in areas that will render human workers redundant for no fault of their own, offers a glimpse of that worldview.

UPSKILLING AND CONTINUOUS LEARNING – IMPOSSIBLE ON THE BRINK OF SUBSISTENCE:

Drucker anticipates an entrepreneurial society where continuous learning and innovation will become normal. He seems to firmly believe that “people no longer stay where they were born, either in terms of geography or in terms of social position and status. By definition, a knowledge society is a society of mobility.” But who can afford continuous learning and use it to elevate one’s position in society?

Let us examine Drucker’s propositions about equal access to knowledge and steady upward mobility by looking at a specific but telling example. India, the country I belong to, is a thriving political democracy, a complex society with numerous fault-lines and a largely informal economy without adequate safety nets for its economic actors. What lies at the heart of social and economic stratification here is a highly pernicious system of discrimination and exploitation –the caste system. It is a social hierarchy of people with a great degree of rigidity and immobility built into it, especially for the marginalized. There is evidence to show that educational and health outcomes vary largely among different caste groups, thanks to differential access to opportunities and levers of power. Analysis of findings from an all-India unit-level survey shows that there is very low occupational mobility across generations.⁵

In India, there are multiple axes of discrimination that intersect at many points. Underlying these axes are deeply entrenched power structures that have thwarted the upward mobility of many disadvantaged groups through overt and unabashed violence. Many live on the margin of subsistence; even official estimates show at least one-third of the population to be living below the cynically defined poverty line. Today, India is more unequal than it has ever been since the time of the British Raj. The World Inequality Report 2018 and Credit Suisse’s annual Global Wealth Report testify to this stark reality.

⁴ <https://newsclick.in/artificial-intelligence-and-threat-humanity>

⁵ <https://www.livemint.com/Politics/N6sgULxWgYXpKfOwyxEM9H/Low-mobility-across-generations-heightens-job-creation-chall.html>

As I pored over Drucker's writings on society, I did not find his insights useful in envisioning a robot society in the Indian milieu that I am part of. I was really struck by the linearity of his imagination and narrative. In Drucker's world, there is no place for losers; no information and power asymmetries exist and blue collar workers will easily become or give way to knowledge workers.

Drucker's over-the-top claims about equal opportunity, continuous learning and upward mobility fall apart when confronted with Indian reality. It is not as if the Indian farmers, weavers, craftspeople and migrant workers lack skill. There is a tendency to privilege mental labour over manual labour in all societies and India is just a glaring example. We live in an epoch where writing algorithms and developing software that make a mockery of people's privacy are celebrated as skills while the act of cultivation that puts food on the nation's table is labelled "unskilled work".

The privileged few have not been human enough at any point in time in history to acknowledge and appreciate the skills of the ordinary folks as superior to theirs and more value creating for the society. Class divide has been a permanent feature of modern industrial societies and in India the caste system intensifies the divide. How can such a divide make universal access to knowledge possible? Can upskilling happen when knowledge is asymmetrically distributed? To expect people who have been structurally prevented from upskilling to adjust to mass technological disruption such as automation is gross and unjust.

HARNESSING ARTIFICIAL INTELLIGENCE FOR HUMANE ENDS:

The caste system referred to in the previous section excludes a group of people from its ambit. They are the Dalits (the oppressed), the outcastes of Indian society. They have been subject to inhuman treatment for centuries and the oppression continues in numerous forms, especially in the denial of basic human rights and citizenship entitlements in a democratic polity. Dalits are engaged in the most degrading and dehumanizing occupation in human history – manual scavenging, which involves handling and disposing of human excrement, cleaning blocked manholes and removing faecal sludge from septic tanks, among other things. The economic value of their contribution to the society is enormous but such an occupation should not be existing in a modern society in the first place.

There are 1.80 lakh Dalit households manually cleaning the 7.90 lakh public and private dry latrines across India; 98 per cent of scavengers are meagerly paid women and girls.⁶ Every year, scores of manual scavengers die of asphyxiation. This horrendous situation persists despite the fact that manual scavenging is outlawed in India. The government has miserably failed to eradicate manual scavenging and rehabilitate manual scavengers. Can we not harness artificial intelligence technology to end this criminal practice?

There is hope. A group of engineers from the Indian state of Kerala with a mission to end manual scavenging in India have developed a spider-shaped robot called "*Bandicoot*" that can clean manholes and sewers with precision. A successful trial was conducted earlier this year and the Kerala Water Authority has officially sanctioned the use of this robot to clean all sewers in Trivandrum, the capital city of Kerala. This remarkably laudable effort needs massive upscaling at the national level to eliminate manual scavenging altogether.

⁶ <https://www.firstpost.com/living/magsaysay-awardee-bezwada-wilson-manual-scavengers-deaths-are-political-murders-by-governments-2924388.html>

It's extremely challenging for those who are giving up this work to switch over to another vocation. They have to toil many times harder to earn livelihood. While robots can do the stellar job of putting an end to manual scavenging, eventually it is the duty of the state and society to guarantee decent livelihood and dignified life for people who have been rescued from that hazardous occupation. For that to happen, the seeds of a strong sense of equality and fraternity, ideals enshrined in the Constitution of India, must be sowed in the minds of people. Even as robots evolve to do technically complex tasks, profoundly influential values like compassion, empathy and acceptance will continue to be the sole prerogative of humanity. There are still quite a lot of things that human beings alone are capable of accomplishing.

BEING HUMANE TO STAY HUMAN – THE NEED FOR EMPATHY AND WELFARE STATE:

The fundamental responsibility of any decent society that aspires to stay human is the following: guaranteeing a just, safe and dignified space to battered souls within the boundaries of the planet in times of growing economic inequality, financial instability and climate change. This essay took up the task of drawing attention to and emphasizing the imperativeness of carrying out that responsibility by arguing that our understanding of what constitutes value, who creates it and who takes the credit for creating it is deeply flawed and underlined its implications for a just economic order. There is a strong economic basis to our inability to see and value fellow human beings as equals.

Acknowledging that society's wealth is created collectively is the first step towards moving in the direction of egalitarian arrangement for reward distribution. Such a thinking requires a fundamental shift in our worldview and is possible only if we develop a sense of empathy. This fundamental shift will be helpful in realizing that scientific excellence is desirable only insofar as it remains subordinated to human faculties and in developing technologies that don't threaten humanity's existence.

Many of the great episodes of human progress, including those that are usually described as being entirely good, have left behind a legacy of inequality. Since the upside potential and downside risks of robots to distributional outcomes in an unequal world remain to be fully fathomed, it would be prudent to design safeguarding mechanisms and safety nets presuming chaos in the initial stages. Doing so will serve as a hedge against the risk of being blindsided by rude shocks if and when a robot society comes into its own.

Large-scale technological disruption in the form of mass unemployment, as argued by some thinkers on AI technology, need not be a remote possibility. But such a scenario opens up another possibility of a benign nature – it increases free time for the full development of the individual. This will empower and enable individuals to accomplish many different things in life as they exit the mechanistic world of specialized work, provided their economic future is secured via guaranteed income transfers.

Contrary to Peter Drucker's emphatic claim that "welfare state is past rather than the future", the looming threat posed by AI to the future of work demands that the state reinvents itself to guarantee economic security, not just to protect those affected by the disruption, but also to salvage the creative potential of capitalism.⁷ The ubiquitous debates and experiments regarding universal basic income is a useful case in point. These debates and experiments need to be

⁷ <https://www.brookings.edu/blog/brookings-now/2018/05/23/artificial-intelligence-will-disrupt-the-future-of-work-are-we-ready/>

conducted in the right earnest, because what is at stake is the sustainability of capitalism itself, as rising inequality can halt the march of capitalist accumulation in a robotized society. Transferring a significant part of the accumulated surplus, i.e. profits, to substantial segments of population is imperative as it would be the best way to acknowledge the collective contribution of the society in enhancing the economy's productive powers and wealth creation.

Our vision about the future and the design of public policy in actualizing it must align with what John Maynard Keynes, arguably the greatest economist of the 20th century anticipated in his delightful essay, *Economic Possibilities for Our Grandchildren*: “Thus for the first time since his creation man will be faced with his real, his permanent problem — how to use his freedom from pressing economic cares, how to occupy the leisure, which science and compound interest will have won for him, to live wisely and agreeably and well.” Much work lies ahead.

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(Word Count: 2998 Words)