The Human Costs of Outsourcing Human Functions to Technology: How Humanity Can be Better Stewards of Technology

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In terms of corporate spending and even consumer spending, there have been significant increases in technological expenditure over the past two decades and that accelerated investment trend is forecasted to continue as humanity outsources more and more human functions to technology. According to figures from the Federal Reserve Board of Governors, technological investment expenditure skyrocketed and tripled between 1994 and 2003 and according to projections from Statista, Artificial Intelligence (AI) expenditure is also projected to triple between 2023 and 2030. The large increases in technological investment and projected investment can mainly be attributed to the successful achievements of technology companies in the last three decades who have been able to harness the capabilities of technology more effectively as opposed to the years between 1971 and 1994 when the first processor was made by Intel when knowledge and understanding of technological topics was in scarce supply which was a major constraint on the effectiveness and development of technological applications. Increases in the last three decades were mainly achieved through increased education and improved understanding of technology related fields which has led to greater output and more accurate delivery which in turn has fuelled and driven technological investment. However, although technological investment is an area of growth that can create human jobs within societies, there is also a downside to this affluent increase in investment and enhanced technological delivery which relates predominantly, to its focus, resource appropriation and the outsourcing of human jobs because the short- and long-term impact of that accelerated rate of investment upon society and communities definitely has implications for our human species.

Essentially, although technology has provided many benefits to mankind and humanity such as medical advancements, educational provisions, scientific developments and even some environmental solutions, the corporate outsourcing of human functions has also come at a human and economic cost to humanity that cannot be ignored. Corporate investment in technology has accelerated but simultaneously, man's operational capacity and contributions to society and the world have reduced, dwindled, and diminished as technological substitutes have replaced man’s role in a variety of industries. Investment expenditure in technology is definitely required in order to solve some of the more complex human problems effectively which may currently lie beyond our human reach, but the questions then become, how much should be spent, how quickly should it be spent, what human functions can we safely outsource and in which areas of human development should technology play a major role. Ultimately, this is where there needs to be more focused human direction and human ethical safeguards put in place to ensure that the trajectory of technological development correlates positively with human development objectives, so that technological development does not run up a negative deficit of human upset, tension and frustration.

Initially, it was suggested and promised that the outsourcing of process driven work functions to technology, would enhance corporate efficiency and would lead to more interesting and stimulating jobs for human beings, better working conditions via shorter working weeks, a better

work life balance and increased leisure time but instead it has led to large increases in unemployment, rising redundancies, and increasing levels of frustration as the technological solutions on offer, outstrip the problems which then in turn creates other problems. In terms of mankind's development as a species, it has clearly been documented time and time again that man requires purpose to live a happy and fulfilled life. This has often been observed by psychologists such as Maslow (1943) who established that purpose, financial provisions, self-esteem and self-actualisation were important to human beings then also by Kahn (1990) who explored meaningfulness in work related roles that ascertained that human beings are more driven and more available to perform constructively and to greater levels of productivity when their work-related role feels more meaningful to them and safer with regards to their personal wellbeing.

When it comes to the issue of human mental wellbeing, our communities and society at large have to some extent already been adversely affected by accelerated technological development as human beings that face redundancy, often face stressful factors afterwards such as debts that they can no longer afford to satisfy, breakdowns in relationships due to financial duress and the lack of any financial lifeboats in terms of a suitable, alternative employment positions being available to them to enable them to continue to provide financially for their families. Additionally, there has been a lack of legal boundaries to govern how man and machine may work together in various industries in a manner that respects human contributions, individuality, creativity, and capacity which can create tension, financial insecurity, individual financial losses, mistrust and upset which can further exasperate the situation, especially when mass human redundancies occur with no suitable forms of alternative employment.

In the last two decades, this can be seen from the loss of jobs in corporate process driven areas as corporations outsource more and more human jobs to technology, but this has not yet resulted in better alternative employment options for many human beings and has simply resulted in larger corporate shareholder gains and the need for the human beings affected to retrain time and time again in a loop of downward spiralling losses. While this may save some corporate resources and return higher yields to corporate shareholders, this is an aspect of corporate ownership that may need to be examined, explored, and dissected, so that there is a less of a negative impact felt by those who face redundancy due to cost cutting technological initiatives. Another consequential risk and danger factor from this massive shift in human employment to technological automation is that the wealth class divisions may start to grow once more and although there would be a shift to some extent in terms of who would be wealthy, and it would no longer merely be about family wealth and/or inherited wealth, the results would still be an affluent minority group and a large, impoverished underclass within society.

Since technology is developing at an accelerated rate due to increased investment which may have already outstripped the levels of corporate investment in human development, this has created an imbalance in terms of the lack of replacement jobs on offer which either needs to be controlled by the people affected by it, i.e. employees need to have greater power and control, or it has to be regulated more stringently. Market forces left to their own devices will only worsen the situation which will become a downward spiral and cycle of human regression that no longer respects the value of human inputs into human functions which will result in more human job losses at an increasing pace with no suitable replacement alternatives being provided because human capacity is now being underdeveloped and corporate objectives and entities are

predominantly, wired to cut costs to increase efficiency and so this issue cannot be left unaddressed.

Some of the more alarming consequences of this accelerated technological development is the impact that it is having and will have on human intellectual capacity which is decreasing as a result due to an increased reliance upon technology and less corporate human development being undertaken. The power and capacity of technology is growing at an accelerated rate and technology is now becoming more involved in not just in our human corporate and work functions but also in many of our human social functions, but human capacity needs to be developed, utilised, and exercised to grow which means that in the future, human brain capacity could suffer long term effects which may possibly, retrogress humanity's intellectual capacity as societies and individuals rely more heavily upon technology to perform basic thought functions. In some respects, technology where utilised in a non-essential areas, can encourage human brains to be far less productive and an example of this in practice can be seen from the learning of multiplication tables which at one-point, children had to learn off by heart while in school and the use of calculators which have made simple and complex calculations a lot easier but also far less brain intensive. Nowadays, nine out of ten adults will reach for a calculator and interact with technology as opposed to performing a basic multiplication calculation in their mind via mental arithmetic however, initially, technology was utilised predominantly as an educational support tool not as a substitute or replacement for human intellect and therefore there has been a definite shift from the provision of a supportive tool to an almost total intellectual dependency.

Furthermore, due to the increased capacity and delivery of technology in recent times, there is a risk that there will be further losses in terms of human investment in human capacity as human beings try to compete with a competitor that is highly efficient, intelligently capable and that also possesses a lower margin of error than themselves for investment resources. When it comes to corporations, corporate entities have already shown that they are far less interested in the development of human capacity than they once were which can clearly be seen from the large number of human redundancies as corporations invest more heavily in technological automation. Since this often adds more economic value to their corporate bottom line more quickly as they prioritise bottom-line profits above human factors, corporations are effectively disinvesting in human capacity.

Consequently, this further adds to the downward spiral of diminishing human capacity because human capacity will no longer be as high on the corporate priority list as it once was since technological investment is often now viewed as more reliable, more stable, more efficient, and more capable which puts human beings at a direct disadvantage and at risk of mass redundancy as technological substitutes are developed then implemented. The reality is human beings cannot compete with technological substitutes therefore this competitive tournament of Technological Automation vs. Human Resource Input is not a competition that human beings can ever or will ever win and especially not if investment in technology continues at this accelerated pace and if the appropriation of those resources continues to follow the same trends because human capacity is now being underdeveloped worldwide. Effectively, to overcome these issues our human species must aim to become better stewards of technology and attempt to correct the diminishing rate of investment in human capacity before that situation transcends beyond repair or any possible corrective action.

When it comes to the issue of human beings becoming better stewards of technology, firstly, we must accept that there has been an underestimation of the rate and resources that would be invested in technology which has enabled technology to perform more human functions, more rapidly and more efficiently. This acceleration in delivery when coupled with an overestimation in the production of replacement work alternatives being provided to human beings, has ultimately, had a negative impact upon human lifestyles and human morale. In theory, the replacement of human jobs with more interesting alternatives should have occurred simultaneously and resulted in a smooth transition, but there has been a lapse in terms of pace due to the commercial appeal of corporate cost cutting, the desire to maximise shareholder wealth and the improved delivery of technological substitutes which has resulted in accelerated investment above and beyond initial expectations. Whether this lapse is due to a diminished capacity on the part of human beings is another issue entirely or whether it is just due to the accelerated rate of technological development spurred on by vast technological investment which has outpaced our own capacity to replenish and create alternative forms of employment, is hard to ascertain with any degree of accuracy and without further research. However, the correlating reduction in human capacity and replacement opportunities coupled with the increasing capabilities of technology have created a downward human development spiral for mankind. This delicate equilibrium regarding humanity's economic development has now been thrown into a state of flux and has been imbalanced by the rapid, intensive increase in technological investment which has led to reduced economic, societal interactions on the part of humanity and although there are many uncertainties about how this situation arose, there is one thing we can be absolutely certain about which is the reality that this imbalance requires action on our part before the situation deteriorates any further.

In conclusion, overall technology can be a great catalyst for positive change in that it can help humanity to find cures for diseases, assist with environmental solutions and it can be utilized to improve educational provisions and accessibility, but it also presents some drawbacks which could be detrimental in the longer term to our human species if left unregulated effectively and unchecked. In terms of how this technological investment and expenditure is regulated, balanced, and checked, a suggestion would be that there could be some cap limits put on technological investment in areas that are non-essential (i.e. areas that are not related to health, medical and environmental advancements) which could be easily implemented via government structures and various technological governance bodies. Some additional positive initiatives could also be implemented at a government level to provide more focused investment direction where governments encourage technological development in positive and constructive areas through focus tax incentives, investment schemes and tech funding start up schemes.

Another measure which could helpful is the implementation of a reporting framework such as an Ethical Corporate Measurement Reporting Framework that analyses how much is spent by corporate entities on technology or technological development which could compare technological expenditure to expenditure on human investment and human development in any given period that could be contained in an Employer Employee Value Statement. A set of Employee Corporate Performance Reporting Measures similar in some respects to the current performance ratios that corporate analysts utilise to analyse corporate performance (i.e. ROCE) could be created as part of that value statement which would allow investors and shareholders to evaluate a company or their board in terms of their corporate ethics in action which would enable those stakeholders to assess their ethical stance in terms of their corporate priorities and

investment priorities in practice. This kind of regulatory corporate moderation would provide investors with greater transparency which would then enable them to invest in companies that support human development, champion the development of human capacity and that financially support the retention of a human workforce. Consequentially, this could also perhaps help to overcome the conflict of interest that has arisen due to accelerated technological investment in less essential areas which is primarily driven by corporate efficiency expectations and demands because it will once again put humanity at the forefront and in the driving seat of our destiny as a species and redirect investment back towards human development.

When it comes to technological development, technology has the potential to change our world in many positive ways being that its primary function is to deliver solutions to human problems but there needs to be some regulatory guidance on which problems are addressed, the rate of investment into those solutions and how technological resources are utilised. This is not something particularly new in that humanity has experienced similar moments throughout history where a resource has become so powerful that it can threaten humanity's existence in various ways through society's misuse or misappropriation of that resource in one way or another such as the discoveries of gold and oil however, unlike those discoveries which were a product of the Earth's natural existence, this resource was created by man and can be fully controlled by man. Much like other discoveries of a useful resource, humanity must regulate the impact of that resource upon our communities and our human intellectual development which due to an emphasis on corporate profits to the detriment to human capacity, requires some kind of regulatory framework to be put in place to govern growth, appropriation, and direction so that technological development does not diminish, undermine, destroy or denigrate the capacity and survival of the species that it was created to assist, human beings.

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End Notes:

Note 1: According to Statista data, in 2021, the United States had investments of more than one trillion U.S. dollars in the information technology (IT) sector. It was followed by China, with IT investments worth 333 billion U.S. dollars, while Brazil's investments amounted to nearly 48 billion U.S. dollars.

Source: Statista:<https://www.statista.com/statistics/1331124/global-it-investments-by-country/> Accessed 18/05/2024

Note 2: According to Statista data, the AI market size is projected to rise from 241.8 billion U.S. dollars in 2023 to almost 740 billion U.S. dollars in 2030, accounting for a compound annual growth rate of 17.3%.

Source:Statista:<https://www.statista.com/statistics/941835/artificial-intelligence-market-size-revenue-comparisons/>Accessed 18/05/2024

Note 3: Maslow's Hierarchy of Needs

Although some scholars have criticised Abraham Maslow's motivational, psychological theory about human behaviour with regards to motivation, happiness and decision making since it was first published in 1943, for the most part, it is still deemed to hold true, and it is a widely referenced and utilised, legitimate psychological theory all across the world. The main conclusions that Maslow arrived at were that human needs can be identified as physiological needs (food, clothing and financial provisions), safety needs (job security and physical safety), belongingness and love needs (societal acceptance and inclusion, family, friendships, work rapports, romantic partnerships and companionships), esteem and self-actualisation needs (fulfilment and realisation of human potential) which were then organised and presented in a hierarchy pyramid model which represented their importance in terms of human psychological drivers.

Some criticisms in the past have related to the lack of research upon which the theory is based which called into question its validity, but other criticisms related to the hierarchical structure of the model itself which some have argued is not reflective of reality because most human beings place little or no hierarchical order upon those needs being met. Another criticism was that the theory fails to take into consideration intrinsic motivations such as personal preferences, life passions, personalities, values, life experiences and interests and it has also been criticised for the lack of consideration given to issues such as cultural influence which can also motivate, drive human behaviour, and influence decision making with regards to the perception of needs and the pursuit of human happiness. However, this theory still stands strong today and is referred to by many, simply due to its base principles with regards to human psychological decision-making processes and motivational theories which were found to hold true when researched and tested decades later through a Gallop World Poll Research project.

Source: Tay, L., Diener, E. (2011) Needs and subjective well-being around the world, Journal of Personality and Social Psychology, vol 101(2), pp. 354-365

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Gallop World Poll Research findings 2005 to 2010: “The researchers found that “fulfilment of a diversity of needs, as defined by Maslow, do appear to be universal and important to individual happiness. But the order in which "higher" and "lower" needs are met has little bearing on how much they contribute to life satisfaction and enjoyment,” Diener said.”