Editorial: Will AI-generated intellectual capital create broader wealth or wealth for the few?

I am a technology proponent. I believe more in the good that technology can do than the bad. I generally see the most harmful consequences of technology as due to its misappropriation by people with nefarious motives. However, the widespread accessibility of generative AI and its furious pace of development raise concerns about how the economic value of the intellectual capital invariably created by AI will be distributed in society. Will capital formation filter down from innovative firms, or can AI help individuals create their own value from the bottom up? Research has shown that clusters and concentrations of firms employing technological innovations will generate increased intangible value for the firms and their stakeholders (Dabić *et al.*, 2021), but AI holds the promise of being more than "just another technology." When many countries worldwide are seeing growing gaps between the rich and the poor, there is a case to be made for AI as a big equalizer, given its propensity to empower individuals with capabilities and knowledge, enabling wealth to be generated by millions of people. But will it?

There is general agreement that a concentration of wealth among the few in society is tantamount to a concentration of power. It is even worse if those few are members of the political class. Such concentration of power allows the few to buy favors and reinforce their power, going against the essential grain of democracy. How does AI create this concentration of power? If we look at the role of AI in improving individual productivity, there are two credible theses – substitution and augmentation. The substitution hypothesis argues that AI, with its (now demonstrable) capabilities, will increasingly replace many jobs – including white-collar jobs like accountants, lawyers, etc. Goldman Sachs (Briggs and Kodnani, 2023) estimates that about a quarter of USA jobs could be automated by AI, "with particularly high exposures in administrative (46%) and legal (44%) professions." The argument claims that this is a runaway train that cannot be stopped as tech companies, with their profit motives, keep churning out better and better AI products. If AI automates jobs, *humans lose bargaining power* – as AI will replace them.

The alternative thesis is that AI is just a tool, and as a tool, it may replace some part of a job but largely augments human productivity, something that technology has been doing for years. The automobile may have precipitated the loss of jobs among saddle makers and street sweepers (who cleaned all the horse manure), but it also ushered in millions of new jobs in myriad industries in the new car culture. The augmentation hypothesis argues for the multiplier effect – humans with smart machines can do much more than humans with dumb machines – *so AI does not decrease but increases the value of human capital.* In this case, the competition is not between humans and AI, as with the substitution effect, but between humans with AI and humans without AI. Which thesis will prevail? The difference is subtle but has profound implications for human value.

In the interminable long run, there is a more robust rationale for the substitution hypothesis. The reasons are simple. Individuals and firms alike will seek to automate ("replace") routinized ("boring") activities, freeing up time and creative energies to solve emerging ("interesting") problems. Moreover, the directional goal of AI has always been (and still is) to build more competitive AI that matches or exceeds humans' abilities. This is natural, as we benchmark AI against the ideal. If this is indeed the trajectory, the substitution

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hypothesis will prevail, as improving AI will continue to drive down the value (and wages) of higher-skilled knowledge workers. Knowledge is sticky and gives individuals with some unique knowledge a competitive advantage. However, AI moves this knowledge to the machine – devaluing the human. The economic value created by the difference between the generative nature of AI (higher revenue) and the automation of AI (lower human cost) will increasingly flow to the owners of AI capital – companies, stockholders, etc. In contrast, unless generative AI can spawn new kinds of jobs, the substituted humans may need to depend on the benevolence of a wealth distribution system (like universal basic income) to survive. However, the people who drive this economic value creation will thrive. As this argument goes, the wealth gap will increase, adversely impacting political institutions (democracy) and society.

This analysis is neither nuanced nor inevitable. Unique characteristics of different industries, relative inelasticity of AI's impact on physical labor, government policies, new industries spawned by AI, immigration patterns, anti-AI backlash, dissipation of big tech power and many other factors can modulate this trajectory. However, what is predictable is that, without such interventions, the natural tendencies of AI in the long term can indeed be dystopian. As I said, I'm a technology proponent.

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References

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Varun Grover is the George and Boyce Billingsley Endowed Chair and Distinguished Professor of IS at the Walton School of Business, University of Arkansas. He has published extensively in the information systems field, with over 500 publications, 300 of which are in major refereed journals. Over ten recent articles have ranked him among the top four researchers globally based on the number of publications in the top IS journals and citation impact. Dr Grover has an h-index of 100 and around 52,000 citations in Google Scholar. Thompson Reuters and Research.com recognized him as one of 100 Highly Cited Scholars globally in all Business disciplines. He is Senior Editor for *MISQ Executive*, Editor of the *Journal of the Association for Information Systems Section* on Path Breaking Research and has served as Senior Editor for *MIS Quarterly (2 terms)*, the *Journal of the AIS* (2 terms) and *Database*. Dr Grover's current work focuses on the impacts of digitalization on individuals and organizations. He has received the top University research awards from USC, Clemson and Arkansas. He has numerous awards from AIS, the Academy of Management, DSI, the OR Society, Anbar and PriceWaterhouse, among others, for his research and teaching. He is a Fellow of the Association for Information Systems and has received the prestigious LEO Award for Lifetime Exceptional Achievement in Information Systems.