High-Tech Modernism: Limits & Extensions

William H. Janeway

High-tech modernism is a powerful construct for reading the broad range of effects of digitalization on society. This response to Henry Farrell and Marion Fourcade's essay "The Moral Economy of High-Tech Modernism" first notes that high-tech modernism seems initially specified for application to advanced, quasi-liberal political economies. It then identifies three dimensions along which that construct could usefully be extended: 1) to take account of the limits of machine learning techniques of data analysis; 2) to consider the manner in which algorithmic digitalization transforms both the content and the management of work; and 3) to examine political responses to high-tech modernism, reminiscent of Karl Polanyi's "double movement," increasingly observable across a spectrum that runs from competition policy to the labor market.

Henry Farrell and Marion Fourcade characterize high-tech modernism by its mobilization of machine learning–based algorithms to do the work of classification and management that had been performed by the paper records of bureaucracies, both public and private, in the high modernism of political scientist James Scott.[1] They particularly call out the difference between the "standardization": of people and goods propagated in the previous analog regime versus the differentiation by individual attributes and behavior that the digital regime enables. Further, the digital regime is dynamic: tracking, recording, and evolving in response to behavioral feedback initiated by the algorithms themselves, conditioning and constraining human agency with the "invisible loops" of these algorithms.

This is a powerful and relevant construct for reading the consequences of the digital revolution. One general comment is in order. The domain that Farrell and Fourcade explore seems implicitly to be that of the capitalist West, where state capacity and reach have been constrained by a long generation of neoliberalism, now in retreat (or so we may trust). High-tech modernism with Chinese or Russian characteristics, for example, would likely elicit significant shifts in perspective and analysis.

The importance that Farrell and Fourcade appropriately give to the techniques of machine learning call for a brief review of the weaknesses and limits of this

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technology. The outputs of machine learning algorithms are necessarily conditioned on their training data, supervised or unsupervised. Some six years ago, the digital guru Maciej Cegłowski pithily observed: "Machine learning is money laundering for bias."[2]

The power of machine learning methods to identify patterns in data is challenged by two deep flaws. First, as Big Data morphs into Humongous Data, the available patterns of correlations increase exponentially. The difficulty of identifying causal relationships in the sea of false correlations similarly rises.[3] Second, it is hard enough to extract *information*, represented by those patterns, from the data. It is a different and higher order of magnitude of difficulty to ascribe *meaning* to that information, as meaning is dependent on the context in which the data were generated and consumed.

In line with Farrell and Fourcade's essay, the application of machine learning algorithms to any data set is intended to confer a certain objective legitimacy on the result. But controversial applications – as in the criminal justice system to influence parole hearings and sentencing judgments – are being called out and questioned.[4] Further, old-fashioned profit maximization can visibly pollute and corrupt the presumed objectivity of the algorithmic output, as has become the case with Google's PageRank algorithm, a relatively early and triumphant machine learning technique.[5]

Successive technological revolutions have transformed both the content and management of work before: for example, the mills of the First Industrial Revolution, with workers clocking on and off shifts, and the assembly line of the Second, with the disciplined microfragmentation of tasks. Machine learning brings in a new dimension of automation: routine tasks reach higher up the hierarchy of skills and status, into the middle third of the distribution of compensation.[6] The application of algorithms to optimize the supply side takes commoditization of labor to a new level.[7]

The emergence of the "gig economy," peopled by part-time providers of services orchestrated by digital platforms, depends on optimizing algorithms. Whether in call centers or distribution centers or driving their owns cars or bikes, gig workers exemplify the precarity that high-tech modernism brings to the labor market. Farrell and Fourcade do take brief note of the machine learning applications "implemented to hire and fire, to predict performance."[8] They could usefully expand on this domain of high-tech modernism.

Those who know they are inventing the future are all too likely to ascribe no value to the time and effort it takes to understand how the world they are disrupting came to be and how it works. Moreover, as Farrell and Fourcade note, the digital authors and architects of high-tech modernism share

a broadly libertarian bias, most explicitly expressed through the rise of "crypto," or crypto-currencies. In particular, success in reducing technological frictions in the delivery and consumption of services often leads the disrupters to ignore the other frictions that remain, especially the political ones.

Uber and Airbnb have discovered that the regulatory structure that evolved over generations for transportation and hospitality services are not successfully overridden with a casual apology. Even while labor organizers struggle to enlist gig and hourly workers from Starbucks to Amazon, legislators and regulators are examining the grey area between gig work and employment.[9] And the less ideologically driven crypto players are embracing regulatory compliance.[10]

More broadly, the bipartisan "techlash" has taken specific form in the rediscovery of the antitrust laws and their incipient liberation from the constraints of "law and economics." Lina Khan's elevation from author of a *Yale Law Journal* article to chair of the Federal Trade Commission is exemplary.[11]

Farrell and Fourcade ascribe "the robust offense and disbelief that many people feel about algorithmic judgment" to the possibility that "the old high modernist moral political economy . . . is not quite dead."[12] But could we not look forward rather than back? Is it not possible that we are witnessing yet another "double movement," such as that explored by economic anthropologist Karl Polanyi and whose reversal was analyzed by political scientist Mark Blyth?[13] Might society be mobilizing in response to high-tech modernism? It would at least be pretty to think so!

ABOUT THE AUTHOR

William H. Janeway is Senior Advisor and Managing Director at Warburg Pincus, an affiliated member of the Faculty of Economics of Cambridge University, and Co-Founder of the Governing Board of the Institute for New Economic Thinking. He is the author of *Doing Capitalism in the Innovation Economy: Reconfiguring the Three-Player Game between Markets, Speculators and the State* (rev. ed., 2018).

ENDNOTES

[1] Henry Farrell and Marion Fourcade, "The Moral Economy of High-Tech Modernism," *Dædalus* 152 (1) (Winter 2023): 225–235.

[2] Maciej Cegłowski, "The Moral Economy of Tech" SASE National Conference 2016, Berkeley, California, June 26, 2016, https://idlewords.com/talks/sase_panel.htm.

[3] For examples, see Tyler Vigen, "Spurious Correlations," https://www.tylervigen.com/spurious-correlations (accessed December 6, 2022).

[4] Jens Ludwig and Sendhil Mullainathan, "Fragile Algorithms and Fallible Decision-Makers: Lessons from the Justice System," *Journal of Economic Perspectives* 35 (4) (2021): 71–96.

[5] John Naughton, "Is Google's Domination of the Internet Finally Over? Search me . . . ," *The Observer*, March 20, 2022.

[6] Daron Acemoglu and Pascual Restrepo, "The Race between Man and Machine: Implications of Technology for Growth, Factor Shares, and Employment," *American Economic Review* 108 (6) (2018): 1488–1542.

[7] Alexandra Mateescue and Aiha Nguyen, *Algorithmic Management in the Workplace* (New York: Data & Society, 2019), 1–15, https://datasociety.net/wp-content/uploads/2019/02/DS_Algorithmic_Management_Explainer.pdf.

[8] Farrell and Fourcade, "The Moral Economy of High-Tech Modernism," 230.

[9] Dave Colon, "What Is He? National Labor Relations Board Will Once Again Look at Gig Workers," Streetsblog NYC, December 30, 2021, https://nyc.streetsblog.org/2021/12/30/national-labor-relations-board-looking-at-whether-gig-workers-are-independent-contractors-or-employees.

[10] "Enhancing Trust with Regulatory Compliance," Coinbase, https://help.coinbase.com/en/coinbase/other-topics/legal-policies/enhancing-trust-with-regulatory-compliance (accessed December 6, 2022).

[11] Lina M. Khan, "Amazon's Antitrust Paradox," *Yale Law Journal* 126 (3) (2016–2017): 710–805.

[12] Farrell and Fourcade, "The Moral Economy of High-Tech Modernism," 232.

[13] Karl Polanyi, *The Great Transformation: The Political and Economic Origins of Our Time*, 2nd ed. (Boston: Beacon Press, 2001); and Mark Blyth, *Great Transformations: Economic Ideas and Institutional Change in the Twentieth Century* (Cambridge: Cambridge University Press, 2002).