



## Are Technological Unemployment and a Basic Income Guarantee Inevitable or Desirable?

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*Journal of Evolution and Technology* - Vol. 24 Issue 1 – February 2014 - pgs 1-4

The question is a simple one: if in the future robots take most people's jobs, how will human beings eat? The answer that has been more or less obvious to most of those who have taken the prospect seriously has been that society's wealth would need to be re-distributed to support everyone as a citizen's right. That is the proposition we used to frame this special issue of the journal, and the contributors have explored new and important dimensions of the equation.

Mark Walker begins the discussion in "BIG and Technological Unemployment: Chicken Little Versus the Economists" by reviewing the argument for impending widespread technological unemployment and reasons to be skeptical of economists' reassurances that it will not occur. Then he briefly reviews the fiscal demands for a minimal basic income guarantee (BIG) and proposes a value-added tax as a way to pay for it. He notes however that a fuller discussion of BIG as a solution to technological unemployment requires a fuller consideration of the many other policies that are and will be proffered as solutions.

In "Technology, Unemployment & Policy Options: Navigating the Transition to a Better World" Gary E. Marchant, Yvonne Stevens and James Hennessy take up the challenge of outlining the many policy options that could be attempted to address technological unemployment. These run the gamut from marginal tweaks to radical reforms of political economy, and from unattractive to attractive: protecting employment by slowing innovation, mandating human workers, or imposing other regulatory speed-bumps; re-distributing employment with job-sharing, lower mandatory retirement ages, more vacations, or a shorter work week; making new work with public employment, national service or tax incentives and regulatory support for employers; public investment in re-education for high skill jobs; and some expansions of the social insurance system such as national health insurance or a basic income guarantee.

Perhaps the two most radical proposals that they discuss briefly are creating alternative, non-monetary economic systems to recognize social contributions, a theme addressed at greater length by Katarzyna Gajewska, and the cognitive enhancement of human beings to allow them to stay a step ahead of automation. They argue that a basic income guarantee would have “corrosive effect on the social fabric, would not address the need for people to have a meaningful purpose to their lives, and would likely be politically infeasible in this era of government cut-backs and retrenchment.”

In my essay “A Strategic Opening for a Basic Income Guarantee in the Global Crisis Being Created by AI, Robots, Desktop Manufacturing and BioMedicine” I argue that widespread technological unemployment is not only inevitable, but that these measures that will be proposed to shore up or create employment will only provide a temporary moderating influence on the rate of job loss. If machines do jobs better and more cheaply than human beings, and that advantage doubles every two years, political support for job programs, regulations or tax incentives that provide or protect employment will erode over time. Nor is human enhancement, with education or drugs or brain machines, likely to keep the majority of humans ahead of machines. Given that this is the case, some form of expanded social wage such as a negative income tax or a basic income guarantee is inevitable, although its achievement will nonetheless take quite a struggle.

I then expand the future context of that struggle to include the growing ratio of retired seniors to tax-paying workers throughout the industrialized world, and the various battle fronts of intergenerational conflict being fought as a result, from “entitlement reform” to raising the retirement age. Although longevity medicine breakthroughs may reduce the health and nursing cost burden of the growing senior population it will also oblige societies to push even harder to raise retirement ages and force more seniors into the shrinking job market. So simple linear trends in jobless growth and senior longevity will be colliding to force a major re-negotiation of the welfare state, while any non-linear technological breakthroughs in job-displacing technologies or longevity medicine will bring that debate to an even quicker boil. Once the political class begins to accept that expanding the social wage is inevitable there may be an opportunity for a left-right coalition for a basic income guarantee. But, I argue, that is likely to splinter once the expropriation required to finance a decent basic income becomes clear.

In “A History of the BIG Idea: Winstanley, Paine, Skidmore and Bellamy” Jamie Bronstein takes us back to the Enlightenment origins of the idea that the right to be free from coercion entails a right to economic security. This basic claim has led to repeated calls for the creation of a “stakeholder society,” such as Thomas Paine’s call for income support for seniors and the disabled, and for income grants to be given to citizens representing their share of natural resources. Thomas Skidmore’s audacious proposals for a redistribution of all property was made decades before the rise of the socialist movement and gained little traction. But with his wildly popular utopian novel, *Looking Backward* published in 1889, Edward Bellamy tapped into the rising workers movement and inspired dozens of Nationalist clubs to organize to promote his more statist vision of socialism. Unlike Condorcet and other techno-optimists of the last two hundred and fifty years these writers did not predict the end of labor, and in Bellamy’s vision everyone is employed by the state and in return given a credit account. Before national service there would be universal free education until 21, and then freedom to retire or pursue a self-chosen vocation after age 45. After the experience of Communism Bellamy’s statism is far less attractive, but thinking about the relationship of a citizens wage to public service is still highly relevant since the expansion of public employment and state intervention in job-training, subsidies and placement are likely interim responses to technological unemployment.

Riccardo Campa, who has two essays in this issue, explores some of these more statist implications of technological unemployment and BIG. The first, “Workers and Automata: A Sociological Analysis of the Italian Case,” is a detailed examination of the technological unemployment that is occurring in Italy. He reviews some of the schizophrenic analyses and responses of Italian politics to their high unemployment rate, and concludes that Italy needs to embrace the automated end of work and the consequent need for a basic income guarantee. Following on this case study, in “Technological Growth and Unemployment: A Global Scenario Analysis” Campa argues that a basic income guarantee, combined with an expansion of state-ownership of banking and industry and strict controls on trade, are the inevitable and desirable responses to the anticipated technological unemployment resulting from artificial intelligence. Like Marchant, Stevens, Hennessy, and myself, Campa argues that “degrowthist” attempts to avoid technological unemployment by slowing technological innovation are doomed in a globally integrated economy, since such policies would cripple exports leading to even more unemployment. Imposing economic isolation and autarky would be only a temporary barrier to internal and external pressures for technology’s benefits, and “degrowthist” regimes are unlikely to ever be powerful enough to impose a successful global ban on innovation. In any case, “growthism” is the goal of almost all contemporary politics from Left to Right, and the question is what policies growthist regimes will adopt in the face of technological unemployment.

Campa argues that liberal capitalist regimes that allow widespread unemployment to develop in an unplanned way will eventually find their way to expanding social provision either through the redistribution of income, or the redistribution of ownership of stock in the increasingly automated industries. But, so long as there is global mobility of capital, firms will attempt to escape these kinds of redistributive efforts, or laws directed at redistributing work, and seek out countries where they can pursue profit-maximizing combinations of automation and labor exploitation with minimal restriction. He argues therefore that the more desirable and feasible alternative to this relatively laissez-faire approach to the end of work is extending state ownership of banking and industry and a limited period of economic autarky in order to provide a smoother transition to the end of work and a basic income guarantee. Eventually the world economy could be re-integrated once social and economic conditions become more equal.

While Campa, Marchant, Stevens and Hennessy all assume the capacity of governments to collect revenue and implement social policies in response to technological unemployment, in “Technological Unemployment but Still a Lot of Work: Towards Prosumerist Services of General Interest” Katarzyna Gajewska proposes that technological unemployment will fiscally cripple governments by withering taxable incomes. A basic income guarantee would contribute to this fiscal burden, if implemented, while driving up the price of labor and thereby the price of goods and services. In response Gajewska predicts that the existing systems of non-market exchange, such as time share economies, makerspaces and couchsurfing, will expand to absorb the growing number of unemployed on basic income stipends. While the gap widens between the unemployed and the gated communities of the remaining workers and the wealthy, the non-monetary economy will create its own forms of stratification. This new form of bottom-up communalism will depend heavily on reputation, social connections and even ‘erotic capital,’ and inequalities in these forms of social capital will need to be addressed with as yet unimagined social policies.

Following up on the idea that erotic capital may be one thing that humans increasingly rely on as labor is supplanted by automation, in “Sex Work, Technological Unemployment and the Basic Income Guarantee” John Danaher explores whether even prostitution may be subject to technological unemployment. General unemployment without a basic income guarantee, or even with one, may force increasing numbers of people into the few occupations for which there remains a strong demand for

human workers. For the time being prostitution is likely to be such an occupation, although Danaher notes the converging technologies that may eventually create sex robots that are either so cheap, or so superior to human prostitutes, or which fill unique niche demands, that the demand for human prostitution declines.

Neo-liberal dogma holds that there will never be unemployment if wages are allowed to find their natural level by eliminating minimum wage laws and social welfare measures, and if state-imposed restrictions on the economy were removed to unleash the power of the market. If we have reached a tipping point where humans are losing the race against the machine eventually even having an employee with zero wages would produce less profit than owning a robot, and unleashing capitalism and slashing job-protecting regulations will simply speed up the process of job displacement. But the prescriptions of left economists, for more job-protection and higher wages, will simply increase the cost of human labor compared to automation. Before widespread unemployment threatens the social order we need to begin seriously examining the dynamics of the new techno-economic paradigm, as our authors help us do with these thoughtful essays.