The Ethics of Labor Automation: AI, Technological Disenfranchisement, and Libertarian Paternalism

By

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SUBMITTED TO THE MIT SLOAN SCHOOL OF MANAGEMENT IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

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Abstract

The capitalist economic landscape constantly reinvents itself to capture new value opportunities, in an endless innovative process of what Joseph Schumpeter called "creative destruction"[1]. Its next major event, hastened by the development of Artificial Intelligence (AI) and the emergence of highly accurate predictive behavioral data, is likely to assert itself in the labor economy. Labor costs often constitute the majority of a firm's operating expenses; indeed, the average wage share in highly developed nations currently hovers around 60% of GDP[2]. Labor-automating technology is, for this reason, both anticipated and feared – the productivity enhancements of its adoption are likely to re-allocate trillions of dollars of revenue globally. Nevertheless, even in labor markets most susceptible to automation, AI is unlikely to completely replace any roles. Instead, its application will happen selectively in a process of human-machine teaming: fragmenting a single workflow into automation-feasible functions executed by machine intelligence, and a remainder of technically infeasible functions performed by a human worker. This technology also promises to radically transform organizations, replacing limited, reactive, human managerial insights with behavioral analytics that anticipate and directly modify worker experience. This paper will explore the ethical and democratic tensions between disenfranchising automation, invasive behavioral analytics, and economic growth. It will survey the evolution of contemporary labor from early narratives, to the vanquished, neoclassical notion of rational *homo economicus*, the development of modern organization theory, and the organizational psychology of workflow automation. Ultimately, it will consider the ethics of this transformation, its ramifications on corporate responsibility, and its threat to the worker and citizen's ever-shrinking creative franchise. The paper hypothesizes that the fragmentation of labor's creative discretion constitutes the total technological disenfranchisement of the worker, and its organizational

[1] Joseph A. Schumpeter, *Capitalism, Socialism, and Democracy* (New York; London: Harper & Brothers, 1942).
[2] Alexander Guschanski and Özlem Onaran, "Determinants of the Wage Share: A Cross-country Comparison Using Sectoral Data," (*CESifo Forum*19, no. 2, 2018): 44-54.

automation ruptures the normal, reactive function of private, social, and democratic institutions. Through the lens of libertarian paternalism, or "choice architecture," it proposes a Third Way to correctively adapt to automation's inevitability. Drawing from this proposal and its survey of related theory, the paper suggests that former institutionalized labor norms have permanently deteriorated, and attempts to synthesize their replacement.

Thesis Supervisor: Leigh Hafrey
Title: Senior Lecturer, Communication and Ethics

Acknowledgements

I've always been somewhere closer to the "work to live" (or more accurately, "work to read Wikipedia") end of the productivity spectrum, and my early inspiration for this project stems partially from the begrudging admiration that I've nursed for so many seemingly tireless colleagues from MIT and beyond. We are all carting around centuries of moral baggage about looking industrious and productive, and things are still going "well" – for now. But what happens when our technology gets too good, and the music stops? What happens when we're finally smart enough to be *bored* without going hungry? At Sloan, we engage primarily with the day-to-day mechanics of maintaining that process; this thesis was written out of wondering what happens when the wheels actually come off.

I would like to acknowledge those who helped me along my way, especially my thesis advisor Leigh Hafrey, who kindly agreed to support my quixotic foray into academic research, patiently indulged my digressions, and wisely counseled me where to omit them in writing. And of course my parents, Judy and Marvin Packer of Newton, Massachusetts, who have always lovingly supported me, educated me, and accepted me for who I am.

All errors contained herein are mine and mine alone.

Contents

Introduction

This paper introduces the concept of "technological disenfranchisement" – the idea that, as machine intelligence and automation is progressively integrated into our lives, our expressions of autonomy become less impactful and less useful. It de-conditions the value we currently associate with independence and self-determination, degrading our sense of agency and franchise. In other words, automation *directly limits* our autonomy by actively replacing our creative discretion. At the same time, automation *indirectly impairs* our autonomy by habituating us to more passive, dependent roles in decisive or creative exercises.

This process is not the plot of evil technologists to cripple human vitality. Its driving force is mundane, economic, and consummately capitalist – to enhance productivity while lowering costs. From the same perspective, human agents are expensive to educate and "maintain". They have finite, bounded parameters of cognitive ability, and they suffer from myriad other systematic flaws besides, from inefficiency to unconscious bias. Machine intelligence and AI are quickly approaching human competency in a range of creative, knowledge work applications with few of these limitations. They will not, for the time being, be able to replace their human counterparts completely. Instead, they will be implemented in hybrid teams, fragmenting workflows and disrupting the autonomy of their human "colleagues". For the first time, technology will not simply replace *manual* task productivity – it will begin to usurp some of the very activities that had purely "human" purposes, including how to manage organizations and direct institutional change.

This introduces a thicket of ethical concerns. How do we balance automation's degradation of professional and social experience with its economic benefit? How do we reconcile the preponderance of empirical evidence for human agents' irrational, even self-destructive tendencies, with the liberal, democratic traditions of freedom, self-determination, and consented social contract?

The argument that follows centrally addresses these questions. It traces the broad, negative repercussions that might result from careless labor automation, and seeks alternative approaches that acknowledge and address human error in ethical ways, without the same structural dispossession of human autonomy and vitality.

Beginning with a description of AI and labor automation, it will pivot to consider the current climate of the firm. The paper will establish the hapless setting of the

average American corporate employee, tracing the advent of neoliberal business policies and the principal-agent model corporation that mitigate worker power.

Having described the vulnerability of the modern worker, it will subsequently discuss the new ethical hazards insinuated by the adoption of labor automation. This includes the compromise of institutional function, and the employee's disenfranchisement at the level of individual workflow.

The analysis continues with an introduction to the ethical discussion. Beginning with a description of work's evolving, institutional status, the paper identifies a tradition whose cumulative weight now informs and guides the changing perception of work in modern era, reflected in polling data.

The paper subsequently and thoroughly accounts for the positive, economic incentives behind labor automation. The limited cognitive output of the human agent is a persuasively mitigating context for any ethical discussion of labor automation. This section covers the evidence of human systematic irrationality and its comparative inadequacy in many future labor settings.

From here, the paper moves on to examine the other side of behavioral data – not only what devalues the human employee (and demands organizational or social redress), but also what experiences – autonomy, affirmation, satisfaction - motivates them when they must work. These organizational psychological drivers inform the firm's ethical responsibility to its employees, and how to achieve them. They provide the moral tension to the firm's economic incentives to automate, cheaply circumvent human flaws, and enhance value.

Following this comprehensive survey of the labor setting, the focus shifts to the ethics of the labor. Reflecting on the typical structure of economic and philosophical debate, the work concludes that a deontological ethics is an essential measure for:

1. anchoring ethical perspectives in normative fundamentals that utilitarian methods might otherwise erode or circumscribe;
2. on reflection, laying bare contrived, institutionalized, subjective drivers that accrue by cumulative, organic process, but do nothing to further our true interests.

With a discussion of firm hegemony and employee rights, the paper finally begins to link AI's social (and state-level) ramifications with those of the firm as microcosm. Having attempted to faithfully render the Gordian knot of countervailing political, social, and economic forces, the analysis turns to libertarian paternalism. It notes that the economic pressure to automate is virtually irresistible, and that some level of paternalism –not to say disenfranchisement – is inevitable in a computationally advanced society. Libertarian paternalism provides a balanced solution – merging a deontological ethical emphasis on individual

autonomy, with the acknowledgement of automation's compellingly beneficial utilitarian, social and economic consequences.

The paper ends with a discussion on the power of institutions – the ultimate subjective bases of social experience, whose unchecked metastases of accumulated mythology can create the unsustainable drivers that unintended potentialities, like labor automation, might disturb. It suggests that contemporary labor aspirations prevent both workers and firms in advanced economies from prioritizing equity and sustainability in the long-term, allowing short-term profit interests and corrupted prioritization of property and consumption to override their better interests. Ultimately, the paper concludes that although labor automation (and, more specifically, technological disenfranchisement) constitute a potentially existential threat to liberal democracy's individualist foundations, ethical countermeasures exist. With prudential, organizational structures like libertarian paternalism, advanced, open economies can successfully contend with extraordinary, if potentially socially-corrosive technology that nevertheless promotes the preservation of autonomy, equality, and the integrity of the individual.

1. Automation and the Contemporary Labor Economy

1.1 Labor Disruption: Etiological Survey

Technology has often disrupted, and even destroyed, entire industrial segments of the labor market. From the typewriter repairman to the preindustrial artisan, as some economic process was supplanted by another, more efficient means, labor migrated accordingly. Yet even within the grand capitalist tradition of creative destruction, the most cognitively demanding labor segments – encompassing fields as disparate as medicine, creative writing, bench science, and people management - have endured with relatively little disruption of their core function. These segments are known as knowledge work, and they are grouped not by industry, but skill requirement: the flexible application of expertise to decision-making[3].

Historically, technology was chiefly deployed to replace or enhance physical rather than cognitive labor. The commensurate gains in productivity were immense. By the early 20th century, consistent, long-term improvements were undeniable: between 1919 and 1925, the average American factory worker saw a 40% improvement in production output. John Maynard Keynes prognosticated the sociological impact of continued optimization: "[...] man will be faced with his real [...] problem - how to use his freedom from pressing economic cares, how to occupy the leisure [...]."[4] In spite of his optimism, Keynes noted the complementary phenomenon of "technological unemployment".[5] He minimized concern, ascribing even the catastrophe of the Great Depression to a "temporary phase of maladjustment" that inevitably accompanied the economic shock of rapid innovation. Keynes correctly predicted that by 2030, earning power would be four to

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[3] *Jobs Lost, Jobs Gained: Workforce Transitions in a Time of Automation*, Report, McKinsey Global Institute, McKinsey & Company (2017).
[4] John Maynard Keynes, *Essays in Persuasion* (New York: W.W.Norton & Co., 1963), pp. 358-373.
[5] Keynes, *Essays in Persuasion.*

eight times higher than 1930s Britain.[6] But Keynes erred in his forecast of human consumption preferences for a fifteen hour work-week[7]. He had his own doubts about worker interest: "[...] there is no country and no people, I think, who can look forward to the age of leisure and of abundance without a dread. For we have been trained too long to strive and not to enjoy."[8] The Keynesian perspective on worker mentality would prove prescient, and informative to contemporary modes of technological unemployment. As information technology and artificial intelligence (AI) improves, it is not simply that labor is being replaced; it is becoming fragmented. Rather than leisure time, workers are being siloed into ever-narrower forms of specialization[9]. This creates a "dread" all its own.

1.2 Artificial Intelligence: Innovative Adaptation and Industrial Application

Artificial Intelligence refers to intelligent action produced by machines, as opposed to human beings (or other organisms of varying, *natural* intelligence). Historically, there are two broad types of AI, though there is still no theoretical consensus of an exhaustive paradigm. The first popular approach to producing AI was symbolic computation: a top-down, hierarchical set of principles that were explicitly formulated, validated, and subsequently programmed, and from which emerged a set of actions intended to simulate comparatively intelligent behavior.[10] These systems were only as robust as their principle architecture, and their coherent function required programming that was both accurate and exhaustively comprehensive. These parameters severely limited symbolic AI's practical development, whose real-world application demanded programming (and forecasting) every cognitively-relevant precept required for an intelligent response.

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[6] The lower bound of that prediction was superseded decades ahead of schedule - US per capita GDP improved from $11,266 in 1930 (adjusted for inflation) to $51,486 in 2015. From: Bruce Yandle, "Economic Possibilities for Our Grandchildren - Will We Ever Get Enough," Mercatus Center (2016).
[7] John Maynard Keynes, *The General Theory of Employment, Interest, and Money* (New York: Harbinger, 1964), 97.
[8] Keynes, *Essays in Persuasion.*
[9] *Jobs Lost, Jobs Gained.*
[10] Stuart J. Russell and Peter Norvig, *Artificial Intelligence: A Modern Approach* (Upper Saddle River, NJ: Prentice Hall, 2010), 18.

The second approach is machine learning: a bottom-up application of fundamental statistical methods to sample data, whereby computers inferentially identify a method to perform a specific task. As computing power improves, so does the ability to perform more sophisticated machine learning analysis. The advances have been extraordinary, resulting in breakthroughs from speech recognition to computer vision, in addition to many other applications that had been far from reach for symbolic AI. Nevertheless, machine learning has its limits: it is highly data intensive, relatively simplistic, and nontransferable. It will not master conceptual methods, for example, that can't be digitally encoded (and "vectorized")[11] There is doubt that the technology can "learn" hierarchical methods on its own, a problem area that would include applications as various as language processing and robotic movement.[12] Machine learning is so generally limited beyond data-intensive, highly specific applications that, at least for the short-term, its disruptive power is contained within those segments of its mastery. In industries with narrow skill application - for example, inventory sorting in Amazon warehouses - AI can replace entire labor segments. But for jobs with a variety of sub-tasks that range widely in scope and data richness, AI application has a uniquely fragmentary effect.

1.3 Labor Disruption, Disrupted: AI-Human "Teaming" and a New Paradigm for Partial Disruption

Certain types of labor that rely on basic cognition – driving and transportation jobs, for example – are likely to be full automated. The level of impact will be substantial, with even low estimates forecasting up to 30% of work displaced by 2030 across developing and developed countries.[13] These figures are

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[11] Francois Chollet, *Deep Learning with Python* (Shelter Island, NY: Manning, 2018), Chapter 9, Section 2.

[12] Gary Marcus, "Deep Learning: A Critical Appraisal," *arXiv* (2018).

[13] "[...] the proportion of work actually displaced by 2030 will likely be lower, because of technical, economic, and social factors that affect adoption. Our scenarios across 46 countries suggest that between almost zero and one third of work activities could be displaced by 2030, with a midpoint of 15 percent. The proportion varies widely across countries, with advanced economies more affected by automation than developing ones, reflecting higher wage rates and thus economic incentives to automate." From *Jobs Lost, Jobs Gained.*

global averages; some industries are likely to be devastated, while others remain relatively untouched. But this is hardly speculative. A McKinsey study from 2016 found that "currently demonstrated technologies could automate 45 percent of the activities people are paid to perform and that about 60 percent of all occupations could see 30 percent or more of their constituent activities automated, again with technologies available today.[14]" Advanced countries, due to greater technology access and infrastructure, are likely to see substantially greater displacement overall.

In the near-term, the continued development of AI - and its viability to automate and replace human labor in increasingly sophisticated roles - will likely manifest faster GDP growth upon its adoption and proliferation across industry. Studies suggest that, depending on the degree of adoption and success, viable AI could as much as double national GDP growth rates in highly developed economies[15]. At the same time, AI promises to replace much of the monotony that human beings find least rewarding about their current labor - shouldering more "manual" labor while human colleagues can focus on the more "abstract", creative labor[16].

The future of the modern wage economy, however, is genuinely more ominous. Rapid, massive automation could scale much faster than the real price declines economists might expect to keep markets, labor, and automation in check. The deteriorating value of labor provokes anxiety about humanity's economic and social future from virtually any perspective. Optimistic technologists dismiss catastrophic disruption of labor, touting the limits of AI, even going so far as to whitewash the concerns by portraying them as positive evolution away from

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[14] Michael Chui, James Manyika, and Mehdi Miremadi, "Where Machines Could Replace Humans—and Where They Can't (Yet)," *McKinsey Quarterly* (2016).
[15] Mark Purdy and Paul Daugherty, Accenture, 2016. https://www.accenture.com/t20161031T154852__w__/us-en/_acnmedia/PDF-33/Accenture-Why-AI-is-the-Future-of-Growth.PDF.
[16] David H Autor, "The Shifts - Great and Small - in Workplace Automation," *MIT Sloan Management Review* (2016).

"manual" labor[17]. But these notions understate the destructive capacity of even low-grade, viable tech. Some disruption is virtually certain - the transportation service industry, for example, is likely to be ravaged - and its victims will be low-skill laborers ill-equipped to recover[18].

To anyone concerned about the median earning power in a consumer economy, these are sobering statistics. Indeed, though the total disruption of human labor is not evidently imminent, high levels of automation are likely, and further advances in natural language processing – the ability of machines to parse language - could significantly increase the forecast. The disruption of a labor sector is predicated on the automaticity of its labor process: if the work is physical, then it must be routinized and predictable; if the work is information- or knowledge-based, then its computation must take place in a relatively routinized framework. *Infeasible* roles, by contrast, include tasks whose objectives are often malleable, and require cross-disciplinary and flexible applications of abstraction – in other words, creative. And while the most common segments of labor can be apportioned into either automation-feasible or infeasible, several rungs of core knowledge work – from medicine, to management, to the practice of law – are actually a bit of both.

Indeed, jobs in the rarefied knowledge economy are composites from both sides of the cybernetic pond, containing automation-feasible and -infeasible processes alike. While fully automated knowledge workflows remain safely out of reach[19], automation in the segment has already begun piecemeal, and this labor disruption is uniquely, structurally unprecedented. Historic upsets like the industrial revolution led to the total re-allocation of labor over the medium-term, replacing and migrating workers from one mechanical industry or role to another.[20]

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[17] O'Reilly, Tim. "Why We'll Never Run Out of Jobs," Speech, Https://www.oreilly.com/ideas/why-well-never-run-out-of-jobs-ai-2016, New York, 2016; Accessed March 12, 2018.
[18] "Preparing for the Future of Artificial Intelligence," government report, October 12, 2016. Accessed February 15, 2019. https://obamawhitehouse.archives.gov/sites/default/files/whitehouse_files/microsites/ostp/NSTC/preparing_for_the_future_of_ai.pdf.
[19] *Jobs Lost, Jobs Gained.*
[20] Bernard Marr, "How Artificial Intelligence Could Kill Capitalism," *Forbes*, July 2, 2018.

The automation of knowledge work, however, is fragmentary. Where AI is incapable to replacing entire roles, it is instead often deployed in tandem with the human worker, splintering individual roles into subdivisions of automated processes and the human cognitive remainder.

This disruption encourages a re-division of labor across these former roles, compressing the responsibility and creative discretion of affected knowledge jobs[21]. Rather than labor annihilation, this type of machine-human hybridization – also known as "human-machine teaming[22]" – appears to be AI's most likely medium-term outcome. AI interventions spanning accounting to law will disintegrate pre-existing human workflows, fundamentally altering the worker's creative authority over data.[23] Human agents will become primarily responsible for stewarding automatable work, or conceiving of the work to do in the first place - but they will not produce it. This could have a cumulative effect. To wit, MIT economist David Autor notes that "tasks that cannot be substituted by computerization are generally complemented by it.[24]" As automation lowers costs, any automation-complementary labor is likely to proliferate as consumption increases.

The imposition of such a novelty in the rather static discipline of labor economics demands examination. Fragmented workflows don't simply alter the labor economics of the firm - they transform the labor experience. The devastation of past technological revolutions was a blunt, destructive force that shredded labor demand and re-allocated the human capital of entire industries. That sledgehammer is being replaced by a scalpel: AI's displacement of human knowledge work is selective, affecting only feasible sub-responsibilities in certain jobs, and constitutes only a *partial* disruption. This has potentially more insidious repercussions on labor. As knowledge work is finally directly undermined, its

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[21] *Jobs Lost, Jobs Gained.*

[22] "Preparing for the Future of Artificial Intelligence."

[23] Thomas H. Davenport and Julia Kirby, *Only Humans Need Apply: Winners and Losers in the Age of Smart Machines* (New York, NY: Harper Business, 2016).

[24] David H. Autor, "Polanyi's Paradox and the Shape of Employment Growth," prepared for the Federal Reserve Bank of Kansas City's economic policy symposium on "Reevaluating Labor Market Dynamics," (2014) http://economics.mit.edu/files/9835.

destruction is only incomplete, and therefore muted. This subtle degradation of discretionary creative authority is less blatant; it is less subject to reactive frustration by the workers it compromises; and its effect on labor relations, managerial ethics, and psychology is potentially overlooked.

1.4 Labor's Decline: Financialization, Bad Jobs, and the Plummeting Wage Share

There are compelling utilitarian claims to be made for expanding automation to both organizational and individual levels – enhanced productivity, optimized human capital allocation, cost synergies from scalable automation, and many more. Nevertheless, automation and predictive analytics severely restrict both creative discretion and worker autonomy - and there's little evidence of financial benefit to the worker they presently displace. Given the costs to employee satisfaction and well-being, firms must comprehensively weight the benefit to earnings and competitiveness - as well as its responsibilities to employee and civil society. There's scant evidence of this.

Firm automation has just started to begin in earnest, coinciding with a long period of continuous, if relatively sluggish, economic growth. The timing is portentous. In spite of low unemployment and what should be an accordingly competitive job-seeker's market, wage growth stagnates, while polling continues to reveal concern about career prospects and - in the case of work engagement - outright apathy. According to Gallup, in the second half of 2018, 34% of the American workforce were "engaged", or enthusiastic about their jobs, along with 16.5% who were "actively disengaged", leaving a remainder of 53% who were simply "not engaged" - neutral, non-derelict employees who nonetheless rarely exceed the minimum performance requirement[25]. These figures are historically *good*. Engagement statistics for the global workforce can be even worse; in 2013, worker engagement barely scraped into the double-digits:

[25] Jim Harter, "Employee Engagement on the Rise in the U.S.," Gallup (2018).

> *Gallup [...] has found that only 13 per cent of the global workforce is properly 'engaged', while around 20 per cent of employees in North America and Europe are 'actively disengaged'. They estimate that active disengagement costs the US economy as much as $550 billion a year. Disengagement is believed to manifest itself in absenteeism, sickness and – sometimes more problematic – presenteeism, in which employees come into the office purely to be physically present. A Canadian study suggests over a quarter of workplace absence is due to general burn-out, rather than sickness.*[26]

Even in the United States, where record job growth would ostensibly tighten the labor market, wages continue to stagnate. In fact, the healthy unemployment numbers belie foundational issues that range from major declines in labor power, concentration of employer power, and structural failures to efficiently and equitably allocate income within the firm.

Many of the problems plaguing today's job market trace back to the late 1970s, when the implementation of neo-liberal economic and tax policies, financial deregulation, and a concerted change in corporate financial management created the circumstances that have continued to shape contemporary market dynamics. The economist Thomas Palley links the government's fiscal re-orientation to the corresponding period of rapprochement between the financial industry, legislators, and regulatory infrastructure.[27] When the American economy's financialization began around 1980, it saw extraordinary growth in the stake of the finance industry, fueled by newly encouraged debt financing, stock option pay, and the agency theory of shareholder value creation[28]. These "conduits" re-aligned corporate incentivizes from stakeholders (such as employees), and towards shareholders, management, and the financial industry itself, in the form of profit seeking and market valuation. This inevitably incentivized subversion of labor power and

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[26] William Davies, *The Happiness Industry: How the Government and Big Business Sold Us Well-being* (London, UK: Verso, 2015), 77.
[27] Thomas I. Palley, "Financialization: What It Is and Why It Matters," white paper, Levy Economics Institute of Bard College (2007).
[28] Palley, "Financialization: What It Is and Why It Matters", 17-18.

stagnation in wage growth, as corporate directors disconnected wages from revenue growth in order to funnel more capital into profit. Over time, this contributed to the cumulative neo-liberal policy agenda of globalization, small government, and flexible labor markets[29]. Palley's analysis suggests that the finance industry's growing clout and progressively stronger overtures reinforced the political momentum that substantially drove that outcome. Modern American capitalism's corporate architecture continues to privilege the market preferences of the financial industry and the corporation, contributing to the symptoms we now see in labor and wage share decline. This conception of the American corporation and its managerial, ethical, and profit interests provide a contextual assessment of the corporation's incentives for implementing labor automation, and a basis for evaluating viable reforms.

1.5 Knowledge Work and Automation: The Future of Middle Income Inequality

Historically, knowledge work was excepted from the creative destruction visited on low skill industries, and served as a haven to aspiring middle class professionals. Not only was its function essential and its work infeasible to automate, but wage growth in the service sector typically outpaced other industries. Several of these trends, particularly in the US labor market, have started to change. Reversing a previously-consistent trend across developed economies, wealth disparity has actually grown since the 1980s, after declining for nearly half-century.[30] Continued globalization and automation continues to weakens labor power, while a pivot to the service economy disperses wages more widely than manufacturing. Nevertheless, all of this is markedly worse in the US. American inequality is a matter of law and regulation that continues to evolve in ways that severely disadvantage the employee, in cyclically self-reinforcing patterns that intensify with the concentration of capital, and its growing share of political power. Antitrust litigation has declined, allowing market power to consolidate; finance

[29] Palley, "Financialization: What It Is and Why It Matters", 22.
[30] Joseph Stiglitz, "The American Economy Is Rigged," Scientific American, November 01, 2018.

perennially cycles back to deregulation after reform efforts; and corporate interests now brazenly court legislative favoritism, from government pricing kickbacks, to abrogated consumer protections, to corporate tax cuts. All of this empowers the corporate body and contributes to rent-seeking, or a firm's determination to extract higher prices than commanded by value[31]. Olivier Giovannoni, a macroeconomist studying labor devaluation, acknowledges that the total labor share has virtually plateaued - but attributing this to *equal* stagnation is unrealistically optimistic. To the contrary, Giovannoni concludes that the majority of the labor share is not stagnant at all - in fact, it has declined significantly. In his analysis of structural factors, he notes:

> *[T]he labor share['s] quasi-stability masks a sizable composition effect that is detrimental to labor. The wage component is falling [, masked by the...] increasing share of benefits and top incomes. [...] we estimate that the US bottom 99 percent labor share has fallen 15 points since 1980. This amounts to a transfer of $1.8 trillion from labor to capital in 2012 alone and brings the US labor share to its 1920s level. The trend is similar in Europe and Japan. The decrease is even larger when the CPI is used instead of the GDP deflator in the calculation of the labor share.* [32]

Historically, these symptoms of labor disenfranchisement were felt most keenly in the labor sectors that went on to pioneer union tactics to compensate for market forces. They primarily included jobs that industrialization had transformed into low-skill, highly replaceable work. Correspondingly, these were the sectors for which trade unions had the greatest negotiating impact.[33] By contrast, high skill, white-collar jobs, with structurally superior negotiating power and better treatment, were rarely unionized[34]. AI hybridization of middle-income and upper-income knowledge work threatens to alter that paradigm, and widen the structural

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[31] Stiglitz, "The American Economy Is Rigged".
[32] Olivier Giovannoni, "What Do We Know About the Labor Share and the Profit Share? Part III: Measures and Structural Factors" (working paper, Levy Economics Institute at Bard College, 2014).
[33] B.T. Hirsch and E.J. Schumacher, "Unions, Wages, and Skills" (*The Journal of Human Resources*, 33, 1998), 201-219.
[34] Rick Paulas, "A New Kind of Labor Movement in Silicon Valley," *The Atlantic*, September 4, 2018.

gap already hemorrhaging capital share from most wage-earners. Some union activists are starting to take note, and there have been rumblings of union interest in white-collar sectors like the tech industry. Nevertheless, the precipitating discontent in tech stems primarily from ethics concerns rather than wage anxiety, and union sentiment in most white-collar roles is neutral to non-existent[35]. The labor backlash against what is still a largely anticipatory threat remains to be seen.

1.6 The Ethical Vulnerabilities of Commercialized AI

Before focusing on managerial and work-experiential concerns, it's important to note that there is a vast landscape of ethical issues beyond these concerns. Many are still emerging from the currently-limited commercial application of machine intelligence, and many more are yet unrealized. Communication theorist Safiya Noble[36] studies the impact of institutionalized prejudice in machine learning and AI, which passively integrates the symptoms of racial oppression and bigotry through the real-world data it ingests. Her work reflects ongoing concern from government agencies, academics, and private corporations on topics as various as cyber security, privacy, and public health[37]. A recent paper from Deloitte Insights identified several concerns, including vulnerability of privacy, consent, and surveillance[38], as well as the possibility of tainted, prejudiced data sets:

> *[...] algorithms and machine-based decisions could actually perpetuate bias due to flaws in the underlying data or the algorithm itself. Understanding the potential for this type of risk is critical to preventing a new source of bias from seeping into an organization's hiring or promotion processes.*[39]

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[35] Kevin Roose, "Workers of Silicon Valley, It's Time to Organize," *The New York Times*, Accessed April 25, 2018.
[36] Safiya Umoja Noble, *Algorithms of Oppression: How Search Engines Reinforce Racism* (New York: New York University Press, 2018).
[37] Steve Lohr, "A.I. Policy Is Tricky. From Around the World, They Came to Hash It Out," *The New York Times*, January 20, 2019.
[38] Dimple Agarwal et al., *People Data: How Far Is Too Far?* (Deloitte, Deloitte Insights, March 28, 2018).
[39] Agarwal et al., *People Data: How Far Is Too Far.*

Similar problems plague the use of AI for other analytical purposes, where excluding supervisory human agents affect entrepreneurial direction - and validity - of a project:

> *Just as people may never know why a certain advertisement pops up on their Web browser, business leaders are beginning to realize that "data-driven decisions" are not guaranteed to be understandable, accurate, or good. [...] Even advanced technology companies like Facebook and Twitter have discovered that AI without humans can be "stupid."*[40]

AI is a tool like any other, and the volatility of its productive purpose should be applied with caution. In addition to being tainted by bad training data, AI can also reciprocally reinforce the same institutions that trained it use. The following analysis will develop this notion in the specific instance of organization and worker experience.

1.7 AI: Organizational Applications

Labor automation's structurally complex ramifications stem in part from the variety of its industrial application. Disciplines as varied as architecture[41] and meat-processing[42] have working papers on the subject. A recent article published in the *Georgetown Journal of Legal Ethics* contemplated the automation of law practice with some restraint, observing "an insufficient understanding of current and emerging legal technologies; an absence of data on how lawyers divide their time among tasks; and inadequate attention to whether computerized approaches to a task conform to the values, ideals, and challenges of the legal profession."[43] These reflect concerns not about the hypothetical efficacy of the technology, but the practical repercussions of its use on the existing infrastructure.

Abstractly, these are hazards to any industry, especially considering the potency of the technology. In the recruiting industry, a company called DeepSense[44]

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[40] Agarwal et al., *People Data: How Far Is Too Far?*.
[41] https://www.aia.org/articles/178511-embracing-artificial-intelligence-in-archit:46
[42] https://www.provisioneronline.com/articles/106219-automation-in-the-food-industry-is-knocking
[43] Dana Remus and Frank S. Levy, "Can Robots Be Lawyers? Computers, Lawyers, and the Practice of Law" (*Georgetown Journal of Legal Ethics*, Summer 2017).
[44] Jason Bellini and Hilke Schellmann, "Artificial Intelligence: The Robots Are Now Hiring," *The Wall Street Journal*, September 20, 2018.

offers services sorting applicants via computational analysis of resume, cover letter, and social media profile – all of which is compared to exemplary employee psychometric and behavioral profiles. A company called HireVue sells technology that quantifies facial expressions and other behavioral data to rank applicants against each other, and preferred qualifications. In the organizational space, Humanyze is a Boston-based firm that uses wearable sensor technology ("sociometric" badges) to record pitch and tone of speech, spatial data, and movement, to discover patterns in employee interaction, and causes or correlates to performance (effectively, looking for key performance indicators)[45]. In each of these circumstances, the firm takes broadly invasive steps to surveil, record, and analyze behavioral data to inform direct evaluative action, define employee and firm performance, and control organizational structure.

Humanyze's application of data uniquely affects worker experience. The firm uses behavioral tracking to routinize organizational procedure, improve individual work styles, and optimize volume of creative output.[46] Winslow Burleson and Pia Tripathi, researchers at Arizona State University, used the sociometric technology to conduct a validating organizational experiment, monitoring creative output across three different technology R&D departments[47]. The ASU researchers succeeded in using the gathered data to develop an algorithmic model with high predictive accuracy, creating actionable organizational insights for the observed firms themselves, as well as an analytical paradigm for generating the same data elsewhere.

These firms intend to achieve greater accuracy and efficiency - and even something loftier. In his book on organizational analysis, Humanyze's founder Ben Waber writes:

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[45] Ben Waber. "Technology for Workplaces That Work: Humanyze's Ben Waber," (Interview by Elizabeth Bramson-Boudreau. January 24, 2019. Accessed January 24, 2019.) https://www.technologyreview.com/s/612814/technology-for-workplaces-that-work-humanyzes-ben-waber/.

[46] Ben Waber, *People Analytics: How Social Sensing Technology Will Transform Business and What It Tells Us about the Future of Work* (Upper Saddle River, NJ: FT Press, 2013).

[47] Waber, *People Analytics,* 132-133.

The big thing is that all of this technology will be in the background. From the employee's perspective, work will look pretty much the same. The only difference is that the environment, and the organization, has been engineered in such a way that it will naturally bring out the best in people and help them enjoy work to the greatest extent possible.[48]

This technology is truly neutral - an organization could adapt the same methodology to optimize virtually any process along Humanyze's "sociometric" inputs. Waber's intention and tone are nearly utopian, as is his optimistic utilitarian anticipation. Nevertheless, the applications are oriented towards productivity. Waber's organizational vision is a seeming contradiction: total, centralized, computational control over the design of what is by nature a *social* structure; and, by implication, the technological disenfranchisement of any single worker's creative agency in relation to it. After participating in a Humanyze trial with some colleagues, a tech journalist wondered what the trial's insights might do, "besides squeezing more work out of its users[.]" His colleague agreed, finding "few use cases for personal improvement [...]."[49]

1.8 Managerial "Machines" and the Future of Firm Automation

Bridgewater Associates, a hedge-fund in Westport, Connecticut, embodies the rational impulse of behavioral analytics and social programming without pretense. The company operates within the strict bounds of an organizational and digital infrastructure, and aspires to utterly, rationally regiment employee behavior and cognition. Internal tools tabulate psychometric and personality data, and allow employees to rate one another's conformity to the firm's principles by dozens of behavioral and cognitive attributes. Bridgewater's culture prioritizes opinion by an individual's statistically "believable" score, and Ray Dalio, the firm's founder,

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[48] Waber, *People Analytics,* 192.

[49] Greg Lindsay, "We Spent Two Weeks Wearing Employee Trackers: Here's What We Learned," (Fast Company. September 22, 2015. Accessed April 23, 2019.) https://www.fastcompany.com/3051324/we-spent-two-weeks-wearing-employee-trackers-heres-what-we-learned.

designed his company to operate like a piece of software – literally. The firm's taxonomy for organizational behavior is mechanical; managerial solutions are called "machines", and according to Dalio, "[t]his process allows us to make decisions not based on democracy, not based on autocracy, but based on algorithms that take people's believability into consideration."[50]

Bridgewater is indisputably intellectual and, within a highly structured, paradoxical format, creatively open and individually autonomous. Nevertheless, its supervision and behavioral demands are universally pervasive and inescapably conformist, and the firm's vision is to automate every instrumental response, from the CEO's office down. In many ways, Bridgewater's cultural idiosyncrasies reflect the effective future of widespread AI and behavioral analytics in all firms. As roles and individual workflows fragment into automated and non-automated components, human workers will be compelled to contend with the automated, algorithmic output, in much the same unyielding way. Simultaneously, the human worker might find themselves progressively more disenfranchised by the creeping technological encroachment on their role, as the creative discretion of their role gets hemmed in by regimented automation.

1.9 Employee and Firm: The Dual Disenfranchisement of Automated Organizational Process

The growing power of predictive behavioral analytics from innovators like Humanyze is slowly transforming the capitalist and firm paradigm towards passively shaping and "optimizing" *anticipated* interactions, and away from strategically reacting to unexpected ones. This presages the next quantum leap in organizational evolution: a stage dominated by automated, predictive management, work, and even creativity. Shoshana Zuboff, a digital economic theorist, examines

[50] Leah Fessler. "At the World's Largest Hedge Fund, 24-Year-Olds Use "Dots" to Critique Their CEO," *qz*, September 2017. Accessed February 23, 2019. https://qz.com/1071749/bridgewater-associates-ceo-ray-dalio-explains-the-dot-collector-feedback-tool-his-company-uses-to-rate-employees/.

the same process as it relates to the consumer, and identifies the underlying economic upheaval as one that transforms contract into *uncontract*:

> *The uncontract is a feature of the larger complex that is the means of behavioral modification, and it is therefore an essential modality of surveillance capitalism. It contributes to economies of action by leveraging proprietary behavioral surplus to preempt and foreclose action alternatives, thus replacing the indeterminacy of social processes with the determinism of programmed machine processes. This is not the automation of society, as some might think, but rather the replacement of society with machine action dictated by economic imperatives.*[51]

Indeed, the automation of the firm denies the *reactive*, autonomous agency of the individual; in so doing, it does not replace society, but conforms it. Society evolves from the emergent interests, and subsequently the developed preferences, institutions, and values, of its component individual agents. A firm that automates or modifies a behavioral decision process to serve a short-term economic outcome threatens to undermine the contractual theory of free markets entirely (economic, social, or otherwise).

This has two major effects. The first is on the individual employee: as workers become progressively more subject to automation, and their machine-human hybridized workflows fragment, their experience of work transforms from a more-continuous exercise, into pockets of creative autonomy situated between sequential applications of AI. The second is on the firm. As more processes and decisions become automated, the institution itself begins to economically operate in fundamentally different ways as a consequence. The following sections will elaborate on each of these possible outcomes.

1.10 Creative Disenfranchisement of the Employee, or: Becoming a Glorified Filing Cabinet

[51] Shoshana Zuboff. *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power* (New York, NY: PublicAffairs, 2019), 211.

The individual employee on a machine-human team, managed by computationally-derived managerial decisions, is less autonomous, less spontaneous, and less creative. He may be preemptively corrected, re-directed, or even bypassed entirely by machine intelligence. His creative inputs, which had once stemmed from social insight or choice, are transformed into objectives that arrive, uninspired and unbidden. Most creative work today remains largely formed by the mixture of social and creative interests that attract colleagues, form working relationships, and even inspire the basis for new products, but elements of that process are rapidly being automated. As these technologies mature, many roles will begin to lose creative luster, evolving from creators into receptacles that freight material or information from one stage of production to another. Layers to stewardship of any production process, from rote production to innovative or creative labor, begin to dissolve and essentialize around a progressively smaller core of human, non-automatable input.

1.11 The Automated Firm: Planning Free Markets

At the firm level, automated processes raise the specter of systematic error, and even challenge the concept of market efficiency. In their current format, firms react organically to perturbations in consumer demand. Nearly anything realizable within the span of human motivation and needs will appeal to some agent, and with a sufficiently accessible cost, will occur. These changes in demand occur because of price or preference changes. In his pioneering work on institution theory, the economist Douglass North observed: "[w]e know very little about the sources of changing preferences or tastes. It is clear that changing relative prices play some role in changes in taste.[52]" So much of this process remains part of an organically reactive process, and one from which whose automation removes some of the random, human autonomous input. When firms like Humanyze or Bridgewater

[52] Douglass C. North, *Institutions, Institutional Change and Economic Performance* (Cambridge: Cambridge University Press, 1990), 84.

might be stewarded by explicitly automated or codified, algorithmic processes, they risk becoming more brittle and less reactively autonomous.

This is true not only of the creative productive process, but of the institutions implicit to the firm - and to other social bodies, as well. Institutional norms and their creation and maintenance stem from informal constraints which are entrained, in part, by the autonomous agency of reactive, human actors over long periods of incremental change. These interests emerge on a massively complex scale that far transcends simple economic optimization inputs. They are "filtered through preexisting mental constructs that shape our understanding of those price changes. Clearly ideas, and the way they take hold, play a role here. The exact mix of the two - price changes and ideas - is still far from clear."[53]Indeed, for most organizations, the legitimacy of institutional authority is still founded on organically emergent, collective values, subsequently codified or not, that form a mandate.[54] But companies like Humanyze and Bridgewater - not to mention Amazon, Google, and Facebook - are beginning to routinize and hardwire managerial function into utilitarian computational models and behavioral analysis. In many ways, this ensures consistency, but it also considerably increases the probability of organizational malfunction. Organizations are already relatively stable, occasionally monolithic institutions that change slowly and painfully. As firms yield more of their organizational evolution to AI or automation, they must take care to ensure the same quality of change, and avoid artificially accelerated transformation that subverts the integrity of interrelated institutions and preferences - like work-life balance, employee autonomy, and creative discretion. This becomes paradoxical, as the essential component of institutional evolution rests on the intangible values and continuous experience of the workers themselves. In his description of the same dynamic, North observe that "[t]he subjective perceptions of the actors are not just culturally derived but are continually being modified by experience that is filtered

[53] North, *Institutions*, 84-85.
[54] D. L. Deephouse and M.C. Suchman, "Legitimacy in organizational institutionalism" In *The SAGE Handbook of Organizational Institutionalism*, R. Greenwood, C. Oliver, K. Sahlin & R. Suddaby (Eds.), (London: SAGE, 2008), 49–77.

through existing (culturally determined) mental constructs.[55]" The further adoption of fragmented, automated labor and human-machine teaming, especially before the repercussions are realized and compensated for at either an individual or firm level, are likely to destabilize not only employee relations, but the viability and function of the firm itself.

The wide adoption of radically transformative technology could undermine the importance and fragility of larger social institutions, as well. North's research noted the institutional function of "locking-in" the continuity and durability of economic and social norms:

> *[...]institutional change is shaped by (1) the lock-in that comes from the symbiotic relationship between institutions and the organizations that have evolved as a consequence of the incentive structure provided by those institutions and (2) the feedback process by which human beings perceive and react to changes in the opportunity set.*[56]

Unmitigated automation of organizational process – whether in private firms, or social institutions - could gravely undermine political and economic institutional vitality, of which individual agency is a central part. The same is true of the American employee's career aspirations for shaping his workplace.

The evolution of the modern workplace is not, in its structure or likely outcome, an exception to the experience of modernity in other realms. Over the last half-century, many industries, from consumer electronics to mass media to kitchen appliances, have achieved similar ends of product development. The diversity of their product lines creates a sense of choice and specific demand that nevertheless functionally overwhelms the average consumer's taste, confining their demand to the firm's competency. While hypothetically, market function still incentivizes firms to economically satisfy a diversity of demand, the sheer scale of ready options potently "locks-in" the drift of those same preferences. The firm's integration of AI with labor is going through the same process - but its existential impact may be

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[55] North, *Institutions,* 138.
[56] North, *Institutions*, 7.

more insidiously stultifying, creating lock-in on a previously unattainable and robust scale.

Over the next several pages, this paper will delve into popular conceptions of work, how they inform the labor expectations of contemporary knowledge workers, and how this in turn relates to the ethical responsibilities of corporate governance.

2. A Contemporary, Empirical Ethics of Work Automation

"Individuals make inferior decisions in terms of their own welfare—decisions that they would change if they had complete information, unlimited cognitive abilities, and no lack of self-control." - Cass Sunstein and Richard Thaler, "Libertarian Paternalism Is Not An Oxymoron"[57]

"The worker has been appropriated by the process; but the process had previously to be adapted to the worker." - Karl Marx, *A Critique of Political Economy*[58]

Insights in behavioral economics coupled with advances in AI economically incentivize firms to strip more autonomy from workers at every level of the organization, and creatively disenfranchise its work processes. This juncture of creative destruction presents a unique set of philosophical tensions to the classical liberal and capitalist. On the one hand, the firm's introduction of labor automation and decision-optimizing technology promises to generate extraordinary value - an innovative opportunity it would ignore at its competitive peril. On the other hand, the same technology's compromise of the individual decision-maker challenges core orthodoxies of classical liberalism's political economy, capitalist theory of the firm, and even, seemingly, principles of deliberative democracy. The matter of why labor matters so much to laborers, often even in spite of low income, is tightly interwoven

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[57] Cass R. Sunstein and Richard H. Thaler. "Libertarian Paternalism Is Not An Oxymoron." *The University of Chicago Law Review,* 70, no. 4 (2003): 1159-202.
[58] Karl Marx, *Capital: A Critique of Political Economy*, Translated by Ben Fowkes. Vol. One (New York: Vintage, 1976).

with the cumulative narratives responsible for its present form, and its primary economic drivers.

2.1 Why Work Exists

> *There is only ninety-six hours' leeway between the moment the strawberries are picked and the moment they start to cave in to attacks of grey mould. An improbable number of grown-ups have been forced to subordinate their sloth, to move pallets across sheds and wait in rumbling diesel lorries in traffic to bow to the exacting demands of soft plump fruit.* - Alain de Botton, *The Pleasures and Sorrows of Work*[59]

People can work for pleasure, or to distract from boredom, though mostly they work to earn money. But work (and money) only exist because of coordination problems - people demand a wide variety of goods and services, only a small fraction of which they can render individually. Work, through its exchange for other work, goods, or money, solves this problem: it distributes the allocation of time, effort, and expertise, while growing the capacity and breadth of economic exchange. Work channels human energy into adapting material - physical or informational - to satisfy demand. This austere formalization would seem to carry little philosophical or political weight. Yet work and its specialization are simultaneously the most essential units of economic function, became the productive force that enabled the growth of early society, language, technology, and every facet of modernity. This section will trace the contours of work's function and social role over time, and discuss its contemporary sociology, psychology, and political economy.

[59] Alain de Botton, *The Pleasures and Sorrows of Work* (Pantheon Books, 2009), 42.

2.2 Institutionalizing Labor Values: Political and Economic Narratives

Work has always been the functional linchpin of economic trade, but this constancy belies its radically variable social role. Work was, in the ancient world, a deplorable necessity. Wage labor was the domain of the lower classes. More than two thousand years ago, Aristotle described wage labor in starkly negative terms, disqualifying workers from formal social or political functions:

> *[...] under some governments the mechanic and the laborer will be citizens, but not in others [...] in which honors are given according to virtue and merit; for no man can practice virtue who is living the life of a mechanic or laborer.*[60]

Aristotle's skepticism of the wage laborer was pragmatic, and related to concerns over the ideal function of a meritocratic state:

> *[...]citizens must not lead the life of mechanics or tradesmen, for such a life is ignoble, and inimical to virtue.[...] leisure is necessary both for the development of virtue and the performance of political duties.*[61]

The Aristotelian diagnosis is functional - workers lack the leisure time to develop the requisite political "virtue". In ancient Greece, literacy, let alone introductory education in civics and political theory, was uncommon and typically precluded by class[62]. Aristotle's rejection of the laborer's political capacity presages alarm over the political incompetence of the rank and file by later liberals like John Stuart Mill (what Aristotle called the absence of "virtue", Mill termed "barbarism"). Indeed, even the earliest scholarly depictions of work within the social fabric take note of its agents flaws.

As religious hegemony coalesced around early Christian ideals, work evolved. The privations of labor, still afflicting, became penance for original sin, or laudable distraction from impure urges. As religion and social norms evolved, so did economic roles. In some regions, hard work and industry became a sign of virtue, and work was more universally adopted; in others, it remained a class distinction. In the

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[60] Aristotle, *The Politics of Aristotle*, Translated by Benjamin Jowett (Oxford: Clarendon Press, 1995), Book 3, Part 5.
[61] Aristotle, *The Politics of Aristotle,* Book 7, Part 9.
[62] William V Harris, *Ancient Literacy* (Cambridge, MA: Harvard University Press, 1991).

Western tradition, work maintained its miserable status with only rare cultural exception until the French Enlightenment. Coinciding with a sudden confluence of radically liberalizing impulses across cultural spectra, Diderot and d'Alembert's publication of the *Encyclopédie*, with its highly detailed descriptions of mechanical and physical labor decontextualized from religious and aristocratic norms, helped establish the emancipation of class distinctions across work[63]. Shortly thereafter, Adam Smith published *The Wealth of Nations*, formalizing the emergent function of market economics. Smith couched capitalism - and the exchange of work for other goods - in frankly egalitarian terms, identifying markets as a product of common "sociability". Smith wrote that "Nature, accordingly, has endowed him, not only with a desire of being approved of, but with a desire of being what ought to be approved of; or of being what he himself approves of in other men." Smith describes work as part of an elevated, innately human sympathy that helps engender the passive, structural cohesion of a market economy.

Max Weber helped pioneer a new, sociological perspective of economic theory. Where Marxism and classical liberalism espoused an economics of linear progress, Weber introduced a layer of socially-directed subjectivity. Weber observed varieties of capitalism consistently coupled with specific religious and cultural mores, suggesting a sociological impetus for idiosyncratic economic function that threatened both neoclassical and Marxist conceptions of universal economic behaviors.[64] Weber distinguishes his synthesis of capitalism with his description of the minutiae of capitalism's structural mechanics. In *The Protestant Ethic*, he observes links between Protestant ethics (specifically issuing from Calvinism, and its immutable eschatology's motivation of hard work) and the expansion of capitalism, largely contingent on "Protestant" qualities. *The Protestant Ethic* introduced a variable, multiform theory of economics. In it, Weber validated a new channel of economic inquiry, variegating capitalism's function by its sociological

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[63] Botton, *Pleasures and Sorrows of Work*, 103.
[64] Max Weber, *The Protestant Ethic and the Spirit of Capitalism*, Translated by Talcott Parsons (Mineola, NY: Dover Publications, 2003).

context and even suggesting extra-economic sources for its independent types of function, rather than emerging naturally - and purely - from human economic interaction.

Over time, inverting the early modern religious significance of work as penance, work has become the object of personal "calling", especially among knowledge workers in contemporary developed economies. Yet as work has become more personally important, its specialization has made much of its modern, industrialized application ever more tedious, distant and alienated from its actual function, and genericized, all the way down to our habits of consumption. Labor specialization is an inevitable byproduct of advanced economic development, and a necessary achievement for sustained economic growth - historically, the best solution to lethal hunger, poverty, and deprivation. Nevertheless, its progression has microscopically segmented the labor market into many hundreds of thousands of distinct roles across dozens of highly distinct, specialized industries at even the broadest cross-section.[65] Contemporary jobs are highly specialized, hard to substitute, and historically monotonous. Cross-industry migration for the disgruntled or displaced can require inaccessibly expensive or time-intensive re-education. In most instances, mobility upward on the skill ladder is quickly and severely restricted.

The same labor specialization that is endemic to advanced economies and individual wealth has empirically paradoxical findings on, for example, the richness of experience available in a typical career. In his anthropological survey of labor specialization in modernity, Alain de Botton noted this irony:

> *[O]ur world of abundance [...] has hardly turned out to be the ebullient place dreamt of by our ancestors in the famine-stricken years of the Middle Ages. The brightest minds spend their working lives simplifying or accelerating functions of unreasonable banality.*[66]

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[65] *Jobs Lost, Jobs Gained.*
[66] Botton, *Pleasures and Sorrows of Work*, 44.

An automotive engineer might devote her entire career to optimizing fatigue performance of crankshafts; food chemists spend years perfecting the texture and appearance of varieties of wheat flour. By efficient design, these jobs are as routine as functionally possible. This absence of creative discretion is striking - and, to many, deeply boring. Strikingly, most people elect to conform to this system that ensures extraordinary resource access, compared to humanity's natural state. Aspiring writers become doctors; failed actors and composers end up in law school.

2.3 Empirical Measures: The Preferences of the Modern Worker

American Enterprise Institute's recent compilation of survey data reflects this discrepancy between aspiration and reality[67]. 92% American workers prioritized "interesting" as an "important" or "very important" job qualification, while 88% said the same for jobs that are "useful to society". 90% reported work as "somewhat important" or "very important" to life satisfaction.[68] These qualities received higher ratings than many qualities of practical value, like "high income" (80%), "allows someone to work independently" (72%), or "leaves a lot of leisure time" (32%).[69] More than 60% report that they would enjoy a paying job even without financial pressure to work. Nevertheless, a much lower number of respondents - 60% - reported "feeling good" about their job. And even lower number - 26% - reported having their "dream job".

When surveyed for fantasy occupations across 11 different categories of purpose, the vast plurality of respondents (63%) fell into just two: *Fun/Enjoy doing it/Love it/Fascinating*, or largely intrinsic factors, and *Help others/Do something that matters/ Personal satisfaction/Contribute to society*, or largely altruistic factors. In both instances, the drivers are not accumulation of wealth, nor convenience, nor anything else of direct economic utility. The modern American worker in these instances is primarily motivated by the experience or impact of the

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[67] Karlyn Bowman and Eleanor O'Neil, comps. *The State of the American Worker: Attitudes about Work in America*. Report. American Enterprise Institute. Washington, DC, 2018.
[68] Bowman and O'Neil, *The State of the American Worker*, 12-14.
[69] Bowman and O'Neil, *The State of the American Worker*, 61-63.

work itself.[70] Correspondingly, 66% of respondents would prefer a job they "loved but paid poorly" over one that they "hated but paid a lot".[71]

Pew research supports the same finding. In a 2016 report on jobs, Pew found that private sector employees were less likely to say their jobs "give them a sense of identity" compared to workers who were self-employed, NGO, or government employees[72].

Nevertheless, Pew also found that "[...] those who work in full-time jobs (52%), salaried positions (58%) and permanent positions (53%) are particularly likely to say they are very satisfied with their current job." Full-time workers report being more satisfied with *additional* aspects of life - family, personal finances, in addition to their job itself - than part-time workers. This suggests that work satisfaction may provide an underlying halo effect - or at least the trappings of professional attainment, e.g. earnings, shadow drivers of happiness in other areas - perhaps even in fields that are not explicitly recognized and "meaningful".

This raises questions about the role that narrative plays in evaluation of job satisfaction - especially in role whose appealing creative discretion compromised by, for example, the incursion of AI. Workers may make significant career compromises in exchange for financial stability, but there is far less positive recognition attached to this choice, or to mass commerce generally, than religious or cultural roles, (excepting, perhaps, for commercial roles of rare prominence). Other societies celebrate any type of labor or economic productivity. Under centrally-planned, authoritarian regimes, labor is often expressly glorified. Cargo cults even pay formal homage to factories and means of production, ritually sanctify the abundance and wealth of the type afforded by advanced manufacturing[73]. In these economic landscapes, choice for work (and consumption) is restricted, and labor motives must become more contingent on institutionalized or extrinsic interests,

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[70] Bowman and O'Neil, *The State of the American*, 64.
[71] Bowman and O'Neil, *The State of the American Worker*, 65.
[72] *The State of American Jobs*. Report. Pew Research Center. Washington, DC, 2016.
[73] L Lindstrom, "Cargo Cults," in *The Cambridge Encyclopedia of Anthropology*, eds. F. Stein, S. Lazar, M. Candea, H. Diemberger, J. Robbins, A. Sanchez & R. Stasch (2018), http://doi.org/10.29164/18cargo.

rather than the individual's. In liberal economies across the developed world, individuals relate to work through more covert or structurally implicit media, where career success, economic productivity, and "industry" is prioritized through institutional norms, national lore, and social narrative. Indeed, the intellectual history of economic growth and prosperity in Western, liberal democracies inverts capitalism's modern triumph, suggesting, per Weber, that it was not capitalism alone that vaulted Europe and the United States into modernity, but the coalescence of institutionalized priorities around "work" and value production, in tandem with the function of state infrastructure and social relations, that enabled a capitalist model to flourish in the first place. Later, in a discussion of potential solutions, this paper will develop this idea in greater depth, exploring why these narratives form and how they might be exploited or reformed to improve worker experience of AI in the firm.

The Irrational Individual: The Ethical Motives to Disenfranchise

Long after Aristotle's concern over inadequate civic engagement, classical liberalism struggled to engage with the power of the individual's economic freedom - in work, or in government. In *On Liberty*, John Stuart Mill described his grave concern over the tension between liberalism and an uneducated democracy, writing that "Despotism is a legitimate mode of government in dealing with barbarians"[74]. These concerns were repeated by other theorists, and they were articulated around the assumption that liberalism *could* triumph through the re-education of its opposition. This educational explanation of liberalism's dysfunction would soon be challenged as insufficient and unsophisticated, replaced by a structural critique of a systematically-flawed human cognition.

Indeed, concerns over the viability of adequate, democratic engagement were not inspired by a simple lack of access to Liberal education. They were the consequence of an observed inadequacy, by average citizens, to rationally compute

[74] John Stuart Mill, *On Liberty* (London: Penguin Books, 2010).

political and social realities in an astronomically complex, disconnected, selectively and partially understood modern society. This surfaced prominently in the early 1900s with Walter Lippmann's *Public Opinion*. Lippmann articulated the problem in empirical language, formalizing the contemporary sociology that distorts democratic participation:

> *[...C]odes enter so subtly and so pervasively into the making of public opinion. The orthodox theory holds that a public opinion constitutes a moral judgment on a group of facts. The theory I am suggesting is that, in the present state of education, a public opinion is primarily a moralized and codified version of the facts. I am arguing that the pattern of stereotypes at the center of our codes largely determines what group of facts we shall see, and in what light we shall see them.*[75]

Lippmann's critique of democracy argued that most participants of deliberative democracies lived in "pseudo-environments". These internal models of reality were insubstantial, inadequate proxies of the actual world: depictions of real events based on secondary or tertiary reporting, reinforced by selectively available gossip and subconscious innuendo. This depiction seriously challenged the foundation of democratic viability: the rational, deliberative citizen, whose vote reflected a careful assessment, and from whose political will emerged a reliable, utilitarian calculus of government action. Lippmann forwarded, instead, a misinformed, miscalibrated ignoramus, complacently insulated by vague stereotypes of real facts and events.

Lippmann's solution is structurally reminiscent of AI's contemporary replacement of human cognitive deficits in the firm. Rather than reinforce civic education, he proposed radically curtailing constituent franchise and reserving policy decisions to select groups of experts. This presciently expressed what economists and psychologists would only decades later identify as fundamental flaws in human reality perception, from positive illusion bias to naive realism to egocentrism and beyond, motivated by a variety of neural economic drivers. A better

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[75] Walter Lippmann, *Public Opinion* (New York, NY: Harcourt, Brace and Company, 1922), 125.

solution, one more keeping with democratic ideals and, more importantly, a more durable countermeasure to institutionalize anti-tyranny that restricting actual legislative effect to a cadre of elites, would be identifying systems to immunize or attenuate distortion biases.

This sustained attack resonated ominously with contemporary political philosophers, who could do little better than a churchillian resignation[76]. In his response, philosopher John Dewey wrote that Lippmann's work constituted "perhaps the most effective indictment of democracy as currently conceived ever penned".[77] Despite this, Dewey ultimately rejected Lippmann's finding as unduly fatalistic. To Dewey, Lippmann's observation of the average citizen's democratic inadequacy was an attribution error - a passing consequence of American democracy's adolescence that it might shed with maturity. The challenge of common "pseudo-environment" and "stereotyping" must not be bridged by circumscription and disenfranchisement, but progressive educational and social reform, "[...] a solution more fundamental than [Lippman] has dared to give."[78] The fundamental cognitive underpinnings of this debate are central to the ethics of organization, labor, and the fragmented automation of AI in the knowledge work sector. It begged the question: is human cognition damned to its vicissitudes, requiring Lippmann's fatalistic, cynical circumscription? Or can a new set of structural reforms compensate, and redeem it?

2.5 Bounded Rationality and the Myth of *Homo Economicus*: An Empirical Critique

Lippmann's concerns presaged later research in behavioral economics and cognitive psychology that would uncover and formalize structural abnormalities in human rationale. Herbert Simon, Nobel Laureate and progenitor of behavioral economics, saw Lippmann's work as one of the "harbingers of the 'behavioral

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[76] "[...] democracy is the worst form of Government except all those other forms that have been tried from time to time." - Winston Churchill, speech, House of Commons, November 11, 1947. Cited in: *Winston S. Churchill: His Complete Speeches, 1897–1963,* ed. Robert Rhodes James, vol. 7, p. 7566 (1974).

[77] John Dewey, Review of *Public Opinion* By Walter Lippmann, *The New Republic*, 1922, 286-88.

[78] Dewey, *New Republic*, 288.

revolution'". [79] Simon's interdisciplinary research had pioneering implications for economics, but also organizational theory, cognitive psychology, law, political science - as well as moral philosophy and metaethics. Much of this empirical work stemmed from the new challenge to neoclassical economics' rational paradigm of *homo economicus*. Instead of finding data corresponding to a perfectly rational and exhaustively methodical economic agent, Simon and others began to uncover evidence of "bounded rationality" - the use of "methods of choice that are as effective as [one's] decision-making and problem-solving means permit.[80]" Simon expanded this to incorporate the agent's environment and reality perception:

> *If [...] both the knowledge and the computational power of the decision-maker are severely limited, then we must distinguish between the real world and the actor's perception of it and reasoning about it [...including] the processes that generated the actor's subjective representation of the decision problem [...].*[81]

These concerns share a natural home in the firm, where numerous agents inhabit a common epistemological forum that must be navigated by each agent's bounded rationality. The next sections will describe empirical theory in organizational behavior, cognitive psychology, motivation theory, and economics that impact this space, and form the basis for ethical observations about conduct inside of it.

2.6 The Modern Organization: An Attempted Resolution

Simon's pioneering work in organizational studies began in earnest with his outline of theoretical implications of cognitive limits of rationality.[82] His theory was built on the systematic critique of neoclassical descriptions of rational choice, first introducing the concept and its premises, then applying empirical exception and theoretical alternative: "[my main task is] to eliminate, one by one, the artificialities

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[79] Herbert A. Simon, "Human Nature in Politics: The Dialogue of Psychology with Political Science," *The American Political Science Review,* Vol. 79, No. 2 (Jun., 1985), pp. 293-304. DOI: 10.2307/1956650

[80] Simon, "Human Nature in Politics".

[81] Herbert A. Simon, "Rationality in Psychology and Economics." *The Journal of Business* 59, no. S4 (1986). doi:10.1086/296363.

[82] James G. March, and Herbert A. Simon, *Organizations* (New York: Wiley, 1958).

of the classical description of the employee as instrument.[83]" *Homo economicus* is rationally bounded, and cannot reliably, exhaustively assess accurate mental models of a choice, compute a choice's outcomes, map those outcomes onto a preference set, nor forecast the likely ramifications on other preferences.

Simon subsequently proposed organizational measures to address the inefficiency entailed by the operational inefficiencies predicated on the critique of rational choice. Organizations, unable to rely on freely deputized, uncoordinated individuals with bounded rationality, should instead implement "performance programs" - organizational algorithms that routinize complex reaction. Performance programs will provide protocol for the entire executable action, in addition to all protocol dictating its use and deployment, and even opportunities for "discretion." Structurally, these organizational tools constitute management "choices". Paradoxically, however, performance programs require very little substantive choice; they interact like macroinstructional, organizational algorithms, executing a complex bundle of reactions to a potentially simple triggering stimulus (e.g., a fire station to an alarm call). Many organizational (and even individual) reactions constitute performance programs, which may be initially constructed because of a systematic, rational optimization process, but, following their routinization, do not constitute one on a subsequent basis.

In addition to the bounded rationality that required organizational innovation, later behavioral research also uncovered rational distortions that compound these flaws, demanded further organizational redress. Try as Simon might to defend the viability of the human decision-maker in some structured context, future research would demonstrate that the flaws of human cognition were more fundamental than previously acknowledged.

2.7 Systematic Irrationality in Decision Making

[83] March & Simon, *Organizations*.

Inspired by Simon's work, foundational research by Daniel Kahneman and Amos Tversky uncovered a variety of systematic flaws in human decision making. Tversky & Kahneman (1974) established their foundational assessment of systematic cognitive errors through heuristic biases[84]. The paper identified moments like "judgment under uncertainty" - when subjects, consciously or not, have only incomplete data for assessing some reality - as opportunities for heuristic biases. For efficiency's sake, moments requiring rapid cognition with potentially incomplete data rely on simple rules or "heuristics" instead of a mathematically exhaustive assessment. This simplifies the computational process and lightens neural burden to provide directional assessments as quickly as possible - but heuristics can easily lead to "severe and systematic errors," and in many instances, these are not immediately obvious to the observer.

These findings were followed, in short order, by discovery of systematic errors in value assessment. Grether & Plott (1979) demonstrated that people consistently reverse their true preferences, even when their comparative preference is perfectly explicit, due to a variety of perceptual biases[85]. The authors despondently noted:

> *Taken at face value the data are simply inconsistent with preference theory and have broad implications about research priorities within economics. The inconsistency is deeper than the mere lack of transitivity or even stochastic transitivity. It suggests that no optimization principles of any sort lie behind even the simplest of human choices and that the uniformities in human choice behavior which lie behind market behavior may result from principles which are of a completely different sort from those generally accepted.*[86]

At the same time, psychologists uncovered vast empirical data demonstrating systematic flaws in reality and self-image perception. Taylor & Brown (1988)

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[84] Amos Tversky, and Daniel Kahneman. "Judgment Under Uncertainty: Heuristics and Biases." *Science,* 185 (1974): 1124-131.
[85] David M. Grether and Charles R. Plott, "Economic Theory of Choice and the Preference Reversal Phenomenon," *The American Economic Review*69, no. 4 (September 1979): 623-638.
[86] Grether & Plott, "Economic Theory of Choice and the Preference Reversal Phenomenon."

summarizes many of the findings, concluding that harboring positive, distorted illusions about self-image is the norm[87]. Contrary to dated theoretical assumptions, "normal" (non-pathological) human psychology consistently cultivates, and may even rely in part upon, illusions of self-image, and these are adaptive to well-being and stability. The paper cites empirical evidence for the systematic tendency of subjects to obscure or forget negative evaluation, and differ more positively from 3rd party observers, on average, in evaluation of self. In a follow-up, one of the authors notes: "Instead of a naive scientist entering the environment in search of the truth, we find the rather unflattering picture of a charlatan trying to make the data come out in a manner most advantageous to his or her already-held theories."[88]

Closely following these findings, Ross & Ward (1996) summarized the impact of personal delusion on larger groups[89]. The paper contends that perception is assimilated via plural and fundamentally different processes that can yield different depictions of reality in different individuals, even under identical conditions - and that individuals are grossly naive to this subjective diversity of perception, rendering them insensitive, and even adversarial to difference. These subjective perceptual differences not only profoundly differentiate individuals' mental models of reality, but they are also naively ignored or insufficiently compensated by other parties. This can manifest in the False Consensus Effect: naive assumption of shared perception. These implications are both directly obvious - where perceptual differences contaminate efforts between individuals to collaboratively communicate, e.g. at a low organizational level - as well as extraordinarily, structurally insidious, where subjective construal writ large can render lasting social divides, and even undermine social contract.

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[87] Shelley E. Taylor and Jonathon D. Brown, "Illusion and Well-being: A Social Psychological Perspective on Mental Health," *Psychological Bulletin*103, no. 2 (1988): 193-210. doi:10.1037//0033-2909.103.2.193.

[88] S. T. Fiske & S. E. Taylor, *Social Cognition* (Reading, MA: Addison-Wesley, 1984), 88.

[89] L. Ross & A. Ward, "Naïve realism in everyday life: Implications for social conflict and misunderstanding," in *Values and Knowledge*, eds. E. S. Reed & E. Turiel (Hillsdale, NJ: Lawrence Erlbaum, 1996), 103-35.

These findings are troubling - in addition to undermining rational choice theory and other facets of neoclassical economics, they lend credence to Walter Lippmann's critique of democracy, justify the ongoing fragmentation and replacement of knowledge work with AI, and generally appear to indict the viability of human rationale.

3. Utilitarian Tension: Pleasure and Productivity in the Workplace

3.1 Happiness and Well-Being

A discussion of these drivers would be incomplete without a brief, experimental psychological description of "well-being" and "happiness". The two concepts are interrelated, though not necessarily equivalent. Indeed, well-being may deviate from happiness or immediate feelings of contentment in certain circumstance. In contemporary management and behavioral science, much is made of the positive link between "happiness" (or, variously, "positive affect", "well-being", et al.) and work productivity. In his chronicle of the subject, William Davies considers the profit-basis for corporate interest in worker happiness:

> *[To the pure utilitarian,] activities that might result in happiness [...] are only valuable to the extent that they might restore brain and body [...to] be propelled forwards to the next business challenge. This particular version of utilitarianism means expanding corporate rationality further into everyday life, such that there is now even an 'optimal' way of taking a break from work [...] as a calculated act of productivity management.*[90]

The clinical formulation of "happiness" to lubricate the organizational gears of the modern, capitalist firm seems crassly transactional, and empirical behavior science actually accounts for a broader conception that incorporates more aristotelian conceptions of eudaimonic well-being. Contemporary positive psychology revolves

[90] Davies, *The Happiness Industry*, 83.

around a paradigm of well-being spanning hedonism to eudaimonia. Mohsen Joshanloo's effort to validate the difference between hedonic and eudaimonic forms cast them as follows:

> *Hedonic models emphasize the presence of life satisfaction, the presence of positive feelings and sensations, and the absence of negative feelings and sensations. Eudaimonic models, on the other hand, regard optimal psycho-social functioning as the cornerstone of mental well-being.*[91]

With this in mind, we can evaluate the employee experience - and the according moral impact of its creative disenfranchisement - through an empirical model.

3.2 Motivation

Contemporary motivation theory began with Maslow's *A Theory of Human Motivation*. Maslow's motivation theory most essentially relies on the notion of *pre-potent hierarchy*. In this context, Maslow's conception of motivation suggests not only that motivation is the consequence of telescoping necessity, spanning from the evolutionary hardware of pressing "physiological" need, to the higher-order "esteem" or "self-actualization" need; but also that motivation is the *remainder* of this schema, rather than its summary:

> *If we are interested in what actually motivates us, and not in what has, will or might motivate us, then a satisfied need is not a motivator. It must be considered [...] to have disappeared.*[92]

This is arguably the structural linchpin of Maslow's theory, which he intends to replace a disorderly conception of human motivation as a constellation of behavioral drives. Maslow's theory fails to account for evidence of overlap[93] between what he appears to conceive of as *mutually exclusive* sequences of goals/motivations that

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[91] Mohsen Joshanloo, "Revisiting the Empirical Distinction Between Hedonic and Eudaimonic Aspects of Well-Being Using Exploratory Structural Equation Modeling," *Journal of Happiness Studies*, 17 (5) (2015): 2023–2036. doi:10.1007/s10902-015-9683-z.

[92] A. H. Maslow, "A Theory of Human Motivation," In *Readings in Managerial Psychology*, 5-22. Chicago: University of Chicago, 1980.

[93] S. Oishi, E. F. Diener & E. M. Suh, "Cross-cultural variations in predictors of life satisfaction: Perspectives from needs and values," *Personality and Social Psychology Bulletin, 25* (1999), 980–990.

expressly ignore previously "satisfied" motives (e.g., *physiological* or *esteem / self-realization*, but not both, or even separate elements of both, at the same time). Nevertheless, his treatment was the blueprint for most other conceptions.

Further research demonstrated that motivation may be mediated by either intrinsic or extrinsic pathways. Intrinsic motivation is constituted by an "underlying need for competence and self-determination" - by a compulsion that is not incentivized or otherwise motivated by any externality[94]. These oppose extrinsic motivation; and, in fact, extrinsic incentives can subsequently attenuate intrinsic motives to accomplish a task. The polarities of motivation are critical to mapping the empirical bounds of organizational management ethics, specifically as they relate to Herzberg's 2-factor model[95]. Frederick Herzberg approached *motivation to work* specifically, which his model assessed purely in terms of either *satisfaction* or *dissatisfaction*. The 2-factor model found mutually exclusive characteristics for each; that is, *dissatisfaction* factors ("hygiene factors", e.g., salary, safety, working conditions) only drove dissatisfaction. The absence of those characteristics simply curtailed dissatisfaction; they did not make employees more satisfied. The same principle applies to satisfaction factors ("motivators", e.g. achievement, recognition, interesting work). There are numerous flaws with this model, as well - some factors, like salary, can be found to apply to both categories, while others may move depending on cultural milieu or idiosyncratic preference. Nevertheless, it provides a basis from which to assess ethical viability of management models of human-machine teaming, as well the creative disenfranchisement of automation.

Studies of boredom find complementary results. In their analysis of contemporary literature, Eastwood et al (2012) define boredom as "the aversive experience of wanting, but being unable, to engage in satisfying activity."[96]

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[94] E. Deci & R Ryan, "The empirical exploration of intrinsic motivation processes,". In ed. L. Berkowitz, *Advances In experimental Social Psychology*, Vol. 13 (Academic Press, 1980).
[95] Frederick Herzberg, Bernard Mausner, Barbara B. Snyderman, *The Motivation to Work* (2nd ed.). (New York: John Wiley, 1959).
[96] John D. Eastwood, Alexandra Frischen, Mark J. Fenske, and Daniel Smilek, "The Unengaged Mind: Defining Boredom in Terms of Attention," *Perspectives on Psychological Science*7, no. 5 (2012): 482-95. doi:10.1177/1745691612456044.

Psychological precursors include the inability to identify a satisfying target for engagement, and low sensitivity to any available stimulus. Mentally, this manifests in inadequate orientation of attention, the attribution of this failure to environmental shortcomings, and failure to engage attention, all of which experientially results in negative affect and non-optimal arousal. Chronic boredom is linked to increased mortality, mediated by correlations to afflictions as varied as: depression, anxiety, slower recovery from traumatic brain injury, drug and alcohol abuse, eating disorder, and gambling. The distinction between boredom, motivation, and dissatisfaction is systematically crucial. Organizations that optimize employee affect purely by motivation and dissatisfaction metrics could fail to detect endemic rates of boredom, which nevertheless impacts employee well-being. Although high happiness and motivation likely preclude boredom, neutral scores on the same measures could belie high levels of boredom, a fail to correct.

3.3 Autonomy

The psychology of autonomy is an important composite, and perhaps the most efficiently responsible mediating pathway, by which to evaluate the experiential transformation of automated work. "Autonomy" contains a variety of slightly different, conceptual baggage; for now, this paper will confine itself to the usage within contemporary psychology, where it may refer broadly to "free will" (itself a highly controversial concept), or the ability to perform a "self-determined act." A theory review by Ryan et al. (2006) notes that in experimental settings, "[...] autonomy literally refers to regulation by the self. Its opposite, heteronomy, refers to controlled regulation, or regulation that occurs without self-endorsement.[97]" The authors cite a modern analytical approach, resolving that "free will" is surely no *less*

[97] Richard M. Ryan and Edward L. Deci, "Self-Regulation and the Problem of Human Autonomy: Does Psychology Need Choice, Self-Determination, and Will," *Journal of Personality,* 74, no. 6 (2006): 1557-586. doi:10.1111/j.1467-6494.2006.00420.x.

than the full endorsement of first-order motives by higher-order reflection (the minimal impetus that elevates behavior from reflex, or mindless conformity).[98]

The psychological basis for autonomy's role in quality of life is robust.[99] In virtually all settings, autonomy and its experience have an essential and additive valence to the sum of all experiential inputs. Correspondingly, the obstruction of an individual's autonomy results in significant performance costs in creativity and complex thinking.[100] Greater autonomy improves relationship factors like intimacy and attachment, as well as outcomes like satisfaction, relationship stability, and well-being. Autonomy enhances mental health, while its obstruction leads to negative outcomes. "[Disturbances in autonomy and [...] excessively controlling social contexts play an etiological role" in the development of psychopathology[101].

In psychological literature, the antecedents for autonomy are virtually synonymous with this paper's working definition of creative franchise and work autonomy: "integrative processing of possibilities and a matching of these with sensibilities, needs, and constraints."[102] Included among the typical obstructions of autonomy are the incentivizing use of extrinsic reward. Nevertheless, the *phenomenology* of autonomy - i.e., the feelings or qualia associated with its experience - need not accompany only proactive behavior. Indeed, autonomy also includes reflective endorsement of any decision or indecision, including the acquiescence to a constraining event[103]. This is an important distinction, and one that has significant implications for the sensation of creative disenfranchisement

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[98] Ryan and Deci, "Self-Regulation", 1561.

[99] This discussion will not exhaustively examine the philosophical incompatibility between autonomy/free will, and the material determinism endemic to most contemporary empirical disciplines. In the author's opinion, the phenomenology of the mental state commonly described as "autonomy" is an adequate proxy for true "autonomy" and "free will" (if such concepts can even be formalized), and furnishes a pragmatist inquiry into the psychology of autonomy and well-being.

[100] Ryan and Deci, "Self-Regulation", 1564.

[101] Ryan and Deci, "Self-Regulation", 1565.

[102] Ryan and Deci, "Self-Regulation", 1565.

[103] Note that autonomy as described in any and all of these contexts is *not* to be confused with "individualism" or "independence". Indeed, as the footnoted sentence clarifies, an individual can autonomously assent to negate or curtail his individualism. Consequently, the notion that autonomy is lacking in low-individualist cultures is not *necessarily* implied, and this interpretation of autonomy misapprehends contemporary definitions.

stemming from automated labor. To wit, if autonomy can be established with perspective - i.e., if an individual, in retrospect, endorses the decision to *accepting* an outcome that was bestowed, rather than proactively selected - then perhaps they can salvage the impact to autonomy. In instances where workers fully elect to take on only partially autonomous work, engaging this strategy may protect positive affect.

3.4 Happiness, Productivity, and the Impact of AI

In addition to employee motivation, organizational decisions are also mediated by employee happiness, and its commensurate effect on creativity and productivity. Staw & Barsade (1993) searched for a link between disposition and efficacy, finding that positive dispositional affect, more intrinsic/continuous than immediate mood, correlate with good managerial outcomes[104]. Amabile et al (2005) continued to probe the effect of mood on the work, finding that happiness improves creativity - but even more critical, happiness is itself also reinforced by creativity.[105] In this literature, creativity is defined as "the production of novel, useful ideas or problem solutions," in terms of both process and solution[106]. In a similar study, Oswald et al (2015) found that workers in whom happiness is stimulated demonstrate improvement in productivity by a substantial margin (~12% increase)[107].

The links between mood and productivity detected by Oswald et al (2015) and Amabile et al (2005) suggest that simplistic models of motivation are not exhaustive. They are subject to whims of individual preference, the cross-product of bounded rationality, idiosyncratic, naive realism, and so on.

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[104] Barry M. Staw and Sigal G. Barsade, "Affect and Managerial Performance: A Test of the Sadder-but-Wiser vs. Happier-and-Smarter Hypotheses," *Administrative Science Quarterly,* 38, no. 2 (1993): 304-31. doi:10.2307/2393415.

[105] T. M. Amabile, S. Barsade, J. S. Mueller & B. Staw, "Affect and Creativity at Work: A daily longitudinal test," *Administrative Science Quarterly*, 50 (2005), 367-403.

[106] Amabile et al., "Affect and Creativity".

[107] A. Oswald, E. Proto and D. Sgroi, "Happiness and Productivity," *Journal of Labor Economics* 33(4) (2015).

3.5 Ideal Architectures of Firm Organization

Strategic human resource allocation is time-intensive, costly, and imprecise. Designing an organization that organically harnesses employee potential, synthesized from the previous concepts of worker well-being is both complementary and necessary to the efficient function of a competitive firm. In his paper *The Human Side of Enterprise,*[108] Douglas McGregor provides a comparative, historical review of applied organizational theory to introduce what he identifies as a paradigm shift in best practices, specifically toward management structure that optimally capitalizes on motivation and labor resources. McGregor's diagnoses "conventional" management's dim view of human motivation ("indolent", "self-centered", "resistant to change" etc.) as the ignorant rejection of what he considers a superior organizational strategy: appealing to worker interests intrinsically to maximize interest, reward, and motivation. To McGregor, this resolves two things: 1) the etiology of contemporary labor's "indolence" is not human nature, but a modernity that has achieved adequate subsistence, and whose workers are no longer motivated by the mean exchange of capital for labor alone; 2) the antidote is neither "hard" nor "soft" management, but the application of management paradigms that motivates workers to realize higher motives (e.g., decentralizing management to expand the franchise of creative discretion to more parts of the organization). This presaged the organizational movement to embrace job satisfaction as a method of firm utility improvement.

McGregor proposed that the "essential task of management is to arrange organizational conditions and methods of operation so that people can achieve their own goals best by directing their own efforts [...]", specifically as an antidote to defeat the drudgery of regimented labor. In a contemporary setting where progressively more knowledge work is displaced and automated every year, this is

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[108] Douglas M. McGregor, "The Human Side of Enterprise," in *Readings in Managerial Psychology* (Chicago: University of Chicago, 1980), 5-22.

especially relevant, and potentially paradoxical. The firm can integrate organizational strategies that maintain, if not improve, worker well-being and satisfaction - but it may not be possible to simultaneously compress marginal cost of production, especially when this requires automation and the creative disenfranchisement of labor. The future of sustainable organization, if it conforms to organizational paradigms, will have to find ways to adapt the prioritization of participation and responsibility to labor's shrinking creative discretion across the production process.

3.6 Psychology, Well-being, Productivity, and Automation: A Tension of Interests

Empirical findings for the effect of boredom, autonomy, and creativity on well-being, productivity, and motivation highlight a powerful tension - the confluence of worker's well-being with firm outcome. Historically, work motivation and firm productivity in knowledge work improves with employee happiness, satisfaction, and positive affect - and these, in turn, are reinforced by autonomy. The encroachment of AI on the firm's productive engine potentially alters this process by displacing human autonomy, and disrupting the link between autonomy, employee satisfaction, creativity, and final work output. This has two consequences:

1) As human creative inputs become secondary to AI inputs in the firm's economic output, and human labor becomes proportionally less responsible for the firm's economic output, the link between worker satisfaction and firm productivity must also weaken reciprocally;

2) If productivity improvements from AI displacement of human creative input are *greater than* the proportionate decline in human labor productivity as a consequence of reduced employee well-being (from increased boredom/decreased satisfaction), firms will be economically incentivized to take AI measures that directly reduce employee satisfaction and well-being.

As automation technology improves, it is likely that firms will quickly surpass the break-even profitability that might dissuade them from otherwise making their employees lives, well, more boring. Having dispensed with the economic argument (and likely eventuality) in favor of labor automation, the remainder of section II will focus on the ethical repercussions of these findings.

4. Towards an Ethics of Labor Automation

With a broad sense of the economic, behavioral, and political realities of the firm and the individual worker, we are better equipped to evaluate their moral relationship. This paper will first consider the deontology of employment ethics, as well as the moral imperatives incumbent on the firm and society at large to monitor its structural support for good (or bad) outcomes. Subsequently, it will forward solutions with the following goals: a pragmatist[109], instrumentalist perspective; with the ethical, consequentialist[110] goal of maximizing utility; and without undue infringement of deontological ethics toward employee or firm.[111]

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[109] Process of inquiry that proposes hypotheses based on improving existing philosophical arguments or methods; it demands empirical testing to validate its assertions.

[110] Examination of the moral value of deeds through the moral value of their consequences. Utilitarian arguments may be commonly understood as consequentialist. See: Kagan, S. *Normative Ethics*, Boulder: Westview, 1998.

[111] There are several reasons for doing so:

1) The intersection of ethics, capitalism, and creative destruction alone is extraordinarily complex and multidisciplinary, and a full accounting of its moral philosophy, to say nothing of how it relates to AI and the day-to-day experience of work, and its slow compression, extends far beyond the scope of this paper. The pragmatist focus on a single relationship (i.e., improving ethical management of labor automation, as opposed to, for example, an examination of the deontological ethics of inducing boredom) allows the paper to complete a more thorough analysis in relative brevity.
2) Increase the likelihood of appealing to a business audience. The final purpose of this paper is to illuminate the ethical concerns in an area of decisive importance. To be applicable, it must be pragmatic, empirical, and grounded in tangible theory that can demonstrate the efficacy of its proposal inside of a real firm with key performance indicators.
3) Finally, the subject of work utility and AI is rich with relevant, empirical data which, to recapitulate points 1 and 2, provide a unique opportunity to design experimental models based on robust, clinical paradigms to measure the utility effects of proposed solutions.

4.1 Institutionalizing Moral Employment: In Defense of a Deontology of Economic Problems

In his response to a colleague's scholarly critique, the Oxford philosopher GA Cohen opined:

> *[...]superb work in political philosophy is, structurally speaking, [...] a set of negotiations within a space of leading positions, none of which are [sic] founded on compelling arguments. That I engaged in a sustained application of my own skills against a potent, reactionary idea for which no decisive argument is available does not show that I took a 'trip down a blind alley'.*[112]

Cohen observes that attempts to realize rigorous applications of political philosophy often – perhaps always - devolve into irreducible complexity. His lament is that, in the absence of a clearly superior position, dismissing a political opponent's ideological anathema is, at best, rhetorically partisan. More typically, it is intellectually dishonest. In the same spirit, and duly acknowledging the moral ambiguity of economic problems, this paper will take pains advance theories of both a deontological and consequentialist utilitarian basis.

Deontology, which judges moral action by duty of the act itself rather than its consequence, is a useful institutional anchor for moral norms. In many economic and political contexts, however, it can conclude absurdly, or in moral paradox. For example, in the many variants of the "ticking time-bomb" scenario, a state with anti-torture statutes captures a terrorist who will only divulge his time-bomb's location under brutal torture. The state must balance its legal commitment to oppose torture against its obligation to promote national security, which a deontological evaluation may not resolve. A consequentialist approach can trivially resolve the same scenario. Consequentialist ethics judges the normative, moral weight of an agent's action by its *consequence.* A purely consequentialist state actor might weigh the cost of illegal torture against the benefit of securing many more of its citizens, compute a net positive utility, and proceed with torture. In this way,

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[112] Gerald Allan Cohen. Letter to the editor, *The Times Literary Supplement*, November 8, 1996.

consequentialism (and utilitarianism) may justify individually reprehensible acts, like the murder of innocent bystander to achieve a moral political end.

In spite of the substantive and thorny conflicts between the two approaches (let alone between libertarianism and seemingly most statist ideologies), there are reasons to address both. There is no obviously superior moral or ethical argument to make about the tensions between worker interests, consumer interests, and corporate interests. An egalitarian Keynesian may argue fruitlessly, for example, that a libertarian's concerns are too politically motivated, or fail to account for the undeniably overpowering, utilitarian good of some extraordinary, benevolent regulatory system, or some other philosophical vagary that appears to challenge the libertarian's sacred precept. And that Keynesian would be met in kind with the relevant lambasts and orthodoxies of her opponent. The conservative economist Tyler Cowen obliges Elizabeth Anderson's research on business ethics and the responsibilities of the firm in precisely this way:

> *I see the economics [of employer responsibility] differently, and when it comes to the moral philosophy, I would [prioritize] the practical trade-offs [...] to shape the philosophy, rather than presenting them as an afterthought.*[113]

Cowen's critique values the Kantian deontology (in this case, the firm's liberty to operate freely) more than Anderson's utilitarian virtue of ensuring equality (achieved by regulating the firm's behavior to ensure the fair treatment of its employees, thereby violating the firm's free operation). To Cowen, Anderson (ab)uses a utilitarian justification to support the regulation of (and infringement on) firm conduct. Yet Anderson's isolated, utilitarian justification for interference with firm conduct is *itself* predicated on a separate, deontological value: ensuring employee well-being, and by extension, social equality, and the other requisites of a functional democracy – whose maintenance, to Anderson, constitutes a deontological imperative[114]. To the extent that it ignores some of the deontological

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[113] Elizabeth Anderson, *Private Government: How Employers Rule Our Lives and Why We Don't Talk about It* (Princeton, NJ: Princeton University Press, 2019), 108.

[114] In this specific instance (the full text of which is available to peruse in Cowen's critique of *Private Government*, included in the same volume, and followed by Anderson's rebuttal), Cowen may not

premises of Anderson's argument while invoking the same principles elsewhere, Cowen's critique comes across as arbitrary and partisan, and it highlights tenuous counterbalance between ethical formats.

In fact, a deontological-consequentialist hybrid may be necessary to any realist philosophy. The ethicist Irene Van Staveren notes that while deontological and consequentialist ethical stances invariably conflict at some level of economic application and demand a hierarchical reconciliation, they have separate but necessary roles to play:

> *Whereas economics is concerned with behaviour characterised by choices and ends, deontology is concerned with behaviour characterised by duties and limitations. [...] It appears that economic behaviour and moral rules are in opposition, and that little room exists for deontology in economics. But [...] an economy can function only when certain normative requirements are fulfilled. [...] These can be formal or informal norms – expressed in formal institutions, such as the welfare state, or informal institutions, such as culturally-shaped styles of human resource management in firms.*[115]

Each approach yields separate, essential insights into social-economic function. For example, the deontological ethic of procedural justice significantly improves the perception of a just outcome. Even in settings that produced unfavorable outcomes, individuals acceptance of that outcome is enhanced by the perception of its just process.[116]

Just as ethical norms anchor and direct the utilitarian calculus of organizational decisions, ideological compromise without any deontological basis jeopardizes its durability. For example, re-conceptualizing a corporation as a stakeholder rather than shareholder enterprise might re-calibrate a free market

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simply deprioritize one ethical philosophy in favor of another; he also describes utilitarian ethics whose validity he does *not* deny, but whose fact he purports to doubt (e.g., the coercive power of contemporary labor relationships).

[115] Irene Van Staveren. "Beyond Utilitarianism and Deontology: Ethics in Economics," *Review of Political Economy*19, no. 1 (2007): 21-35. doi:10.1080/09538250601080776.

[116] J. Greenberg, "A Taxonomy of Organizational Justice Theories" *Academy of Management Review*, 12 (1987): 9-22.

libertarian's expectations of firm conduct, and yield short-term results that appeal to any strong egalitarian. This is because architecting the firm to act on its own behalf in a more balanced and net-utilitarian way preserves its liberty while better accommodating the well-being of its employees. But this concession does nothing to enshrine the deontology of the coincidental, egalitarian outcome. Instead, it simply moves the goalposts, until new innovations threaten worker welfare in some more novel, virulent way, and demand yet another re-configuration. All of this suggests that elucidating a deontological ethics of worker treatment is, in fact, a worthy enterprise. It creates an ongoing, objective basis that clarifies matters of moral import for *their own sake*, and tethers future ethical debates to a set of normative rules about employer conduct.

4.2 The Ethic of Equality

Elizabeth Anderson touts the ethical value of equality. In "What is the Point of Equality?", Anderson argues that equality is not simply an end, but an integral part of civic infrastructure, without which an egalitarian society becomes fundamentally unsustainable.

> *Many egalitarians argue that the point of equality is to compensate people for undeserved bad luck. This view leaves egalitarians open to devastating conservative criticisms [.... Rather, t]he point of equality is better conceived as creating a democratic society, in which people stand in relations of equality to one another. Democratic equality entitles all citizens to the goods they need to function as free and equal citizens, and to avoid oppression by others. This view explains, against conservative objections, how citizens can be obligated to promote equality.*[117]

[117] Elizabeth Anderson, "What Is the Point of Equality," *Ethics* 109, No. 2 (January 1999): 287-337.

To Anderson, equality is the efficient structural conduit to ensure the closest thing to equitable outcomes and viable democracy: "to understand the diversity of human endowments as a common good, rather than as a cosmic injustice[118]"

The relevance to the private firm, especially in light of Anderson's conception of firm as government, is clear - equality is the ethical basis for the social contract implicit in moral government. This organizational importance has empirical footing: a study on the psychological costs of pay inequality by Larkin, et al. (2012) found that "perceived inequity through wage comparison reduces the effort benefits of individual pay-for-performance compensation [... and] introduces additional costs from sabotage and attrition [...]".[119] Just deserts aside, even apparently justifiable differentiation generates psychological dissatisfaction - and this, ironically, has utilitarian consequences.

In *The Great Transformation*, Karl Polanyi observes that this equality can only be sustainably achieved through the agency and autonomy bestowed upon the individual:

> *For the alleged commodity, "labor power" cannot be [...] used indiscriminately [...] without affecting the human individual [...]. In disposing of a man's labor power the system would, incidentally, dispose of the physical, psychological, and moral entity of "man" attached to the tag. Robbed of the protective covering of cultural institutions, human beings would perish from the effects of social exposure [...and] dislocation through vice, perversion, crime, and starvation.*[120]

Emile Durkheim traced the implications of labor specialization far beyond the walls of the factory and firm. "...Social harmony comes essentially from the division of labor. It is characterized by a cooperation which is automatically produced through the pursuit by each individual of his own interests. It suffices that each individual

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[118] Anderson, "What Is the Point of Equality".
[119] Ian Larkin, Lamar Pierce, and Francesca Gino, "The Psychological Costs of Pay-for-Performance: Implications for the Strategic Compensation of Employees," *Strategic Management Journal,* 33, no. 10 (October 2012): 1194-214. doi:10.1002/smj.1974.
[120] Karl Polanyi, *The Great Transformation: The Political and Economic Origins of Our Time* (Boston, MA: Beacon Press, 2014), 73, quoted by Anderson, *Private Government*, 97.

consecrate himself to a special function in order, by the force of events, to make himself solidarity with others."[121] Expanding on this, Shoshana Zuboff explains that "the division of labor accounts for the interdependencies and reciprocities that link the many diverse members of a modern industrial society in a larger prospect of solidarity. Reciprocities breed mutual need, engagement, and respect, all of which imbue this new ordering principle with moral force."[122]

In the same way, Anderson links equality intrinsically to the capacity for autonomy: "Exercising autonomy - directing oneself in tasks, no matter how exacting and relentless they are - is no ordinary good. It is a basic human need. [...] Elimination of [...] autonomy is the product of social design, not nature."[123] She argues that the compression of autonomy - e.g., in terms of an employer unilaterally electing to implement AI that automates former opportunities for creative discretion - "demeans one's agency." To ensure the firm's organizational commitment to equality, Anderson proposes four tools: competitive exit opportunities, legal constraints on employers, constitutional rights within the workplace, and directorial voice.

4.3 The Ethic of Privacy and Personhood

Autonomy is undermined by more than direct constraint on action, or even the erosion of antecedents like equality. It also suffers from insidious, structural interventions that threaten not only its exercise, but its accessibility. In his review of privacy in an information economy, legal philosopher Spiros Simitis concluded that the loss of privacy - constituted by marked advances in personal data collection and analysis - is now an active means of enforcing conformity. The collection and analysis of data itself is not simply a matter of sweeping up breadcrumbs; it "is

[121] Emile Durkheim, *The Division of Labor in Society* (New York: Free Press, 1964), 200.
[122] Zuboff, *Surveillance Capitalism*.
[123] Anderson, *Private Government*, 128.

developing, therefore, into an essential element of long-term strategies of manipulation intended to mold and adjust individual conduct."[124]

In the expansion and customization of state welfare systems, governments relied on expansive data collection to support the viability and wide benefit of the programs. As circumstances changed and system protocol was accordingly revised, however, Simitis observed a new, coercive approach to compliance measures empowered by the same personal data: "increasingly sharpened attempts to control the behavior of the social programs' beneficiaries."[125] This preceded a decline in welfare recipient autonomy, and a new social equilibrium for compliant mindset.

Simitis traces the same transfer of control in the firm's collection of personal data to ensure a "well-adjusted employee", supported by the vast store of personal data initially accumulated for the mundane purpose of administrative efficiency.[126] The organizational use of that data, however, inevitably evolves, where possible, to generate cost-saving conformity measures:

> *[it is the employees' constant data collection and scrutiny,] inaccessible to them, that institutionalizes control, thereby ensuring constant reevaluation of their individual performance. [...] mere awareness of a device that minutely records their activities may be sufficient to influence their behavior. The pressure [...] inhibits critical reactions.*[127]

Simitis published this paper in 1987, well before the advent of effective predictive analytics. His critique resonates precisely for being founded on such a muted effect: employee tendency to conform is not even based on certainty, but the "real or assumed expectations" through which, despite attempts to "guarantee a minimum of independence, personnel information systems promote a maximum of adjustment."[128] This is a more profound claim: withdrawing privacy is not only disenfranchising when it materially contributes to behavioral modification; rather,

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[124] Spiros Simitis, "Reviewing Privacy in an Information Society," *University of Pennsylvania Law Review*, 135, no. 3 (1987): 710, https://doi.org/10.2307/3312079.
[125] Simitis, "Reviewing Privacy," 714.
[126] Simitis, "Reviewing Privacy," 720.
[127] Simitis, "Reviewing Privacy," 723.
[128] Simitis, "Reviewing Privacy," 723.

it is fundamentally disenfranchising in firms where the loss itself creates the same effect.

Privacy, or what Simitis calls the "refuge for the individual," is a state apart from economic or social manipulation whose protection and acknowledged status embodies the primacy of the free individual. Aligning this theory with Anderson's provides the insight that loss of privacy, and the subsequent application of behavioral analytics, structurally relinquishes autonomy by revising its function:

> *Whatever the original incentive for computerization may have been, processing increasingly appears as the ideal means to adapt an individual to a predetermined, standardized behavior that aims at the highest possible degree of compliance with the model patient, consumer, taxpayer, employee, or citizen.*[129]

Individuals are no longer opaque and free to exercise their own self-determined interests - those interests are now manipulated externally or else deftly manipulated by even unconscious techniques.

4.4 Ethics of Firm Conduct: Stakeholder or Shareholder?

Thus far, this paper has examined the profound ethical content of firm structure with regards to its coincidental opportunities: for example, its access of private data. To truly understand what normatively or directionally motivates the treatment of employees, however, an ethical approach must account for the very basis of the firm's composition. Theories of corporate governance and ownership follow a variety of models, and their ethical responsibilities trace from the implications of this structure. As interested parties change, so does a corporation's emergent motivational tension between its ethical imperatives, the ethical imperatives of its owners, and their profit-seeking interests. Appreciating the purpose (and structural consequence) of firm composition contextualizes its

[129] Simitis, "Reviewing Privacy," 733.

incentives, and provides the organizational tools to revise the mechanics of its profit-ethical tension.

Publicly-traded corporations, in terms of the market efficient hypothesis, are structurally subject to profit-maximizing incentives through drivers like product markets, capital markets, and the market for corporate control.[130] Contemporary theory of firm structure and its corporate governance is monopolized by the notion of "shareholder value" - that "public corporations are little more than bundles of assets collectively owned by shareholders (principals) who hire directors and officers (agents) to manage those assets on their behalf."[131] This is broadly known as the "principal-agent model", and one consequence has been the prioritization of shareholder wealth, and the according interpretation of conflicting ethics within that framework.[132]

There are other, divergently nuanced theories of firm composition that center around a more holistic conception of the firm construct that includes not only shareholders, but all stakeholders. In the stakeholder view, there are agents outside of asset owners with a stake in firm outcomes, like the "Executives, rank-and-file employees, and even creditors or the local community", who "may also make essential contributions and have an interest in an enterprise's success."[133] This create a basis for legal inducement, in addition to an ethical re-assessment of value ownership, to account for additional interests, including those of employees. As union power continues to wane, a legal basis for employee interests over conflicting financial obligations of the firm -a "societal construction[134]" - becomes more vital. The principal-agent model, in addition to providing the financial justification for the diversion of income from labor to capital[135], also effectively sever corporate interest

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[130] M.M. Blair and L.A. Stout, "A Team Production Theory of Corporate Law," *Virginia Law Review*, 85 No.2 (March 1999), 248-328. https://www.business.illinois.edu/josephm/BA549_Fall%202018/Session%204/4_Blair_Stout%20(1999).pdf

[131] Blair and Stout, "A Team Production Theory of Corporate Law".

[132] Blair and Stout, "A Team Production Theory of Corporate Law".

[133] Blair and Stout, "A Team Production Theory of Corporate Law".

[134] Palley, "Financialization: What It Is and Why It Matters."

[135] Palley, "Financialization: What It Is and Why It Matters."

from employee interest, and threaten the ethical basis for the preservation of their well treatment.

4.5 The Consequentialism of Creative Disenfranchisement: Supervising the Inept Employee

Any discussion of these normative ethical forces must nevertheless acknowledge the weight of evidence against the notion of the rational employee presented earlier, and its mitigating effect on worker treatment. Worker autonomy is empirically and decisively worse than many AI replacements, and as long as the benefit of its implementation outweighs its cost, firms will have economic incentive to replace progressively more of the worker's role. What is the moral calculus of creating unpleasant, or acutely authoritarian workplaces that nevertheless produce optimal utility? Is the purpose of the corporation short-term profit, or does it have responsibility to other stakeholders? The purpose of this discussion is to elaborate on this tension - the balance between economic motive and ethical obligation.

4.6 Employer Hegemony: Employee as Coerced Agent

Indeed, the firm's motive to dominate the bounded rationale of employee autonomy wherever it maximizes shareholder productivity – aided by its disproportionate hegemony over labor contract and organizational setting - creates a quasi-governmental effect. Ethicists and political philosophers are starting to conceptualize the firm, and subsequently its responsibilities, in terms of private government. The firm's disproportionate leverage and the lengthy, dissuasive frustration of job-seeking, disarm employees of purported negotiating equality, effectively approaching the structural coercion and hegemony of actual states over citizens. This potentially confers an according level of ethical responsibility. Re-casting the employee as a selectively irrational actor, however, potentially balances the ethical calculus. By suggesting that some degree of supervisory (or advisory) automation is necessary to ensure utilitarian outcomes, the employee's

compromised or distorted rational capacity reduces the firm's ethical transgression in automating away former areas of an employee's creative discretion.

The philosopher and ethicist Elizabeth Anderson argues that the contemporary capitalist firm has been inoculated by Adam Smith's egalitarian narrative from accusations of hegemony and coercion. Realistically, Anderson suggests that the firm more closely resembles a form of private government: an entity that can coerce or enforce conformity with practice through a variety of public or private means, abrogating freedoms negatively or positively by withholding pay, threatening termination, proceeding with available legal action, or even passively exploiting systemic means of pressure (e.g., the constraints imposed by the difficult prospect of finding alternative employment; the loss of unemployment benefits in the event of quitting; etc.)[136]

To Anderson, the Smithian intention of free markets was social as well as economic; it permitted individuals to express opposition to, subvert, and in some instances even dissolve, disenfranchising social constructs (e.g., the feudal system, the estate system, etc.) By design, early free-market modalities unshackled individuals (now imbued with free access to transaction) and provided a new metaethics to equalize access to goods and services. Capitalism's evolution soon structurally negated many of these advances, however. After the industrial revolution, larger firm settings introduced an entirely distinct industrial economic mechanism, where "economic freedom" no longer structurally predisposed markets to achieving equality of the individual, or subverting their disenfranchisement.

The conflation of "private sector" or "enterprise" with freedom ironically obfuscates the actual, disenfranchising impact of employment with the large firm. Instead of liberty, firm incentives motivate them to impose hegemonic sanctions on their employees to effect conformity with their demands, subject only to the witting, collective action of its employees (when permitted by law). Indeed, this free market does not muster much egalitarianism. Within it, the individual has starkly

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[136] Anderson, *Private Government.*

insignificant power. Employees have only limited freedom to leave their job, whose replacement is uncertain, slow, and also vital. The management and organization of the workplace, therefore, memorialized in a legal employment contract underwritten by the actual legal system is a form of private government.

This establishes the degree of "subjugation" (perhaps in Hobbesian terms, "subjection to Lawes, and coercive Power[137]") shouldered *often unwittingly* by the contemporary firm employee. It is precisely this level of *un*conscious subjugation, the impact of its disenfranchisement, and the empowerment of its acknowledgement, that chiefly impacts employee experience of autonomy. Moreover, because of the firm's relatively coercive power, the notion of on-going individual liberty in a workplace is a virtual oxymoron. Very few, if any, private companies prioritize their employees' "liberty" to make consistently costly business decisions. For example, no rational employer would have a direct economic incentive to grant employees the liberty to improve their *experience* of their job, over the economic utility of its output. An employee who, for the purposes of her own enjoyment, took the liberty to perform her role in an intentionally less-effective, if more enjoyable way, would likely be terminated. The re-conception of firm as quasi-state entity alters the moral calculus that firms must evaluate to account for employee well-being, expanding it from a transactional compliance with the regulatory minimum of labor protections, to potentially fostering a democratic social contract. This has wide-ranging ramifications for any structural treatment of human cognition, from private firm to social institution to state government. Anderson's ethical finding suggests that any pervasive institutional control – especially one with potentially behavior-modifying, effectively hegemonic consequences – has some share of responsibility for general stakeholder welfare.

5. Libertarian Paternalism: Ethical Alternative

[137] Thomas Hobbes, *Leviathan or the Matter, Forme, & Power of a Common-Wealth Ecclesiastical and Civill* (London: Green Dragon in St. Paul's Churchyard, 1651).

5.1 Towards a New Theory of Employer Hegemony and Employee Liberty

The mess of firm incentives and ethical obligations previously discussed inspires a directional interest, but does not alone synthesize a cogent ethical hierarchy. Indeed, it ignores a valid, utilitarian pressure: the confluence of systematic, human irrationality and the advent of superior, cost-effective, replacement AI, which makes some level of paternalism inevitable from virtually any profit motive. Fusing deontological ethics with utilitarian, social and economic consequence, presents an approach that seeks to mitigate automation's creative disenfranchisement of individual labor, and to undermine the greater "uncontracting" and loss of autonomy within social and economic relations of the employee and the firm.

With their 2003 publication on Libertarian Paternalism[138], Cass Sunstein and Richard Thaler introduced the notion of economically-derived, state-structural incentive to induce preferable agent behavior - without eliminating freedom of choice. Sunstein highlighted state-bureaucratic applications from the wider, pre-existing body of behavioral economics. He and his co-author named this approach "libertarian paternalism", a phrase whose oxymoronism challenges neoclassical economics' expectation of unsupervised rationalism - the notion that yielded the free market's "spontaneous", unplanned order[139]. Sunstein acknowledges that social institutions, intrinsic to economic function in any societal context, already liminally structure individual agent behavior. In his paper, he suggests improving the institutional mechanism by consciously crafting explicit institutional standards to create specific, aggregate economic outcomes. Sunstein describes, for example, improving retirement planning by automatically enrolling employees in programs. In modulating a decision's format without mandating an outcome, the structurally-influenced, admittedly paternalistic effect nevertheless preserves the choice

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[138] Cass R. Sunstein and Richard H. Thaler. "Libertarian Paternalism Is Not An Oxymoron." *The University of Chicago Law Review*, 70, no. 4 (2003): 1159-202.

[139] F.A. Hayek, *The Fatal Conceit: The Errors of Socialism* (Chicago: The University of Chicago Press, 1991), 6.

mechanics of libertarian agency[140]. The basis for Sunstein's paternalism is the ethical justification for choice architecture – crafting an organizational tactic whose manipulation of choice promotes the chooser's welfare. Admittedly, the process is not individually customized, and the outcome may seem ham-fisted:

> *[...] in many domains, people lack clear, stable, or well-ordered preferences. What they choose is strongly influenced by details of the context in which they make their choice, for example default rules, framing effects (that is, the wording of possible options), and starting points. These contextual influences render the very meaning of the term "preferences" unclear.*[141]

Any choice architecture must be specifically, even simplistically, optimized to a particular welfare outcome – and this outcome will not always precisely align with some theoretical, idiosyncratic preference of many individuals. Nevertheless, these preferences are already so hopelessly bound to myriad, intractable concerns of local psychology and sociology, that computing anything more than the directional preference, selected for both its ethic and utility, is virtually impossible. Sunstein asserts that our institutions *already* operate within a choice architecture - passively, organically-devised frameworks that unconsciously guide so much of human cognition. Sunstein's proposed libertarian paternalism does not create additional layers of involuntary socially-conditioned bondage, so much as it adapts the same institutional toward locally optimal outcomes – in an open and libertarian way.

In his subsequent role as director of the White House's Office of Information and Regulatory affairs, Sunstein had the opportunity to midwife the integration of libertarian paternalism with elements of regulatory policy.[142] This choice architecture - the incentive programming - manifested a state structure that beckoned (or "nudged") the Invisible Hand, if it didn't shackle it. For the American economic system, whose Keynesian instruments had eroded since the first Reagan

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[140] Hayek, *The Fatal Conceit*, 5.
[141] Sunstein & Thaler, "Libertarian Paternalism is not an Oxymoron," 1161.
[142] Benjamin Wallace-Wells. "Cass Sunstein Wants to Nudge Us," *The New York Times Magazine*, May 13, 2010.

administration, this marked a theoretic course-correction. Throughout their intellectual history, liberalism and capitalist economics have acknowledged at least some minimal state interference in law, regulation, and fiscal policy. Nevertheless, in most instances this was introduced with either reluctance (as with Hayek's defense of minimal welfare[143]), or cautionary distance from the economic decisions of the individual agent (e.g., bond buyback to control inflation, implemented at a systemic level, rather than lump sums of cash deposited in the pocket of individual citizens). With the introduction of "choice architecture" to induce, if passively, specific individual choices, capitalist state regulation acknowledges one of the first influential critiques to emerge, at least nominally, from neoliberal economic theory.

The application of the same critiques applies as much to the private corporation, if not more so. As demonstrated previously, decades of research in cognitive psychology and behavioral economics have eroded the myth of a rational *homo economicus*. At the same time, extraordinary advances in statistical and machine learning have yielded AI with capacities that meet and supersede human capacity for creative insight, even in labor markets that were former havens from creative destruction. The intersection of these two trends virtually necessitates managerial paternalism: wherever the firm's profit motive incentivizes it to replace costly, predictable cognitive flaws of human workers, or improve their output.

Sunstein and Thaler's theory applications, with abstruse terminology like "choice architecture", might seem like an Orwellian approach to the grander Lockean vision of autonomy, free will, and rational consent. "I wish [instead] that I could be made a better chooser,"[144] noted the legal scholar Jeremy Waldron. But the implications of Sunstein's libertarian paternalism truly demand a frank re-appraisal of classical liberal approaches to political theory at the level of both the firm or state-interventionist, and the citizen or employee. The introduction of

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[143] "[...] in an advanced society government ought to use its power of raising funds by taxation to provide a number of services which for various reasons cannot be provided, or cannot be provided adequately, by the market."F.A Hayek, *Law, Legislation and Liberty: A New Statement of the Liberal Principles of Justice and Political Economy* (London: S.n., 1973). Volume 3: The Political Order of a Free People, page 41.

[144] Jeremy Waldron, "It's All for Your Own Good," *The New York Review of Books*, October 9, 2014.

"choice architecture" and behavioral economics returns to the ethical origin of classical liberalism: the human individual. That "rational" actor has evolved from the indivisible unit upon which the social relations of efficient market function were purportedly built, to one of a multitude of quasi-irrational agents subject to the whims of various social institutions, subjective perception, and idiosyncratic variation. The ethics of privacy, autonomy, and equality are contingent in part on the coherent individual, and must reckon with the utilitarian validity of a more paternalistic social contract. If worker autonomy is, due to quasi-irrationality of individual actors, not utilitarian in the aggregate, then a firm's responsibility to promote employee welfare could ironically find liberal argument to suspend individual liberty for personal choice in a variety of contexts. Liberalism's prioritization of economic freedom - and its ideological cornerstone for liberal democracy - is then compromised. If, however, to the contrary, autonomy remains intrinsically preferable in spite of its quasi-irrational agents, liberalism must conclude that it is worth the foreclosure of greater general welfare and utilitarian ethics in favor of civil liberty.

5.2 Libertarian Paternalism: Instrumental Implementations

The following outlines a variety of hypothetical opportunities for libertarian paternalistic implementation. These examples rely on the following characteristics, developed over the course of this paper:

1) The acknowledgement that the cognitive foibles of human workers are gradually becoming more quantifiable, transparent, and efficiently substituted with automated/AI means.

2) The subsequent acknowledgment that achieving and implementing this technology will *fundamentally change the work experience*, where the technology does not simply displace the individual human worker, but in fact "teams" with them in a hybrid format that fragments their workflow, *constrains* their autonomy, and *disenfranchises* or limits their creative discretion.

These approaches will operate within this innovative space to accomplish the following:

a) *Organizationally:* limit the encroachment of AI on integrally-pleasurable elements of the work experience to whatever extent possible.
b) *Individually*: re-cast the experience of workplace autonomy, wherever possible, to allow for conscious endorsement of a work choice, cultivate intrinsic motivation, and reduce boredom, even in occupations with nominally less "liberty" or freedom for true discretion. A firm could apply this method by, e.g., structuring a workflow to include an opportunity for autonomous selection by the human employee on a hybridized machine-human team.
c) *Institutionally:* reconsider the institutionalized aspirations about how and why workers aspire to select "callings", and a conscious course-correction for this interest at every possible institutional level.

5.3 Adapted to AI: A Potential Model of Automated Libertarian Paternalism

In the context of the ethical issues relating to employee treatment considered earlier, while accounting for firm profitability, libertarian paternalism - that is, passive, structural approaches to guiding the outcome of agent behavior without proactively modifying it - seems like a potentially viable, theoretical solution to automating firm management. The firm may have an ethical obligation to align its choice architecture with the employee's well-being. both in terms of its hegemony and therefore its obligation to ensure relative equality and autonomy, as well as its own profit incentives. Specifically, a firm's adoption of AI and fragmentation of labor replacement may present a part[145] of the solution to creative technological

[145] Other parts of the solution could require a more elemental reconfiguration of employment norms: reforming contemporary labor narratives about fulfillment and satisfaction vis a vis earning power, and shuffling prospective workers towards other productive and diverting "work" outlets, as human labor in inevitably excised completely. This will be described later in greater detail.

disenfranchisement. Rather than replacing human cognitive frailties with AI outright, and fragmenting workflows altogether, firms could adopt Sunstein's recommendation: hybridizing the automated task itself, and integrating the human agent into the decision loop generated by the AI's automated function. This transforms the AI's output into a piece of choice architecture, rather than a black-box result that turns the human worker into the Marxian tool, "appropriated by the process".

> *[I]ndividuals make inferior decisions in terms of their own welfare—decisions that they would change if they had complete information, unlimited cognitive abilities, and no lack of self-control.*

By casting the choice architecture as work enhancement opportunity, and insinuating the human knowledge worker inside the AI's product outcome, the firm might preserve the worker's sense creative franchise, "purpose", and thereby wellbeing. A worker who would defy the choice architecture could be re-directed by the imposition of a trivial cost (social, or financial, if their alternate choice proves less optimal) - choice architecture like this induces the employee's implicit endorsement of an action and bestows some level of autonomy.

This paternalism carries considerable ethical weight, considering the firm's responsibility for upholding worker welfare. These outcomes could be measured empirically, using psychological paradigms of motivation, happiness, and boredom as key performance indicators. Such an application of libertarian paternalism demonstrates fulfillment of the firm's moral objective, creates a visible, verifiable token of the firm's relationship with employee, and helps satisfy worker preferences.[146]

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[146] This opens extremely important questions about the utilitarian quotient of capitalist and firm output. Although unlikely, from a consequentialist perspective, the worker's personal experience of his work could theoretically outweigh the utility generated by every other aspect of value production, including economic outcome, in terms of evaluating the net utility of the firm's operation. If this were extended to the firm's impact on society, the utilitarian function may be even more democratically or socially evaluated by its net consequence. Early utilitarian theory noted the sheer impossibility of nearly any frequency of comprehensive (let alone accurately individualized) utility calculation, by virtually any metric of value. Mill noted the foolishness of such a task, writing that "it is a misapprehension of the utilitarian mode of thought to conceive it as implying that people should fix

Such an approach may raise doubts; it does not, for example, repudiate *any* use of AI, nor of the type that inspires anxiety over the future of work in the first place. Consider Shoshana Zuboff's concern for apparently apathetic attitudes to the erosion of autonomy:

> *[...] only a few decades ago US society denounced mass behavior-modification techniques as unacceptable threats to individual autonomy and the democratic order. Today the same practices meet little resistance or even discussion as they are routinely and pervasively deployed in the march toward surveillance revenues.*[147]

This analysis is superficially true, but it overstates the public's comparative lack of concern, and fails to acknowledge the radical transformation of today's social and economic context. To whatever degree "US society" may be unaware of subtle behavior modification itself, surveys suggest that they are very aware of the structural attempts to manipulate via social media, through targeted advertising, and customized news content. This social concern as manifested by congressional desire to regulate companies like Facebook and Google is also evident, even if the commercial applications remain premature and under-regulated. Firms need not jettison AI in its entirety - and indeed, it would be economically disastrous to do so. The use of conscious, *passive* behavioral incentives does not seriously challenge an individual's free will, nor threaten to undermine social pillars, and is meaningfully different from active, interventional modification.

In spite of this, the seriousness of unconscious behavioral modification warrants emphasizing the sensitivity of a conscious, passive approach. Framed from an economic perspective, an employee's work experiences ought to be "allocated" according to an employee's voluntary interest. This paper therefore argues that direct, non-voluntary[148] behavioral modification is perversely anti-market, and

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their minds upon so wide a generality as the world, or society at large." (Mill, 1861; Chap. II, Par. 19). This is no longer presently obvious; in fact, the stated claim of many firms *is* to accurately and specifically track some proxy of utility in close to real-time.

[147] Zuboff, *Surveillance Capitalism*, 25.

[148] As opposed to "involuntary", this also includes unconscious, direct behavioral modification of an individual whose voluntary preference is unknown.

unethical. Manipulating an employee's demand to suit the function of the firm polarizes the benefit of the contract, vitiating its *mutual* benefit. In addition to undermining the contract, the firm's act itself constitutes a seizure of power that circumscribes the employee's conscious consent. In its deliberate endeavor to conform, and even to invert, the employee's relative preference in favor of the firm, this act approaches covert hostility. Non-voluntary consent would constitute a denial of the social contract, and the viability of liberal democracy. Libertarian paternalism in any format, let alone more aggressive behavioral interventions, requires regulation to ensure integrity of personal preference and freedom. The ethics of this exercise, therefore, demand that where choice architecture, firm automation, and human-machine teaming compress human creative discretion, they do so openly, transparently, and with contextual and shared positive interest. The purpose of such a system is to optimize the automation and management of employees without altering, and in best cases in fact affirming and promoting, the worker's experience of consent, understanding, and autonomy in accepting this outcome.[149] All of this must therefore be implemented only within a firm that verifiably upholds the value of stakeholder and employee as well as shareholder, and realizes its motivational tension between its incentive to create value, and its incentive not to harm, and even improve, itself and its employees.

Some weak determinism is an inevitable byproduct of (and in many instance, the express and desired function of) any conscious, social circumstance, where individuals interact and flow through inclined behaviors and preferences, mediated by the architecture of their social environment. Markets passively mediate this behavior. This is distinct from reactive, targeted behavioral modification, especially

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[149] The philosophical foundations of the liberal tradition strongly oppose coercion, except with conscious consent. In his discussion of free will, John Locke notes that even a voluntary preference, enacted without a subject's choice, does not constitute liberty: *"[...] suppose a man be carried, whilst fast asleep, into a room where is a person he longs to see and speak with; and be there locked fast in, beyond his power to get out: he awakes, and is glad to find himself in so desirable company, which he stays willingly in, i.e. prefers his stay to going away. I ask, is not this stay voluntary? I think nobody will doubt it: and yet, being locked fast in, it is evident he is not at liberty [...]*(quote from John Locke, *An Essay concerning Human Understanding* (London: W. Tegg, 1870), Book II, Chapter XXI, Of Power).

the exploitation of clandestine, hostile efforts to conform individual preferences to those aligned with purely with profit generation.

In summary, to resolve the social conflict of disenfranchising labor automation without obstructing innocuous progress of the same technology, in addition to productive output and quality of life, firms must commit to the following:

1) Circumvent or limit automation wherever possible.
2) If it must be implemented, integrate it with as mitigated a negative effect as possible, judged by primary impact on autonomy.
3) Where it threatens to demote worker experience, or otherwise subjugate, conform, or disenfranchise, make the effect consciously known, so as to limit conditioning effect on fulfillment or sense of autonomy.

Indeed, this paper concludes that the "ideology of human frailty[150]" - the cumulative evidence of selectively inept human agency - is a dispossessive fallacy. It does not effectively challenge the foundations of liberal democracy, nor does it justify the "benevolent" and direct modification/mind-control of an incompetent body politic. In fact, this "human frailty" lives in viable tension with a neutral technology that does not violate the individual's ultimate, conscious appreciation of its integration, nor coerce into "uncontract".

5.4 Deconstructing Labor Institutions: Revising Obsolete Narratives

The "purpose" of capitalism is, ultimately, the compression of marginal cost for resources; but capitalism's crowning achievement is not "cheap trade" or "low transaction costs" as much as it is simply the total mastery of its resource allocation. The sociological superstructure that supports this process can only aspire to the pragmatist credo of improving our methods and judgements - it is, after all, intentionally unplanned. Markets are not necessarily deontological ideals, though they may, in lieu of perfect resource allocation, effectively ensure other ideals like equality. In light of this functional, potentially fleeting purpose, to what extent

[150] Zuboff, *Surveillance Capitalism*, 323.

ought humanity extract meaning from labor roles? This will attempt to articulate how workers - humans whose life is mostly spent inside the firm - disentangle their social and political identity, and structural hierarchies, from their labor roles. It will examine the language to identify how their work informs their civic and social identities, and militate appropriately to advance their position within that gravity, which is so commonly obscured.

As developed economies advance, labor specialization continues to render ever more repetitive, obscure, and disengaging forms of work, much of which is technically boring. Simultaneously and paradoxically, work's institutional reputation has morphed slowly from a mark of politically-disqualifying lowliness, to an affliction, to - in its more modern format - a fulfilling or even ennobling practice. Surveys show that the modern American worker is primarily motivated to work by the impact of the work itself - even more so than compensation.[151] This suggests that the high estimation of "work" is motivated, in part, by the expectation that fulfillment is actually possible. But that hope goes unrealized by the vast majority of workers: The highest American worker engagement rate on record is 34%; the remainder were either "actively disengaged", or simply "not engaged" at all[152].

Narratives play some role in sustaining this unlikely dream. Workers may make significant career compromises in exchange for financial stability, but there is far less positive recognition attached to this choice, or to mass commerce generally, than religious or cultural roles (excepting, perhaps, for commercial roles of rare prominence - though even for these, the worker in question may be said to have "sold out"). Other societies celebrate most types of labor or economic productivity as its own virtue. Under centrally planned, authoritarian regimes, labor is often expressly glorified. Cargo cults even pay formal homage to factories and means of production, ritually sanctify the abundance and wealth of the type afforded by advanced manufacturing[153]. In these economic landscapes, choice for work (and

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[151] Bowman and O'Neil, *The State of the American Worker*, 64.
[152] Harter, "Employee Engagement on the Rise in the U.S."
[153] Lindstrom, "Cargo Cults".

consumption) is restricted, and labor motives must become more contingent on institutionalized, extrinsic interests, rather than the individual's. By contrast, in liberal economies across the developed world, individuals relate to work through more covert or structurally implicit media, where career success, economic productivity, and "industry" is prioritized through institutional norms, national lore, and social narrative. Indeed, the intellectual history of economic growth and prosperity in Western, liberal democracies inverts capitalism's modern triumph, suggesting that it was not capitalism alone that vaulted Europe and the United States into modernity. In fact, it required the coalescence of institutionalized priorities around "work" and value production, in tandem with the function of state infrastructure and social relations, that enabled a capitalist model to flourish in the first place.

In the same way that work became an institutionalized value, so too does conspicuous consumption suggests consumers, driven by need to individuate or demonstrate primacy, customize their primary economic experience (consumption) through conspicuous externalization and variety of goods consumed. This reinforces desire to work, earn, and externalize through productive value. Expanding the use of goods beyond their formal intention increases the value of the good beyond the expectation of its formal utility.[154] The economist Thorstein Veblen described consumption as signaling and differentiation:

> *In a community where class distinctions and class exemptions run chiefly on pecuniary ground, wasteful conventions spread with great facility through the body of the population by force of the emulative imitation of upper-class usage by the lower pecuniary classes; so that an exemption of this kind which is an easy means of distinction among the well-to-do, will presently find its way among the indigent as a necessary mark of reputable living.*[155]

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[154] Thorstein Veblen, *The Theory of the Leisure Class* (Project Gutenberg: 1899).
[155] Thorstein Veblen, *Imperial Germany and the Industrial Revolution* (New York: The University of Michigan Press, 1968), 142.

This is a modern antecedent to what is the contemporary norm (especially within the ranks of the knowledge worker class, the middle class, and white collar/service industry work): individuation through work, in addition to consumption. The contemporary worker seeks meaning through expression of industry, both in terms of demonstrating virtue and worth through discipline and work ethic, but now too in terms of the work's intrinsic relationship to self - and as a means of personal fulfillment, happiness, and true expression. The proliferation of career counseling and personality testing is also informed in dialectical tandem by the pressures of labor specialization to efficiently sort individuals to jobs best suited to their skills and personalities. This merged with the heeding of the near-religious "calling" to describe career selection aspirationally: in consumer advertising targeted at successive generations of job applicants (or aspirants), and intersecting with what is now, with technology, the "perfect" customization of this experience.

All of this generates the institutional context that sustains work fulfillment aspirations, and fuels the potent disappointment of that dream denied. Institutional problems have institutional solutions: resolving the ethos of over-consumption and over-work that diverted labor function from Keynes' prediction of the 15-hour work-week. Yanis Varoufakis, Greece's former Minister of Finance, made this critique:

> *[...] the problem with capitalism is not that it produces too much technology, or that it is unfair. Capitalism's problem is that it is irrational. [... its incentivize of] accumulation for accumulation's sake is causing human workers to work like machines for a pittance, while the robots are programmed to produce stuff that the workers can no longer afford and the robots do not need. [...] Even capitalists are turned into angst-ridden automatons. They live in permanent fear that unless they commodify their fellow humans, they will cease to be capitalists – joining the desolate ranks of the expanding precariat-proletariat. [...] Given that it is neither possible nor desirable to annul capitalism's "energy", the trick is to help speed up capital's development (so that it burns up like a meteor rushing through the atmosphere) while, on the*

other hand, resisting (through rational, collective action) its tendency to steamroller our human spirit. [156]

The capitalist system itself is not the enemy - and it will, in fact, provide the only means of an achievable alternative to the boredom of so much contemporary labor. Rather than supplant capitalism entirely, or even rely on superficial relational reforms, it would be wise to re-visit and redefine the essence of its institutional drivers. Becoming more conscious of this reality, as well as the human foibles that make AI an increasingly better labor substitute, would help calibrate the institutions that currently prioritize creative franchise and autonomy. This is not to dispute that humankind has intrinsic diversionary interests. This merely observes that the institutions that channel those interests could be satisfied on many different planes. A re-dedicated, conscious vision of labor, within which occupations constitute a means rather than a deontological end, hastens the Keynesian dream - freedom from the tyranny of labor's glorified file-cabinetry, and the application of our creative pursuits elsewhere. The preponderance of menial jobs simply exists to fuel yet another exploitative commodities market - a universal aspiration to the minority of fulfilling work achieved by only a very few. For every Steve Jobs, Marie Curie, or Neil Armstrong, there are tens of millions of nameless factotums; a more conscious labor ethic dissolves that duality.

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[156] Yanis Varoufakis, "Yanis Varoufakis: Marx Predicted Our Present Crisis – and Points the Way out," *The Guardian*, April 20, 2018.

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