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## Toward a Critical Theory of Corporate Wellness

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## Toward A Critical Theory of Corporate Wellness

**Abstract:** In the U.S., “employee wellness” programs are increasingly attached to employer-provided health insurance. These programs attempt to nudge employees, sometimes quite forcefully, into healthy behaviors such as smoking cessation and exercise routines. Despite being widely promoted as saving on healthcare costs, numerous studies undermine this rationale. After documenting the programs’ failure to deliver a positive return on investment, we analyze them as instead providing an opportunity for employers to exercise increasing control over their employees. Based on human capital theory and neoliberal models of subjectivity that emphasize personal control and responsibility, these programs treat wellness as a lifestyle that employees must be cajoled into adopting, extending the workplace not just into the home but into the bodies of workers and entrenching the view that one belongs to one’s workplace. At the same time, their selective endorsement of health programs (many scientifically unsupported) produce a social truth of wellness framed as fitness for work. We conclude by arguing that the public health initiatives occluded by the private sector’s promotion of wellness programs would be a much better investment of resources.

**Keywords:** employee wellness, neoliberalism, subjectivity, health

### I. Introduction

Intensive workplace surveillance has become the norm for workers ranging from retail clerks to delivery drivers. The power of employers and insurers relative to employees and the insured is an asymmetry ripe for analysis and critique. For some academic departments (like economics and finance), modern managerial control is justified on the grounds that discipline promotes productivity. However, that justification is belied by an increasingly prominent manifestation of such discipline: employee wellness programs, which aim to incentivize and supervise healthy employee behaviors, from smoking cessation to weight loss to maintaining a cheerful and productive demeanor. Through monitoring of activity levels, biometric measures, and even moods with diaries, self-reports, and wearable technologies, bosses and insurers are now directly influencing employees’ choices about exercise, mental health care, medication

adherence, and other aspects of “wellness”—but there is little evidence such interventions actually increase productivity or profit.

Vendors publicly bill these programs as a way to develop a healthier, happier workforce, and privately market them as a route to reduced insurance costs. While wages are the main component of compensation, in the US, the persistence and prevalence of employer-sponsored insurance means that health care is a secondary—but critical—margin of cost for most large firms. Indeed, since healthcare costs have risen at a much higher rate than other employee-associated costs, and are subject to numerous forces largely outside of the employer’s control, from a purely economic perspective, the development of tactics to contain healthcare costs becomes an urgent desideratum.<sup>1</sup>

All this effort is supposed to reduce incidents of illness, thereby lowering insurance costs. As we will argue, a purely economic account of wellness programs fails in several ways. Consider that wellness programs are primarily run by wellness vendors, who have a material interest in promoting their effectiveness. But even their own trade association recently admitted that costs to employers are higher than the savings achieved (Health Enhancement Research Organization and Population Health Alliance, 2015). The programs have routinely failed to generate any substantial positive impact on either health, reported well-being, or medical costs. Moreover, if employers were truly serious about the cost of care, they would support Canadian, French, or British models of health care finance (which deliver care at 55% to 70% of the cost of the United States’s fragmented, profit-driven system). Why support invasive inquiries and new bureaucracies to micromanage employees’ personal decisions, when they do not appear to deliver expected savings, and when there are such obvious alternatives available?

The solution to the puzzle lies in a recharacterization of the wellness program's aim. It is not primarily designed to cut costs or improve employee health. Rather, one of its conceded costs to employees (micromanagement) is its key benefit to employers. Just as employers might reject the economic boon of full employment in order to assure some level of insecurity among workers (Kalecki, 1943), they may also favor useless or even counterproductive programs of health monitoring and intervention in order to create certain types of subject: submitting, obedient, and ever-cognizant of the costs they may impose on their benefactors via carelessness or lethargy. Wellness programs are primarily concerned with conditioning workers to frame personal choices (about how to medicate, eat, meditate, exercise, and engage in self-care) in an economizing manner, one that is always attentive to the employer's bottom line.

The first step toward better understanding wellness programs is to show the connections between their political and economic foundations, and to analyze their actual effects on workers and businesses (Part II below). Wellness programs' general failure to cut costs or improve outcomes raises another question: why are they so persistently pursued, in so many contexts? Part III offers a set of answers informed by concepts of neoliberal subjectivity and the radical extension of extant models of human capital. Rather than continuing to contest wellness programs on their outcomes, those concerned about their ongoing threats to privacy, autonomy, and well-being should instead aim to shift discourse on health improvement toward public health initiatives (Part IV).

## **II. Wellness as a Politico-Economic Construct: Risk-Spreading versus Moral Hazard**

Government can only create markets for health insurance that are perceived as legitimate by intensely regulating the practices of both insurers and consumers. Insurers want to insure the

healthiest persons, but it is the least healthy consumers who are most interested in obtaining insurance. If insurers are allowed to practice price discrimination, and segment consumers into narrow pools based on perceived risk, the result is a classic market failure, as healthy consumers will abstain from buying insurance, and unhealthy consumers will be priced out of it.

Government can slow that process, by mandating the purchase of insurance (as the Affordable Care Act (ACA) did). In return, the state can require private insurers to forego strictly actuarial experience-based rating, and to expand their risk pools.<sup>2</sup>

#### *A. The Legal Environment of Wellness Program*

The ACA also took a more direct approach to the problem of price discrimination, prohibiting refusals of coverage based on “pre-existing conditions.” The economic rationale is supported by a clear moral intuition: most illnesses are not the result of purposeful behavior or neglect by an afflicted person. No one deserves to have the pain and unease of illness compounded by the fear of financial ruin. This moral value translates to a conceptualization of “insurance-as-safety-net,” meant to cushion the blows of uncertain futures. The earlier Health Insurance Portability and Accountability Act (HIPAA, 1996) also reflected these values, forbidding group health plans from denying employees at a firm eligibility for coverage (or raising the cost of coverage) based on “health status. . . receipt of health care; medical history; genetic information; evidence of insurability; and disability” (29 U.S.C. § 1182(b)(2)(B)). These provisions of HIPAA and the ACA reflect a conception of insurance as risk-spreading, designed to share the burden of the financial consequences of illness. Like Accountable Care Organizations, which explicitly embedded a population health model in the ACA, these insurance regulations were based on a holistic model of health promotion (Pasquale, 2012).

But there is a rival conceptualization of insurance—as a moral hazard—which takes exactly the opposite approach to illness. On this concept, obesity, unprotected sex, lack of exercise, smoking, and other conditions considered to be within one’s own control are critical precursors to illness. Too easily obtained, insurance insulates individuals from the full consequences of their personal choices. This perspective also animates parts of the ACA—particularly the sections promoting wellness programs, in which the moral-hazard understanding of insurance coincides with a potentially cost-saving form of price discrimination.

For over a decade before the ACA was passed in 2010, corporate leaders had been lobbying the federal government for revisions of health law to support workplace-based health improvement programs. They believed health privacy laws impeded access to the records necessary to monitor health status and health-related activities (Ajunwa, K. Crawford, and Ford, 2016), despite the wide variety of other information sources that were readily available for such purposes (Pasquale, 2014b). They also wanted to charge more for insurance to those who did not engage in wellness activities, shifting costs from the healthy to the sick.

They succeeded in many ways. HIPAA’s general prohibition on health status-based discrimination has an exception: group health plans may “establish premium discounts or rebates or modify otherwise applicable copayments or deductibles in return for adherence to programs of health promotion and disease prevention” (29 U.S.C. § 1182(b)(2)(B)). The ACA raised the permitted discount from twenty to thirty percent, and further authorized the agencies implementing wellness programs (the Departments of Labor, Treasury, and Health and Human Services) to raise the discount to 50% (42 U.S.C. § 300gg-4(j)(3)(A)). As Lindsay Wiley explains, “although the ACA generally prohibits private health plans from discriminating on the basis of health factors, a ‘wellness program’ exception allows group health plans to adopt

incentives and penalties tied to the terms of coverage as part of a program of health promotion and disease prevention” (Wiley, 2014). Nothing in the legislation or regulation prevents insurers from making up the “discounts” or “rebates” they give to wellness participants by raising the price of plans overall. Given the high price of individual and family coverage, a 30% “discount” for some can easily translate into thousands of dollars more in expense for others in the plan. The law effectively enables harsh price discrimination based on whether the insured participates in the wellness program.

Nevertheless, even in wellness policy, the “insurance-as-safety-net” model of coverage offers some counterbalance to the “insurance-as-moral-hazard” model. A 2006 legislative rule imposed several restrictions on wellness programs which offered discounts or rewards conditioned on “a standard that is related to a health factor”<sup>3</sup>. Such programs must be “reasonably designed to promote health or prevent disease” (29 C.F.R. § 2590.702(f)(2)(ii) (superseded); 42 U.S.C. § 300gg-4(j)(3) codifies this principle in the ACA). They must also provide alternative standards to those who might find it “unreasonably difficult due to a medical condition to satisfy the otherwise applicable standard.” However, the “reasonable design” requirement is not a strict one: those imposing wellness programs do not have to prove that they improve outcomes. Rather, they must only show that their program has a “reasonable chance of improving the health of or preventing disease in participating individuals,” is not “overly burdensome,” is not “a subterfuge for discriminating,” and is “not highly suspect in the method chosen.” There have been virtually no cases testing these requirements, since agencies and courts tend to defer to sponsors’ management of group plans (Wiley, 2013; EEOC v. Flambeau, 2015).

Corporations have responded to these favorable rules by rapidly adopting wellness programs. As of 2013, 80% of workers at firms with more than 50 employees were covered by

them (Mattke et al., 2013). Program features have ranged from the useful (fresh produce sales on corporate campuses) to the dubious (long-form questionnaires assessing workers' mental health) to the creepily invasive ("laughter cards" which ask workers to record whether they experienced levity at least 10 times in a day). An increasing number of programs target workers biometrically, penalizing them for being overweight or having high cholesterol (Bernard, 2015). Some employers have even slowed their elevators to encourage the use of stairs (Goetzel, 2013). Employees who fail to answer wellness questionnaires, or participate in wellness activities, may be penalized hundreds or thousands of dollars in the form of higher insurance premiums, higher copays and deductibles, or both. They may also be denied health insurance altogether (EEOC v. Flambeau, 2015).

Wellness programs are just as popular for managers of state benefits programs, as well—a logic of austerity empowers top bureaucrats to present wellness programs as a cost-cutting, tax-saving measure. In North Carolina, for example, wellness programs are part of a larger political movement to monitor and discipline state employees (Mayer, 2011; Owens, 2009). State university employees participate in the state employee health plan. That plan offers tiered plans, which offer better and worse terms of coverage. Starting in 2010, the program defaulted employees into a less desirable plan, unless they completed an attestation that they (and their dependents) did not use tobacco products (or that they were enrolled in a smoking cessation program) (Cauchi, 2016). The plan also initially forced obese employees into the skimpier plan, although this was ultimately scrapped (Owens, 2009).

During the 2016 enrollment period, the wellness program was presented as a set of economic incentives (Forsberg, 2016). Generally, premium increases came with the opportunity to "earn" "wellness credits," which would lead to a much more modest increase. To maximize



premium and copay reductions, employees must attest to nonsmoking/smoking cessation (indeed, they are not even eligible for any but the least desirable plan until they complete this attestation), indicate a primary care provider (to be printed on their insurance card; visiting this provider is rewarded by a reduced copay), and take a health assessment (which involves uploading biometric data on weight, blood pressure, as well as more general information on significant disease history, tobacco and alcohol use, level and frequency of physical activity, overall stress level, eating habits, typical amounts of sleep, and so on).<sup>4</sup> North Carolina also promotes the “NC HealthSmart” website, which pushes links to videos and programs on topics like healthy eating (N.C. HealthSmart, n.d.). Those who fail to visit the site receive an email with the following nudge:

It has been over 90 days since you visited your Personal Health Portal. Please log in to update your health information as needed. As a result, you may receive valuable health alerts. On your Personal Health Portal you can also find a variety of resources to support your health. These include personalized Action Items and resources to help keep your health on track.

A 2013 RAND report shows that the North Carolina plan’s intrusiveness is by no means unusual (Mattke et al., 2013). Nor are its coercive elements: employees around the country will soon face the grim choice of either taking blood tests, or losing health coverage (Greenfield, 2016).

In short, and in both the public and private sectors, over the past decade, employee wellness programs have added doctors’ visits, fitness programs and weight loss to many workers’ already expanding job requirements. Superficially, these initiatives appear “win-win:” employees get healthier and employers cut costs. However, as the following will demonstrate, they are all too often part of broader efforts by corporations to shift costs to workers (Anderson, 2016; Mattke et al., 2013; Lewis and Khanna, 2014). Like the pervasive intertwining of public and private actors even in explicitly regulatory aspects of US health care (Pasquale, 2014a),

wellness programs draw on the normative appeal of public-private partnership while granting new forms of soft power to private actors.

### *B. Do Wellness Programs Save Money?*

Health policy technocrats downplay popular suspicion of wellness programs. They praise employers who promote “personal responsibility” for better diet and exercise habits. But empirical evidence on wellness programs is mixed at best. For example, research published in *Health Affairs* shows that when wellness programs do save employers money, they tend to shift costs to unhealthy workers (Horwitz, Kelly, and DiNardo, 2013). Stressed and vulnerable individuals are frequently too overwhelmed by job and family responsibilities (and their own health concerns) to jump through the many required hoops, so they resign themselves to fines for their “failures.”

More generally, savings touted by vendors have been widely mocked as sleight of hand tricks (Lewis and Khanna, 2015). For example, many vendors do not take into account selection effects when reporting results—and present small average weight losses as “successes,” when they could easily have resulted from seasonal effects or random variations. Astoundingly, researchers in the *American Journal of Managed Care* reported in 2015 that “there is no published evidence that large-scale corporate attempts to control employee body weight through financial incentives and penalties have generated savings from long-term weight loss, or a reduction in inpatient admissions associated with obesity, or even long-term weight loss itself.” (Lewis, Khanna, and Montrose, 2015).

Such notable failures mean that employee wellness programs are now at a crossroads (Frakt and Carroll, 2014). Managers will either start abandoning them *en masse*, as they realize

that minimalist nudges toward better behavior don't outweigh the costs in paperwork, employee aggravation, and regulatory compliance (Lewis, 2015; Morris, Solander, and Huelle, 2015). Or they will double down on intrusive surveillance, required activities, and detailed protocols. From a short-term economic perspective, such alienating and time-consuming monitoring may seem irrational. However, their efficacy in inculcating certain attitudes in the workforce may be intrinsically valuable to employers—and may generate long-run financial returns, if not employee health.

### III. Why “Wellness”?

If the empirical evidence on the efficacy of wellness programs is so sparse, how do they persist and proliferate? Their origins supply some important clues, and we focus on these origins because they vividly display both the extent to which the rhetoric and justification for the programs remain relatively constant (despite the different kinds of activities they promote), and the extent to which the largest change since the 1980s is an increasing level of coercion on employees to participate. Using representative work from the 1980s thus offers a baseline against which features of current wellness programs can be assessed. Corporate wellness initiatives date to the mid-1970s, with literature from the 1980s reporting that health promotion efforts “range[] from single interventions such as hypertension screening to comprehensive health and fitness programs.” The overarching goal was to “facilitate changing people’s *behavior or lifestyle* to prevent disease and promote health” (Conrad, 1988, p. 485, emphasis original). The most obvious distinction between these programs and current ones is that when Conrad was writing, participation was fully voluntary. While participation is still generally technically voluntary, wellness programs increasingly come with carrots both in the form of heavily

discounted programs (*e.g.*, Webinars on weight loss) and sticks in the form of higher premiums and co-pays for those who do not participate, although, as noted above, the penalties can now include being denied coverage altogether.

With the exception of voluntariness, however, reading Conrad's summary of the programs feels very much like reading current literature on them: the benefits await scientific demonstration, but there is a "widespread belief among wellness advocates that these programs have significant positive effects for employees and corporations" (1988, p. 485). Employers are largely motivated by cost-containment, claims of increased productivity and decreased absenteeism, and the emergence of the "lifestyle-risk factor paradigm in medicine" (*op cit.*, p. 486). The lifestyle-risk paradigm, which posits that many health outcomes can be controlled by behavioral changes, in turn emerged as part of a larger cultural moment of wellness, as evidenced by the rapid rise of individual participation in fitness activities like jogging (*op cit.*, p. 505). For that paradigm of "healthism," individuals respond to a failure of social and medical policies to sustain their well-being by doubling down on the individual responsibility to be "healthy," in the process creating a "potential-sick role through which the obligation to stay healthy is more strongly asserted .... As potentially sick, individuals are experiencing more intense social pressures to act in ways to minimize that potential" (R. Crawford, 1980, p. 379). Today, the same paradigm is additionally sustained not just by the proliferation of fitness centers, personal trainers, and so on, but also by the more complex apparatus of genetics and environmental research, and the increasing ability to designate the "pre-symptomatically" ill through genetic testing and other statistically based means. Those patients are expected and encouraged to take ownership of their potential health problems, engaging in behaviors to minimize their risk of developing them and then to manage them cost-effectively should they

actualize (Rose, 2007). The appropriate managerial angle was and is unclear: a number of studies from the late 1970s to early 1980s came up with wildly conflicting causes for medical cost rises, but employers settled on the idea that it was individuals who were “responsible for current medical increases,” due to their increased utilization of them.<sup>5</sup> As a result, the 1980s began a trend toward increased cost-sharing as a disincentive to utilization (Alexander, 1988, p. 561).

Even in the 1980s, the downside risks of wellness programs were debated: they emphasize individual risk factors without an evidenced, scientific basis for knowing how much individuals are responsible for their own hypertension or other problems; the programs ignore structural issues around class; they shift attention “from the environment to the individual;” and they risk that corporations will “become more coercive about promoting health and, for example, make wellness a condition of employment” (Conrad, 1988, p. 487). At the same time, there was and is an entrepreneurial market of health information vendors, who would serve as consultants to companies to push wellness programs, perhaps at the expense of other, more fruitful strategies (Alexander, 1988). These vendors, of course, add considerable transaction costs that have to be accounted in any analysis of costs.

What emerges most clearly from this history is that wellness programs have risen in tandem with the neoliberalization of the economy and the rise of neoliberal governmentality, defined as a way of “structur[ing] the possible field of action of others” (Foucault, 1982, p. 221).<sup>6</sup> Neoliberalism is most notable for its insistence that all social issues are tractable by, and should therefore be subjected to, economic analysis, even if the details of what that means remain murky.<sup>7</sup> Thus, neoliberalism prizes markets and their proliferation (even using government to create them (Harcourt, 2011)); competition; market efficiency; the complete

blurring of boundaries between work and leisure time; and individual responsibility for everything to do with one's situation. At the same time, this focus systematically devalues social or structural approaches to addressing social problems, and in so doing, depoliticizes them. As Alexander put it a generation ago, "the risk discourse has gained such ascendancy that any theory of disease etiology which returns individuals to groups or classes" is quietly ignored (1988, p. 563). Fully invested in this individualistic risk discourse, employee wellness programs are part of a social move away from any consideration of "public health" as a legitimate concern and toward health as a fully privatized good.

#### *A. Human Capital, Responsibility and Financialization*

Central tenets of neoliberal economic theory emerged in Gary Becker's *Human Capital* (1975). The book was largely focused on education and the reasons why investment in education had a positive return. Becker's framing of human capital, however, as filtered through early work by Michael Grossman, was enormously influential, and contained "the seeds of virtually all of the ensuing literature on health as human capital and the welfare value of health improvements, even if mostly not explicitly considered" (Soares, 2014, p. 1-2). In a much later paper, Becker himself returned to the question of human capital when applied to health. His analysis there, which incorporates the work of the intervening thirty years, suggests that investment in health is an important component of human capital, because "the greater the probability surviving into the future, the smaller the incentive to consume harmfully addictive goods .... So individuals with lower life expectancies should be more likely to be addicted to drugs, smoking, and other harmful goods" (2007, p. 383).<sup>8</sup> In other words, if you can expect to live a long time, you are less likely to engage in behaviors that reduce your life expectancy. Taken on its own, this

observation could help promote any number of social programs: outreach to the addicted; state subsidies for youth sports and music programs; a job guarantee or state support for other sources of meaning and purpose come immediately to mind. In Becker's hands, the observation fueled another, more punitive set of policy recommendations, focused on increasing the immediate cost of risky behaviors, to counteract persons' predictable tendency to discount the future.

Since the economic way to deal with the future is risk, wellness programs as neoliberal economization tend to emerge as a mechanism of risk stratification, with the aim of transferring the burdens of risk of medical costs onto those deemed most likely to create them. In other words, they tend to unravel the risk-pooling aspects of insurance. Wellness instead becomes something that a worker invests in, managing her personal health risk like an investment portfolio, under the supervision of the employer. A decision to exercise regularly today delivers a return at some moment in the indefinite future, when it will have lowered one's risk of ischemic stroke or other heart disease (Martin, R., 2002). As Viq Pervaaz, of Human Capital at Ernst and Young LLP, puts it in an essay on what wellness initiatives might look like in 2020:

Coupling a predictive, proactive and fact-based wellness management approach with *employee owned and led* wellness decisions can provide a powerful and personalized platform. By maintaining this initiative in a structured and sustainable manner, employers are able to provide a more targeted approach of spending *proactive* wellness dollars for maximum ROI and decreasing the *reactive* spend on medical costs (Pervaaz, 2016, emphasis original).

In a nutshell, this presents the neoliberal view of healthcare: a portfolio to be managed, by the employee, via investment in empowering lifestyle changes, as a way to generate a positive ROI for both the employee and the employer.

### *B. The Wellness Lifestyle*

Early, voluntary wellness programs had very low participation and retention rates, and those who did enroll tended to already have “healthy” habits: non-smokers, those who already had an exercise routine, and so forth (Kotarba and Bentley, 1988). It is in this context that we can see most clearly that wellness programs are also an exercise in what Foucault calls subjectification. The general point is that neoliberal capitalism requires certain kinds of subjects, principally those who view the world economically, trusting in markets, viewing personal choices as investments in themselves, and viewing their life as intimately connected to work. Such subjects do not generally occur without training. In this case, the programs are techniques for creating employees and subjects for whom “wellness” is a “lifestyle,” a part of their personal brand.<sup>9</sup> The mechanisms center on convincing employees—primarily through monetary mechanisms—that they are responsible for their own health. As one Walgreens executive put it:

Is this an entitlement or are you accountable for your own health? The bottom line is that you can’t push people to change. It’s going to have to be something they want to do. So it’s really trying to find the right programs and meet the employees’ needs at a specific point in their lives. (Corporate Health and Wellness Association, n.d.)<sup>10</sup>

The rhetoric of accountability, often mixed with autonomy, in other words, is how the compulsory nature of wellness programs is justified, and how they become a technique for the conduct of conduct.

Research into older, voluntary programs can illuminate what is at stake. Drawing on a series of structured interviews across several corporations, Kortaba and Bentley note that the voluntary wellness programs tended to appeal to two types of employees: those “for whom workplace wellness fits ongoing efforts to develop what can be termed the fashionable and contemporary self,” and, second those “for whom workplace wellness is perceived as a potential resource for establishing a new style of self - either when required by some sort of traumatic



event like a divorce or personal illness, or when recommended by a life that is becoming increasingly boring and unstimulating” (1988, p. 552). That is, wellness programs appealed most strongly to those who had already experienced some success in branding themselves as well or fit. Those who felt like they would be stigmatized by participating in the programs (*e.g.*, smokers enrolling in exercise programs, or even the obese in aerobics classes) tended not to participate, as they felt “incompetent” to do so.

Insofar as current wellness programs are both more intensive and coercive than earlier models, they present an exercise of power of employer over employee, one that attempts to push a rebranding of the reluctant. Indeed, one factor that was predictive of participation in voluntary wellness programs was pressure (real or perceived, as in the case of the boss who is clearly a fitness fanatic) from employers (Kortaba and Bentley, 1988, p. 554). Although the employer is first-mover in this relationship, the importance of employees’ internalizing wellness goals is of greater importance. That is, health moves from “a status—something an individual has—to an accomplishment—something an individual does” (Kortaba and Bentley, 1988, p. 558).

Kortaba and Bentley were writing nearly thirty years ago, but their point is still clearly applicable. Indeed, since that time, the programs have expanded in both extension and intensity, and not just in the move to make them compulsory. For example, the inclusion of mental health in the larger domain of healthcare, while salutary at one level, creates more potential targets for wellness intervention. Again, this is not a new concern: as one article from the late 1980s, long before legally mandated parity in mental health coverage, put it, the programs “have implications for social control in the workplace, creating employer influence over workers’ lifestyles and introducing the influences of parapsychiatric expertise into the normative structure of individual lives and organizational culture” (Roman and Blum, 1988, p. 503). That is, not only should

employees take care of their physical health, but also their mental health, and “happiness” has emerged as the mental equivalent of aerobic fitness, generating an elaborate apparatus of positive psychology (Binkley, 2014). To cite an extreme example, one Nevada school district adopted a program called “Laughter, the Best Medicine;” under which employees who could prove that they laughed at least once per day were eligible for a drawing for a \$100 prize (Vander Schee, 2008).

What all of this makes clear is that wellness programs function as an apparatus of neoliberal biopower in at least three ways. All of these techniques are central to the neoliberal vision of the world. First, as Foucault (1985) noted in his studies of the ancient Greeks, stylizations of the self, whereby individuals come to occupy specified social roles, provide a rich, normative tableau through which individuals make meaning in their lives, and establish their position within it. As the above should indicate, “wellness” is such a stylization, wellness programs ride on the back of broader social trends emphasizing the importance of being or becoming “healthy” by participating in health markets; that is, not just by jogging, but by consuming gym memberships, yoga classes, nutritional supplements, and so forth. As Chris Till (in press) notes, wellness programs are useful tools for inculcates these aspects of the neoliberal vision of selfhood: workers are encouraged to compete with one another over fitness goals, are habituated to viewing themselves in terms of productivity, are theoretically able to do more at work because they are more fit (and happy), and are encouraged to view all of this as entirely their own responsibility, a part of their job that they perform while not on the clock.<sup>11</sup>

Second, as the above suggests, the programs move participants to do something outside of work that will enhance their productivity at work. As such, they are part of a long tradition of attempts at subject formation, by way of extending work requirements into employees’ private

lives. Other representatives of that trend include both coercive workplace techniques such as drug testing, and the disappearance of the home as a space away from work as workers become more connected through email and the like.

Third, as noted, the specific techniques encourage individual responsabilization. When you join a wellness program, you not only say who you are, you indicate that you will be taking personal responsibility for your health. It is also to be expected; as Melinda Cooper (2012) notes, the general strategy is to push for the “necessity of contingency:” workers are to be available at all times, and workplaces increasingly try to regulate family life; women and people of color most are disproportionately subject to these enhanced risks. Louise Amoore (2004) similarly argues that the risks of globalization and job insecurity are transferred to employees, who are told to “celebrate risk.”

### *C. The Truth of Wellness*

Insofar as wellness programs become both pervasive and mandatory at the workplace, they will also tend to produce a social truth about what “wellness” means. In Foucauldian terms, we are looking at what Foucault calls “the production of truth in the form of life” (2011, p. 218). Or, as Carolyn Vander Shee puts it, “the contemporary vision of a healthy neoliberal citizen/worker is of one who is able to self-examine and reconstruct the self consonant with the dominant version of a healthy body” (2008, p. 856). That is, they will contribute to and be extensively involved in producing the social meaning of “health” or “wellness.” This social meaning depends on a selective and somewhat tendentious reading of the medical science it relies on; studies that involve long-term measurements of the effects of dietary habits, for example, are very difficult to conduct. There is medical consensus on a few points: smoking is

bad for you and a primary risk factor for numerous cardiovascular and lung diseases, as well as several kinds of cancer; diabetes is bad for you, and as a chronic condition can be staggeringly expensive.

Beyond such low-hanging fruit, however, current studies cannot agree on even the most basic of questions that must be presumed answered in order for wellness programs to do more than trade on the social authority of medicine and quantification. For example, recent work questions the social consensus on whether carbohydrate intake is a matter of concern for obesity (Hall et al., 2016; see also below). Consider also the weight-loss/exercise nexus. There is an emerging literature that suggests that being somewhat overweight and fit is better than being thin but unfit (Ortega, Lavie, and Blair, 2016; Flegal, 2014). So too, recent and competing articles in the *Journal of the American Academy of Cardiology* studied whether one could jog too much and thereby increase cardiovascular risk. They of course arrived at opposite conclusions (Feldman et al., 2015; Schnohr, O’Keefe, Marott, Lange, and Jensen, 2015). Again, the experience of a generation of programs is instructive: a 1988 study (Kronenfeld, Jackson, Davis, and Blair, 1988) of workplace wellness initiatives included eating breakfast on its list of healthy behaviors, even though more current studies find little support for that inclusion (Barr, DiFrancesco, and Fulgoni, 2015; Chowdhury et al., 2016).

Even if the science as to what constitutes “wellness” could be settled, the techniques and instrumentation for measuring it are complex, contested, and themselves potentially problematic. The ubiquitous Fitbit, for example, may not accurately report heart rate, according to a study commissioned for a class action suit against the company (Jo and Dolezal, 2016). Activity trackers may inspire no more activity among users, let alone better health outcomes—even when

coupled with cash rewards (Finkelstein, 2016). Body-Mass Index (BMI) is both widely used as a proxy for dangerous obesity and is notoriously unreliable.

Wearable and self-tracking technologies are rapidly proliferating (Lupton, in press; Schüll, 2016), and as they become cheaper and more widespread in the absence of statutory protections for workers, demands for health information can become increasingly granular and intrusive (Lupton, 2016). The trend is unmistakably toward more surveillance, with little regard for externalities or unanticipated side effects. For example, consider the Apple Watch, which initially came with unremovable health tracking software, as a good example of the sort of thing that employers like, but also something that incidentally encourages the very sorts of obsessive behaviors associated with eating disorders. The watch also normalized the male body: menstrual tracking required downloading a separate app (Moraine, 2015). Devices like the Fitbit also encourage the social meaning of exercise to coincide with those activities that can be easily quantified by wearable devices, and potentially monitored by employers (Till, 2014). It is thus important to understand “wellness” as a socio-medical construct, the details of which will vary with context and the needs of those who define it, in this case employers and the wellness industry. That is, the looseness of fit between cultural, scientific, and normative dimensions of the lifestyle-health nexus allows their selective integration into management and control strategies. Indeed, as David McGillivray notes, these strategies use the social legitimacy of medicine to authorize another agenda entirely: “this health promotional logic appears to provide medicalized legitimacy for the organizational governance of an employee’s subjectivity” (2005, p. 132).

Today, the truth of wellness is one that is consonant with the needs of neoliberal capital. This is evident in the selectiveness in the forms of well-being that wellness programs promote,

versus those they ignore or even undermine. The programs generally ignore exogenous factors that are outside the employee's ability to internalize, such as exposure to pollution and harmful chemicals at work (for example, in the strawberry industry: Guthman and Brown, 2016) or the increase of job-related stress, much of it induced by pushing the risks of exogenously produced precarities onto lower status employees (Amoore, 2004). However, cumulative stress is a known health risk (Lampert et al. 2016), and a recent meta-analysis suggested causal links between employee feelings of job insecurity and both diabetes and incident coronary heart disease (Ferrie et al. 2016). Neoliberalism addresses all of this with mental health initiatives: therapy steps in, to help employees be cured of the desire for communal bonds getting in the way of entrepreneurial ones (Foster 2016) and to address the general problem that "life is inevitably insufficiently happy" (Binkley 2014, p. 171), and at least some wellness programs reward displays of happiness and laughter. However, the positive psychology by means of which workers are encouraged to feel happy about their precarious status is so poorly supported that it was critically covered in *Newsweek* (Mitchell 2016).

The rise of such quasi-scientific psychologies make it harder to notice that we do not see widespread efforts to reduce job insecurity or to promote a more relaxing work schedule, particularly for low SES workers. Indeed, as noted above, employment precarity is a key component of the neoliberal workplace, but at least some wellness programs reward displays of happiness and laughter. In other words, neoliberal employment practices may very well be significant contributing factors to the very medical conditions that neoliberal wellness programs are then supposed to overcome. It is difficult to imagine a better example of the subtle transfer of risk onto employees.

Mandated wellness goals may also be practically unattainable for most. Disabled employees are the most obviously disadvantaged here. Employers are supposed to modify wellness goals to accommodate the disabled, but it is difficult to imagine accommodations addressing such fundamental issues as the lack of time a disabled person might have, relative to others, thanks to efforts needed to address their disability entirely independent of the challenge of wellness programs (Basas 2014). More generally, consider the case of weight loss: there is very good evidence that weight gain can be almost impossible to undo, because it comes with a series of metabolic changes, the gist of which is that the body tries everything in its power to sustain its “new normal.” To demand that employees nonetheless lose weight - especially given the total lack of public health initiatives aimed at preventing weight gain in the first place - risks violating one of the fundamental maxims of most moral theory, that “ought” implies “can.” Not only that, different bodies metabolize foods differently: some people gain weight easily, and others do not. Under wellness regimes, the latter can wrap themselves with the social approbation of “wellness” and routinely engage in behavior for which the former are socially and financially penalized (Jeppsson, 2015).

Whatever their moral legitimacy or efficacy, wellness programs serve to entrench the idea that one belongs to one’s workplace, extending market relations from beyond the workplace and into the home and other spaces.<sup>12</sup> This is not a new worry; Roman and Blum express the concern that “these programs represent intrusions into employees’ lives that are outside the employer’s appropriate purview” and view it as non-problematic only if the programs are fully voluntary (1988, p. 506). Now that the programs have become essentially compulsory, the warning sounds prescient. The ensuing years have precisely seen an increasing tendency for

employers to consider their employees as working (or subject to workplace-like supervision) all the time.

Wellness programs contribute to the same tendency, but here it is not just a matter of time, but of the direct appropriation of the bodies of workers themselves. If you are at home eating dinner, you are also working, because you are making lifestyle choices that will affect your future insurance rates, job performance, and perhaps even employability. In this sense, one's very embodiment is at least partially under the control of one's job, and there is a tendency to conflate personal wellness habits with "fit for employability" (Dale and Burrell, 2013). That is, tying a diabetic's blood sugar levels, or an obese person's weight loss plans, to financial incentives offered by their employers, does far more than nudge workers to do what their better selves would have done anyway. It reframes health and bodily integrity as an obligation owed from the worker to the employer. The worker has an obligation not merely to optimize job performance, but to be sure she has the physical and mental resources to continue doing so. As sociologist Will Davies has observed, health and happiness used to be seen as ideal outputs of economic processes: we'd measure how well a firm or economy functioned, at least in part, by the human flourishing of people as workers or citizens. Now, wellness is an input, too: the worker has an obligation to use non-work time to be mentally and physically prepared for the workplace (Davies, 2015).

The rise of data analytics—"big data"—threatens to intensify these trends. On the one hand, analytics will discover new, supposedly predictive correlations between employee behaviors and wellness. Indeed, analytics would likely further the specific, normative understanding of wellness; because they (falsely) appear to be fully neutral, unbiased sources, "algorithms are stabilizers of trust" (Gillespie, 2013, p. 178).<sup>13</sup> This stabilizing function occurs



at the same time that the amount of data that can be processed increases exponentially, and that data brokers facilitate the transfer of information from one context to completely different ones (Pasquale, 2014b). For example, if either insurance companies or employers obtain access to credit card information about their employees—perhaps as a required condition of employment—they could monitor alcohol purchases, penalizing those who purchase too much (or any). Sharing of information from auto insurance could identify employees who drive too late at night, or in “high risk” areas.

Perhaps most troubling, wellness programs entrench the view that health is predominantly a function of individual lifestyle choices which carry long-term consequences. No one simply is healthy, because she could always be doing something now that will lead her inexorably toward disease. From a public policy standpoint, this is highly problematic, since wellness programs present only one possible form of health promotion. Before being generally adopted, they should be compared with other interventions designed to nudge individual behaviors, like raising taxes on cigarettes or super-sized beverages.<sup>14</sup> It is also not clear that nudging individual behaviors is the right strategy at all, as public health initiatives also demonstrate that environmental factors, features of the built environment and corporate product promotions can have profound effects on the health of individuals.<sup>15</sup> One current example is evident in research about “food deserts” where residents have no ready access to healthy food choices (Whitacre, Tsai, and Mulligan, 2009); another is the ongoing catastrophe of lead in the water of Flint, Michigan—and possibly other areas (Stanley, 2017). Commuting is another problem; for those who live outside urban cores, driving is both stressful and physically taxing. There are few realistic options for the type of walking and standing that a train or bus commute offers. For those in countless suburbs or rural areas, walking can be dangerous, even if distances

weren't an obstacle (Ernst, 2011). The history of asbestos and cigarettes show that workplaces can themselves be sources of illness; environmental factors like air pollution also have significant health effects. Even cancer generally may be much less preventable than patients have been led to believe (Tomasetti and Vogelstein, 2015). In short, the neoliberal view of wellness substantially overestimates the degree to which wellness is actually under the control of workers.

Even in cases where employees would seem to have some control (as in smoking cessation or diet), the odds are stacked against them by corporate advertising and the sale of addictive products. Nicotine is highly addictive, as are the salt, sugar and fat that find their way, in bulk quantities, into convenience foods (Moss, 2013). "No one can eat just one," the Lay's jingle goes, and modern science makes that a frighteningly near certainty. Similarly, the soda industry not only wields a massive advertising budget; it has also funded and coopted many of the civil society groups that would ordinarily warn their members about the dangers of empty calories. It has also spent millions undermining efforts to reduce soda intake, and portraying soda taxes as an attack on consumer freedom (O'Connor 2016).

#### *D. The Perils of Privatized Wellness*

In short, for managers, wellness programs inculcate a convenient self-understanding in employees. In particular, they teach two habits of mind central to the neoliberal vision of society. They first instruct us that health is primarily a matter of individual decision-making. They then condition workers to look to the boss for help in shaping a successful, responsible, "well" self. Each habit normalizes a transactional dynamic in areas where virtue, self-care, or other models of ethics once held sway. These programs institutionalize in workplace insurance policies a view of health dating to the 1970s according to which "poor health is most likely to be seen as

deriving from individual failings,” fostering “a continued depoliticization” and “undermining the social effort to promote health and well-being” (R. Crawford, 1980, p. 378, 368). Voluntary wellness programs of the 1980s offered a clear example of this vision, and today’s more coercive examples demonstrate its social power.

Behind any critique of power and mystification, there lies some conception of freedom and truth (Taylor, 1984). Wellness programs offer a privatized, narrow, and instrumental version of what are at best public, expansive, and intrinsically valuable human qualities. The positive vision behind a critique of corporate wellness programs is a renewed appreciation of the role of public health measures in a well-ordered polity. The World Health Organization (WHO) has defined health as “a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.” (World Health Organization, 1948). Such an expansive concept suggests moving the locus of wellness promotion outside individual workplaces and into a broader public sphere.

In much of contemporary America, workers are already stressed, tired, and rushed (Miller, 2015; Pew Research Center, 2015). They would likely act in healthier ways if they could. But there are substantial barriers to progress (Wiley, 2013). As detailed above, many obstacles individuals face in being healthy are attributable to larger social forces that make it very difficult to adopt healthy habits. Though the drawing of moralizing, actuarial bright lines can be very gratifying for HR departments, those lines do a very poor job reflecting reality. They disproportionately blame those who have the fewest resources to deal with their problems, and they tend to violate the moral maxim that to say that I *ought* to do something presupposes that I (reasonably) *can* do so. Public health measures, from banning trans fats and smoking to changing zoning rules to encourage greater density, are well worth considering as an alternative

to wellness programs. While no panacea, public health measures are being rigorously evaluated at present, and this evaluation should lead to more democratic and informed policy development (Burris, undated; LawAtlas, 2015).

Big Tobacco and Big Food will object that “paternalistic” public health laws violate “consumer freedom,” but there are at least three problems with that tired invocation of libertarian dogma. First, it is not clear that such sacrifices of consumer freedom are worse than the privacy sacrifices demanded by wellness programs, especially when one factors in the dubious efficacy of wellness programs (Ajunwa, K. Crawford, and Schultz, in press). What is characterized as “consent” to privacy policies in libertarian theory is all too often experienced as coercion by those actually bound by them (Hull 2015; Pasquale, 2013). Second, as a society, we generally accept substantial limitations on the consumption of goods that are considered too dangerous in themselves (like cocaine) or very closely tied to goods that are too dangerous (like Sudafed, which can be used to make crystal meth). Finally, the consumer freedom complaint begs the question: to unquestioningly treat consumer freedom as the highest possible freedom is to assume that neoliberal model of the human being as most fundamentally a participant in markets is the right one.

In any case, whatever utilitarian calculus may set the optimal physical and mental state for America’s workforce, corporate managers should not be in charge of achieving these aims. They are not competent to run such programs. They are conflicted, and easily tempted to mask voyeurism and surveillance as benevolent monitoring. The programs’ carrot-and-stick approach reflects an infantilizing behaviorism (Schüll, 2016). If health nannyism is necessary, it should be democratically developed and controlled. New and well-funded public health initiatives would be far more effective than private wellness programs at promoting health.

## V. Conclusion

Corporate wellness programs tend to promote a partial and biased conception of wellness: the habits and dispositions that reduce the risk of workers' absenteeism, presenteeism, and significant health care expenses. The science behind what counts for these risk factors, as well as the proper way to calculate those metrics, is ambiguous and contested: the truth (in a Foucauldian sense) of wellness programs exists independently of the science on which one might assume they would be based, even as they trade on the social legitimacy of science as a source of truth. The burden of all of this is placed on the shoulders of workers themselves, with no attention paid to the larger environment that created many of the risks that workers are told to avoid. As one human resources journal article put it over a decade ago, with bracing honesty:

With regard to the internal environment, wellness programs offer a way of establishing and maintaining an effective corporate culture. They offer a way of securing the loyalty and commitment of employees by showing them that the organization is concerned about their welfare. In short, wellness programs offer a means of social control (Ginn and Henry, 2003, p. 26).

However many studies are commissioned to analyze the results of wellness programs, it is difficult to conclude that such outcomes research is not secondary to the larger power grab they offer to their implementers.

Wellness thus suggests a larger lesson about the role of economic cost-benefit analysis in contemporary society. Touted as a *reason* for employer micromanagement of worker lives beyond the workplace, it is all too often a *rationalization* for extant power relations, in the worst sense of that word—a post hoc excuse for decisions made on different grounds. Seen in this light, economists' self-touted virtues—of flexibility and data-drivenness—are less likely to result in true assessments of the value of wellness programs, than to ingratiate corporate proponents of

increasing monitoring and control of workers. Instead of abandoning the wellness project when negative results are reported, corporate managers promote experimentalism: someday, they assure skeptics, the proper mix of penalties and rewards, nudges and incentives, will cut health care costs. In 2010, health economists were confident that wellness programs could generate savings (Baicker, Cutler, and Song, 2010), and many remain so today—despite the numerous documented failures of such programs.

Whatever their ostensible commitment to data, these analysts are primarily driven by a theory of human capital and individualized responsabilization for health outcomes. Those concerned about the substantial burdens imposed by wellness programs on workers must address that politico-economic theory directly, rather than just continuing to point to the dubious outcomes of wellness programs. Because they work to establish the truth of wellness, these programs are difficult to discredit on purely empirical grounds. For the neoliberal, there is nearly always a rationale for “just one more study” of a privatized alternative to public service, ranging from online charter schools, to wellness programs, to private equity-run nursing homes and hospices (Rosenfeld, 2016).

A renewed commitment to public health programs is a better target for advocacy, for wellness programs are likely to become at least as innovative in measuring their programs’ effects as they are at devising new ones. Moreover, to the extent new wellness experiments continue, federal regulators should require that they give employees some voice in program development. A true wellness program would include the opportunity for its putative beneficiaries to help define what wellness truly means. Health is as much a political and social value as it is the preserve of scientists and economists.

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<sup>1</sup> This paper will assess employee wellness programs in the context of the United States. Comparison with other countries is important, but beyond the scope of this paper. The U.S. is differentiated by its employer-based healthcare system, and the consequent financial burden that unhealthy employees thus place on employers. For an initial consideration of wellness more generally, with a focus on the UK, see Chris Till, (in press). Till emphasizes that wellness programs are often conceived as a form profit-enhancing “philanthrocapitalism” (and thus under the umbrella of corporate social responsibility), whereby what is deemed good for the employer (in this case, the habituation of employees to high levels of activity) is made to coincide with social health considerations, insofar as those involve individual responsabilization.

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<sup>2</sup> Some aspects of the legal discussion here may be dated or obsolete if President Trump and the Republican Congress elected in 2016 make major changes to health law policy.

However, the underlying dynamics of moral hazard and risk selection will persist. The GOP's anticipated reduction in federal funding for health care will raise the appeal of ostensibly cost-saving wellness programs. And even if the ACA is repealed in its entirety (an unlikely event as long as Senate filibuster rules remain), wellness programs were authorized by prior legislation, and would persist.

<sup>3</sup> These are the dominant form of wellness program, and are the topic of this piece; they include programs that require a certain amount of physical activity, a certain level of weight loss, smoking cessation, or other standards.

<sup>4</sup> The plan does not appear to be doing anything more than data collection at this time, and employees can even indicate that they do not know their blood sugar level or when it was last measured. Also, the data is not verified except by the employee's attestation that it is accurate. In any case, the plan is accumulating a lot of data, as it serves well over half a million employees.

<sup>5</sup> Health economists now disagree: the outlier status of US health spending was, and still is, a result of higher prices, not more utilization (Pasquale, 2014c). To be fair to employers, this was also the easiest factor for them to exert any control over; however, repeated business efforts to scuttle universal health care should temper any sympathy here.

<sup>6</sup> The point is the indirect regulation of behavior: the goal is to, for example, nudge people toward certain preference orderings, not push them directly into one course of action or another. This is often paraphrased from a later interview as the "conduct of conduct" (Foucault 1982, p. 222; see also Foucault 2008, p. 186).

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<sup>7</sup> Thus economic analysis extends into the social sphere (Foucault, 2008), resulting in the “economization” (Brown, 2015) or “financialization” (Harvey, 2005) of all phenomena. For the general case against neoliberalism, see especially Brown 2015. For the somewhat loose fit between neoclassical economic theory and neoliberal policy recommendations, see Mirowski, 2013. The literature debating what exactly neoliberalism entails is, of course, vast; here we only emphasize aspects of it that are relatively non-controversial.

<sup>8</sup> Although we will not pursue the point here, Becker also said that human capital theory predicts that health spending will ultimately worsen socio-economic divides: “People who have better life expectancies also have higher earnings and greater education, save a larger fraction of their permanent incomes, have ‘better’ habits, and also have greater conditional life expectancies, given that they reach any age. So characteristics like earnings, habits, discount rates, and saving do not offset inequality in life expectancy, but reinforce that inequality to contribute to a still widen[ing] inequality in overall welfare” (2007, p. 393).

<sup>9</sup> For other examples of neoliberal subjectification, see, *e.g.*, Binkley 2009 (on literature about “two dads”); Binkley 2014 (on positive psychology); Cooper 2012 (on workplace transformations); Hamann 2009 (on the general production of *homo economicus*); Hull, 2015 (arguing that notice-and-consent privacy policies primarily serve to teach that privacy is a tradable commodity); Langley 2007 (on financialization of retirement plans); McMahon 2015 (on the role of behavioral economics); Mirowski, 2011 (on university science research); Pongratz 2006 (on the role of formal education, focusing on Germany); Read 2009 (on the general production of *homo economicus*); Simon 2002 (on the rise of extreme sports); Strandburg, 2005 (on university technology transfer programs); Winnubst 2015 (on cultural figures of ‘coolness’ and ‘diversity’); and Winslow 2015 (on restructuring in higher education).

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<sup>10</sup> The executive then touts “consumer directed health plans,” which are supposed to cause employees to shop around and make better healthcare decisions, since they are allocated a certain amount of money to spend, rather than access to insurance. These programs are ethically objectionable and likely to be very burdensome on the chronically ill (Jost, 2009).

<sup>11</sup> A full theoretical analysis of neoliberal selfhood is beyond the scope of this paper. Some initial thoughts can be found in Till (in press). Till grounds his argument – and here we agree that this is a fruitful literature – in Italian autonomist political theory (Franco Berardi and Maurizio Lazzarato) and Boltanski and Chiapello’s *New Spirit of Capitalism*. What emerges in all of these sources is the importance to modern capital of regulating affect. Hence, for example, the importance of efforts at nudging employees to be happy.

<sup>12</sup> Of course, this attachment is purely a one-way street: employers feel no compulsion to retain employees, offer long-term contracts, or otherwise scale back from the insecurities generated by at-will employment and the decline of collective bargaining. But employees are taught that work, and preparation for work, should structure their entire lives.

<sup>13</sup> For criticism of that view, see (in addition to Gillespie), for example, boyd and K. Crawford, 2012 (noting both the lack of objectivity and the tendency to produce spurious correlations); K. Crawford, 2016 (showing how algorithms are embedded in concrete social struggles); Esposti, 2014 (noting the situatedness of algorithmic knowledge); French, 2014 (showing gaps and irregularities in the context of health data); Kitchin, 2014 (debunking the positivism behind much big data enthusiasm); Rieder and Simon, 2016 (situating big data in the social trust in quantification); and Ruppert, 2012 (emphasizing the complexity of contexts in which big data is used).



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<sup>14</sup> Which has a reasonable track record of success: see Contreary et al., 2015; and Chaloupka, Yurekli, and Fong, 2012.

<sup>15</sup> While powerful as tools to reinforce addictive behavior (Schüll, N. 2016), neither nudges nor variable reward schedules may be optimal solutions to the problems they have caused.