TECHNOLOGICAL UNEMPLOYMENT, MEANING IN LIFE, PURPOSE OF BUSINESS, AND THE FUTURE OF STAKEHOLDERS

Forthcoming in ***Journal of Business Ethics***

Tae Wan Kim
Associate Professor of Business Ethics
twkim@andrew.cmu.edu

Alan Andrew Scheller-Wolf
Richard M. Cyert Professor of Operations Management

Tepper School of Business
Carnegie Mellon University

"I think everybody should be a machine." – Andy Warhol

Whether one agrees with Andy Warhol or not, there is no denying that the relationship between people and machines—more specifically workers and machines—is rapidly evolving. And as this evolution unfolds, it is yet to be determined whether the two groups will find a mutualistic equilibrium, or whether machines will emerge as dominant in the workplace, greatly diminishing, if not essentially extinguishing, the role of workers. As we write this, businesses are automating workplaces with advanced technologies, including but not limited to driverless cargo trucks, artificially intelligent mortgage approvals, machine learning-based paralegals, and algorithmic managers. Such technological advancement raises a host of normative questions (Bhargava & Kim, 2017; Hooker & Kim, 2018; Martin, 2016; Parmer & Freeman, 2016). As Thomas Donaldson recently remarked, "It's an instance of a problem that more sophisticated engineering cannot solve, and that requires a more sophisticated appeal to values" (Ufberg, 2017).

One normative question to which has been paid much public attention is whether the government ought to offer a basic income to everyone if robots take over human jobs on an unprecedented scale in the near future (Ito, Dadich, & Obama, 2016; van Parijs, 2004), often-called "the second machine age" (Brynjolfsson & McAfee, 2014). Although this is an important public policy question, its seeming focus on the government as the sole agent responsible for mitigating societal problems can obscure questions about the role and accountability that businesses themselves should accept, especially regarding workplace automation and its potential impact upon unemployment.[1] For example, it could lead one to the conclusion that if a new governmental (re)distributive scheme proved satisfactorily useful in reinforcing the material conditions for a just and decent society in the coming machine age, managers should have no reason to hesitate in maximizing automation. Putting aside the practical reasons not to be "that sanguine about the efficiency of the political process" and the idea that "government cannot be relied on to solve all problems, thus leaving a role for private action, including at the corporate level" (Hart & Zingales, unpublished manuscript), there are other, equally fundamental questions. Specifically, as a matter of principle, the fact that a government may be able to fix problems does not mean that firms are warranted in creating these problems in the first place. Moreover, even if a government can ensure a basic level of material comfort of its citizens, there are other negative effects that may arise from the forecast machine age that merit investigation, effects that may not be ameliorated by a governmental stipend. We offer a precautionary account of why business managers and all other relevant parties have reason to proactively rethink how much automation and what kinds of automation firms ought to implement in the coming decades, focusing on two challenges that workplace automation will potentially pose.

Two Challenges

A current public debate concerns whether life without work opportunities but with some novel kind of (re)distributive scheme (e.g., a basic income guarantee) will or will not incur a meaning crisis in the coming machine age (Danaher, 2017; Floridi, 2014). Given the resources on the good organizational life and its role for meaning (Alzola, 2012; Bowie, 1990; Ciulla, 2000; Hartman, 1996; Hsieh, 2008; Michaelson, 2005; Moriarty, 2009; Sison, 2015; Solomon, 1992), normative business ethics can contribute to this debate. This article in its first part engages with this debate by offering an argument in favor of the position that if massive unemployment occurs in the second machine age, the coming age may be a structurally limited and systematically unconducive condition for many without work opportunities to have or add meaning to their lives, which we shall explain under the name of ***the axiological challenge***.

Let us be clear up-front. We certainly do not contend that a universal basic income is wrong or harmful. A central argument developed in favor of a basic income guarantee is not just that it has the power to address poverty, but that, with a basic income, workers obtain the bargaining power not to accept work that does not satisfy conditions for meaningful work (Parijs, 1992; Hsieh, 2008). This argument in itself presupposes the meaning-creating aspect of work, which is central to our argument: In the coming machine age, potentially much of the population will no longer have job opportunities, meaningful or otherwise. Hence, the question of a basic income is itself consistent with this article's concern about the looming meaning crisis.

The axiological challenge, if it turns out to be persuasive or at least plausible, we shall argue, necessarily leads to the second challenge, to which the field of business ethics has particular resources to contribute. It is what we shall call ***the teleological challenge***, a topic especially relevant to the broad literature in business ethics and other relevant disciplines that attempt to answer E. Merrick Dodd's (1932) question, "For whom corporate managers are trustees?" (see also Donaldson & Walsh, 2015; Freeman, 1984; Friedman, 1970; Jensen, 2002; Stout, 2002; Smith, unpublished manuscript; Strudler, 2017). By clarifying the connections between the coming machine age and the teleological challenge, we encourage other authors in business ethics to pay more attention to the second machine age. As we shall explain, the challenge exposes insufficiencies in the shareholder/financier model (Boatright, 1994; Friedman, 1984; Jensen, 2002). Its major alternative view, the stakeholder theory (Freeman, 1984; Parmer, Freeman, Wicks, & de Colle, 2010), as it is, will not be good enough to address the axiological challenge, unless the theory actively embraces a new kind of stakeholder group who is neither worker nor community. This challenge compels business leaders to proactively rethink the role and overall purpose of firms for future society.

To discuss the implications of the axiological challenge upon corporate purpose, we first introduce the projected nature of technological unemployment. Then we offer a precautionary account of the axiological challenge. Finally, we discuss the teleological challenge to corporate purpose.

When Robots Take Over

In 1930, John Maynard Keynes conjectured that in one hundred years, society would be at odds with technology. He wrote,

> We are being afflicted with a new disease of which some readers may not yet have heard the name, but of which they will hear a great deal in the years to come—namely, ***technological unemployment***. This means unemployment due to our discovery of means of economising the use of labour outrunning the pace at which we can find new uses of labour (Keynes, 1963/1930, 364).

Lately, a growing number of reports assert that Keynes's prediction will be true in two or three decades. According to the ***Oxford Martin Programme on the Impacts of Future Technology*** (Frey & Osbornem, 2013), 47 percent of the total U.S. employment will likely be automated over the coming twenty years. Similarly, the World Bank anticipates that around 65 percent of jobs in developing countries are at risk of automation (World Bank Group, 2016). A ***McKinsey*** report predicts that "as many as 45 percent of the activities individuals are paid to perform can be automated by adapting currently demonstrated technologies" (Chui, Manyika, Miremadi, 2015). And the ***Economic Report of the President to the Congress*** (2016) predicts that the probability of robots taking over the lowest-paid jobs (hourly wage less than 20 dollars) in the coming decades is .83, the middle-paid jobs, .31, and the highest-paid jobs (more than 40 dollars), .04.

From well before the time of Keynes, technological innovation has been pushing workers out of the workplace. During the Industrial Revolution, a great number of textile workers lost jobs with the introduction of simple machines. The invention of tractors rendered many farm jobs obsolete. Owing to personal computers, we no longer see typists. Nevertheless, economic history reveals that, thus far and in aggregate at least, technological unemployment is a temporary adjustment: The dynamic nature of capitalism has always leveraged technology to create more new jobs than those that were lost, through increased wages and elevated demand for new products. A dominant view in labor economics is that, in the long run, technological innovation creates more (human) jobs than it destroys in the overall economy (Autor, 2015). To deny this is to commit the so-called "Luddite fallacy."[2]

In contrast, others, including two MIT economists, Brynjolfsson and McAfee (2014, 2015, 2016), contend that although the Luddite fallacy has inaccurately explained past economic history, this won't necessarily be the case in the coming age of advanced robots. Their primary rationale, among others, is as follows: when people lose jobs as a result of new technology, they need to learn and hone the new skills necessary to be reemployed, a process that can take months or even years. In the coming machine age, given the exponential speed of technological development and its rapidly-expanding scope of application, robots and smart systems equipped with the power of machine learning and big data will learn the necessary skills for ***newly*** created jobs far faster than humans; as a result, advanced machines will take new jobs before humans are ready. Then, only robots need apply.

Work that involves more explicit and quantifiable rules is more easily codifiable, hence more likely to be automated than work that involves tacit, personal, and unquantifiable knowledge (e.g., judgment, critical thinking, persuasion) (Autor, 2015). An example of the former is mass manufacturing. Foxconn, a company that assembles iPhones and iPads in China, recently installed about 10,000 robots, each of which costs $20,000, for spraying, welding, and assembly. Terry Gou, CEO of Foxconn, proclaimed his plan for automation, saying, "We have over one million workers. In the future we will add one million robotic workers. Such a change, of

course, will massively impact human jobs" (Davidow & Malone, 2014).

The distinction between more easily and less easily codifiable work is quickly blurring: A wide range of cognitive tasks that could not be codified in the past can now; this increase in codifiable tasks will likely continue, transforming more jobs into work that can be done by advanced algorithms. For example, in 2005, Frank Levy and Richard Murnane in ***The New Division of Labor: How Computers Are Creating the Next Job Market*** stated that computing systems have fundamental difficulties replicating the dexterous human perception and manipulation required for driving cars. Yet in 2010, Google introduced a driverless Toyota Prius. And in 2016, Uber started testing operation of self-driving services. This means that human Uber drivers, taxi drivers, and, similarly, truck drivers are at serious risk of losing jobs. A senior executive of FedEx, who was recently asked whether the company would replace human drivers with self-driving trucks, answered, "Well, not on the local routes" (Davenport & Kirby, 2016). Advanced robots increasingly threaten white-collar jobs, too, including junior law and paralegal jobs, as well as jobs in radiology, anesthesiology, and translation—all of which had until recently been thought to involve uncodifiable capabilities (Finley, 2015; Frankish & Ramsey, 2014; Müller, 2016; Remus & Levy, 2017; Shankland, 2016).

A disclaimer is important here: It is extremely difficult to precisely predict the future, and it is ***not*** our aim to empirically predict how much of the labor force will actually be replaced with machines, and in what timeframe. For our purposes, suffice it to say that there will be a second machine age, and this article addresses the ***normative*** questions inherent in this possible future, questions to which we will turn presently.

The Paradox in the Era of Abundance: The Axiological Challenge

Many participants in recent public discussions about the coming workforce transformation focus only on the ***economic*** sustenance of displaced workers in our envisioned future society; there is a consensus on the need for a proper (re)distributive scheme to ensure societal stability. This will be some form of a basic income guarantee, usually defined as "an income paid by a political community to all its members on an individual basis, without means test or work requirement" (Parijs, 2004, 8;). In a similar manner, a "negative income tax" (people whose income is below some amount receive cash from the government instead of paying taxes), which differs from a basic income in specifics but shares many things in common, has also been proposed (Friedman, 1962).[3] We will not discuss the specific differences or merits of a basic income or a negative income tax, or which is the best way to address the potential economic repercussions of future technological unemployment. Although some form of a basic income guarantee may be necessary to help stabilize society in the face of the foreseen massive wave of technological unemployment, it may not be sufficient: It is another question altogether whether the second machine age—even if we assume it includes a solution to poverty and basic welfare problems—would be a satisfactory and fulfilling societal structure for those who systematically lack work opportunities. Will material security be accompanied by a crisis of meaning? This is the very question to which we move now.

For the sake of argument, allow us to imagine that we are living in the 2040s with some form of universal basic income; we will use this hypothetical as an intuition pump. Add some minimal features to this imagined society: Given that the employment-to-working age population ratio in the U.S. is currently about 60 percent[4] and most of the forecasts mentioned in the previous section predicted that the ***net loss*** (accounting for any job creation due to the technology) of existing employment to robotic workers would be around 50 percent in the coming two decades, let us roughly imagine that in 2040s in the U.S., only 35 percent[5] of the working-age population is employed in paid jobs, broadly defined. With this shift in employment let us imagine further that the mere ***prospect*** of employment has become increasingly remote for large segments of the population—possibly even a majority. Adding the fact that business enterprises have dramatically increased operational efficiency due to massive automation and as a result have enhanced corporate profits greatly, presume that it is with aggrandized tax revenue that the government offers a basic income to every citizen. With the provided cash, the unemployed citizens are able to buy food, pay rent or a mortgage, and within reason fund whatever activities they want to do (e.g., art, surfing, traveling, voluntary work, gambling, watching TV on the sofa, etc.). Following Keynes (1963/1930), let us call this societal circumstance "the era of abundance."[6]

There do exist criticisms about a universal basic income guarantee, specifically regarding its economic feasibility and fairness (Barry, 2000; Cunliffe & Erreygers, 2003). But this is a distraction from our primary question: Our aim is not to evaluate whether a basic income itself is a bad idea. Rather, the claim to be made is that something other than a basic income is needed in the era of abundance to ensure a generally fulfilling life for many members of society. Citizens will receive money whether they work or not, but something important may still be missing in the era of abundance. And that something may be meaning in life.

Discussing meaning in life and its relationship to work opportunities is not like answering arithmetic questions. Furthermore, work opportunities, as options to be part of economic cooperation and creating societal

value, are neither a necessary, nor a sufficient condition for meaning. But, even if it is not impossible for one to live a meaningful life without gainful employment, the empowering role of work opportunities for meaning is a subject that society must consider in the coming machine age. We contend that we need to pay keener attention to the challenge of meaning in life, which in turn will lead us to fundamental questions of how to justify the very foundations of economic organizations in the coming machine age. To answer these questions we will ultimately have to explore, and prescribe, entrepreneurial directions for future workplaces. But before we can do any of this we need a short excursion into the concept of "meaning in life" in general.

Meaning In Life

We draw upon Susan Wolf's (1997a, 1997b, 2007, 2010, 2014) "fitting-fulfillment view." The view is a hybrid account that combines subjectivism and objectivism. Subjectivists believe that, roughly, a person's life is meaningful if and only if she achieves whatever she subjectively sets as an end. So, subjectivism is value-neutral. Thus, subjectivism allows lives that include many kinds of undoubtedly worthless and ethically repugnant activities (e.g., crime) to be perfectly meaningful. Through the lens of subjectivism, we must admit that Hitler lived a perfectly meaningful life by massacring Jewish people, given that he set killing them as an end.[7] In addition, if subjectivism were true, a person could live a perfectly meaningful life by plugging into, for instance, Robert Nozick's (1968/1974) experience machines, which would give her any experiences she set as an end. Accordingly, the challenge of meaning in the era of abundance could be easily dissolved by developed technologies such as virtual reality and brain enhancing drugs. But this only shows another reason to reject pure subjectivism.

Objectivism is a proper reaction to the inherent problems of subjectivism. Thaddeus Metz (2013) well makes the point as follows:

> [C]ertain features of our natural lives can make them meaningful, but not merely by virtue of a positive attitude toward them. […] [A] life cannot matter simply by virtue of urinating in snow and chewing gum, however much those activities might be wanted or sought out. […] There are forms of life that individuals sometimes fail to want or to pursue, but that they should if they want their lives to matter (20).[8]

The question, then, is who decides which forms of life are objectively worthwhile? The objectivist's full-blown answer should address metaethical issues (e.g., Is value objective?). But the moderate objectivist, for our purposes, can provide a simpler answer, taking a pluralist but not relativist or chauvinistic perspective about what constitutes forms of life activities worth pursuing, by borrowing a kind of contractualist framework: roughly, a form of life activity is objectively worthwhile and accordingly adds meaning to the author of the life (and possibly to other involved parties) in so far as the life activity is consistent with any minimum set of evaluative principles that no one could reasonably reject as a basis for an informed view about the intrinsic desirability of one's life activity given the circumstances of one's life.[9] We can reasonably agree, for example, based on our shared (or overlapping) background evaluative values (e.g., widely accepted ethical values such as social utility, virtue, and agency), that the life of Jonas Salk, who dedicated his life to discovering polio vaccines, is worthwhile (to the extent that, e.g., his life enhanced social utility, strived to fulfill excellence, and/or consistently developed both rational and areteic agency) or that the life of Sisyphus, who was punished to permanently roll a boulder up a hill only to see it return to him with nothing changed, is not. While this definition may be imperfect (and in fact the question of how to precisely define meaning in life could be the subject of another entire paper, or set of papers), we believe it is functional enough to serve our larger purposes here. As a guiding evaluative principle that we believe no one could reasonably reject for our purposes, we will endorse "contribution" (to both society and agency)—that is, a form of life activity is meaning-creating if through the activity people are regularly empowered to enable agency as individual persons and fulfill, in concert as cooperators, contributions as broad as possible to the good of society.[10] We will further elaborate this principle shortly.

Pure objectivism has its own problem, though. Imagine that Sisyphus is working for a green energy plant. He does not know that his actions generate electricity and thus contribute to society, so he believes he has been punished to permanently toil for no reason. Most of us would hesitate to call his life meaningful, with good reason. Something is missing. Sisyphus is producing some objectively good outcome, but he does not ***fulfill*** or ***achieve*** it. To address this, Wolf (2010, 26) in her hybrid view proposes, "[M]eaning arises when subjective attraction meets objective attractiveness and one is able to do something about it or with it." She also uses "engagement" and "fulfillment" in addition to "subjective attraction."[11] Hence, in the fitting-fulfillment view, as the name itself conveys, roughly, one's life is meaningful insofar as one ***fulfills*** (values and engages) what is ***fitting*** (objectively worth pursuing). Armed with the fitting-fulfillment account, let us return to the challenge of meaning in the era of abundance. Our contention shall be as follows:

The axiological challenge (or paradox in the era of abundance): Many of those who do not have work opportunities in the era of abundance will likely live in quite systematically ***limited*** conditions for engaging in fulfilling activities inside economic and perhaps even non-economic spheres. Thus, those who structurally face lack of work opportunities will therefore likely encounter fairly unconducive conditions for having or adding meaning to their lives.

To support this, we develop two inter-related component claims as follows:

The contribution thesis: Work can be meaning-creating by providing people with platforms to participate in processes of collective value creation in which they are regularly empowered to enable agency, broadly construed, as individual persons and fulfill, in concert as cooperators, contributions as broad as possible to the good of society.

The non-glamorization thesis: Although it is possible for those who systematically lack work opportunities to contribute to society and gain meaning in, for instance, non-paid organized social/charitable work, it is irresponsible to romanticize that option or use it as a rationalization to dismiss the impact of lack of employment opportunities on our axiological challenge.

The Contribution Thesis

Let us begin the argument by discussing the thesis that work is cursed. If work is inherently bad, the absence of work is good and there the axiological challenge won't exist (and automation will be the greatest thing to happen to humanity). Bertrand Russell (1932) seems to make such an argument:

> I want to say, in all seriousness, that a great deal of harm is being done in the modern world by belief in the virtuousness of work, and that the road to happiness and prosperity lies in an organized diminution of work…Leisure is essential to civilization, and in former times leisure for the few was only rendered possible by the labors of the many. But their labors were valuable, not because work is good, but because leisure is good.

We find nothing to disagree with. Russell's point is to condemn the propaganda that work is so virtuous that people should work no matter how badly an employer treats them—and to propose that an antidote to the problem is more leisure for workers. Russell's point is not inconsistent with our view that work is like exercise—it can be harmful when dysfunctionally done, but it can be good when properly done.[12]

One might try to refute our claim by pointing out that working for a for-profit firm in a competitive market economy does not automatically offer an opportunity to contribute to the good of society. We partially agree. However, the fact that for-profit firms' direct goals are profit-making does not exclude the real possibility that market efficiency is pragmatically used as one of the proxies through which firms, indirectly, enhance intrinsically important social values. In this line of reasoning, Jeffrey Smith (unpublished manuscript) offers a compelling example as follows:

> I am pressing the idea that market arrangements, as a matter of public policy, ***serve*** other, general social objectives…Pharmaceutical research and development is, to a significant degree, funded through private capital markets in the US. While there are sources of funding that come through public agencies, investment decisions about research and development are largely made by managers who are consciously aware of the need to maintain high profit margins to attract investors, given the comparatively high level of risk and uncertainty involved in pharmaceutical products without the use of price controls…In this case the aim of public health—or an important dimension to public health—is ostensibly realized by moving pharmaceutical research, development and sales into the market (13).

Pharmaceutical companies' ***core*** operations—developing and providing drugs and services to hospitals and patients—as Smith points out above, contribute to the good of society on a massive scale, on a regular basis. Furthermore, these core operations would be almost impossible without a number of participants' consistent financial investment, innovative research, and competitive efforts.[13] Note, please, that we are not stating that for-profit economics is ***necessary*** for pharmaceutical (and consequent societal) advances, just that it is not inconsistent with those advances.

Of course, companies also contribute to society through non-market activities, say, Corporate Social Responsibility. For example, Merck's contribution to the good of society through its non-market plan, called the Mectizan Donation Program, has added much meaning to the lives of all involved parties, by providing them real opportunities to consistently engage in and pursue what is fitting, which would not have been achievable without the complex business and research capabilities of the pharmaceutical company in modern society.[14] Note, however, that this donation program is only a fraction of the good that Merck contributes to society and that this program, too, would not be possible without the profits Merck generates.

Not just pharmaceutical companies, but most economic enterprises, big or small, aim (indirectly or

directly) to develop unique capabilities to provide people with environments in which they are empowered to consistently fulfill significant contributions to the good of society. Christopher McMahon (2010) similarly points out that what can best explain and possibly justify for-profit businesses' competitive and self-interested market exchanges is how much they contribute to what he calls "morally important social values," such as the promotion of social prosperity, preservation of the health of the population, advancement of knowledge, development of culture, maintenance of the rule of the law, social justice, and defense of national territory.

Realistically, thus, in modern society, if one systematically lacks opportunities to be part of a well-coordinated productive means or a cooperation-enhancing hierarchical and technological infrastructure, one systematically lacks much of the real opportunity to contribute to the economic process and to the good of society and its constituents in a consistently competitive, innovative, and workable manner. By working for a pharmaceutical company, for example, a person can become a "participant" in a chain of "collective value creation"[15] to contribute to the good of society. Crucially, not just high-ranking positions, but many low-ranking jobs are essential for such an enterprise to successfully fulfill its roles and responsibilities to society. Those who occupy such stations play important roles in the productive cooperation chains and joint value creation. In their daily activities, these individuals may not always recognize their social contribution or the significance of their work opportunities to develop agency and excellence, and they are not always excited about every aspect of their daily work activities, but they have reason to value the fact that the core of their daily work and even its associated challenges have the fundamental potential to persistently empower them to pursue ends, including both self- and publicly-oriented goals.[16] The same logic can be applied to many other types of businesses and industries that contribute to the good of society and human existence.[17]

In addition, gainful employment offers involved persons opportunities to develop agency, broadly construed, in two distinct manners. Modern business is a series of promises such as making appointments, buying and selling, etc.—and promising is a paradigm of how one's rational agency coheres with another. Kantian legal scholar Charles Fried (1981) eloquently makes such a point:

> By promising we put in another man's hands a new power to accomplish his will… What he sought to do alone he may now expect to do with our promised help, and to give him this new facility was our very purpose in promising. By promising we transform a choice that was morally neutral into one that is morally compelled. Morality, which must be permanent and beyond our particular will if the grounds for our willing are to be secure, is itself invoked, molded to allow us better to work that particular will (p. 8).

Furthermore, employment offers a substantive exercise of reason-responsive agency. Given that firms are hierarchies governed by authorities (Coase, 1937; Williamson, 1972), high-ranking individuals who have authority have the managerial power and right to demand that low-ranking individuals follow their orders without giving specific reasons (Simon, 1957; see also Smith, unpublished manuscript). But without a reason that low-ranking individuals can justifiably see as a reason, a managerial order is disrespectful of their reason-responsive agency (Kennedy, Kim, & Strudler, 2016). Thus, the reason-responsiveness aspect of agency demands that high-ranking individuals give a comprehensive (content-non-specific or on-balance) reason for authority. In other words, low-ranking individuals in the workplace are consistently invited to identify whether their authorities' orders are consistent with comprehensive reasons that they can reasonably accept on balance for obeying authorities. This contributes to their agency.

By participating in gainful employment, organizational persons are also encouraged to deepen areteic agency, by feeling pride, self-respect, self-esteem, and a sense of usefulness, and by developing personal identity, character traits, virtues, and excellence (Alzola, 1992; Hartman, 1992; Solomon, 1992). Virtue and excellence cannot be bought through a market exchange (Gheaus & Herzog, 2016); instead, attaining them takes a significant amount of time and sustained effort, which is not easily attained outside a context wherein individuals are mutually encouraged and sometimes actively pushed to achieve them. Employment is one such context in which persons are regularly empowered to put sustained efforts into developing excellence and improving their personal skills such as knowledge and good judgement. Recently, a growing body of literature in political philosophy argues for meaningful work as a primary good (Breen, 2016; Walsh, 1994) or a basic capability for human flourishing (Gheaus & Herzog, 2016; Veltman, 2014, Yeoman, 2014). In a similar vein, John Rawls changed his view on the role of work in self-respect from a value-neutral position to one which emphasized the realistic importance of employment for living a life with self-respect (Moriarty, 2009).[18]

Of course, not all work opportunities in the real world involve objectively fitting activities and subjectively engaging conditions. There are business activities whose nature is inherently illegitimate or exploitative (slavery, human trafficking) and/or that coercively press people to work in systematically agency-diminishing conditions (Michaelson, 1982; Schwartz, 1982). An informed person has reason to recognize such

paid jobs as not worth pursuing for reasons of both objective and subjective attractiveness. Nonetheless, it is a stretch to suggest that work is inherently bad and wrongful. Rather, it's undeniable that many kinds of work—performed by employed workers, entrepreneurs, professionals, university researchers, paid positions in non-profit organizations, and all other kinds of paid vocations—provide unique environments that empower individual persons to regularly develop agency and consistently contribute to the good of society, including essential capabilities for people to function as humans (Bowie, 2014; Sen, 1999).

The Non-Glamorization Thesis

It is important that we reiterate the fact that if a person has fundamental limitations in one sphere of life this does not mean that she has them in other spheres. No one in philosophy has done more to develop such an argument than Richard Arneson (1987, 1990). He writes:

> For one thing, there are ways to gain self-esteem other than job performance. Individuals can be dedicated to pursuing avocations, cultivating friendships, carrying out duties of family life in exemplary fashion, attaining some virtue or recognized excellence of achievement, or working in free time for a cause one respects. Any of these and many other projects can be sources of self-esteem obtainable independently of the quality of one's employment and on-the-job experiences (1990, 1132).

Self-esteem is not exactly equivalent to meaning in life,[19] but Arneson could make a similar point about meaningful work—and we would not disagree with him.[20] We never asserted that work is ***necessary*** for a life to have purpose. Our contention is that gaining the opportunity to be part of a cooperative productive means in the realm of economic life in the modern society is often a major societal base by which individual persons can have real opportunities to contribute to the good of society. It also affords them the opportunity to consistently develop excellence, which altogether uniquely confers much of life's meaning to them.

If one accepts this premise, the era of abundance, in which a majority of the population may be systematically denied an opportunity to be part of collective value creation, will likely create a ***significant loss*** of opportunity to add meaning in life. We reiterate that this view is not inconsistent with the idea that those without work opportunities can find meaning in other spheres of life, such as volunteering, reading books, or playing musical instruments. In fact, in the era of abundance— presuming the presence of the financial support of a basic income—the unemployed will inarguably have these options, along with opportunities to participate in various non-work activities worth pursuing. The presence of these opportunities is not our point. Rather, the point of our thesis is that many unemployed people will realistically ***lose*** a large portion, and in fact an entire class, of meaning-creating opportunities. This loss needs to be reckoned with.

And yet, Arneson's point may be more sophisticated. Two different categories of leisure participants may exist: a) those who have (or used to have for a considerable amount of time, in the case of retired people) economic roles in work and additionally add meaning to life by participating in activities outside of work; and b) those who cannot have opportunities to play an economic role but who participate in non-work activities.[21] In theory, people in both situations can equally flourish in non-work activities and equally add meaning to life. But we claim that those who do not have work opportunities to be part of economic cooperation in the era of abundance will ***tend to*** experience some degree of socio-psychological disadvantages in subjectively engaging and fulfilling non-work activities. In fact, countless works from the literature support such spillover effects (McKee-Ryan, Song, Wanberg, & Kinicki, 2005; Korner, Reitzle, Silbereisen, 2012; Grün, Hauser, Rhein, 2010). Therefore, it is likely, other things equal, that many of those who do not have work opportunities in the era of abundance will potentially be at a socio-psychological disadvantage in meeting the subjective condition of Wolf's hybrid account of meaning in life in non-work activities. Interestingly, Arneson (2009) himself recently rejected his own view, making a distributive justice argument for the significance of meaningful work for the good life, saying, "It is plausible to hold the good life includes meaningful work, and that what we fundamentally owe one another is a fair distribution of good quality of life" (139).

One might balk at the notion of the spillover effect, arguing that this effect exists only in work-oriented civilizations. Joanne B. Ciulla (2000), for instance, makes such a point. Extending this logic, it can be claimed that in the coming machine age, if people could be re-educated to mitigate the construct of a work-oriented civilization, the spillover effect would significantly shrink. We believe Ciulla is right about that. Nonetheless, we suspect that some (healthy) orientation to the importance of work is inevitable and desirable in human civilizations,[22] and realistically, it is unlikely from a non-ideal theory perspective that concepts of the merits of different sorts of human civilization could be so fundamentally reoriented within the coming two decades, during which those who lack work opportunities will still see the other half of working-age adults contributing to society by working.

Thus, although we concede that in theory those who do not have work opportunities can have meaning

in life independent of work, we find a more balanced view in Luciano Floridi's commentary on Keynes's essay:

> In the leisure society, the risk is that there will be countless people bored and demotivated, undecided about what to do with their free time…We may turn into 'idle creatures'—as Flavius describes them in Shakespeare's Julius Caesar—who 'being mechanical…ought not walk upon a laboring day'. The mildly optimistic reply is that some of us will learn to live a life of leisure worth living (education is the key here), and those of us who will not will still be left with the opportunity of making the most of their leisure if they wish. Civilisation also means the freedom of being a couch potato" (Floridi, 2014, 147).

Left unanswered, of course, is the axiological question as it relates to the life of a couch potato.

Returning to the era of abundance, with the aid of a basic income guarantee, everyone could potentially have "the opportunity of making the most of their leisure if they wish" (Floridi, 2014). At the same time, this should not be negligently interpreted to mean that a massive and systematically ongoing lack of work opportunities to be part of economic cooperation would not be a problem—or that it may be a problem but a trivial one. We argue the opposite—that it comprises a serious personal, ethical, and social problem that limits much of the population in pursuing meaning in life. In a just, decent, and healthy society, securing opportunities for purpose must be a substantial moral and political priority. To use an imperfect analogy, those who cannot have work opportunities to contribute and who feel useless in the era of abundance would be like people with acute physical, mental, or educational disadvantages. That is, it's possible for those with acute disadvantages to accomplish, often with proper training and practice, many of the things that non-disadvantaged people can typically do. Still, their societal conditions are typically deeply ***limited*** and structurally ***unconducive*** for them to perform and pursue goals that are commensurate with those that "advantaged" persons can achieve much more easily: One should not romanticize, imagining that there is no difference between the living conditions of people with acute disadvantages and those without.[23] Many who cannot have work opportunities to contribute to the social cooperation of collective value creation and who are affected by ensuing negative spillover effects in other spheres of life in the era of abundance may be metaphorically termed as axiologically disadvantaged.

Implications for Corporate Purpose

Perhaps at this point a reader might say, "Okay, I agree with you. I get that the axiological challenge is a risk not to be ignored. So what? ***Why should business ethics researchers pay attention to the challenge?***" To this we answer that the axiological challenge is directly relevant to major questions that business ethics has discussed over several decades, especially within the broad literature about corporate purpose (Blair & Stout, 1999; Dodd, 1932; Donaldson & Walsh, 2015; Stout, 2012) and governance (Donaldson, 2012; Orts, 2012; Strudler, 2017; Zingales, 1998), including but not limited to the shareholder theory (Boatright, 1994; Friedman, 1970; Jensen, 2002) and the stakeholder perspective (Freeman, 1984, 1994; Parmar et al., 2010). We now further clarify how the axiological challenge calls into question these two major theories in business ethics.

The Teleological Challenge

The axiological challenge emerges primarily as a result of the uniquely limiting socio-economic structure created by the technological unemployment predicted by various reports to arise due to massive workplace automation (Arthur, 2011; Brynjolfsson & McAfee, 2014; Frey & Osborne, 2013). The overall thesis of these reports is, as explained in the previous sections, that the dominant view in traditional economics that technological innovation creates more human jobs than it destroys won't be true in the near-future society. These reports use different approaches to predict the future workplace, but one common theme among them is considering whether a certain kind of job can be automated enough to replace humans in the near future.[24] But the empirical fact that a kind of job ***can*** be automated does not necessarily mean that it ***will*** be automated or ***should*** be automated. There must be another premise that governs this choice to automate.

It is generally assumed that as the market price of automation falls, human workers will reallocate their labor supply to workplaces where tasks are not yet susceptible to automation, but eventually the number of human workers who cannot find an alternative workplace will quickly grow on an unprecedented scale.[25] At a fundamental level, the premise leading to the presumption of automation could be more generally understood as follows: business enterprises (e.g., corporations) do and will behave in ways consistent with a certain kind of a theory of the firm that explains (and seemingly prescribes) corporate purpose and governance—that is, to maximize operational efficiency so as to maximize (financial) capital owners' profits (e.g., Boatright, 1994; Friedman, 1970; Jensen, 2002).

This fundamental premise is itself descriptive and empirical, but given its prescriptive power,[26] it inescapably invokes a normative question that essentially involves a teleological dimension of corporate behavior: "Should the firm really be guided to behave that way in future society?" or "Is that the right, desirable, or fitting purpose of the firm in future society?" Saying, "X does

and will behave in a certain manner" never means, "X ***ought to*** act in that manner" (Donaldson, 1994). Since Aristotle—who started ***Nichomachean Ethics*** (2006, 3) with "Every skill and every inquiry, and similarly every action and rational choice, is thought to aim at some good; and so the good has been aptly described as that at which everything aims"—there has been a long tradition in ethics that purports to understand and evaluate the ethical status of an action in terms of the good at which it is aimed. In that vein, managers' choices and their ethical desirability could be understood in terms of the good at which they are aimed in their undertaking. Thus, the question to be asked in our context is what is the apt or fitting purpose at which managers' choices are to be aimed in the new machine age?

It is an "Open Question" (Moore, 1903/1993; Freeman, 2009) whether the capital-owner-profit-maximization model is the justified and legitimate goal or purpose by which managers should be guided in the coming decades, especially if doing so may systematically hinders much of the population from living a meaningful life. In other words, the social scientific predictions empirically, prescriptively, ***and*** normatively premised upon the shareholder model, in fact, challenge us to pay attention to the ethical and societal risk that the more managers passionately endorse and follow the dominant shareholder/financier model in the coming decades, the more they will commit their firms, negligently or perhaps intentionally, to becoming major contributors to a serious ethical and societal loss, harm, or externality in the coming machine age. In general, this challenge implies that the axiological challenge could be used as an ethical and social legitimacy criterion of corporate purpose in the second machine age, because it is plausible to submit that, other things being equal, a theory of corporate purpose that has resources to satisfactorily address or at least mitigate the challenge is a better model than one that does not. This is a challenge about the ***telos*** or purpose of business firms, so let us call it ***the teleological challenge***.

A possible reaction from the shareholder theory is that the theory is already well positioned to address this challenge by stating that maximizing shareholder values leads to market efficiencies that ultimately benefit society as a whole, ***materially***. But this answer misses the point. The teleological challenge that we identify is fundamentally different from material security. It ***presumes*** material security for the masses and instead questions an insecurity of ***meaning***. In the era of abundance, those who do not have work opportunities have material security largely due to increased market efficiency and basic income, but they have seriously limited opportunities for axiological security because they systematically lack opportunities to gain meaning through work.

Another possible reaction from the shareholder perspective is to dismiss the challenge as nonsense, because it is only the government who bears responsibility toward those who have lost jobs and are having difficulty finding jobs, so that there is nothing wrong with a business firm creating social problems if it causes them without violating existing laws and minimum ethical norms (e.g., "free competition without deception and fraud"; Friedman, 1970). Such a view strikes us as absurd. First, practically, the government cannot be relied upon to solve all externalities and problems (Hart & Zingalas, unpublished manuscript). Second, the existence of a functioning government cannot and should not give firms a license to create social problems. Third, the shareholder perspective does not necessarily have to cause such a reaction, at least, philosophically. What is often meant by "minimum ethical norms," broadly construed, is libertarianism, and in our view, libertarian business leaders have ample liberty-based reason to take the axiological challenge seriously. It is beyond the capacity of this article to fully develop such a claim, but let us briefly address it.

Libertarianism has its diverse traditions, but its core is its emphasis on respect for ***everyone***'s liberty. How to understand liberty is a thorny problem, but for our purposes it can be said that at the center of liberty is "the capacity people have to become responsible authors of their own lives, along with their capacity to recognize their fellow citizens as responsible self-authors" (Tomasi, 2001, 88). In order to be a responsible self-author, according to libertarianism, having the power to exercise economic liberty is not just instrumental, but necessary. Accordingly, broad kinds of libertarian traditions praise actions that afford everyone as wide a latitude as possible to choose for themselves their economic lives. Serious libertarians, thus, would not condemn but support business firms that strive to empower as many humans as possible to capably write their own stories and add meaning in economic life rather than let technology determine their stories. Furthermore, not all libertarians deny that the ideal of liberty may sometimes impose some action-guiding norms when there exists a systematic failure to give everyone the opportunity to be a self-author.[27] If the teleological challenge to the shareholder theory is credible or is at least a risk not to be ignored—that is, if the existing shareholder model-driven economy might end up with a socio-economic structure that systematically denies many in the population the opportunity to write their own stories in economic life—proactively adopting an open-minded attitude to address the axiological challenge may be a virtue that the ideal of liberty in the second machine age can impose on leaders of business firms.[28]

Fundamentally, we posit that the teleological challenge calls for shareholder model theorists to respond to the axiological challenge by showing how the

shareholder tradition could be developed as a fitting theory for the coming machine age. Failing that, other models must be sought.

The Future of Stakeholders

A corporate model that has garnered much attention as an alternative to the shareholder/financier model is the stakeholder theory (Freeman, 1984, 1994; Jones, 1995; Jones & Wicks, 1999; Parmar et al., 2010). According to it, the purpose of a firm is primarily to create value in ways that best balance various stakeholders' interests (e.g., customers, suppliers, employees, financiers, and communities), and a stakeholder is defined, according to Freeman (1984, 1994), as any group or individual that can affect and/or be affected by the realization of an organization's purpose.[29] Potentially, stakeholder theory may prove to be a useful framework in the coming machine age, primarily due to its expansive notion of stakeholder, which may be extended to human workers who compete with robots, and who systematically lack work opportunities. However, we only ***conditionally*** accept the potential of the stakeholder framework: Although stakeholder theory has ample resources to include meaning in life as part of stakeholders' cardinal interests or part of value creation, the traditional dichotomy between the two principal stakeholder groups—the employed and the community—may lead managers to feel helpless in the face of the potential marginalization of human workers. Specifically, as managers try to balance the needs of the two stakeholder groups, it may prove difficult for them to resist the displacement of workers, since the benefits to one stakeholder group must come at the cost of the other. To break this potential deadlock, we propose that firms should actively embrace a third and entirely new type of stakeholder group, which we shall call "agora," who would be neither the employee nor the community.

First, unlike the shareholder theory, which does not offer room for anything other than market value of capital owners as the content of value creation or interests, the stakeholder tradition is ready to be elastically extended to embrace meaning as part of the content of value creation. Stakeholder theory has been defended by various normative theories such as Kantian ethics (Evan & Freeman, 1998), norms of fairness (Phillips, 1997, 2003), and libertarianism (Phillips & Freeman, 2002), but the major philosophical foundation for stakeholder theorists is pragmatism (Freeman, 2009; Wicks & Freeman, 1998). The pragmatic perspective that stakeholder theorists endorse has often framed the purpose of corporations as an empowering and useful tool to enable humans to write better "narratives" (Rorty, 1989). Hence, managers who endorse the stakeholder perspective have no reason not to be open-minded to the urgency and legitimacy of the axiological challenge ***per se***, but only if the managers are justified within the stakeholder framework to identify those who face a systematic lack of work opportunities as a legitimate stakeholder group.

At first glance, using Freeman's (2009) original definition of a stakeholder—that is, any group who affects and/or is affected by the achievement of the organization's objectives—in a conceptual manner well covers the job seekers as an independent stakeholder group, given that their unified interests in meaning-seeking through gaining work opportunities are obviously affected by how firms are operated, especially in terms of automation strategies. But this inflationary definition, without some principled limits, may not provide a reasonable explanation of why the job seekers must be considered as a stakeholder group, the interests of whom managers should take into consideration when they decide how to run their firms.[30]

Second, if we use the theory's often-used stakeholder analysis, those who structurally face the meaning crisis can be part of a stakeholder constituency known as "community" (Dunham, Freeman, & Liedtka, 2006). But the community stakeholder is usually understood as a secondary stakeholder group whose interests are less weighty than those of primary stakeholder groups that include financiers and employed workers, especially in terms of fairness or meritocracy (Phillips, 1997, 2003) and legitimacy and power (Mitchell et al., 1997). Furthermore, given that stakeholders are alternatively defined as "those groups without whose support the organization would cease to exist," the unemployed can likely be disregarded, unless their support is crucial for a firm to exist. It is unclear, then, how much attention stakeholder perspective-oriented managers would and should pay to those experiencing the challenge of meaning in life during the second machine age.

Furthermore, even if the job seekers were considered a group of community stakeholders; a typical stakeholder relationship to community has only limited resources to address the teleological challenges. Any adequate solution must allow job seekers to become participants in the core operation/organization of corporate activities, and by doing so contribute to the common good of society and actively develop their agency in the organizational setting. No doubt, as we mentioned above, individuals can contribute to the common good through community activities, sponsored by corporate philanthropic activity, a primary kind of stakeholder relationship to community. But in contemporary societies, those who have limited participation in value creation processes would likely have limited opportunities to contribute to the common good and to actively develop their agency.

Stakeholder theorists can object that the above analysis is unfair because stakeholder-oriented managers would not suddenly face the axiological crisis but would

make decisions step by step throughout the coming decades, to mitigate the axiological challenge in a gradual manner. For instance, managers would first face a series of situations wherein they made decisions about whether to automate or not, or how much, during which they would not straightforwardly maximize automation without hesitation, but instead try to balance the interests of low-ranking workers and other stakeholder groups including shareholders, customers, creditors, high-ranking workers, etc. But even in this picture, it is unclear why the marginalization of human workers would not occur sooner or later.

Crucially, as stakeholder theorists explain, stakeholder theory never claims that interests of stakeholders must be balanced in a strictly egalitarian manner (Phillips, Freeman, & Wicks, 2003; Parmar et al., 2010). Rather, norms of fairness have been developed as a major legitimacy standard for allocating benefits to stakeholders who contribute to value creation (Phillips, 1997, 2003), which in our view is normatively the most rigorous foundation for stakeholder identification and balancing interests. If this is taken as so, stakeholder theory-oriented managers would be inclined to believe (reasonably) that the interests of human workers—in particular displaced human workers—should be subservient to the interests of other stakeholders, as human workers' contribution to value creation would become more and more limited, given the benefits of automation to customers, financiers, and others.[31] This would have the perverse effect of confirming, from a theoretical/philosophical perspective, the devaluing of workers who have been displaced from employment. At this point, the managers might consider implementing some minimum threshold protection or affirmative action for human workers facing the threat of automation, which could be developed by importing some deontological duties,[32] but stakeholder theory itself does not have such resources, and the theory seems to oppose making any principled deontological constraints, given its pragmatic emphasis on "balancing" (Orts & Strudler, 2009).

Perhaps, unlike the shareholder-oriented managers, stakeholder-oriented managers might at least try to imagine an alternative kind of automation that could mitigate the axiological challenge. But to be consistent with the fundamental vision of stakeholder theory—that ethics should not be cast as an accessory or an afterthought to the value creation process but must be positioned at the core of management and innovation (Freeman, 1984, 2009; Parmar et al., 2010; Wicks & Freeman, 1998; Jones & Wicks, 1999)—any solution to the axiological challenge must not be that businesses charitably delay automation for the sake of humans by providing a certain number of jobs as CSR. Businesses can surely do that, but the stakeholder–oriented manager must realize that unless societies radically change the basic incentive systems of the market economy, most delay or charity strategies would be inevitably defeated by economic incentives – consistent with the stakeholder theory – toward automation. The manager, hence, must recognize that the challenge is directly to the very nature of business strategy.

Thus, stakeholder-oriented managers must not avoid frontal confrontation with the market pressure to automate: Hiring humans is costly due to salaries, pensions, human resources management, paid vacations, and limited working hours (Davenport & Kirby, 2016). As a logical matter, a fundamental solution to the problem of meaning must encourage businesses to sustainably offer work opportunities for humans to be part of economic cooperation through fair economic competition with robots as well as other humans (unless doing so harms comparable interests of all involved parties, including the unemployed and the worst-off groups in society). Such a solution must come from innovative business ideas for creating ***market*** demand for human jobs, unless we dramatically redesign the basic structures of capitalism. One interesting proposal is to help consumers take a more stakeholder-centered view – for example by initiating a "made by humans" campaign to create market demand for human labor (Brynjolfsson & McAfee, 2014). Just as a growing number of customers prefer to buy organic products, locally made food, fair trade food, sweatshop-free clothing, conflict-free electronics, or non-GMO food, if the "made by humans" campaign were successfully implemented, it could create some amount of market demand for human labor. This idea may be powerful, and there may be other, similarly clever gimmicks. But they cannot be relied upon as a solution to such a grave societal problem on such a large scale.

Overall, this analysis teleologically challenges stakeholder theorists to more deeply consider the future of all stakeholders, including how to balance the interests of different stakeholders, particularly those who may only be peripherally necessary for the financial success of the firm. Specifically, we implore such theorists to determine how managers who endorse the stakeholder model can and should write "better stories" by capably addressing the axiological challenge in the second machine age.

A Proposal: Back to the Greek Agora

Despite our arguments above, we still see the potential of the spirit of stakeholder theory. The existing framework assumes a dichotomy between two stakeholder groups: workers and community. If workers are no longer employed, they belong to community, but community is a secondary stakeholder group, so the axiological challenge is not effectively addressed by the existing approach. We propose that firms must be encouraged to actively embrace a new kind of stakeholder group, neither

workers nor community, and that doing so would solve the axiological challenge. Let us explain why.

Any adequate solution to the teleological challenge—within our market-driven economic framework—must satisfy at least two conditions: a) It must provide resources by which those who do not have work opportunities due to systematic automation, can contribute to the good of society and thus develop agency so as to add meaning to their lives; and, b) There must be a sustainable market demand for the solution. We propose that there may be such a solution and in fact that this solution has existed for millennia. Specifically, we suggest learning from ancient Greek society, in which collective deliberation for the common good was considered an essential element of a meaningful life, ***especially for aristocrats—"citizens"—who did not have to work because slaves worked for them***. We propose that in the coming machine age, as machines replace the labor of workers, those displaced can likewise find meaning through collective deliberation for the common good. Moreover, we also posit that it is both in the interests of, and the responsibility of, business enterprises to play a significant role in bringing about this societal change.

In Aristotle's account, the most meaningful life is one that engages rational agency. Aristotle thought that such a life is best realized in contexts in which persons are jointly engaged with each other with some form of civic friendship. An integral part of this experience is their conscious and intentional collective deliberation concerning how to best serve the common good given their limited resources (Hussain, 2018). In a contemporary society, universities are helpful examples of such a communal context in which members share facilities for their continual intellectual, cultural, and athletic education and overall human flourishing. It is notable, we believe, that the specific aspect of university life that most resembles the Aristotelian ideal is the "all-night bull session," which many students partake in while at university, when they are first exploring their roles in larger society and creation as a whole.[33]

We therefore prescribe that, in the coming machine age, firms offer a university-like community to those who do not have work opportunities. These communities may have residential components, but it is likely they will be largely or entirely remote or virtual—paralleling the anticipated technology-enabled trends in higher education.[34] These communities will be actively empowered to collectively deliberate on how their firms can best contribute to the common good. And, in order to ensure that their deliberations have efficacy, we also propose that representatives of the corporate agora be board members. For instance, after deliberative sessions, a retail store's corporate agora may recommend at a board meeting that the firm not sell weapons. In a pluralistic society, each firm's agora may be a useful resource to address many value questions that modern businesses face. This is a solution that obviously enables people to contribute to the common good and thus develop their agency.

Furthermore, we suggest that participating in the corporate agora be a competition—and merit-based—so that participants will be mutually encouraged to further develop their agency. These then would not be unlike the "innovation tournaments" that are becoming more common today—in which individuals and teams can enter ideas in contests sponsored by companies. These tournaments take several different forms: they may be more or less collaborative, may enable collective voting on ideas or not, may provide feedback during the tournament to entrants or not. Different forms or rules for the corporate agora may be adopted by different industries or companies, depending on their particular tastes and needs. There is already some research on which types of rules firms should adopt for innovation tournaments, depending on their particular characteristics (e.g., Ales, Cho & Körpeoglu, 2017; Terwiesch & Ulrich, 2009) deciding on agora structure could in fact be one of the first topics that the agora community considers.[35]

Allow us to imagine how Nike could use its corporate agora in light of Nike's recent commercial that features Colin Kaepernick. Kaepernick is the former NFL quarterback who first kneeled during the national anthem to protest racial injustice. Society has subsequently been bitterly divided toward NFL players' kneeling during the national anthem. Hiring Kaepernick for the Nike commercial, thus, is a strong symbolic action that Nike endorses Kaepernick's stance toward racial injustice. If Nike had a corporate agora, a collective deliberative community, the board and the marketing team could have asked the agora to critically deliberate whether featuring Kaepernick would contribute to the common good or not. In fact, at the onset of the controversy, the board could even have asked the agora what Nike ought to do regarding social injustice; conceivably the agora could have reached the consensus that featuring Kaepernick would be an effective solution. This line of imagination, once implemented, could effectively help members of the agora to actively use their rational agency to contribute to the common good through Nike. Such an endeavor would also help Nike, which has been identified as running sweatshops, find a more responsible way of running a business.[36]

The agora model satisfies the first condition: contribution to both society and agency. But we haven't discussed the second condition: market demand. There are several ways to render the agora model financially attractive to companies. First, firms will likely create much surplus due to increased operational efficiency, and they could then create a corporate agora as a form of CSR activity. Given that society expects firms to enact

some form of CSR, implementing a corporate agora may meet such a market demand. But we recognize that this is a weak solution, because CSR is an add-on task outside of a firm's core operations.

A second, probably better idea is to directly create a market demand for the agora through taxation, for example. For instance, if, as Bill Gates suggests, a government can create a robot tax, and if a government could simultaneously offer a robot-tax exemption to firms that create the corporate agora, there would be a direct market stimulus for the implementation of the agora. On what grounds can a government create such a public-policy level incentive? McMahon (2010) argues that firms, especially public corporations, can be understood as public authorities granted by political institutions to efficiently create the good of society such as the promotion of social prosperity, preservation of the health of the population, advancement of knowledge, development of culture, maintenance of the rule of the law, social justice, and defense of national territory. Extending McMahon's argument, given that meaningful life is an important social good, it can be argued that the legitimacy of corporate authorities could be weighed, other things being equal, according to the extent that they address the axiological challenge in the coming machine age. If the corporate agora with the tax exemption model is a feasible idea that fits the new purpose of business, that is itself a public policy ground.

But taxation is still an unsatisfying solution to the problem—firms would in some sense be compelled to participate by the government to avoid penalties, not because they saw value in the corporate agora. One could argue that if there is no real value to firms, this undermines our arguments for the corporate agoras themselves: Does this not render the agora a charity rather than meaningful work?

Fortunately, the corporate agora can directly benefit firms, incentivizing their participation outside of any tax policy. We argue that there are several benefits a firm can expect to receive from its agora. First, as alluded to above, the agora is an expression of collective intelligence or crowdsourcing. If the agora gives the firm knowledge on how it can contribute to the common good, and the firm acts on the knowledge, this can be expected to generate customers' good will and thus increase market demand. Or even better, if it is ***proprietary*** actionable knowledge (e.g., Patagonia's sustainability strategy), then a firm may be able to act on it and gain a sustained competitive advantage. This posits that there would be a market among consumers for firms doing good. We would argue that such a nascent market already exists (e.g., Hart & Zingales, 2017). Why then wouldn't firms eventually compete to do good like soccer or football teams compete? We do not see why this shouldn't be the case. And, while not the direct task of the corporate agora, it is certainly possible that the agora would spawn ideas that generated positive market outcomes ***in addition to*** the common good. Products that fill a real need in the market typically are both very popular and contribute to the common good: Customers derive utility from the products, which drives purchases. The agora in this sense would be a vast extension of a firm's R&D base.

Relatedly, firms may come to see the members of their agora as a highly dedicated customer base, something that firms strive to build now through loyalty programs and special offers. This base could serve as a test community for new products and ideas; once established among agora members, the ideas could be refined and launched to broader society. Accordingly a broad and responsive agora would become a rich source of information for the firm, as well as a reservoir from which potential viral marketing campaigns could be launched. In this way, a highly functional, loyal, agora could be seen as a crucial component of brand value. Returning to the sports analogy—a corporate agora could be seen as similar to the rabid fan base that many teams enjoy, in various sports, across cultures and around the world. Thus, we argue, firms can derive value from their corporate agoras in myriad ways.

But this very argument leads to a challenge: At this point, the critic might say, "If there's market demand to fix the problems, both the shareholder and the stakeholder theories have no serious hurdles to address the axiological and teleological challenges." Yes, this is true, but only after the potential for such a market demand is ***recognized*** and then actively ***created***.

The shareholder theory ***per se*** is indifferent to these challenges if automation is instrumental to shareholder-profit enhancement. Although we could elaborate on the market arguments for why it would be in firms' best interest to invest in the corporate agora, many of these same market arguments exist already. Yet, the number of firms that choose to invest in building a strong and loyal customer base or who leverage crowdsourcing is limited. Why? We argue that the answer is that there is easy money to be made by many firms absent of such efforts. Therefore, the investment in such a community, specifically the risk and potentially long payback horizon related to this investment, makes it unattractive to many firms that are dedicated to maximizing shareholder value (often in the short term). Thus, shareholder theory may forego this opportunity in favor of others that have either higher or less risky returns or a shorter return on investment horizon.

Conclusion

In this article, we have called for the proactive consideration of an issue that business ethics will be arguing about in the years to come. We have explored two challenges that the impending machine age potentially raises for business ethics. First, we described

a problem that we called ***the axiological challenge***, submitting that work opportunities, broadly defined as opportunities to be part of economic cooperation or collective value creation, are often a major societal base that confers much of life's meaning for people. Thus, in the second machine age, a universal basic income or welfare aids alone would achieve only limited success in bolstering and reinforcing the health of a just and decent society. Hence, businesses that naively automate the workplace will put themselves at risk to become contributors to a major societal and ethical problem in the second machine age.

Second, we proposed using the axiological challenge as a legitimacy criterion to evaluate theories of corporate purpose for future society. If our analysis is apt, businesses that endorse the shareholder framework will potentially be major contributors that inflict an axiological loss to many constituents of future society. Stakeholder theory does have the potential to address the axiological challenge, but the existing framework to identify stakeholders—"either workers or community"—hinders managers from actively embracing a new kind of stakeholder—agora—through which they can capably address the axiological challenge. Overall, this article maintains that the axiological challenge must be understood as an ethical and societal problem that provokes businesses to proactively and precautionarily rethink their purpose in ways that further develop or overcome existing models of corporate purpose. This is what we called the ***teleological challenge***. Finally, as a solution to the two challenges, we propose that in the coming machine age firms have reason to institute what we call a corporate agora to actively empower those who systematically lack work opportunities due to automation: Firms can provide the displaced workers with an avenue to a better society, while deriving practical benefits as well.

Ethical approval: This article does not contain any studies with human participants performed by any of the authors.

References

Ales, L., Cho, S.-H., & Körpeoglu, E. (2017). Optimal award scheme in innovation tournaments. ***Operations Research, 65***, 693-702.

Alzola, M. (2012). The possibility of virtue. ***Business Ethics Quarterly, 22,*** 377-404.

Annual Report of the Council of Economic Advisors. (2016). Economic Report of the President: Transmitted to the Congress February 2016. Retrieved from: http://www.presidency.ucsb.edu/economic_reports/2016.pdf

Aristotle. ***Nichomachean ethics.*** R. Crisp (Tr.) (2006). Cambridge: Cambridge University Press.

Arneson, R. (2009). Meaningful work and market socialism revisited. ***Analysis & Kritik***, 31, 139-151, 139.

Arneson, R. (1990). Is work special? Justice and the redistribution of employment. ***American Political Science Review, 84,*** 1127-1147.

Arneson, R. (1987). Meaningful work and market socialism. ***Ethics, 97,*** 517-545.

Arthur, W. B. (2011). The second economy. ***McKinsey Quarterly.*** Retrieved from: http://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/the-second-economy

Autor, D. H. (2015). Why are there still so many jobs? The history and future of workplace automation. ***Journal of Economic Perspectives, 29,*** 3-30.

Barry, B. (2000). Basic income and the work ethic. ***Boston Review.*** Retrieved from: http://bostonreview.net/forum/basic-income-all/brian-barry-ubi-and-work-ethic

Bhargava, V., & Kim, T. W. (2017). Autonomous vehicles and moral uncertainty. In O. Lin, K. Abney, & R. Jenkins (Eds), ***Robot Ethics 2.0: New challenges in philosophy, law, and society.*** Oxford University Press.

Bidhan, L., Parmar, R., Freeman, E., Harrison, J. S., Wicks, A. C., & de Colle, S. (2010). Stakeholder theory: The state of the art. ***Academy of Management Annals, 4,*** 403-445.

Blair, M. M., & Stout, L. A. (1999). A team production theory of corporate law. ***Virginia Law Review, 5,*** 247-328.

Boatright, J. (1994). Fiduciary duties and the shareholder-management relation: Or, what's so special about shareholders? ***Business Ethics Quarterly, 4,*** 393-407.

Bowie, N. E. (1990). Empowering people as an end for business. In G. Enderle, B. Almond, & A. Argandoña (Eds), ***People in corporations,*** 105-112.

Breen, K. (2016). In defense of meaningful work as a public policy concern. In A. Fives & K. Breen (Eds.), ***Philosophy and political engagement: Reflection in the public sphere*** (pp. 139-161). Springer.

Brennan, J. (2012). ***Libertarianism: What everyone needs to know.*** New York: Oxford University Press.

Brynjolfsson, E., & McAfee, A. (2016). Human work in the robotic future: Policy for the Age of Automation. ***Foreign Affairs, 95.***

Brynjolfsson, E., & McAfee, A. (2014). ***The second machine age: Work, progress, and prosperity***

in a time of brilliant technology. New York: Norton. 8-

Brynjolfsson, E., & McAfee, A. (2015). Will humans go the way of horses? Labor and the second machine age. ***Foreign Affairs, 94.***

Chui, M., Manyika, J., Miremadi, M. (2015). Four fundamentals of workplace automation. ***McKinsey Quarterly.*** Retrieved from: http://www.mckinsey.com/business-functions/digital-mckinsey/our-insights/four-fundamentals-of-workplace-automation

Ciulla, J. (2000). ***The working life: The promise and betrayal of modern work.*** New York: Three Rivers Press.

Coase, R. H. (1937). The nature of the firm. ***Economica***, ***4***, 386-405.

Cunliffe, J., & Erreygers, G. (2003). Basic income? Basic capital! Origins and issues of a debate. ***Journal of Political Philosophy, 11,*** 89-110.

Danaher, J. (2017). Will life be worth living in a world without work? Technological unemployment and the meaning of life. ***Science and Engineering Ethics, 23,*** 41-64.

Davenport, T. H., & Kirby, J. (2015). Beyond automation. ***Harvard Business Review.*** Retrieved from: https://hbr.org/2015/06/beyond-automation

Davenport, T. H., & Kirby, J. (2016). ***Only humans need apply: Winners and losers in the age of smart machines.*** New York: Harper Business.

Davidow, W. H., & Malone, M. S. (2014). What happens to society when robots replace workers? ***Harvard Business Review.*** Retrieved from: https://hbr.org/2014/12/what-happens-to-society-when-robots-replace-workers

Dodd Jr., E. M. (1932). For whom are corporate managers trustees? ***Harvard Law Review, 45,*** 1145-1163.

Donaldson, T. (2012). The epistemic fault line in corporate governance. ***Academy of Management Review, 37,*** 256-271.

Donaldson, T. (1994). When integration fails: The logic of prescription and description in business ethics. ***Business Ethics Quarterly, 4,*** 157-169.

Donaldson, T., & Walsh, J. P. (2015). Toward a theory of business. ***Research in Organizational Behavior, 35,*** 181-207.

Dunham, L., Freeman, R. E., & Liedtka, J. (2006). Enhancing stakeholder practice: A particularized exploration of community. ***Business Ethics Quarterly, 16,*** 23-42.

Evan, W. M., Freeman, R. E. (1988). A stakeholder theory of the modern corporation: Kantian capitalism. In T. Beauchamp & N. Bowie (Eds.), ***Ethical theory and business***. Englewood Cliffs: Prentice Hall.

Evers, D., & van Smeden, F. E. (2016). Meaning in life: In defense of the hybrid view. ***Southern Journal of Philosophy, 54,*** 355-371.

Finley, K. (2015). Robot radiologists will soon analyze your x-rays. ***Wired.*** Retrieved from: https://www.wired.com/2015/10/robot-radiologists-are-going-to-start-analyzing-x-rays/

Floridi, L. (2014). Technological unemployment, leisure occupation, and the human project. ***Philosophy of Technology, 27,*** 143-150.

Frankish, K., & Ramsey, W. M., Ed. (2014). ***The Cambridge handbook of artificial intelligence.*** Cambridge: Cambridge University Press.

Freeman, R. E. (2009). Managing for stakeholders. In T. L. Beauchamp & N. E. Bowie (Eds.), ***Ethical theory and business*** (8th Ed.) (pp. 39-53). Pearson.

Freeman, R. E. (1984). ***Strategic management: A stakeholder approach.*** Boston: Pitman.

Freeman, R. E. (1994). The politics of stakeholder theory: Some future directions. ***Business Ethics Quarterly, 4,*** 157-169.

Freeman, R. E., & Reed, D. L. (1983). Stockholders and stakeholders: A new perspective on corporate governance. ***California Management Review, 25,*** 88-106.

Frey, C. B., & Osborne, M. A. (2013). The future of employment: How susceptible are jobs to computerization? ***The Oxford Martin Programme on the Impacts of Future Technology (The University of Oxford).***

Friedman, M. (1962). ***Capitalism and freedom.*** Chicago: University of Chicago Press.

Friedman, M. (1970). The social responsibility of business is to increase its profits. ***New York Times Magazine.*** Retrieved from: http://www.nytimes.com/1970/09/13/archives/a-friedman-doctrine-the-social-responsibility-of-business-is-to.html?mcubz=1

Gheaus, A., & Herzog, L. (2016). The goods of work (other than money!). ***Journal of Social Philosopjy, 47,*** 70-89.

Grün, C., Hauser, W., & Rhein, T. (2010). Is any job better than no job? Life satisfaction and re-employment. ***Journal of Labor Research, 31,*** 285-306.

Hanson, K. O., & Weiss, S. (1991A). Merck & Co, Inc: Addressing third-world needs. ***Harvard Business Review Case Studies.***

Hart, O., & Zingales, L. (unpublished manuscript). Should a company pursue a shareholder value?

Hart, O., & Zingales, L. (2017). Companies should maximize shareholder welfare not market value. Journal of Law, Finance, and Accounting 2, 247-274.

Hartman, E. (1996). ***Organizational ethics and the good life.*** Oxford: Oxford University Press.

Hayek, F. A. (1979). The political order of a free people. In ***Law, legislation, and liberty*** (Vol. 3) (1981). Chicago: The University of Chicago Press.

Hooker, J. N., & Kim, T. (2018). Toward non-intuition-based machine ethics. ***Proceedings of AAAI/ACM Conference on Artificial Intelligence, Ethics and Society*** (http://www.aies-conference.com/accepted-papers).

Hurka, T., & Suits, B. (1978). Introduction. In ***The grasshopper: Games, life, and utopia.*** Broadview Press.

Hussain, W. (2018). The common good. ***Stanford Encyclopedia of Philosophy.***

Kennedy, J. A., Kim, T., & Strudler, A. (2016). Hierarchies and dignity: A Confucian communitarian approach. Business Ethics Quarterly, ***26***, 479-502.

Jensen, M. C. (2002). Value maximization, stakeholder theory, and the corporate objective function. ***Business Ethics Quarterly, 2,*** 235-256.

Jones, S. E. (2006). ***Against technology: From the Luddites to neo-liberalism.*** New York: Routledge.

Jones, T. M. (1995). Instrumental stakeholder theory: A synthesis of ethics and economics. ***Academy of Management Review, 20,*** 404-437.

Jones, T. M., & Wicks, A. C. (1999). Convergent stakeholder theory. ***Academy of Management Review, 24,*** 206-221.

Kauppinen, A. (2012). Meaningfulness and time. ***Philosophy and Phenomenological Research, 2,*** 345-377.

Keynes, J. M. (1930). Economic possibilities for our grandchildren. In ***Essays in persuasion*** (1963), 358-373. New York: W. W. Norton & Co.

Kim, T. W., & Donaldson, T. (2018). Rethinking right: Moral epistemology in management research. ***Journal of Business Ethics 148***, 1-16.

Korner, A., Reitzle, M., & Silbereisen, R. K. (2012). Work-related demands and life satisfaction: The effects of engagement and disengagement among employed and long-term unemployed people. ***Journal of Vocational Behavior, 80,*** 187-196.

Levy, F., & Murnane, R. J. (2004/2005). ***The division of lab.*** Princeton: Princeton University Press.

Macey, J. R., & Miller, G. (1993). Corporate stakeholders: A contractual perspective. ***The University of Toronto Law Journal, 43,*** 401-424.

Martin, K. (2016). Do privacy notices matter? Comparing the impact of violating formal privacy notices and informal privacy norms on consumer trust online. ***Journal of Legal Studies, 45,*** 191-211.

McKee- Ryan, F. M., Song, Z., Wanberg, C. R., & Kinicki, A. J. (2005). Psychological and physical well-being during unemployment: A meta-analytic study. ***Journal of Applied Psychology, 90,*** 53-76.

McMahon. (2010). The public authority of the managers or private organizations. In G. G. Brenkert & T. L. Beauchamp (Ed.), ***The Oxford Handbook of Business Ethics*** (pp. 100-125). New York: Oxford University Press.

Metz, T. (2013). ***Meaning in life: An analytic study.*** Oxford: Oxford University Press.

Michaelson, C. (2005). Dialogue: Meaningful motivation and work motivation theory. ***Academy of Management Review, 30,*** 235-238.

Mitchell, T. R., Agle, B. R., & Wood, D. J. (1997). Toward a theory of stakeholder identification and salience: Defining the principle of who and what really counts. ***Academy of Management Review, 22,*** 853-886.

Moore, G. E. (1903/1993). ***Principia ethica.*** Cambridge: Cambridge University Press.

Moriarty, J. (2009). Rawls, self-respect, and the opportunity for meaningful work. ***Social Theory and Practice, 35,*** 441-459.

Müller, V. C., Ed. (2016). ***Fundamentals issues of artificial intelligence.*** Springer.

Murray, C. (2016). A guaranteed income for every American. ***The Wall Street Journal.*** Retrieved from: https://www.wsj.com/articles/a-guaranteed-income-for-every-american-1464969586

Nozick, R. (1968/1974). ***Anarchy, state, and utopia.*** New York: Basic Books.

Orts, E. (2012). ***Business person: A legal theory of the firm.*** New York: Oxford University Press.

Orts, E., & Strudler, A. (2009). Putting a stake in stakeholder theory. ***Journal of Business Ethics, 88,*** 650-615.

Orts, E. W., & Strudler, A. (2002). The ethical and environmental limits of stakeholder theory. ***Business Ethics Quarterly, 12,*** 215-233.

Parijs, P. V. (2004). Basic income: A simple and powerful idea for the twenty-first century. ***Politics and Society, 32,*** 7-39.

Parmar, B. L., & Freeman, R. E. (2016). Ethics and the algorithm. ***MIT Sloan Management Review.*** Retrieved from: http://sloanreview.mit.edu/article/ethics-and-the-algorithm/

Phillips, R. A. (2003). Stakeholder legitimacy. ***Business Ethics Quarterly, 13,*** 25-41.

Phillips, R. A. (1997). Stakeholder theory and a principle of fairness. ***Business Ethics Quarterly, 7,*** 51-56.

Phillips, R., & Freeman, R. E. (2002). Stakeholder theory: A libertarian defense. ***Business Ethics Quarterly, 12,*** 331-349.

Phillips, R., Freeman, R. E., & Wicks, A. C. (2003). What stakeholder theory is not. ***Business Ethics Quarterly, 13,*** 479-502.

Remus, D., & Levy, F. S. (2017). ***Can robots be lawyers? Computers, lawyers, and the practice of law. Georgetown Journal of Legal Ethics, 30, 501-558.***

Rorty, R. (1989). ***Contingency, irony, and solidarity.*** New York: Cambridge University Press.

Russell, B. (1932). In the praise of idleness. ***Harper's Magazine.*** Retrieved from: https://harpers.org/archive/1932/10/in-praise-of-idleness/

Scanlon, T. M. (1998). ***What we owe to each other.*** Cambridge, MA: The Belknap Press of Harvard University Press.

Schwartz, A. (1982). Meaningful work. ***Ethics, 92,*** 634-646.

Sen, A. K. (1999). ***Development as freedom.*** New York: Oxford University Press.

Shankland, S. (2016). Microsoft translation app vaults over language barriers. ***CNET.*** Retrieved from: https://www.cnet.com/news/microsoft-translation-app-group-conversation-ai/

Simon, H. A. (1957). Authority. In E. D. Arensberg (Ed.), ***Research in industrial human relations***: 103-118. New York: Harper and Brothers.

Sison, A. J. (2015). ***Happiness and virtue ethics in business: The ultimate value proposition.*** Cambridge: Cambridge University Press.

Smith, J. (Unpublished manuscript). On the market's plurality of aims: Implications for corporate responsibility. The Zicklin Center Normative Business Ethics Workshop Series (presented on March 17 2017).

Solomon, R. (1992). Corporate roles, personal virtues: An Aristotelian approach to business ethics. ***Business Ethics Quarterly, 2,*** 317-339.

Solomon, R. (1992). ***Ethics and excellence.*** New York: Oxford University Press.

Steiner, D. (2015). The future of law firms: Will AI replace young attorneys and paralegals? ***Law Technology Today.*** Retrieved from: http://www.lawtechnologytoday.org/2015/12/the-future-of-law-firms-will-ai-replace-young-attorneys-and-paralegals/

Stout, L. A. (2002). Bad and not-so-bad arguments for shareholder primacy. ***Southern California Law Review, 75,*** 1189-1209.

Stout, L. A. (2012). The problem of corporate purpose. ***Issues in Governance Studies, 48,*** 1-12.

Strudler, A. (2017). What to do with corporate wealth. ***Journal of Political Philosophy, 25,*** 108-126.

Suits, B. (2005). ***The grasshopper: Games, life and utopia***. Toronto: University of Toronto Press.

Tomasi, J. (2001). ***Liberalism beyond justice: Citizens and the boundaries of political theory.*** Princeton: Princeton University Press.

Terwiesch, C., & Ulrich, K. (2009). ***Innovation tournaments: Creating and selecting exceptional opportunities***. Harvard Business Press.

Ufberg, D. D. (2017). Business ethics in the age of robotics lecture features Wharton business professor. ***Miami Law News Articles.***

Veltman, A. (2014). ***Meaningful work.*** New York: Oxford University Press.

Walsh, A. C. (1994). Meaningful work as a distributive good. ***Southern Journal of Philosophy, 32,*** 233-250.

Werhane, P. H. (1999). ***Moral imagination and management decision-making.*** New York: Oxford University Press.

Wicks, A. C., & Freeman, R. E. (1998). Organization studies and the new pragmatism: Positivism, anti-positivism, and the search for ethics. ***Organization Science, 9,*** 123-140.

Williamson, O. E. (1975). ***Markets and hierarchies: Analysis and antitrust implications***. New York: Free Press.

Wolf, S. (2014). Happiness and meaning: A plurality of values rather than a conflict of norms. ***Proceedings of the American Philosophical Society, 158,*** 18-24.

Wolf, S. (1997). Happiness and meaning: Two aspects of the good life. ***Social Philosophy and Policy, 14,*** 207-225.

Wolf, S. (1997). Meaning and morality. ***Proceeds of the Aristotelian society XCVII,*** 299-315.

Wolf, S. (2010). ***Meaning in life and why it matters.*** Princeton: Princeton University Press.

Wolf, S. (2007). The meanings of lives. In J. Perry, M. Bratman, & J. M. Fischer (Ed.), ***Introduction to philosophy*** (pp. 62-73). New York: Oxford University Press.

World Bank. (2016) ***Digital Dividends.*** Retrieved from: http://www.worldbank.org/en/publication/wdr2016

Yeoman, R. (2014). ***Meaningful work and workplace democracy.*** Palgrave: Macmillan.

Zingales, L. (1998). Corporate governance. In P. Newman (Ed.), ***The new palgrave dictionary of economics and the law*** (pp. 497-502). London: MacMillan Reference Ltd.

---

[1] We use the terms "accountability" almost interchangeably with "role" or "responsibility." Our uses of "accountability" are close to T. M. Scanlon's

(1998) uses of his term "substantive responsibility," when he writes, "[t]o understand the conditions of responsibility in the first sense [responsibility as attributability] we need to consider the nature of moral appraisal, praise and blame. Judgments of responsibility in the second sense [substantive responsibility], by contrast, are substantive conclusions about what we owe to each other."

[2] Textile workers who lost jobs due to machines during the Industrial Revolution attacked mills under the leadership of a supposedly mystical figure called Ned Ludd. The workers in the riots were called "Luddites" (Jones, 2006).

[3] Friedrich A. Hayek also supported a basic income. Hayek (1981/1979, 5) writes, "The assurance of a certain minimum income for everyone, or a sort of floor below which nobody need fall even when he is

[3] Friedrich A. Hayek also supported a basic income. Hayek (1981/1979, 5) writes, "The assurance of a certain minimum income for everyone, or a sort of floor below which nobody need fall even when he is
unable to provide for himself, appears not only to be wholly legitimate protection against a risk common to all, but a necessary part of the Great Society…"

[4] For details, see "Labor Force Statistics from the Current Population Survey" in the Bureau of Labor Statistics.

[5] Although the reports already take into account job creation, to respectfully invite skeptics into our discussions, we add an additional 5% of job creation.

[6] How much will be offered as a basic income, and what effect such universal payments might have on the economy and inflation are thorny questions. In any case, we do not think the amount would make much difference to our argument. If the reader desires details, we tentatively propose adding the statistic that everyone over 18 years old annually receives a fixed amount of cash equivalent to the value of, say, $12,500 in 2017 and anyone under 18 receives a quarter of that amount (given that an often proposed amount of an annual basic income by advocates in the current public discussions in the U.S. is usually around $10,000-13,000 per person; e.g., Murray, 2016). As another possible benchmark, a recent proposal that would provide a basic monthly income of 2,560 Swiss francs, or about $2,600, to every adult and 625 francs to those under 18, was submitted for a referendum. On June 5, 2016, the Swiss people rejected the proposal.

[7] We authors are extremely uncomfortable with using this example. We discussed whether to replace it. We opted to keep it, because the example exemplifies how we should be accordingly uncomfortable with subjectivism, in contrast to a commonly held view that meaningfulness of one's life is always subjective.

[8] In a similar vein, Kauppinen (2012, 356) writes "the Voluntarist [Subjectivist] view is far too permissive, once we remember to disambiguate the notion of a life being meaningful *for* someone. Just as a food can be unhealthy for a person even if she thinks it is healthy, a life can be meaningless for someone even if she thinks it is meaningful."

[9] There may be hard cases, but when those are cases of reasonably informed disagreements, the framework above submits that the form of life activity in the disagreement must be respectfully admitted as objectively worthy to the extent that no one could reasonably reject the informed argument in favor of the worthiness of the life.

[10] Similarly, Joanne Ciulla (2000, 225-6) writes: "Work has meaning *because* there is some good in it. The most meaningful jobs are those in which people directly help others or create products that make life better for people. Work makes life better if it helps others; alleviates suffering; eliminating difficult, dangerous, or tedious toil; makes someone healthier and happier; or aesthetically or intellectually enriches people and improves the environment in which we live."

[11] In response to counter-examples to the fitting-fulfillment view, Evers and Smeden (2016) proposed modifying Wolf's account to replace "love" with "valuing." We believe Wolf's is already inclusive of the suggestion.

[12] Bernard Suits (2005) argues that work can never be meaning-creating and that game-playing is the only worthy activity. We take the message seriously, especially as we live in a workaholic society. Nevertheless, we maintain that Suits' thesis is too strong. Not all cases of game playing are objectively meaningful (e.g., urinating in snow to melt it). Our argument submits that game playing or any activity is meaningful only if it realizes and contributes to self-development and the good of society. Thus, employed work, when it becomes a vehicle that empowers individuals to capably realize their agency and contribute to others, is meaning-creating. Consistently, Thomas Hurka, who wrote the introduction to Suits's book, argues that economic activity is itself often a process of intrinsic value-creating activity in the modern life (Hurka & Suits,

1978). We are indebted to Joanne B. Ciulla for pressing us to discuss Suits' work.

[13] Of course this is not to say that everything that pharmaceutical companies engage in can be seen as beneficial and meaningful. This point is actually immaterial to our argument—the axiological challenge does not require work that is invariably meaningful, but rather work that is *sufficiently* meaningful. The precise definition of sufficiently in this context is a difficult question and beyond the scope of this paper.

[14] The venture was suggested by Dr. William Campbell—who discovered that a veterinary drug, once reformulated for humans, could easily cure onchocerciasis or "river blindness"—and executed by CEO P. Roy Vagelos to provide the drug to anyone who needed it for as long as it was needed, for free (Hanson & Weiss, 1991A).

[15] For a detailed analysis of "participant" in a chain of "collective value creation" see Donaldson and Walsh (2015).

[16] Another salient example is provided by sanitation workers, who may be looked down upon in society due to the dirty nature of their work. But there are few other occupations that do more to ensure the public good or the public health.

[17] Of course, paid employment is not the only form of work by which one can contribute to the good of society. Those who take care of housework and raise children significantly contribute to the good. We do not deny this at all. Instead, our argument is that for very many in society, paid employment is often the best potential option present for fulfillment.

[18] Moriarty (2009, 15), in his analysis of Rawls's works writes: "In identifying the OMW [the opportunity for meaningful work] as a social basis of self-respect in PL [*Political Liberalism*, paperback edition], Rawls abandons th[e] laissez-faire approach. His new view seems to be: we cannot merely hope that if people cannot find meaningful work, they can get self-respect from other activities, such as chess or softball…This has the effect of privileging the work association over other associations as a source of self-respect."

[19] As Nozick (1968/1974, 247) says, "The issue of meaningful and satisfying work is often merged with discussions of self-esteem…Such an individual, it is said, can take pride in what he's doing and in doing it well; he can feel that he is a person of worth, making a contribution of value."

[20] Arneson's primary claim in his broad project about meaningful work was a public policy thesis that there is no compelling argument for the government to intervene to increase the degree of meaningful work.

[21] Conceptually, there can be two other categories: c) those who have economic roles but do not participate in activities outside of work and d) those who do not have work opportunities and do not participate in activities outside of the economic realm.

[22] We think this is likely evolutionary—humans who derive utility from work that is societally beneficial are more likely to form strong societies. Similarly, animals in zoos often become neurotic, because they are denied the ability to roam the broad spaces they evolved to roam and to engage in the hunting and gathering activities they evolved to engage in. Zoos have recognized this, and now work to hide a polar bear's food, for example, to give them some poor relative substitute for the "gainful employment" they would see in the wild.

[23] We authors are once again extremely uncomfortable with using this analogy, but opted to use it, because in romanticizing the opportunities available through leisure activities we run the risk of ignoring the societal disadvantages those without employment opportunity may face. This is not to say that those without employment opportunities cannot find fulfillment, or even thrive, in our society. Rather, we argue that their opportunities to thrive may be curtailed, and we question whether this is just. Likewise, there are countless examples of those who are disadvantaged thriving in our society. But this does not mean that the barriers to their thriving that currently exist in our society are in any way just.

[24] Accordingly, the competing intellectual camp attempts to show that many of the jobs essential for human society are so complex in perception and manipulation that even advanced robots *cannot* automate them.

[25] For instance, Frey and Osborne (2013, 43) write, "labour saving inventions may only be adopted if the access to cheap labour is scarce or prices of capital are relatively high (Habakkuk, 1962). We do not account for future wage levels, capital prices or labour shortages. While these factors will impact on the timeline of our predictions, labour is the scarce factor, implying that in the long-run wage levels will increase relative to capital prices, making computerization increasingly profitable (see, for example, Acemoglu, 2003)."

[26] To see the prescriptive aspect of social scientific research and how the prescriptive dimension could be strengthened by normative moral reasoning, see Donaldson (2012) and Kim and Donaldson (2018).
[27] For our interpretation of libertarianism, we are indebted to Jason Brennan, who writes, "Many libertarians believe that property rights—including the right to run our businesses as we see fit—can be justified only if they systematically benefit everyone who is asked to respect those rights. If property rights end up systematically leaving some people behind, it may be unreasonable to demand that those left behind respect those property rights" (Brennan, 2012, 204).
[28] In a relevantly similar manner, Tomasi writes, "Rather than being simply derivative from the public norms in a liberal society, this [the criteria of good citizen conduct] is a *substantive* or *eudaimonistically* directed understanding of liberal good citizen conduct…to be a good citizen means far more than being merely just, or law-abiding, or consistent in the performance of one's politics duties. Liberal citizenship imposes far heavier burdens: citizenship involves the very center of one's life" (Tomasi, 2001, 67, 70).
[29] According to the Stanford Research Institute's memorandum, from which the theory was originally developed, a stakeholder is defined as "those groups without whose support the organization would cease to exist" (Freeman & Reed, 1983, 89).
[30] A similar challenge was made to the stakeholder theory by Eric Orts and Alan Strudler (2002), who argued that stakeholder theory is futile for sustainability because the natural environment cannot be a stakeholder.
[31] Macey and Miller (1993) criticize the stakeholder theory's lack of a rigorous balancing procedure, because without such a tool, managers "can justify virtually any decision they make on the grounds that it benefits some constituency of the firm." We do not accept this type of anything-goes criticism against stakeholder theory but acknowledge that stakeholder theory as it is does not have clear resources to prove its usefulness to address the axiological challenge.
[32] Donaldson and Walsh (2015) added what they call the "Dignity Threshold" to the stakeholder framework. The Threshold demands minimum ethical respect to participants in collective value creation. This is a promising step forward for businesses to pay more attention to the axiological aspect of humans, and it deserves further discussion. Does business' minimum respect for a person's intrinsic worth mandate business' accountability to pay attention to the challenge of meaning? Are those who seek work opportunities to contribute to the good of society participants in collective value creation?
[33] It is possible this is just coincidence. It is also possible that these sessions are contemporary echoes of ancient Aristotelian ideals; ideals that still resonate with us and that will continue to resonate into our machine-age future.
[34] Although the anticipated rise in Massively Open Online Communities—MOOCs—has yet to transform education as first anticipated, it is clear that crowdsourcing, community ratings sites, and, yes, Facebook have transformed how we as a society gather and transmit information, form beliefs and make decisions. We think it is important that our proposal—the corporate agora—be flexible enough to adapt to these changes.
[35] Our premise is that some of the technologically unemployed will desire fulfilling engagement in meaningful work. Thus in our vision membership in an agora would be competitive – it presumes that members would actively want to exert effort within their community to help their "team." Participation could be further motivated through the distribution of tokens from their agora community – Pepsi or Nike gear could serve the same identity-fulfilling purpose as a Steelers or Yankees jersey does now. This could be supplemented by distributing small shares of the company to the most productive and loyal members of the agora.
[36] Reflecting on this example, one could argue that firms *already* have sufficient incentive to initiate the formation of agora. As society becomes more able to form virtual communities, and in the face of increasing technological unemployment, firms may find still more value from a dedicated band of followers. Thus forward–looking firms might be well served to explore the formation of agora presently.