Refocusing the Minimum Wage Debate: Overcoming Management Failure and Achieving the High Road

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The minimum wage debate has in recent years revolved around those arguing against it on the grounds that it reduces teenage employment and those arguing for it on the grounds that it assists the working poor. And yet, this debate has really been nothing more than a side show that misses what the issue is really about. Historically, the minimum wage was framed within the larger context of labor-management relations. Early supporters of the minimum wage couched their arguments in terms of achieving greater productivity and efficiency. At the same time, some of the early management theorists like Frederick Winslow Taylor talked about how overall efficiency could be improved if management undertook to make second class workers into first class workers. The efficiency wage argument put forth by Sidney Webb held that a minimum wage would actually encourage managers to invest in their workers' human capital.

In this article I seek to elevate the debate and refocus it on the issues that the minimum wage really speaks to, which is the type of society we want to be. If we follow the early arguments over the minimum wage it becomes clear what the intentions were: to be a society of more skilled, more productive, and more efficient workers. In other words, the intent was to encourage the high-road over the low-road whereby more would be invested in human capital. This argument is even more relevant today as the ranks of the low-wage labor market have been increasing.

In the pages that follow, I review Taylor's argument and show how it somewhat mirrors the efficiency wage argument postulated by Sidney Webb, and very much mirrors the neoclassical version of the efficiency wage as an anti-shirking wage. As Taylor made clear that the workers who would benefit from principles of scientific management weren't really skilled workers, I argue that the Taylorite argument similarly applies to the low-wage and low-skilled market today. Using data from the IPUMS–CPS for 1982-2013, I show that the ranks of the low-wage labor market — what can be referred to as the "effective" minimum wage population — have grown. What I intend to make clear is that the growth of this segment of the labor market, which no doubt lies in the general transformation of the economy from an industrial to post-industrial service sector economy, owes as much to the failure of management. Therefore, by refocusing the minimum wage debate, or viewing it through a different prism, we are ultimately forced to address issues that the more conventional way of looking at the minimum wage has conveniently enabled us to neglect.

Taylorism

Frederick Winslow Taylor has long been considered to be the founder of the school of scientific management. Conducting time and motion studies at the Bethlehem Steel Plant in Pennsylvania, Taylor sought to ascertain just what would make for a more efficient operation of the firm, especially at a time when most production occurred in the form of Fordist assembly line production. For Taylor, however, it is more than simply a matter of efficiency, rather it is a quest for knowledge and what managers can do with knowledge. At issue is how managers can use knowledge to make their enterprises more productive, and how they can get more product out of their workers. In his most famous writing: *The Principles of Scientific Management* (2013) written in 1911 Taylor sets out to illustrate the great loss suffered by the country due to inefficiency. The answer to this problem lies in systematic management; not the search for some unusual or extraordinary man. The principal object of management should be to secure maximum prosperity, coupled with the maximum prosperity for each worker. But the greatest prosperity can only exist as the result of the greatest productivity of the new machines of the establishment — when each man and each machine are turning out the largest possible output. He then goes on to state:

> If the above reasoning is correct, it follows that the most important object of both the workmen and the management should be the training and development of each individual in the establishment, so that he can do (at his fastest pace and with the maximum efficiency) the highest class of work for which his natural abilities fit him (p11)

In other words, it is management's responsibility to take workers who naturally tend to laziness and are otherwise second-class workers and transform them into first-class workers, or the highest class of workers that they can be. Taylor actually uses the term "soldiering" to describe the laziness of second class workers, and it is soldiering that scientific management is intended to eliminate. To do this, management must provide their workers with the resources for this transformation to occur. That managers must provide their workers the necessary resources, would imply at a minimum that managers must provide the materials needed to perform their tasks. But it would also imply the need to provide workers the necessary training to perform their tasks.

It has been commonplace to assume that Taylor with his principles of scientific management and carrot-and-stick approach to workers is really anti-worker. According to Chris Nyland (1998), most industrial relations analysts continue to equate Taylorism with anti-worker and mechanistic job tasks to the exclusion of employees from workplace decision making. And yet, Taylor and his main circle actually advocated policies that closely resembled those proposed by mutual gains theorists. Taylor remained forever constant in his belief that management must be based on scientific principles and that the benefits of his system of management would flow to both employees and workers. The rigorous commitment to measurement and scientific method was key to effective management. He also believed that yet another factor was critical if management was to be developed as a science, and that was the independence of the technician. By technician he meant somebody whose technical expertise would contribute to the productivity of the firm. An individual must strive to be an expert of the highest order and a professional who could be trusted to make nonpartisan and informed decisions. His claims that his system of management would benefit both workers and employers was only accompanied by a call for parties in production to work together to enhance the output of the firm. Scholars now acknowledge that Taylor insisted that scientific management required managers to systematically train, assist, and teach workers so that each can perform "the highest grade of work for which his natural abilities fit him, and it further means giving him, when possible, this class of work to do (p522)." Management trains and supplies employees with the information they need to do their jobs, but managers must in turn listen to their workers and react with respect.

Taylor called for cooperation for the sake of mutual benefit that would ultimately contribute to greater efficiency. At the same time, Taylor received scathing criticism because of a perception that his view of man was that of a total economic being motivated by money alone. Most of Taylor's theories were developed during the "Progressive Era" and gave rise to the efficiency wage in which a gospel of efficiency was possible without embarrassment. Taylor was criticized for emphasizing only the economic nature of people, but at the same time he also felt that economic initiatives were the primary motivation of the industrial worker. Taylor did see people as naturally lazy, identifying two forms of loafing or soldiering. The first is the natural human instinct to be lazy, whereas the second was "systemic soldiering" which resulted from the collusion of workers to restrict productivity.

Many years after Taylor, Douglas McGregor (1960) distinguished between two different management approaches: Theory X and Theory Y. Those who practice Theory X often treat their workers like children who need to be supervised, controlled, and often treated harshly in order to ensure that the objectives of the firm are realized. But those who practice Theory Y are taking a more behavioralist approach where workers are assumed to be individuals with human needs and managers who want to get product out of them should find positive ways to motivate them. Taylor himself, instead of taking the totally "Theory X" perspective that held that workers needed to be controlled by managers and perhaps dealt with harshly, was really somewhere along the continuum between Theory X and Theory Y extremes — the idea that workers as people needed to be positively motivated. As Louis Fry (1976) points out, Taylor's views of human nature are pessimistic, but not without the hope of improvement. Another criticism leveled against Taylor has been his failure to recognize the potential functional aspects of informal groups. Rather, he took the position that the only solution was to destroy the very nucleus of these groups in order to assure worker accountability for outcomes and reduce opportunities for workers to collude with one another to restrict outputs.

To work according to scientific laws, management must take over and perform much of the work that is now left to men. Almost every act of the workmen should be preceded by one or more preparatory acts of management that enables the workers to perform better. Therefore, in order to get workers to demonstrate initiative, managers must give their workers some special incentive that extends beyond that which is given to the average of the trade. In other words, if the average wage among low-wage workers could be said to revolve around the statutory minimum wage, then managers who seek to obtain more from their workers must in fact pay more. Taylor writes that “This incentive can be given in several different ways, as, for example, the hope of rapid promotion or advancement; higher wages, either in the form of generous piece-work prices or a premium or bonus of some kind for good and rapid work; shorter hours of labor; better surroundings and working conditions that are ordinarily given.... (p30)” The general adoption of scientific management would in the future double the productivity of the average man engaged in industrial work. More importantly, however, society as a whole will benefit from these measures:

> But while the whole world would profit by this increase in production, the manufacturer and the workman will be far more interested in the especial local gain that comes to them and to the people immediately around them. Scientific management will mean, for the employers and the workmen who adopt it — and particularly for those who adopt it first — the elimination of almost all causes of dispute and disagreement between them (pp123-124).

Moreover, the higher wages that accompany this type of management will ultimately eliminate the wage question as the source of dispute. But it will also foster intimate cooperation between managers and workers, which in turn will reduce friction and discontent. Consequently, society will prosper because the low cost of production accompanying a doubling of output will enable companies who adopt this management to compete far more effectively than before. It means an increase in prosperity and a diminution in poverty, not only for those workers, but for the whole communities in which they live. At the same time, it becomes clear that if workers are not transformed into first class workers, the fault really lies with management. By extension, it is then the fault of businesses and their management that society is not a high-wage society.

Sigmund Wagner-Tsukamoto (2007) suggests that Taylor was actually an early pioneer of institutional economics. Institutional structures are conceptualized as incentive structures, and the goal of conflict resolution is to generate mutual advantages. Taylor pointed out the potential dilemma threatening cooperation. If the increased rewards that had been given to workers who were responsible for increased work performance were to be taken back, lower performance in turn could be expected. Consequently, productivity would decrease. Both worker opportunism and managerial opportunism created conflicts — "specifically 'antagonism' in organizational behavior, which would lead to 'loss for both parties (p106).'" Taylor was particularly critical of a reward and distribution system that did not take into account levels of individual contribution of organization members and rewarded individual over-performance or under-performance in the same way. Therefore, he recommended changing the system of management so that the interests of workmen and management should be similar, rather than antagonistic. He further argued that profit increases achieved through scientific management were to be shared among all who had contributed to generating them. In other words, gains in productivity should at a minimum be shared among the workers in the form of higher wages. Moreover, increased productivity being shared in the form of higher wages has long been a fundamental assumption of neoclassical economics that hold workers earn higher wages when their marginal revenue product increases. In a competitive market each worker receives the value of his or her marginal revenue product, which is the amount of an increase in say a unit of labor. The marginal revenue product of labor is often the criterion for determining how many more workers to hire because they are able to calculate how much more output can be expected based on how many units are added. But if the marginal revenue product can be increased from the greater efforts of workers without having to increase their number, it then becomes feasible to raise their wages without eating into the profits of the firm. It is on this, basis, then, that higher wages are warranted.

Andrew Sum and Joseph McLaughlin (2010), for instance, note that since the Great Recession ended in 2009, productivity has been steadily increasing, but those productivity gains have not been shared among the workers in the form of higher wages. For Taylor this is clearly an example of poor management. Otherwise, there could be no expectation that cooperation would materialize. The key point being that employer prosperity over the long-run could not last unless it was accompanied by employee prosperity and vice versa. In this regard, Taylor's suggestion of mutually beneficial outcomes reflects a non-zero sum model of social exchange. A more proper reading of Taylor suggests that Taylor is actually quite humanistic because he emphasizes that management does need to offer special incentives to his workers that exceed the trade average. But these special incentives need to be accompanied with personal consideration for and friendly contact with his worker, which can only come from a genuine interest in the welfare of those in his employ. While the purpose of scientific management is to serve management, it is also to enhance the welfare of all parties in the organization. Not everyone, however, sees Taylor as a humanist because of the mechanistic quality of what he prescribes, and that the ultimate objective is the attainment of greater efficiency. This ultimate objective of efficiency undermines any claim that Taylor may have been concerned with workers as people. Still, even if Taylor did view them as means to and end, managers are no less absolved of their responsibility to transform second-class workers into first class workers.

Under scientific management, managers direct workers in the "one best way," but Taylor identified the “very essence” of scientific management as cooperation between managers and workers. It was Taylor’s philosophy that science and reason based on data would allow management and workers to collaborate. Efficiency thus became the key goal of scientific management. Roland E Kidwell and Philip Scherer (2001) note the similarity between scientific management and quality management where the workforce is involved in process improvement while management is conspicuously more up front with employees. Because of the specialization of the factory system and the labor intensive nature of mass production during the first half of the Twentieth Century, scientific management appeared to be quite applicable. But as they point out, scientific management from a utilitarian perspective is ethical in its focus on economic outcomes, greater productivity, higher quality, lower cost, greater profit and lower prices. Of the two systems, however, quality management is considered to be more ethical than scientific management.

Perhaps it ought to be recalled that in Taylor’s time most factories operated according to a two-rate system where one low rate applied to all workers who did not attain standard, and a higher rate for those who attained or exceeded standard. The higher rate was also known as a task-and-bonus system. The daily task was set for a first-class worker who was expected to perform the tasks most of the time and to improve it once in a while. The first-class worker was to receive from 33% to 100% better wages than the average of his trade. Taylor tended to emphasize the task rather than the piece (Boddewyn 1961).

Still, much of the literature portrays Taylor as the ideal/typical authoritarian who views workers as appendages of their machines and equates their motivation solely to money. But as Hindy Laurer Schacter (1989) argues, Taylor’s scientific management prefigures the idea of increased worker participation in decision making. Citing Peter Drucker's brief note in the 1970s, Taylor's motivational strategy actually provided the worker an opportunity for full personality development. Taylor viewed training as a means to long-range worker development. Through scientific management, unskilled laborers had the opportunity to learn time-study and job analysis. A review of the literature actually shows that Taylor anticipated several key motivational strategies generally associated with the human relations movement. Taylor himself understood the importance of higher motivation. In offering workers the opportunity to name acceptable suggestions after the workers who originated the process, he effectively used esteem as a tool of motivation. By urging employers to develop unskilled laborers, he was offering workers a chance at self-actualization.

Maarten Derksen (2014) too notes that Taylor's introduction of technological thinking into shop management led to new discussions of what would come to be referred to as "the human factor." In many respects, his thinking about the workers' mind and about the right way for managers to work together were similar to the human relations school that would emerge during the 1930s. The history of management from Taylor to human relations isn't one of progressive humanization, rather it is one of successive redefinition and realignment of the human and mechanical factors of production and their management. Large-scale industrial unrest often arose out of conflicts between foremen and workers. The core of Taylor's shop management could be said to consist of four elements: a focus on industrial workers; strict separation of planning from the execution of work; the exact timing of constituent parts or the elementary units of a job; and the differential piece rate (**p 150**). For Taylor, managing labor scientifically meant that labor had to be individualized and that management had to be concentrated in a dedicated department. It also meant that workers would be able to understand the science behind their work. Arguably, his concern for workers may not be so much out of a concern for workers as human beings, but out of a view to achieve efficiency, and that strife and unrest were a sure way to undermine that efficiency. At the same time, there is a recognition that scientific management needs to be cognizant of the human dimension.

Still, not everyone was enthusiastic about scientific management. The bonus and other wage systems were long met with resistance, as they were seen as forms of "driving" or "speeding." Samuel Gompers, in particular, led the charge against scientific management. In an editorial in the *American Federationist*, he called it a "machinery to perfect the living machine (p.151)." He claimed that Taylor wanted to turn workers into high speed automatic machines. Rather separating planning from execution only robbed men of "initiative" in a system that "preys upon the independence, the development, and the character of the worker," and "his individuality, initiative, and vitality (p152)." And yet, Taylor goes to great pains to convince people that there is more to scientific management than mechanism and efficiency. According to Taylor, strife has been the main organizing principle in industry. Whereas employers want low labor costs, workers want high wages, and it is from this apparent incompatibility that the main traits of industrial life during his lifetime became all too obvious: labor unions and strikes, soldiering by the workers, wage cutting by the employers, which was only driven by foremen. For Taylor, this strife was only inefficient and unnecessary. Rather low labor costs and high wages are not incompatible at all. On the contrary, if the work is done in the scientifically determined most efficient way, the employer would be able to pay higher wages to fewer workers and still raise production. At the same time, the workers would be able to earn more without being driven to exhaustion. Taylor's perspective on the mind of the worker was perhaps broader than that of many early industrial psychologists and psycho technicians, which is to say that the increasing influence in recent years of psychology on management theory and practice continued a development that was actually begun by Taylor. Put simply, an employer who shows an interest in his or her employees will ultimately get more product from them.

Efficiency Wage

The broader reading of Taylor, then, would appear to suggest symmetry with efficiency wage theories both expressed by Sidney Webb and the later neoclassical arguments presenting higher wages as means to avoid shirking on the job. And yet, at the same time, to the extent that Taylor is talking about worker development there may also be symmetry with Amartya Sen's notion that whatever serves to lift people out of poverty, like higher wages, also enables them to develop their capabilities.

Early economic arguments for the minimum wage revolved around achieving greater efficiency because it would allow workers to better maintain themselves. Among the foremost proponents of this view was English economist Sidney Webb (1912) who argued that a legal minimum wage would have the positive effect of increasing productivity. A wage floor would be beneficial to employees and employers alike, because better paid workers would be able to work harder, as they would have greater energy due, in large measure, to their ability to better sustain themselves. Moreover, the greater morale among employees derived from higher wage rates would lead to greater loyalty to their employers. A legal minimum wage, then, would positively increase the productivity of the nation's industry by ensuring that those who are left unemployed would be the least productive members of the workforce. Not only would employers be forced to look for the best workers so as to increase their overall productivity, employees would be forced to develop their skills so that they could be counted among the better class of workers.

Ironically, the logic of this efficiency was perhaps best summed up by George Stigler (1946) who argued that an effective minimum wage does one of two things: it either results in the layoff of those workers whose value is less than the minimum or it results in an increase in productivity among low-efficiency workers. Rarely does the contemporary neoclassical economist couch the efficiency wage in terms of the Webb effect; but in terms of shirking. That is, in a competitive market workers will take steps to avoid shirking their duties when employers pay them higher wages. When paid a higher wage, workers have an incentive to hold onto their jobs because the costs associated with job loss are now higher. Because workers will seek to avoid shirking, their employers too will benefit from savings on monitoring costs. These savings actually offset higher wage costs and at the same time offer a positive inducement to work. Consequently, workers work harder and become more productive (Shapiro and Stiglitz 1984).

Early neoclassical economist John Bates Clark (1913) made a similar argument when he argued that the absence of a minimum wage essentially triggered a process whereby employers would pick from the ranks of the most necessitous men and women. As he put it:

> Mere need and helplessness give citizens a certain valid claim on the state, even though it has done nothing to cause their troubles. Privation that is traceable to social defects makes a more cogent claim. This, in fact, is the basis of the demand for minimum wage laws, since the ill-paid workers are regarded as victims of social arrangements (p 294).

Echoing this line of thought businessman Edward Filene (1923) maintained that higher wages would result in higher quality workers. Whereas contemporary neoclassical arguments hold that paying low-skilled workers more than their worth is inefficient, and that it is further inefficient to invest in their training because they may leave and take their newly acquired skills and training to work for another, the earlier arguments for the minimum wage simply maintained the inefficiency of not paying a higher wage. Employers simply would not be able to get effective organization out of those who weren't intelligent, and they couldn't be intelligent if they did not have enough to live on properly.

Jozef Korning and Patrick Walsh (1993) note that efficiency wage theories have been put forward as attractive ways of explaining involuntary unemployment and other aspects of the labor market. Most efficiency wage theories predict a positive relationship between a wage premium and performance. Looking at efficiency wages in Chili for example, Omer Gokcekus and Edward Tower (2003) found that higher wages did draw more people into the labor market. A higher minimum wage attracted workers with higher reservation wages into the minimum wage sector. "If the labor demand curve in the free sector is quite flat, the vast majority of workers displaced by the minimum wage will find employment in the free sector, raising aggregate employment **(p 257)."** At the same time, if there is any displacement of workers due to only a slightly binding minimum wage, it will be negligible. Another side of the efficiency wage assumes costs savings to employers from higher wages. These employers now experience lower turnover and therefore save on recruitment and training costs as a result (Howes 2002; Fairris 2003; Reich et.al. 2003). Michael Reich, Peter Hall and Ken Jacobs (2005) observe that following the implementation of living wage policies at the San Francisco Airport, wage increases resulted in substantial reductions in turnover. As examples, they note that turnover among ramp workers declined 25 percent following a 27 percent increase in entry level wages, and that turnover among screeners declined by 80 percent following a 69 percent increase in their wages. Although turnover among customer service agents only declined by 5 percent following a wage increase of 26 percent, turnover among them was already low prior to the living wage policies' implementation.

Edward Leamer (1999), for instance, argues that most economists have been trained with a "simple partial equilibrium model **(p 1145)"** that associates minimum wages with unemployment. The problem with this is that the labor contract is assumed to have a single focus. It typically covers wages, but overlooks working conditions. This, however, negates the varying degrees of effort by different workers. Rather in a competitive market, higher daily wages will be offered to those who display greater effort. In other words, an efficiency wage is essentially a wage for greater effort. Arguing from a non-neoclassical perspective, David Fairris (1995) observes how the radical argument conceives of capitalist control in production as an alternative view of capital's power over labor. Labor power is exchanged in the labor market. The capitalist's power is derived from his purchasing power due to his wealth and position of ownership. The distinguishing feature of the radical analysis is the idea that the labor process is one of "domination" which capital is able to exert in the production process, and that the capitalist is able to subordinate the workers. This analysis, however, is similar to the neoclassical view of the efficiency wage, especially as it finds expression in the anti-shirking model. A worker who lands a job in this view is essentially paid an enforcement rent --- a rent to prevent shirking. The worker accepts the employer's authority because the employer's control is more than compensated by the higher wage. The argument is that greater intensity or work effort creates a disutility. In other words, there is no reason to work harder for its own sake. Rather if this disutility is not compensated through higher wages, then there is no way for management to obtain greater intensity or work effort. Fairris, then, suggests that the substantive distinction between the radical and neoclassical conceptions of power in the employment relation is that neoclassical economists view management's authority as legitimate under capitalism, whereas the radical economists do not.

The radical claims that capitalist production is inefficient because it does not necessarily lead to Kaldor-Hicks improvements in welfare, and also because capitalist production is inefficient relative to some "ideal" alternative such as production controlled by workers **(p 12)**. A theory of compensating wage differentials suggests that the labor market actually imposes a positive price on increased labor intensity. The price of labor now becomes optimal because the manager's now has a disutility associated with monitoring the workers' effort. Therefore, getting more intensity from workers cannot be accomplished without raising their wages. For Fairris, those radicals associated with the inefficiency argument have not sufficiently acknowledged the challenge that the theory of compensating wage differentials pose to their arguments. Nevertheless, when workers see managerial authority as legitimate, there is likely to be greater cooperation with management, with the result being greater productivity. Arguably, managers that pay higher wages to their workers, even if their goal is greater productivity rather than meeting their human needs, will have greater legitimacy in the eyes of their workers. In this vein too, it would fit Taylor's exhortation for managers to find means by which they can take second-class workers and turn them into first class workers.

A minimum wage, then, does not necessarily cause unemployment; instead it forces effort in the low-wage and low effort contracts up enough to support the higher wage. This is no different from Webb's observation that employers forced to pay higher wages would in turn find it worth their while to invest in the human capital of their workers in order to increase their productivity, thereby making them worth the higher wage. This isn't to say that there aren't benefits to capital that could not hurt labor. An increase in the minimum wage in the low-wage market may cause a reduction of wages and an increase in effort in the high-wage, high effort market not directly affected by the minimum wage. As a result of greater effort in both the high-wage and low-wage sectors, output levels rise in both. Gross domestic product is increased and income inequality is reduced, which may make the representative worker worse off. But by forcing effort levels to more closely conform, the minimum wage creates comparative advantage in the labor intensive sector, which is the opposite of what might be expected. In exchange for the higher wage, employers are getting greater effort. The goal is not to equalize, but to ultimately push up wages through productivity gains. If capital is then interpreted as human capital, and if workers themselves invest in their own education, the message of the model is that those who choose education are also choosing higher effort. But the flip side, and much in lines with Webb and Taylor, is that if employers invest in their workers' human capital, they too are choosing higher effort, or what Sabel and Piore (1984) refer to as the high road. In other words, if the labor contract is multidimensional, a minimum wage law that sets a floor for one aspect of the contract will most likely be met with adjustments to other aspects of the contract. And if effort is variable, then a minimum wage could generate enough extra work effort to compensate for the increased wage level, thus ensuring that everybody is happy.

Similarly, Allan Drazen (1986) argues that a minimum wage can be Pareto optimal, if wage increases lead to higher quality work. In his simple model, he assumes that workers enter the the labor market to maximize their income, and that the extent to which they can maximize their income will determine whether they even enter the labor market In his model, there is a primary market with higher wages and a secondary one with lower wages. Individuals will enter the primary labor market if their expected income is higher than the lower income in the secondary market. It is also assumed that a worker's productivity in the primary market is an increasing function of his foregone income --- that he succeeded in obtaining employment in the primary market where wages are higher and was not forced to worker in the lower paying secondary market. These two assumptions together imply a positive relation between an individual's acceptance wage and his or her productivity. The worker, in other words, understands that a higher acceptance wage implies that she or he is expected to be more productive. Moreover, as Deborah Figart (2001) points out, Fordism, which grew out of Taylorism, did give rise to job evaluation as the basis for setting wages. Arguably, the idea of evaluation, which unions were opposed to and might even pose a challenge to a legislated wage floor, would appear to be consistent with the idea of an anti-shirking efficiency wage.

Therefore, there is a role for minimum wage legislation because firms would prefer to pay higher wages if they knew that labor quality would improve to reflect the higher wage level. They would also prefer to pay above market-clearing wages if they knew that other firms were behaving the same way. By fixing wages above the market-clearing level, government can achieve a preferred equilibrium which private competitive behavior cannot. In other words, left to their own devices, employers will not pay higher wages to achieve greater efficiency, because in the uncertainty that others will do the same, they are forced to lower their wages in order to remain competitive. Employers, in other words, need a little push. Is this argument not making the same assumption as Taylor? To be a first class worker, one's productivity must be above the minimally acceptable. And yet, this may also speak to the difference between efficiency wage theory, as put forth by Webb, and Taylorism. Efficiency wages may actually extend beyond Taylorism to the extent that Taylor assumed that management through the application of scientific management would come to this conclusion on its own, whereas the Webbian efficiency wage assumes a little push from the state may be necessary.

Still. it may be plausible to infer that Taylorism could imply the payment of efficiency wages if in the end they would result in greater productivity. Taylor, however, says nothing about efficiency wages, but be talks about rewarding more productive workers with higher wages. Even f it is a stretch to equate Taylor with Webb on this issue because Webb assumes that productivity will be the reward for higher wages rather than higher wages being the reward for greater productivity, Taylor's management approach does very much appear to be in lines with the neoclassical anti-shirking wage. It also implies that workers will be monitored and evaluated on their performance (Figart 2001). Taylor, after all, is arguing that it is management's responsibility to take the so-called second class worker, which would have to include the lazy and one that tends towards shirking, and make him into a first class worker. The underlying premise of the anti-shirking wage is that the opportunity cost of losing a higher paying job due to shirking is simply too high. The worker will be more productive to avoid losing the job, and the employer will willingly pay the higher wage if not only is the worker more productive but the employer can save money on monitoring costs. If the end result is that the worker becomes a first class worker, then at least the anti-shirking version of the efficiency wage would appear to be in lines with Taylor's exhortation to turn the second class worker into first class workers. It then bears repeating that Taylor used the term "soldiering" to describe the laziness of these workers. It is not inconceivable that he would have viewed a worker's tendency to shirk no differently than the workers who soldiers. They are one in the same. Although one might infer an efficiency wage from Taylorism on the grounds that a good manager will use the lure of higher wages to increase worker productivity, it may not follow that Taylor would have supported a legislated minimum wage.

A more radical approach, however, might hold that the application of Taylorism to the production process will only necessitate the payment of mandatory minimum wages. Michael Aglietta (1979) talks about labor productivity as defined by those forces which over time will raise the surplus-value of production. The fundamental relation defining capitalism is the wage relation which essentially renders labor power into a commodity. Taylorism involved the application of knowledge to the production process with the intent of increasing productivity. Through time and motion studies, Taylor sought to determine how workers could be more productive. Aglietta defines Taylorism as "the sum total of those relations of production internal to the labour power that tend to accelerate the completion of the mechanical cycle of movements on the job and to fill the gaps in the working day (**p 114**)." Taylorism culminated in the development of work teams, which would find expression in general principles of work organization that reduced workers' autonomy and effectively placed them under the permanent surveillance of management. Taylorism, however, was superseded by Fordism, which "denotes a series of major transformation in the labour process closely linked to those changes in the conditions of existence of the wage earning class that gives rise to the formation of a social consumption norm and trend to institutionalize the economic class strength in the form of collective bargaining (**p 116**).” We typically think of Fordism as assembly line production. Taylorism and Fordism with the mechanization and rountinization of lobor, which can only have the effect of driving down wage rates, will necessitate the existence of institutions to effectively give workers voice. Collective-bargaining is clearly one such institution, but so too is a legislative minimum wage.

The Marxist position was always that capitalism would implode under its own weight, and arguably this implosion would only be facilitated through Taylorism. Therefore, in order to prevent the implosion, capitalism needs to be regulated. As Aglietta explains, the capitalist class needs to institutionalize class struggle in order to maintain its position in the relation of production and direct the social process. He notes that the general conditions of capitalist resolution of the crisis of Fordism can be understood in the context of laws of capitalist regulation. The crisis of capitalism forms part of the laws of its regulation. It is only by generating a “new cohesion or Neo-Fordism” that capitalism will be able to escape from its contemporary organizing crisis (**p 385**). “The scope of changes in the condition of existence of the wage-earning class that are necessary for creating a new coherence in the regime of accumulation implies a new development of state influence within the structural forms (p.386).” This would clearly imply a role for government to mandate high road policies in order to ensure the survival of capitalist markets. Whereas the neoclassical assumes that these policies could correspond to the efficiency wage implied in Taylorism, Aglietta is suggesting that Taylorism only makes these policies a foregone conclusion. It becomes an interesting catch twenty two. On the one hand, efficiency requires that firms produce greater output for lower costs. But on the other hand, to get workers to produce more, workers' wages have to rise. On their own, employers will not raise wages because they cannot be sure that their competition will follow suit. Therefore, they need to be prodded. A minimum wage does fall under the rubric of Aglietta's "a new development of state influence within the structural forms." The neoclassical, then, retorts that the manager is now compelled to find ways to become more efficient. But for the radical, this is just another example of the capitalist class finding a way to institutionalize class struggle --- to exert control over their workers --- in order to maintain their position in the wage relation. Ironically, however, both the radicals and neoclassicals appear to be on the same page.

Personal Development

A higher income would also enable workers to develop their capabilities. Amartya Sen (1999) points out that income deprivations and capability deprivations have considerable correlational linkages. To the extent that individuals at the bottom of the income distribution could be said to be poor, Sen suggests that poverty deprives individuals of their capabilities. Morever, poverty should be viewed as a deprivation of basic capabilities rather than merely as low income. When Sen talks about a capability he means the alternative combination of functioning that are feasible for a person. A capability is a kind of freedom. Therefore, he suggests that there is a strong case to be made for judging individual advantage in terms of the capability that a person has — "the substantive freedoms he or she enjoys to lead the kind of life he or she has reason to value (p87)." Sen takes the argument further when he says:

The problem of inequality, in fact, gets magnified as the attention is shifted from income

> inequality to the inequality in the *distribution of substantive freedoms and capabilities*. This is mainly because of the possibility of some "coupling" of income inequality, on the one hand, with unequal advantage in connecting incomes into capabilities, on the other (p119).

All of this, of course, implies the following: a society that pays its workers low wages, and because it does pay them low wages forces them to live in poverty, is effectively depriving them of their capabilities. By extension, then, a society that fails to maintain a reasonable minimum wage, or allows the size of the effective minimum wage population to grow, is not only aiding and abetting the deprivation of capabilities, but is also aiding and abetting the diminution of their capabilities. To the extent that this is true, it only supports the view that the choice of the low-road over the high road was not only a deliberate choice by American management, but was facilitated through public policy (Sabel and Piore 1984; Hacker and Pierson 2010; Smith 2012; Stiglitz 2012).

When Taylor was writing he was specifically talking about the application of scientific management to the nation's factory system at the heyday of the industrial revolution. It should not be forgotten, then, that industrial factories modeled on the Fordist system of production were the largest employers of what we would today refer to as unskilled labor. Among the roles performed by organized labor is that they gave dignity to wage workers and over time, through the raising of wages, effectively transformed the way society viewed these workers (Glickman 1997). Those in manufacturing were considered to possess skill while those in low-paying service jobs were not. In the post-industrial service economy, we think of low-skilled workers as the prototypical hamburger flipper in the fast food industry. As much of the criticism of minimum wage increases revolves around the argument that low-skilled workers simply are not worth the higher wage, one wonders just how applicable either Webb's efficiency wage or Taylor's scientific management would be. And yet, Taylor (2013) addresses this very question when he writes:

> ...the average man would question whether there is much of any science in the work of shoveling. Yet there is little doubt, if any intelligent reader of this paper were deliberately to set out to find what may be called the foundation of the science of shoveling, that with perhaps 15 to 20 hours of thought and analysis he would be almost sure to have answered as the essence of this science. On the other hand, so compellingly are the rule-of-thumb ideas still dominant that the writer has never met a single shovel contractor to whom it had ever occurred that there was such a thing as the science of shoveling. This science is so elementary as to be almost self-evident (p56).

Taylor then proceeds to inform us that at Bethlehem Steel Company there were 600 shovelers and laborers of this general class. The low-skilled work of the shoveler is no different from the low-skilled work of the hamburger flipper, but Taylor is telling us that through scientific management, this low-skilled worker can be made more productive. Of course Webb's response to Taylor might have been that a higher wage in and of itself would make the low-skilled worker feel better about his or her job, and that there would be a natural tendency to put more effort into the work, in which case there will be greater productivity. Although Taylor specifically is concerned with management and doesn't address himself to the efficiency wage, there are clearly implications for it in his assumptions about management's responsibility.

Effective Minimum Wage Population

A key reason for resurrecting Taylorism and its application to the low-wage labor market is precisely because of the changing nature of the overall labor market. Because the concern is with the general low-wage labor market, it really serves no useful purpose to conceive of the minimum wage labor market as only those earning the statutory minimum wage. On the contrary, the statutory minimum wage is really more symbolic — a reference point for the general low-wage labor market whose wages hover around the statutory minimum wage (Spriggs and Klein 1994). Therefore, it makes sense to define the low-wage labor market as those earning what can be referred to as an effective minimum wage, which for the purposes of this paper will be defined as those earning between the statutory minimum and 50 percent of average annual earnings. This definition is also in lines with an historical tendency to set the minimum wage at about 50 percent of average annual hourly earnings. Using data from the IPUMS– Current Population Survey (CPS) from 1982 to 2013, I look at the demographics of the low-wage labor market. For the purposes of this analysis I focus on the effective minimum wage labor market because as a percentage of the overall labor market, it has been increasing in size. Table 1 presents labor force figures for full time working adults over the age of 18, the number of effective minimum wage earners in each year, their percentage of the labor market in the CPS sample, the minimum wage for each year, the average annual hourly earning for each year and the 50 percent of average annual hourly earning.

[Table 1 around here]

Whereas in 1982, the effective minimum wage population was only 3.3 percent of the full-time working labor market, by 2013 it was 16.4 percent, an increase of 497 percent. Just between 1982 and 2002 the effective minimum wage labor market increased by 521 percent.

Much of the criticism of minimum wage increases centers around the claim that only a very small segment of the labor market earns the minimum wage — usually around 2 percent —

and that of this small segment most are either teenagers or other secondary earners. Therefore, it is maintained, the benefits of an increase in the minimum wage will be so small, it hardly justifies the cost in terms of lower employment. But as Table 1 makes clear, when the minimum wage labor market is redefined as the "effective" minimum wage labor market, that segment is not that small or inconsequential. Moreover, as the demographics in Table 2 show, most of these workers are not necessarily teenagers or secondary earners.

[Table 2 around here]

During this 31 year period, there was among the effective minimum wage labor market a 49.5 percent decrease in the 18-24 year old cohort, a 20.7 percent increase in the 35-44 age cohort and 40.1 percent increase in the 45-54 age cohort. In other words, effective minimum wage earners are older in 2013 than they were in 1982. In 1982, the vast majority of effective minimum wage earners (75 percent) had not even completed a High School education. By 2013 only 16.7 percent of the effective minimum wage population had less than a high school education, a decrease of 77.7 percent. Meanwhile, the percentage of effective minimum wage earners with a High School diploma increased 303.7 percent from 2.7 percent to 37.9 percent in 2013. On the surface, these changes alone may tell us quite a bit about the changing nature of the U.S. economy. That only 3.3 percent of the labor market in 1982 were effective minimum wage earners and of that 3.3 percent the vast majority had not completed high school suggests that the effective minimum wage labor market — what can be referred to as the low-wage labor market — was comprised of predominantly low-skilled workers. To a certain extent, prior to the decline of manufacturing, a high school graduate could count on securing a decent middle class job in a factory. These demographics actually make clear that not only has the low-wage labor market grown, it now appears to include those who previously might have been considered to possess some more skill, or at least to the extent that educational attainment can in any way be said to serve as a proxy for worker skill levels. Over this same period, there was also a decrease in the percentage of women who were effective minimum wage earners and an increase in the percentage of men who were minimum wage earners.

Over this period there were significant changes in industrial and occupational composition that speak to the changing nature of the economy. Manufacturing declined 41.9 percent from 20.3

percent in 1982 to 11.8 percent in 2013. At the same time, construction increased 54.8 percent from 4.2 percent in 1982 to 6.5, and business and repair services increased by 37.5 percent from 5.0 percent to 8.0 percent. Meanwhile, there was a 77.8 percent increase in Managers, Officials, and Proprietors from 4.5 percent in 1982 to 7.7 percent in 2013. There was a 144.3 percent increase in service workers in private households from .7 percent to 1.8 percent. Laborers also increased 23.4 percent from 4.7 percent in 1982 to 5.8 percent in 2013. At the same time, craftsmen increased by 9.2 percent from 7.6 percent in 1982 to 8.3 percent in 2013 while operatives declined by 29.9 percent from 20.1 percent in 1982 to 14.1 percent in 2013.

On the surface, at least, it becomes clear that higher paying middle class jobs have decreased further and what has replaced them are the lower paying and lower skilled jobs at the bottom end of the market and higher paying and higher skilled jobs at the top of the market. To a certain extent, these trends only support the claims of those who argue that there is a mismatch between the skills of workers and the skills needs of employers (Katz and Murphy 1992; Katz and Krueger 1992; Juhn. Murphy and Pierce 1993; Sandler and Wapler 2004; Balleer and van Rens 2013; Vivarelli 2014). A logistical regression analysis on the dependent variable of who is more likely to be an effective minimum wage worker may bear this out. But it may also suggest that Taylor's formula still has application in the changing economy. In the following logistical regression, I test for the effects of being female, having less than a 12th grade education, being black, being between the ages of 18 and 24, 35 and 44, and 45-54, being in manufacturing, having a high school diploma, being in retail trade, being in business and repair services, being an operative, being a laborer, and being a service worker in non-private household on being an effective minimum wage earner. Regression coefficients and their statistical significance can be seen in Table 3. All variables are set to a value of 1.

[Table 3 around here]

The regression coefficients suggest that over time, skills do become an issue. In 1982, women had the highest probability of being effective minimum wage earners. The size of the female coefficient declines by 2013, but the size of the less than 12th grade education coefficient increases dramatically, and that does indeed appear to be the most important factor in accounting for one's likelihood of being an effective minimum wage earner. At the same time, it is worth noting that the size of the high school graduate coefficient also increases dramatically by 2013, suggesting that just high school graduates also have an increased likelihood of being effective minimum wage earners. We also see an increase in the size of the coefficients for retail trade and laborers. That the size of the coefficient decreases for women does suggest that more and more men are finding themselves among the ranks of the effective minimum wage labor market. Again, all of this would appear to speak to the changing structure of the overall labor market and the low-wage labor market.

Still, the fact remains that a much larger proportion of the workers fall into the effective minimum wage labor market, and it may no longer be credible to write them off as simply lacking the skills and therefore they should retrain. Rather, one wonders whether the skills level of this labor market is significantly different from the skills level of the labor market that Taylor believed would benefit from application of scientific management. Even if there are limits to the application of scientific management, we have to infer that the Webb effect might still be applicable. If nothing else, Taylor seems to imply that good management would have implemented the Webb effect as a component part of scientific management. To the extent that Taylor has talked about carrots and sticks for motivating employees, and he does talk about higher pay as a basis of motivation, the efficiency wage concept can be inferred. At a minimum, the neoclassical version of the efficiency wage in the form of anti-shirking wage, appears to accord with some of his basic principles of scientific management. Perhaps when we look at the efficiency argument as formulated by both Taylor and Webb within the context of the data on the growing "effective" minimum wage labor market, we need to conclude that this growth and the failure to ensure higher wages for this segment of the labor market, it does represent an overall failure of management. That low-skilled workers, as exemplified by the growing significance of the less than a 12th grade education variable, comprise the bulk of this labor market is perhaps suggestive of this failure to make first class workers out of second class workers.

Arguably the demographics of the low-wage labor market — our effective minimum wage population — are the result of the loss of the American manufacturing base and its replacement with low-paying retail and service, which the data also bear out. Large box store and retail outlets like Walmart would no doubt claim that the low-wages they pay their workers is necessitated by the desire to satisfy consumer preference for low-priced goods. Walmart, however, is not merely picking up for the loss of better paying manufacturing jobs, but has actually played a critical role in the disappearance of manufacturing jobs. As one of the largest retailers in the country with economies of scale it is often in the position to dictate to its suppliers what they will pay their workers as a condition of getting the contract to supply goods. Companies that want their goods sold in Walmart stores have been placed in the position where they have had to reduce labor costs by as much as 10 percent in one year, followed by another 5 to 10 percent the following year in order to maintain their contracts with Walmart. While Walmart could easily survive by getting other products to sell, many of these suppliers have found that the loss of Walmart, accounting for 34-40 percent of their market, could not. This manipulation by Walmart has only forced many companies to outsource their production operations to places where labor costs are lower (Smith 2012). To the extent that this is true, companies like Walmart are only creating jobs that naturally self select for Taylor's second class worker, in which case Taylor's principles might not easily apply. And yet, the same could easily have been said about the industrial production jobs that replaced the skilled craft and artisan jobs that were lost during the Industrial Revolution — the same industrial production jobs that Taylor was applying scientific management principles to. These service jobs have certainly taken on a Fordist quality to them, even if they are not specifically production jobs as they have been traditionally defined.

The argument of management's responsibility for transforming second class workers into first class workers should apply to the Walmarts of the world. Among the reasons that these places pay low-wages is because of the high turnover among low-skilled workers. Many assume that it isn't worth their while to invest in their training to create more value because they will leave and take their training elsewhere. But if we assume that the anti-shirking version of the efficiency wage would make better workers out of second class worker, if for no other reason than they would be afraid of losing their jobs, then we have to assume that management's decision not to pay an efficiency wage is also a choice — one predicated on remaining a low-road economy. It is on this point that Taylor would agree that to the extent that managers are making this choice, the low wages they pay do ultimately reflect management failure. When Taylor places the onus on management to transform second class workers into first class workers, he is effectively suggesting that the failure of management is the choice it made not to apply principles of scientific management. If management can make coal shovelers into first class workers, then surely it can do the same with Walmart workers. The efficiency wage, even if it be the neoclassical version of the anti-shirking wage, would certainly represent an application of scientific principles, or at least the transference of those principles from the Fordist production model to mass retail operations.

Conclusion

In this article, I have been arguing that Taylor's theory of scientific management, particularly management's responsibility to transform second class workers into first class workers, actually supports, if not altogether assumes the efficiency wage arguments made by others. And by the more radical approach it in fact supports the need to pay higher wages. Given the growth of the low wage labor market over the last few decades, these theories might well be applicable today, especially if we as a society would like to grab the high road. It has to be remembered that the second class workers of Taylor's time were no more skilled than the low-skilled workers in today's low-wage labor market. Taylor recognized that management at least had a responsibility to make the effort to create an overall prosperous society. Perhaps Webb added on to this by recognizing that management may tend to the same laziness as Taylor's second class workers, and therefore a little push through public policy is needed. But the neoclassical anti-shirking model somewhat assumes that workers would be more productive because the failure to do so would result in the loss of the higher paying job for a lower paying one. Similarly, Taylor's carrot and stick approach that management could take to motivate workers certainly implied an understanding on the part of workers that their own failure to become better workers — even first class workers — could resort in sanctions, the most extreme one being termination. The overall point, however, is that by refocusing the minimum wage debate away from contemporary arguments of needs, fairness, and morality towards the earlier arguments of efficiency, the idea of a higher minimum wage can also have appeal to a broader base of support. In that vein, it can become the basis for a collaborative effort between public officials, labor, and business towards a achieving a higher wage society, predicated on the high road. And by refocusing the debate, the minimum wage is restored to its rightful place in history as a labor-management issue.

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