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Cover Page Footnote
I would like to thank Dr. Miriam Wright for her excellent suggestions and feedback.
At War With the Machine: Canadian Workers’ Resistance to Taylorism in the Early 20th Century

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Abstract
This essay looks at the ways Frederick Winslow Taylor’s modern theories of scientific management (Taylorism) transformed Canadian workplaces in the early 20th century. In particular, it shows how Taylorism negatively impacted Canadian workers’ lives, and examines the various ways that workers consequently resisted Taylorist methods. The essay argues that although workers were unable to stop the widespread implementation of Taylorism in Canadian workplaces, their resistance to Taylorism still played an important role in unionist and radical political movements that gradually gained important concessions for Canadian workers during the first half of the 20th century. Additionally, the essay argues that resistance was significant as an outlet for workers to retain bodily autonomy in work environments that increasingly aimed to make workers more automated. Ultimately, the essay highlights important ways that the Canadian working classes have exercised agency via solidarity and perseverance.

Keywords: Taylorism, labour, resistance, working classes, class struggle, twentieth century, scientific management, automation
During the late 19th and early 20th centuries, modern ideas and ideologies transformed Canadian society. Many of these modern concepts propagated the belief that science could cure all of society’s ills, and bring humanity to a more enlightened and civilized state of existence. Implementing these lofty new concepts, however, came at a price, and often caused much harm to society despite having a “progressive” impact. Perhaps the best example of modernity’s double edged effect is in Frederick Winslow Taylor’s theories of scientific management. Scientific management aimed to use scientific empiricism and rationality to maximize efficiency in both workplaces and society as a whole. However, as Canadian companies embraced Taylorism to become “modern,” work became more monotonous and exploitative, and these changes ultimately led many workers to resist. This essay will address workers’ main grievances with scientific management and look at the different ways that they resisted in both industrial and non-industrial settings. Mainly, workers resisted by forming unions, performing small acts of rebellion on the job, and becoming politically active, particularly in left-wing organizations. I find that in most cases, workers were unable to completely stop managers from implementing Taylorist methods. Despite this, their resistance was often still meaningful in slightly more subtle and less obvious ways.

Taylorism or “scientific management” essentially looked to eliminate waste and maximize efficiency. This entailed mechanizing the workplace and increasing the division of labour so that workers’ tasks could become as simple as possible. In *The Principles of Scientific Management*, Taylor argued that managers should break down work processes into small steps, and then codify the process so that workers would always perform their tasks in the exact same way.¹ In a scientifically managed work process, workers are essentially used like machines and are forced to repeatedly perform a basic, identical task. Scientific management also included “time study,” where experts strictly monitored the work process in order to find inefficiencies, and sped up the pace of work whenever they deemed it necessary.² In order to incentivize efficiency amongst the workers themselves, Taylor

². Ibid., 80-1.
contended that workers should be paid by a “piece-rate system” where quicker workers would be rewarded with a higher rate of pay.\(^3\) To prevent workers from setting their own pace of work or altering the work process in any way, Taylor advocated for a strict workplace hierarchy where workers would be forced to obey their superiors.\(^4\) Harry Braverman explains how these new techniques contrasted with the craft work of the 19th century, where workers had a great deal of autonomy in the workplace and could be creative on the job.\(^5\) During the 19th century, craft workers themselves held expert technical and scientific knowledge, and their jobs required them to be quite skillful. The new Taylorist techniques, however, gave management a monopoly on scientific knowledge in the workplace and eliminated workers’ “brainwork.”\(^6\) By simplifying tasks to be as basic as possible, Taylorism removed workers’ technical skills, and this process ultimately degraded work and disempowered workers.\(^7\)

Scientific management was not only implemented in industrial settings or within conventional workplaces. In fact, Taylor meant to apply his theories to all aspects of human work and society. This too, is quite evident in *Principles* where he proclaimed, “the whole country is suffering through inefficiency in almost all of our daily acts,” and that “the fundamental principles of scientific management are applicable to all kinds of human activities, from our simplest individual acts, to the work of our great corporations.”\(^8\) Inspired by Taylor’s words, industrialists, social scientists, and governments all embraced the belief that scientific management could improve and perfect modern society. As a result, companies began to monitor their workers outside of the workplace and influence their private lives. Antonio Gramsci observed that the use of scientific management outside the workplace and regulation of workers’ morality was an attempt to create a “new type of worker and man” whose life revolved around “timed movements of productive motions connected with the most perfected automatism.”\(^9\)

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3. Ibid., 39, 53.
4. Ibid., 123-127.
6. Ibid., 88-91.
7. Ibid., 91.
8. Taylor, 7.
Commachio explains that this caused people to think differently about concepts such as the human body. Taylorist discourses led many people to see the human body as a machine, and perpetuated a belief that scientific management could make human bodies into more perfect, efficient, modern machines via proper regulation. The Taylorists’ strict moral regulation and propagation of the ‘man as a machine’ discourse increasingly alienated workers and deteriorated their relationships with their employers. In combination with lost skill, creativity, and autonomy, these elements of Taylorism further contributed to resistance.

Taylorism caught on quickly in Canadian industries. Most famously, Henry L. Gantt implemented a complex piece work system during the construction of the Canadian Pacific Railway. Both Gantt and Taylor wrote articles in Canadian industrial journals, and held lectures on the benefits of scientific management which inspired many other Canadian industrialists to embrace Taylorism during the early 20th century. Bryan Palmer explains that companies such as Toronto’s Lumen Bearing Company and Hamilton’s B. Greening Wire Company hired experts to eliminate waste and to make detailed plans for the work process. Additionally, foremen in both companies were given control of the shop floor, and skilled workers in lost all of the autonomy that they had previously obtained during the 19th century. However, many Canadian workers considered control of the shop floor to be their right, and this mentality was “deeply embedded in the ethos of the working class.” Unsurprisingly then, workers soon fought back against these new managerial techniques.

Unionism was the main way that workers initially resisted scientific management. On the British Columbian frontier, new management techniques in construction and other outdoor labour contributed to the growth of unionism during the 1910s. Likewise, in Vancouver, scientific management techniques threatened “metal

12. Ibid., 220.
13. Ibid., 220.
trades, boilermakers, machinists, and moulders.” The workplace changes that threatened these Vancouver “crafts in crisis” ultimately led to three large waves of strikes in 1918-1919. Moreover, unions in Hamilton and Toronto vehemently opposed Taylorist techniques, and partook in both traditional strikes and larger sympathetic strikes throughout the first two decades of the 20th century. Canadian union leaders directly cited scientific management as the reason for their resistance, and mainly criticized the Taylorist obsessions with efficiency and the implementation of the piece rate system. Others expressed the aforementioned fears that scientific management forced workers to become far too machine-like and opposed the ‘man as machine’ discourses. Canadian unions had mixed success during this period and while some were initially able to resist Taylorist methods, many eventually accepted the new management paradigm. However, this was not a complete loss, as unions could often obtain some concessions in exchange for their shop-floor autonomy.

After 1919, Canadian union power temporarily subsided until the mid-1930s. When unionism did re-emerge, workers still saw it as a way to oppose particularly exploitative aspects of scientific management. For example, a 1940 workers’ song called “Talking Union” shows how workers used unions to resist managers’ constant speeding of the work process. The lyrics proclaim, “Now, you know you’re underpaid, but the boss says you ain’t, He speeds up the work ‘til you’re about to faint. You may be down and out but you ain’t beaten, You can pass out a leaflet and call a meeting.” In this passage, one can see that although many workers had already lost skill and autonomy in the work process, they still resented the ways that scientific management techniques unjustly strained workers’ minds and bodies. For workers, unionism provided hope that workplaces could be made more equitable through collective solidarity and perseverance. Indeed, unions continued play an important role in Canadian workplaces throughout the rest of the 1930s and 1940s,

18. Palmer, 221, 223.
19. Ibid., 221.
20. Ibid.
and eventually workers’ perseverance paid off when they obtained the right to collectively bargain for wages and benefits. However, like in previous decades, the unions were only able to do so by allowing companies to solidify their control of the work process and the “shop-floor.”

So, while unions ultimately could not prevent companies from implementing scientific management techniques, they were still able to secure workers some very important rights.

In other settings where unionism was not an option, workers resisted by participating in “everyday resistance.” For example, during the 1920s and 1930s, hospital administrators at the Kingston General Hospital used scientific management techniques in an attempt to create ideal, obedient, ‘modern’ nurses. Administrators created strict routines for the nurses in training, and heavily monitored their personal lives. James Wishart notes that there were rules for “virtually every moment of nurses’ waking and sleeping lives,” and that administrators regulated “sleep, diet, and exercise according to a schedule set by the work rhythms of the hospital.”

The administrators also forbade any sexual activity as a part of a moral regulation of nurses’ lives. Nurses who were caught breaking any of the rules faced harsh punishment, and in extreme cases, expulsion. However, nurses still participated in small forms of resistance during their work and life at the hospital. To resist, nurses collectively broke the rules in many different ways. This included sneaking out after hours, drinking alcohol, having unauthorized contact with men, mocking administrators, stealing food, and hiding pregnancies or marriages. In doing so, these women rejected the administrators’ control over their bodies. While the nurses’ resistance did not (and did not intend to) end scientific management in the hospitals, their resistance is still significant because it meant the nurses retained their humanity, despite the administrators’ Taylorist attempts to make them machine-like. While they may have been able to exploit the nurses’ labour, the administrators failed in ‘programming’ the nurses as they intended.

25. James Wishart, “‘We Have Worked While We Played and Played While We Worked’: Discipline and Disobedience at the Kingston General Hospital Training School For Nurses, 1923-1939,” *Canadian Bulletin of Medical History* 21, no. 2 (2004): 329.
26. Ibid., 332.
27. Ibid., 335.
28. Ibid., 338, 339.
In a less extreme scenario, Graham S. Lowe explains how mechanization and scientific management altered Canadian offices during the 1920s and 1930s. Though increased efficiency did have positive effects for some office workers, it degraded female clerical work in other ways, and made their jobs more monotonous and factory-like in certain cases. Lowe explains that poor working conditions and patriarchal power structures in the office were large barriers to unionization for female clerks. As a result, he suggests that these female workers may have pursued “covert modes of resistance,” though further research is necessary to conclusively confirm his hypothesis. Additionally, though everyday resistance may have been more common in non-industrial settings where unions were not a viable option, there is evidence which suggests that it also occurred in more conventional industrial settings. For example, Greg Kealey notes that unionized workers still tried to preserve older shop practices in small ways even after they surrendered their control of the shop floor in collective bargaining agreements. Like the nurses, it is possible that both office clerks and industrial workers saw small acts of resistance as a way to preserve their dignity and maintain at least a minimal amount of autonomy in their working lives.

Complaints against the speeding of the work process and overwork, like those expressed earlier in the Talking Union song, were even more common than (though not entirely unrelated to) the grievances about loss of autonomy. These were important grievances in of themselves because they became important catalysts for other, more radical, forms of resistance. It is possible that these grievances were particularly common because overwork would have affected both skilled and unskilled workers alike. Early criticism of this element of Taylorism can be seen in a 1906 article in the Machinists Monthly Journal written by James O’Connell, the President of the International Association of Machinists at the time. Like Braverman, O’Connell argued that scientific management had degraded machinists’ work. In particular, he argued that speeding up the pace of work is the main problem with these new techniques.

30. Ibid., 200.
31. Ibid.
32. Kealey, Toronto Workers, 82.
and lamented that older workers are dismissed as soon as they cannot “keep the pace.” O’Connell said that the constant speeding of the work process causes a “great strain, both mental and physical,” upon the worker which “soon proves too much for him and he becomes a nervous, shattered wreck.” Further, he claimed that the strain ultimately shortens workers’ lifespans, and often causes workers to develop drug and alcohol habits which further damage their health. To solve this, O’Connell proposed that as the work process speeds up, workers should be allowed to have more breaks and leisure time to preserve their mind and bodies. Like many others, he argued joining unions is the best way for workers to obtain adequate rest time.

Many labour leaders echoed O’Connell’s sentiments during the early 20th century, yet industrialists and managers often ignored these complaints. Cynthia Commachio explains how managers refused to believe that worker fatigue could be the result of long hours or a quicker work pace. Rather, they attributed so called ‘worker-fatigue’ to workers’ own supposed pre-existing inadequacies. Managers believed that fatigued workers were simply lazy or physically inept. They felt that these workers were inefficient ‘machines’ who needed to be replaced by superior ones. It should be noted that the idea that workers should be well rested does not necessarily conflict with Taylorism per se. After all, well rested workers would surely be more efficient than fatigued workers. However, these reluctant managers show that scientific management was, ironically, often quite pseudoscientific in practice, and was simply used as a way to further legitimize pre-existing laissez-faire capitalist ideologies by using ‘science’ as a justification for exploitation.

While some workers heeded O’Connell’s advice and turned to unions for protection, others believed that workers would never truly be treated fairly until radical changes were made to the economic system. Published in the same journal as O’Connell, another article argues that the best way to solve these new, more

34. Ibid., 410.
35. Ibid., 410-11.
36. Ibid., 411.
37. Ibid.
39. Ibid.
40. Braverman, 59-60.
intense forms of exploitation would be to create a socialist co-operative commonwealth, in which labour time would be the basis of all value. In Canada, workers similarly embraced radical political ideology in their struggle against Taylorism and capitalism more generally. Groups such as the Independent Labour Party of Ontario and the Social Democratic Party began to gain popularity in the late 1910s. Mary Lestor, an important member of the Socialist Party of Canada during the same period, provides a link between the new scientific management techniques and workers’ radical political resistance. Espousing similar views to O’Connell, she argued that social problems and “madness” were caused by the “monotony of factory life.” While socialist groups were formed to resist capitalism in general, one can see how scientific management techniques may have contributed to Canadian workers’ disenchantment with capitalism and led them to seek alternative political solutions. These fragmented leftist groups had difficulty gaining political influence, but by 1933, the Co-operative Commonwealth Federation emerged as a legitimate left-wing political force by uniting “farmer, labor and socialist provincial parties” in Canada.

In the Labour Code section of the CCF’s founding document, the Regina Manifesto, there is further evidence that suggests workers saw the group as a direct way to resist Taylorism and the speeding of the work process. It asserts, “The community must organize its resources to effect progressive reduction of the hours of work in accordance with technological development and to provide a constantly rising standard of life to everyone who is willing to work.” Like O’Connell, the Regina Manifesto argues that as technology and efficiency improves, workers must be given appropriate rest and leisure time. The CCF’s focus on leisure time again suggests that workers during the the early 20th century were not being given adequate rest despite long hours and a constantly

increasing pace of work. Therefore, like Mary Lestor, many workers likely saw these political groups as an effective way to resist these ‘scientific’ methods which seemed to justify overwork.

Like unionism, this radical political resistance was ultimately unable to directly stop the implementation of Taylorism. Nonetheless, workers’ political resistance was still significant. The CCF became more popular during the 1940s, and began to win more seats in Federal elections; this in turn led William Lyon Mackenzie King’s Liberals to adopt and implement more left-leaning social policies which greatly benefitted all Canadian workers.\(^{46}\) Moreover, the CCF, and later its successor the New Democratic Party, would continue to push for social programs and labour rights throughout the 20th century. While resistance to scientific management would have been one small part of CCF’s larger appeal, workers who resisted unjust management practices still contributed to the CCF’s broader success and therefore helped to change Canadian politics and society.

So, while superficially it may appear that workers’ resistance to Taylorism was a futile fight against the inevitable, a closer examination reveals that workers’ resistance was quite important. When workers realized they could no longer maintain control over the work process, their union solidarity still managed to obtain better wages and benefits; when faced with unjust discipline and surveillance, workers resisted in their own small ways to maintain personal autonomy in their lives; and, when Taylorist methods led to overwork and fatigue, workers joined radical political groups and eventually changed the Canadian political landscape. Though workers were unable to stop the driving engine of ‘progress,’ it quickly becomes clear that resistance was in fact necessary, and that without it, Canadian workers would have fared much worse in the early 20th century. Indeed, these forms of resistance demonstrate the importance of working class collective action in response to oppression. Perhaps most importantly, workers’ resistance to Taylorism should remain an inspiration for future generations of workers who will likely have to confront new forms of exploitation in the workplace.

\(^{46}\) Heron, 70.
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