The increasing automation and robotization of work in the twenty-first century will ensure that industrial conflict will become an issue of the past

Ada Matuassa

 [Institutional Affiliation(s)]

Author Note

The increasing automation and robotization of work in the twenty-first century will ensure that industrial conflict will become an issue of the past

In the contemporary world, there are no two opinions on the fact that technological change is crucial for businesses not just to sustain growth and maintain a competitive edge but for their survival. However, a transition towards automation also needs to take into account market trends, the overall business environment and government policies. With the advent of AI and machine learning, the 21st century saw an increasing reliance on robotization and automation especially in sectors previously only thought to have been the sole domain of human intuitiveness. Besides enhanced productivity, such technological changes are sure to bring about substantial changes in work processes and industrial relations, by creating a manpower surplus or making certain skills redundant. In turn, this has led unions and workers to see automation and robotization with suspicion who have concerns with the arbitrary treatment being faced by workers. Thus, the idea that the increasing automation and robotization of work in the twenty-first century will ensure that industrial conflict will become an issue of the past, may hold some merit, if substantial changes are brought about that redefine the nature of the relationship between unions and management.

In the 20th century, technological change saw manual and menial labour being replaced by machines along with a shift in labour roles, which now placed greater emphasis on controlling the apparatus which performs the function. Artificial intelligence permits carrying out a number of complex functions typically thought to have been the sole domain of human operations. Among the repercussions of the shift was a change in management attitude brought about as a result of the changing division of labour. Naturally, it affected employee relations and demanded that workers acquire new skills to cope with the challenging demands of their new roles to address the complex needs of automated production systems. The new industrial set-up in the post-industrial economy retains the division brought about by the industrial revolution and free market capitalism, in the form of capitalists and labour. The interests of the two groups still conflict, wherein capitalists demand higher productivity while workers strive for better working conditions, higher wages, and job security (Bomers & Peterson, 1982). Industrial disputes continue to arise as a result of such differences in objectives and values. The way these Industrial conflicts are perceived depends upon the theoretical position of the observer which also, like other forms of conflicts, are influenced by emotional tensions and factors between the concerning parties. The pluralist perspective sees the industrial setup as inherently prone to conflict, with varying interests between sub-groups that operate within it. The radicalistic perspective sees conflicts as a result of the fundamental inequalities of advantage and power (Bomers & Peterson, 1982).

The process of automation relies upon a division of labour into various differentiated tasks which machines are programmed to perform, thereby modifying or replacing human input. However, it is not the occupation or the job but rather the task that is automated. Labour involves bundling a set of tasks under a particular occupation. Unless the robotization or automation process involves advanced AI, the automation process will only involve replacing certain tasks, which, however, cannot be all replaced within a specific occupation. Even in the 21st century, it is still rare to have all sets of tasks associated with a particular occupation being entirely replaced. However, the digital age advanced machine algorithms combined with enhanced computing power and digital sensors have expanded the capabilities of tasks which machines can perform. According to Fernández-Macías and Bisello (2016), there are generally two categories of labour input; routine intellectual tasks, and routine physical tasks, which when replaced can contribute to polarization and conflict to varying extents.

There are varying opinions to the extent automation can induce industrial conflicts. According to Blauner’s theory, automation may bring about positive changes in labour roles by eliminating some of the profound sources of resentment associated with labour by transforming their experience in performing a task (Gallie, 1978). Automation provides the worker with a greater sense of control liberating them from rhythmic machine-like labour while allowing them to set their own pace. Thus, the worker is free to plan his/her work schedule and work using his own initiative. The change comes from the fact that an automated industry will involve less repetitive work which would make the job more interesting and allow the operator to develop and experiment with their own techniques of performing the tasks, which contributes to their self-actualization. The changing nature of work will remove the worker's resentment, an emotional tension, which tends to fuel conflict. Furthermore, Gallie (1978) predicts that automation would create more meaningful work as the work process becomes less fragmented, allowing the individual worker to see how their tasks fit into the wider production process. In turn, this facilitates the worker in thinking holistically about the collective nature of production. Moreover, this will diminish the amount of energy and time needed into performing the task which will allow the worker a greater portion of time for leisure and other meaningful activities (Faunce, Hardin, & Jacobson, 1962). Although it may not completely eliminate industrial conflict, it will remove some of the emotional factors that lie at the heart of conflict and influence the negotiation process.

From the employer’s perspective, the technological advances brought as a result of automation will allow them greater influence over roles and enhance their ability to bargain with labour unions. For instance, the introduction of automation may create changes in coverage for workers on certain new terms and conditions. The employer may also gain increased leverage in bargaining when they have to deal with a specialized, yet smaller, workforce. Changing circumstances may also affect which unions hold the right to represent the labour force (Marshall, 2018). On the other hand, the workers too may obtain an opportunity to grow while working in an environment where a work cultural change could be easily promoted. From this perspective, even if the automation process changes bargaining dynamics, the overall change in industrial relations may create a more positive environment where the management seeks the cooperation of labour in achieving commitment.

 Today, robotization and automation are increasingly intertwined within digitalization, which in turn creates a more complex form of production. As production processes can be broken down, a greater opportunity for outsourcing and subcontracting exists that can also create less favourable employment conditions for workers in terms of their income, stability and work hours. As boundaries are blurred, it disrupts worker and union solidarity and makes the collective representation process difficult (Fernández-Macías, 2018). Yet lately, the digitization of various production processes has also created new avenues and methods of decentralized and collaborative production, which can create a sustainable, non-hierarchical, cooperative model of production. Comparing these emerging trends to the traditional radicalistic perspective which views conflict to be arising from a fundamental division of interests between the labor and the capital, the inequalities of power which result from the very nature of the capitalistic economic model, need not exist in the modern age as the latest digitization and automation trends create the need for a more collaborative approach instead of union’s bargaining as a natural response to the inequality and exploitation.

 As the idea of collective bargaining changes in more automated industries, a change in labour attitude is evident. The demand-oriented activism by trade unions may become a relic of the past as a fundamental change in the nature of management begins to develop, from being an exploiter and owner to a more collaborative one (Datta, 1990). From the pluralistic perspective of industrial conflict, conflict arises due to the different opinions of sub-groups operating within the Industry. In the automated and robotized industries of today, collective bargaining could be used to achieving an evolution and a positive change, while the role of management becomes more that of coordination and persuasion. However, the increased heterogeneity in Industrial relations along with an expanded role of state regulations may not require the traditional form of collective bargaining used by radicalists and pluralists (Guppta, 2016). In fact, the role of unions itself now requires a re-think. Instead of a demand-oriented approach, the union has to become more involved in the decision-making process at the early stage, while employers will also have to shed the old image of the union as an adversary and accept it as a partner. By jointly working together to optimize work organization amidst emerging technology and automation, it will not just serve the organization and its labour's interests but maintain the firm's overall competitiveness (Harvey, 1992). In Italy, the union known as the Italian Federation of Metalworkers (FIM) studied the automation trend in the manufacturing industry and the role unions can play therein to avoid industrial conflict. As tasks shift from a menial or manual nature to more that of control and planning, the union started to promote professional training as a worker’s individual right in order to address the complex relationship between machines and humans. This right is now included as part of the collective agreement within their sector. Another union issue in the post-automation stage is to negotiate issues related to decentralized work structures, while advocating greater participation of workers in the decision-making process in order to reach an effective solution concerning the digitization and automation process between the employers and workers (Guppta, 2016). If such newer approaches in industrial relations are adopted, it can prevent industrial conflicts from occurring as a result of the automation process even if not completely eliminating them.

 To conclude, smart businesses and industrial setups of today will have to approach the automation process in a manner where they will have to actively engage with their workforce through a collaborative approach in order to be able to harness practical benefits from the automation process in terms of productivity, while avoiding industrial conflicts, dislocation, and dissension that often comes as a result of a dramatic change in work structure. Integrative bargaining can allow both labour and the management to achieve win-win agreements, wherein unions seek to become promoters of change and innovation while employers allow them a greater role in the organizational structure of the firm. Together, they can develop an action plan where people are able to work more closely with machines within a more harmonious industrial relationship.

# References

Bomers, G. B., & Peterson, R. B. (1982). *Conflict management and industrial relations.* Boston, MA: Kluwer-Nijhoff Pub.

Datta, S. K. (1990). Automation and Industrial Relations: Implications for Employment, Utilisation and Deployment of Workforce. *Indian Journal of Industrial Relations, 20*(3), 254-276.

Faunce, W. A., Hardin, E., & Jacobson, E. H. (1962). Automation and the Employee. *The ANNALS of the American Academy of Political and Social Science, 340*(1), 60-68.

Fernández-Macías, E. (2018). *Automation, digitalisation and platforms: Implications for work and employment.* Luxembourg: European Foundation for the Improvement of Living and Working Conditions.

Fernández-Macías, E., & Bisello, M. (2016, September 25). *A framework for measuring tasks across occupations*. Retrieved April 19, 2019, from Voxeu: https://voxeu.org/article/framework-measuring-tasks-across-occupations

Gallie, D. (1978). *In Search of the New Working Class: Automation and Social Integration within the Capitalist Enterprise* (1st ed.). Cambridge: Cambridge University Press.

Guppta, K. (2016, October 12). *Will Labor Unions Survive In The Era Of Automation?* . Retrieved April 19, 2019, from Forbes: https://www.forbes.com/sites/kaviguppta/2016/10/12/will-labor-unions-survive-in-the-era-of-automation/#17b0c6573b22

Harvey, N. (1992). Automation and Restructuring: How Industrial Relations Affects Change in the Wisconsin Metal Working Industry. *IFAC Proceedings Volumes.* *25(27)*, pp. 27-33. Madison, WI: Elsevier.

Marshall, D. P. (2018, March 8). *Industrial relations in an age of automation*. Retrieved April 19, 2019, from Workplace Law & Strategy: https://www.workplacelawandstrategy.com.au/2018/03/industrial-relations-in-an-age-of-automation/