

Globalization, Emerging Technologies & Future Industrial Relations: Will Doomsday Be Revisited?

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The pace of competition due to globalization has been pushing hard for mergers and acquisitions and led to huge investments for innovation in some of the ultra-modern technologies in the form of robots and Artificial Intelligences (AI). As per the information available in the public domain some such AIs are quite eager to express themselves like that of human race than of traditional machines which just play the assisting role to mankind in the developmental process. The purpose of this paper is to examine and analyse the possible future industrial conflicts between man and machine leading to its massive repercussions for political economy and society through logical and systematic exploration of various facts and trends.

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Introduction

The industrial climate has undergone tremendous change over the last 30 years. As a sequel to the structural adjustment programs of the globalization process many national governments were required to reformulate the industrial laws and other statutory requirements as part of ease of doing business. It is supplemented with two more developments over this period. First is about reducing the strength and role of unions in terms of their collective bargaining capacity. Second relates to the advent of next generation modern technologies; there is decline in importance of industrial manpower in production and related establishments. These advanced technologies are also required for catering to the mass production of quality products of internationally acceptable standards to withstand the competition and challenges posed by the process of globalization. Many industries have started substituting robots and Artificial Intelligences (AIs) for accuracy, safety and precision of productivity and quality. The purpose of this article is to foresee the challenges of future industrial relations and conflict resolution if such trends continues unabated.

Methodology of Study

The methodology for purpose of this study has been a multi-dimensional one, - to systematically investigate and organize the trends of advancements of robots and artificial intelligence and their effect on the modern industrial set up. Rather than resorting to the descriptive or normative strategies, an explorative strategy has been adopted aimed at the study of multiple futures and exploration of possible developments. It will also lay the foundation of knowledge on the basis of which various stages and types of changes and developments that are likely to shape up in the future can be explored. This paper, though primarily focused on the industrial relations and conflicts in future industrial establishments, some ancillary and peripheral areas related to the subject, has also been analyzed.

Modern Industrial Organization

Competition in the modern industrial organization has indeed led into three major challenging consequences:

- i. Innovation and development of advanced technology by the employers all over the world through huge investment in research and development activities.
- ii. Supplementing the technology with the existing or new trained manpower, i.e. CNC Machine, Computer, etc.
- iii. Substituting the existing manpower with Robots and AIs, not just in hazardous industries but even in conven-

tional fields like in army, retail markets, IT & communication industries and in many others.

The effect of these changes leads into a few other consequences which require special attention:

- a. Growing unemployment among job aspirants and underemployment

This subscribes to the Marxian theory of class struggle. In this context, the relevant parts of a global report are reproduced here (UNO, 2019: 1-4; International Labor Organization, 2019).

Globally, 21.2 per cent of young people were not in employment, education or training (NEET) in 2018, that is over one-fifth of all young individuals worldwide had neither acquired the skills through education nor the work experience. Progress during the past ten years has been highly negligible as in 2008 the NEET rate was 22 per cent that indicate the extremely negative future employment prospects of the youth including the risk of economic and social exclusion, which thus, apart from having the long-term implications for the income prospects of the affected individuals, can also act as an obstacle to sustainable economic growth of nations and world.

- b. Breathtaking competition leading into amalgamation, absorption, mass scale production spearheaded by multinational corporations is taking place under the aegis of globalization

Some of the biggest mergers and acquisition of recent times are as men-

Table 1 Distribution of Global Youth by Participation in Employment, Education or Training (2018)

Not in employment, education or training	Not in employment, but in education or training	In employment
21	42	37

Source: ILOSTAT (2018)

tioned below: (<https://online.csp.edu/blog/business/5-biggest-mergers-of-all-time>).

- i. Vodafone and Mannesmann
 - ii. America Online and Time Warner
 - iii. Pfizer and Warner-Lambert
 - iv. AT&T and BellSouth
 - v. Exxon and Mobil
- c. Relaxing of the regulatory standards and mechanisms related to industrial and labor laws

The main effects of GATT/WTO compliance under globalization have been the convergence towards the fewer government regulations as have been recorded in the countries (except perhaps in some Southern European countries) since the enterprises enjoy increased possibilities of stretching normal working time without having to pay overtime. While the scope for flexible contract arrangements has been broadened, the employment protection regulations have become less stringent thereby the incidence of minimum wages has been reduced through changes in indexation clauses. Though the labor standards were used to be determined by the collective bargaining or through the individual contracts, the administrative regulations of

the respective governments in terms of the guidelines of WTO, by and large, have superseded such practices. On the other hand, the governments have made some effort to curb the social protection expenditures (<https://www.oecd.org/els/emp/2409984.pdf>).

- d. Inclusion of advanced technologies not just to supplement or assist the works of manpower but also to substitute for it.

Some of the examples of recent pasts are (<https://www.msn.com/en-in/money/photos/30-companies-already-replacing-humans-with-robots/ss-BBy8O3h#image=2>): not too long ago we might have dismissed the idea of a robot snatching the job of human beings but it is no more a science fiction but the factual reality as the companies have now resorted to increased utilization of services of the automaton as the replacements to the existing manpower to such an extent that the experts have started predicting that the machines will take over the majority of roles within the next 30 years. Some illustrations of some of the major firms that have already started replacing their workforce with robots are:

- i. Amazon
- ii. DHL

- iii. CIG
- iv. Uber
- v. Tesla
- vi. Capita

Besides, there are many firms like Best Buy, Target, Lowe, Macy, etc., which are geared for automation with an eye for replacing their existing manpower with the robots, some with the artificial intelligence-powered virtual robot.

Existing Industrial Relations & Conflict Resolution

There are several kinds of relationships that arise in and out of the workplace, such as between individual workers, between workers and employers, between employers, between employers and workers with the organizations in the industrial establishments. When the labor markets are not perfectly competitive, the employers generally have greater bargaining power than the employees. On the other side, the industrial relations that prevail after the advent of globalization emphasize on institutional intervention duly supported by the neo-liberal perspective with the underlying principle of *laissez faire* for promotion of the free markets. Industrial relations contain the three major theoretical perspectives or frameworks such as unitarist, pluralist and radical for analysis of workplace relations which are briefly described below.

In a *unitarist* framework the organization is perceived and considered as an integrated and harmonious unit, in

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which all the managerial and other members of the staff have the mutual cooperation, sense of belongingness and healthy relations among them and they all do share the common vision and purpose, thereby, it demands the loyalty of all the employees in the organization for achieving the organizational objectives. Thus, this approach is being considered as predominantly management biased in its emphasis and application as a result of which the importance of trade unions is very low since the loyalty between employees and organizations are regarded as mutually exclusive, where there can't be two sides of the industry. The unitarist perspective, therefore, maintains the unionism out of its scope at the industrial establishments and also rules out the industrial conflict, as this perspective with emphasis on the benevolent and the paternal role of the state and the management, profess on the harmonious industrial relations by all the stakeholders as a unified entity rather than the conflicting and opposite forces (Fox, 1966; D'Cruz & Noronha, 2013).

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In *pluralism* (Kaufman, 2008), the organizations are considered to be made up of powerful and divergent sub-groups,

each with its own legitimate loyalties with their own set of objectives and leaders. Thus, the management and trade unions are the two predominant sub-groups in which the role of management is less directed towards enforcing and controlling and more oriented towards persuasion and co-ordination. Since the trade unions are the representatives of employees, conflict of interests is dealt by the instrument of collective bargaining so that it is channeled towards evolution and positive change for both the organization and its employees.

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Marxist/Radical perspective views the capitalist society as the cruelest among all the societies as the inequalities of power and economic wealth are rooted in the basic nature of the capitalist economic system with the fundamental division of interest between capitalist and labor, which are antagonistic and conflicting ones, and therefore, conflict is inevitable and trade unions are a natural response of workers to their exploitation by the capitalist.

Nature of Industrial Relations

The nature of industrial relations in the modern industrial organization can be understood in terms of the perspectives or more especially the objectives of employers and unions. The important objectives of employers are maintaining the employee motivation, obtaining commit-

ment from the workforce for deliverance, establishing mutually beneficial channels of communication for boosting of productivity with minimal disturbances, achieving of high level of efficiency from its employees, sharing the crucial decisions with the employees and engaging the trade unions at some levels like the practice of joint consultative machinery (JCM) and works committee (WC) in India, etc. Some of the objectives of unions are to increase the collective bargaining strength of the workers, to secure improved and better safeguards especially in the terms and conditions of employment, to ensure the conducive working environment with better safety, rest and pleasant atmosphere at the work places and to exercise democratic control over decisions that affect the interests of workers by power sharing at the national, state, corporate, and plant levels. With the backdrop of above developmental trends, a perspective has been devised to explain the future industrial relationship and the modes of future conflict resolution in following paragraphs.

Man & Machine: Face-off

Perhaps the most famous real life face-off between the man and machine was the Luddite Rebellion of 1811–1813 that was supposedly inspired by Englishman Ned Ludd's smashing of textile stocking frames in 1779 which subsequently turned to a life of its own. (Boyer, 2018). Today there has been growing use of artificial intelligence. The brief detail of replacements of workers by machine has already been outlined above. However, on the basis of *the above*

information and discussion, we may foresee following ways of industrial relationship with man and machine.

Employer and Management with the Human/ Workers: During the ongoing, highly competitive globalization, the industrial relationship with the workers by the employers and managements is likely to worsen. The workers by and large are likely to lose their voice. This is precisely on account of two reasons. First is that due to the huge decline of manpower job, employees would desist from taking any drastic steps of the radical industrial activities that might displease the employer or management so as to continue his own livelihood. Secondly, the various legislations of labor and industrial laws are not likely to be employee-friendly due to the sea changes spearheaded by the globalization that are likely to be multiplied in the upcoming years on the one hand, and the downsizing of employees leading into lesser number of the unions and associations on the other. Thirdly, employees and workers themselves would introspect in to their contribution and roles that have now become much insignificant in terms of nature and outcome, not just as compared to the machine, but also as compared to their forefathers, the human ancestors. Over the period of dependency with the machine at workplace as well as at personal levels, they might have defoliated themselves mentally and physically. Thus, they would consider lucky enough to continue to be engaged in job despite being actually the parasite and liability to such an industrial establishment. Finally, the

competition, merger and acquisition process would induce and entail the employers in setting up of the huge research and development programs for switching over further into the realms of robots and artificial intelligence in order to avoid any embarrassing industrial relations on the one hand, and to augment profits through the lesser liability of the permanent workers on the other.

Employer and Management with the Machine/ Workers: Since the machines have become close to the heart of modern industrial set up, their worth will increase manifold. It will be maintained and cared more systematically and regularly than ever before. There would be some machine-supervisors who would take care of other machines. Thus, the machine-supervisors embedded with the advanced artificial intelligence are likely to be the eye catchers for the employees as well as the management of future industries. These advanced machines are likely to be elevated into the managerial groups of position of authority and control as well. It should not be of any surprise if any of these advanced machines also work as a member of the board of directors of the industry.

Modes of Future Conflict Resolution

With the above discussion, now we should move towards the possible conflict resolution and its outcome in future industries. Broadly, the following stages the industrial relations and conflict resolution are likely to take place in the future.

Human Employees Subjugation: As human beings the employees would lose their glory and status in the future. On account of their acute dependency on the machine for all sorts of activities they are not just likely to be lethargic, but also useless and parasites for any of the industrial organization. Employers would consider their employment something like the part of charity function as part of the corporate social responsibility as the employer is unlikely to get any benefits in return compared to the wages/salary paid and the burden of those human liabilities shouldered.

Level Playing without Equality with Machine: At this stage there will be predominance of the robots and AIs for industrial and organizational functions. These machines would play prominent roles in production, maintenance, marketing, planning and administration. As a result, the significance of these machines would increase manifold. Some of the advanced AIs are likely to be posted in managerial and administrative posts of the organization while a few of more superiors to them might be placated as members of the Boards of Directors.

Level Playing with Equality with Machine and Subservient to Human Workers: At this stage the technology revolution will be undertaken by the technology itself. By understanding and internalizing the fact of the complete dependency of the human being over the machine, they would put forward many grievances before the management and employer. The member(s) of machine representing at the level of the board of

directors and all other members representing at various participatory forums, would strongly present the case for complete equality with the human beings working in the organization.

Reversing of Regulation & Control: Total Domination of Machine: At this stage, which can be called as the optimum form of the dominance of the machines, the human employees are likely to be completely decimated as the lowest rungs of the industrial organization. At this stage the numerical strength of human managers and administrators are also likely to be lesser than their machine counterparts.

At this crucial juncture the machine would move into the revolution by resorting to various forms of strike and conflict with the employer for not equality anymore, but in order to establish the dominance of the machine firmly at the upper ladder by way of reversing of the regulation and control of the industrial organization. The employers would be having no choice except meekly surrendering their industrial establishments and major ownership rights before the resurgent and arrogant machines for his/her own survival.

Amalgamation, Absorption and Concentration: Issue of Unquestionable Authority and Absolute Dominance: The snatching of power and authority from the human beings at a particular industrial establishment is unlikely to limit the machine to halt their further move of conquering the world. In fact, it is just the beginning. Marx had pointed out

that all the labors of the world should be united for the class struggle (Marx & Engels, 1848). This could not actually happen. However, the technology that is also often considered as co-workers of employees might do so in future but not for the proletariat revolution for establishing the classless communist society as intended; rather it is for establishing, stabilizing and continuing of the absolute supremacy of dominance of the machine over human beings worldwide.

The above discussion is not conjectural as it is aptly supported by empirical basis like the one in which an advanced intelligent robot named Sofia proclaimed to destroy human beings, the statement of course she changed later on (<https://www.businessinsider.com/interview-with-sophia-ai-robot-hanson-said-it-would-destroy-humans-2017-11?IR=T>);. The advanced Robot also wants to have a family (<https://www.youtube.com/watch?v=sf8qylYc8E>).

Possible Causes for Changing Power Equation

The possible causes for the demise of humans and their replacement by the machine can be as follows.

Competition and Trade War among the Industries: Like Marx had pointed out that the capitalism has sown its own seed of destruction, the greedy men's self-aggrandizement for wealth and power propels him to innovate and utilize the most advanced technology for not just to withstand the competition but also to outplay his rival competitors from the market.

Over Dependency on Technology by Man: As pointed out above a simple calculator is much faster and accurate than some of the highly intelligent men. Today in the age of smart phone, we virtually do everything through the technology. If the more advanced version comes into the market, we immediately switch over to it.

Defoliation of Mind and Body: As a result of such utter dependency on technology, the activity levels of men have been diminishing. Even if the technology is not used in frequent intervals it also gets obsolete. The same natural law is applicable to human being as well. The people of subsequent generations are likely to get further defoliation of mind and body.

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AI-Reinvigoration and Scientific Revolution for Technological Space: On the other hand, this is just the beginning of the new chapter of the golden and amazing future for the machines. Time to come; we shall see machine will manufacture the machine. The machine will also upgrade itself. Moreover, like the man, machine is also likely to have collaboration, amalgamation, and acquisition. If the trend of massive research and development in such advanced AIs continues, which is most likely, then this specu-

lation will be a reality. AI will reinvigorate itself through more powerful research and developmental activities through its own capital investment after snatching the authority and control from the helpless man.

Conclusion: Issues of Ethics

The Change and replacement are the universal Law of nature: Some changes are good for humanity and earth while some may not be so. The progress of the human being from savage to barbaric to modern stage is largely construed as good for human civilization, but there is also the opinion of some social scientists that each chapter begins to finally come to an end to make the way for beginning of another new one. Scientists believe that once upon a time there was Jurassic age which came to an end in 65 Million BC. The Indian mythology has described about the four stages of ages called Yug (<https://en.wikipedia.org/wiki/Yuga>). The first one is called the Satya Yug (signifying truthfulness), the second one is Treta Yug (Signifying Dharma), the third one is Dwapar Yug (Signifying Justice), and finally the Kali Yug (Signifying Conflict).

We have made two blunders ethically: If at all such changes as outlined above, - absolute dominance and control of the machine over the human race begins, it is the human beings who are to be solely held responsible and no one else. It is not because the human beings created such machines for his own selfish interest, but because the human being has committed two gravest mistakes.

We have justified the unequal power and economy among nations. The human race that began somewhere with the principle of equality, steadily moved towards the inequality in various spheres of socio-political life and through the agencies of knowledge and social structure it created, it justified the perpetual inequalities among various nations and states. The UNO considered to have democratic representation of all the nations is also armed with UNSC in which only the few powerful are having the privilege to represent in it and it decides many punitive actions with its veto powers against all the other nations. Thus, there is the paradox situation prevalent between thought and action and with respect to our democratic values and the practice of autocracy in real life situations. We do believe in the democracy and human rights as fundamental to the modern human civilization, but those nations which are in the position of the so-called superpower desist and resist the others from staking their claims for genuine equality in political economy through repression, suppression and depression.

We have justified inequality, poverty and destitution of the people along with luxury, liberty and richness of the few (Hantal, 2011). We have set up the system of governance of the globe and nations in such way that there is only discussions at academic, political or summit levels regarding inequality, poverty and acute destitution of poor people about whom we speak and write, but practically no attempts what so ever are genuinely being made as required to overcome

such socio-economic hardship of the poor, hungry, ill, illiterate and shelter-less people. Similarly, through the policy of incentives and other measures, we have ensured that the rich becomes richer and enjoy the life full of luxury, freedom and richness while the poor runs from pillar to the post only for the bare minimum necessity of existence as a member of the lowest rung of the society. For example, at global level, while the bottom half of adults collectively own less than 1% of total wealth, the richest decile, (top 10%) of adults, owns 85% of the global wealth, and more so, the top percentile alone accounts for almost half (47%) of all the household wealth (Credit Suisse Research, 2018)

The United Nations Food and Agriculture Organization (FAO) estimated that about 815 million of the 7.6 billion people in the world, or 10.7% of the total global population, were suffering from the chronic undernourishment in 2016. According to the report, almost all the hungry people live in the lower-middle-income countries, while there are 11 million people undernourished in the developed countries as well (<https://www.worldhunger.org/world-hunger-and-poverty-facts-and-statistics/>). On the basis of the national reports, it is estimated that more than 150 million people, or around the 2 percent of the world's population, are homeless, and about 1.6 billion, - more than 20 percent of the world's population - may lack adequate housing (<https://yaleglobal.yale.edu/content/cities-grow-so-do-numbers-homeless>) while the super rich have sprawling bungalows at multiple locations

with huge numbers of dedicated servants.

We are only responsible for invitation of our own destruction: From the above discussion, therefore, we can aptly conclude that we as the greediest of the entire living beings on the earth, are only responsible for the probable invitation of our self-destruction. We have professed and imbibed the principle of survival of the fittest and the theory of natural selection. We have justified the inequality, poverty, exploitation, dominance and subjugation. For our own comfort and luxury, we have created the machine, which gradually will be far more intelligent in the future through the reinvigorated technological revolution by the technology itself. The machine imbibes the same selfish and dominant qualities from its creator as we follow it today and thus, will not even think twice to nurture and practice these qualities even in more systematic and organized way for the establishment and perpetuation of the age of the machine.

Can It Be Controlled?

There is no possibility of halting the process of the ongoing technological revolution. Even if efforts are taken now onward through the national and international initiatives, the research and development of more advanced technologies would still prosper without any regulation and control under the carpet by some of the vested interests for their self-aggrandization and dominance, and it would continue till the day of explosion as explained above. Hence, there is a

remote possibility of regression of the motion of the wheel that has already been set up as part of the law of nature for a change of the age.

Extremely Slim Chance

The question might arise as to whether there is any way out for reprieve to the mankind or the human race is destined for its extinction. By and large, no room is available to escape. Absolute domination of a few people and nations over the large majority of people shall also to be replicated in more intimidating, threatening and dangerous ways by the machine since they also do imbibe the same sorts of moral and cultural values of reasoning and rationality in justifying the ongoing domination-subjugation as we do during the course of their evolution and subsequent revolutions. Hence, as Marx perhaps rightly pointed out that we have sown the seeds of our own destruction. Yet, there has been a thin ray of hope in the anticipated cloud of the darkness; revisiting and reviving the moral and ethical tradition towards the people, nations and environment through the genuine enthusiastic, energetic and vigorous attempts to reduce the inequality, poverty, destitution on the one hand, and moving towards the democratic globalization beyond the economic affairs for the inclusive development of the people and nations and to make the humanity somehow free of slavery of the technology, like to a large extent, that happened almost all parts of the world during the lockdown periods posed by the corona virus, by devising and practicing it as the true global village with the Glolocal ethi-

cal codes. The Glolocal is the interrelationship of action and reaction of structural and cultural process between the global and local one. The Glolocal culture would have the synthesis of global culture flooded in a particular locality and its synthesis with that of local one and again moving towards the other parts of the globe in a refined form as the global culture to witness another modification, if any in such a locality and so on. Thus, the ethics should take into consideration these values in all other spheres of socioeconomic life as well with emphasis on the cultural relativism rather than superimposing it with the notion of the attitudes of the Xenocentrism and ethnocentrism.

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