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New Realities, New Rules: Labour Laws in a Changing World
Sub Theme for the seminar: Labour Law and Artificial Intelligence: Legal Implications in Automation

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Abstract

Labour Law and Artificial Intelligence: Legal Implications in Automation.

Labour Laws are statutory enactments made with an intent to protect the interests of employers and employees in the industry and service sectors. Whereas **Artificial Intelligence (AI)** is an emerging information technology area which has a prominent impact on the way businesses and manufacturing processes are carried out. It is mostly an intellectual, knowledge-based innovation process wherein certain automated tools enable a machine or equipment to perform human like function /capabilities with set precision.

The Artificial Intelligence Related Programmes are collective intellectual output of either a specific group of individuals or entities. The relationship between program developers/software application coders and the entity which own such output, mostly covered by contractual agreements which in turn governed by the relevant Labour and other Laws of the country. Since the intellectual based work environment is completely different from brick-and-mortar establishments. The governing regulations, control and supervisory environment also differ from traditional work environment. It may happen in a few occasions, the developer of a new programme also be the owner of the program and is entitled to own such new innovative idea/application.

Thus, applying the regular Labour laws to the process of AI based-automation tools may not be appropriate as the *employer-employee* or *owner-entrepreneur* roles

sometimes overlap and may not exactly fit in with the traditional employer-employee work frame.

In this paper, the features of both **Labour Laws** and **AI related automation tools** and their relation is critically examined and suitable legislative approach based on dynamic changes in the above two operational areas suggested.

It is felt that Labour Laws are also relevant and has to co-exist along with regulatory measures for Artificial Intelligence based automation tools in a harmonious manner.

I. Introduction:

The introduction of Labour laws was due to culmination of various incidents in the late 18th century and in the early 19th century accelerated by general industrialization and textile revolution in certain parts of western India especially Bombay province.

In 1875, **Sorabji Shahpurji** an Industrialist, started a movement against inhuman working conditions of Indian workers especially of women and children and appealed to the Government to introduce legislation for giving most needed protection and relief to the working class.

In 1877, the first resentment/disappointment was collectively shown in **Express mills -Nagpur**, for an increase in wages. It could be recorded **as the first strike**. Afterwards, followed by few other strikes indicating the germination of seeds of trade unionism on Indian Soil. In **1884, N.M. Lokhande** a factory worker of Bombay, organized an agitation to represent grievances before the **factory commission,** which was appointed by the State of Bombay. It appears to be the first systematic step in the right direction by which **N.M. Lokhande** submitted a demand for *weekly holidays, limitation of working hours, midday rest/break and compensation for injuries*. But he succeeded in achieving weekly holiday demand only. In 1890 N.M. Lokhande formed the first trade union under the name of "Bombay Mill hands association" and started a newsletter under the name "Deena Bandhu**"** means "workers' friend".

Earlier laws were made to protect the interests of workers in traditional **brick-and-mortar industries** where labour is the primary input of production. The economy at that time was mostly agrarian and agricultural sector contribution to Gross Domestic Product (GDP) was around 50%. In such a scenario there is a greater chance for exploitation of workers through *discrimination in wages, forced increased number of work hours, denial or non-provision of basic amenities viz., "clean drinking water, hygienic conditions of workplace etc."*

To address the above situation in work environment and to improve the working conditions, the legislature felt a need for introduction of Labour Laws. Also, the newly started Trade Union Movement, initiatives of intellectuals and social service organisations, exerted pressure on the Governments to introduce labour welfare legislations to prevent labour exploitation and improve the conditions of working class. The general dissemination of information through radio and newspapers and development of communication facilities during late 19th century created awareness among masses regarding their human rights and global practices in industry prevalent in other countries.

As a natural consequence of all these developments government has progressively enacted certain legislations like "*The Workmen Compensation Act, 1923 (in the year 2010 amendment renamed as Employees Compensation Act, 1923), The Payment of Wages Act, 1936, The Minimum Wages Act, 1948*". Apart from the above, the most important legislation is "*The Factories Act, 1948*", Factories Act has streamlined the working conditions, safety and welfare measures at Factories. The above legislation became a benchmark for manufacturing establishments and continues to hold its relevance even today.

Thus, the evolution of Labour laws/legislations is slow and steady but to a great extent were successful in preventing rampant exploitation of working classes. The recent measures of consolidating existing labour laws by introduction of a new "Labour Code" through review and revisit of existing laws was considered relevant and effective to meet the requirements of present-day work environment.

II. Present scenario**:**

As stated earlier, the country has gradually transformed from an agrarian economy to Service oriented economy. The Services sector share in national GDP is almost equivalent to that of Agriculture sector at the time of independence. i.e., around 55% and still growing. The major contributors include revenue from *Tourism, Hotels, Communication, Transport, Information Technology services etc*. The contribution to economy from these sectors is increasing day by day. The present Globalized economy and digital commerce facilitating trade and commerce across borders.

The recent *Corona epidemic* has forced the workers from all sectors (both industrial and service sectors) to adapt Technology in a big way. The resilience shown by the Global population and forced adaptation of technology, the need for further innovations during the crisis period paved the way for future course of action in

technology development. In this phase of transition, a new innovation in the form of "*Artificial Intelligence*" (AI) opened up for further research and development .

During the first half of 20th century, medical science related innovations and Biomedical research are the major areas of focus. Many developed countries spent resources and efforts to get breakthroughs in biological science and pharmaceutical field.

However, the development of computers and information technology opened the door for knowledge based digital world. The invention of internet and World Wide Web (WWW) which accelerated further developments in IT enabled areas. The information technology reduced the inequalities like, *"unequal access to knowledge & resources", "global disparities in knowledge sharing", "social and economic barriers to education and knowledge" etc*., The development of IT encouraged the traits like *innovation, critical thinking and new ideas*.

It is to be noted that the pace of technological innovations, particularly in areas like mobile and tele-communications, internet & Wi-Fi (Wireless fidelity) services was tremendous in the last three decades. The generation gap or digital divide among population which normally used to be 25-30 years was now reduced to 10-15 years. It means, the population is getting **digitally ignorant** within a span of 10-15 years unless they adopt and use the latest technology.

Among all the information technology developments, **Artificial Intelligence** (AI) is the most prominent one. Artificial intelligence means the *Human-like capabilities of performing taskswhich the computers and machines possess in their functioning*. Thus, human-like capabilities refers to the traits of *intelligence, skill, logical thinking, rationalization and performance*.

Is it Possible to replace Human Mind?

It is a million-dollar question. The possibility of using AI-enabled devices/machines may be a reality. But complete replacement of Human minds and intervention may not be possible at this stage. These developments are akin to earlier biological science breakthroughs relating to *DNA (Deoxyribo Nucleic Acid) cloning*, where researchers claimed to achieve the capability to create new species or clone human beings of similar characteristic DNAs. There were proponents and opponents for such an innovation, such findings still fraught with ethical, legal and practical implications.

In a similar manner, *Artificial Intelligence* is now considered as the latest development which is reportedly having a capability to redefine the employer-employee relationships.

When we assess the impact of Artificial Intelligence on Labour Laws, the following likely possibilities are seen.

III. AI Impact on Labor Law Legislation and Challenges:

The traditional employer- employee relationships are slowly fading out. In the late 19th century and early 20th century, most of the jobs are restricted to a particular geographical area. The factors like migration of population for a living, specific skillsets for profession/ occupation, employment for life are the accepted norms prevalent at that time.

In the present-day employment conditions such concepts/norms not followed, however, still a section of the workforce bound by such earlier beliefs regarding employment. Thus, in present times both modern and traditional belief systems continue to exist side by side.

- The main feature of information technology work environment is a complete knowledge-based environment. There are no boundaries for innovation and sky is the limit for work related goals and achievement.
  - *Freedom* and *access to information* sometimes results in misuse and data theft, infringement of rights of other stakeholders and loss of invention-protection rights to original inventor(s)
- The employees are largely aware of their rights and responsibilities and accordingly choosing their employers and working conditions.
  - Freedom of choice of employment is available in certain sectors where employee specific skills or domain knowledge matters. Whereas in most of the brick-and-mortar industries, the employees are to a great extent under the control and supervision of employers and choice of employer or choice of working conditions for employees are limited.
- The present labour laws, in their endeavor to meet achieve social justice in working conditions of employees, various amendments were carried out from time to time to reflect the changing needs and aspirations of working class.
  - The need to continue the existing Labour Laws is more appropriate and relevant.
  - The existing labour laws can co-exist along with new Technology based service sector legislation. Both legislations can complement each other in a harmonious manner.

- Challenges in enacting suitable legislation to safeguard the interests of employers and employees in Information Technology industry was faced even in developed countries. The legislation in this area must evolve along with maturity levels of the industry.
- In India, the labour law legislation has evolved over a period of five to six decades and mostly successful in meeting the aspirations of both employers and employees. In similar manner the challenges in making laws for AI led Technology areas will evolve gradually.
- Information technology and digital world broadly consist of *Artificial Intelligence, Internet, World Wide Web (WWW), e-commerce, social media etc*., The phenomenal growth in internet usage, Telecommunication coverage, growth in e-commerce and UPI (Unified Payment Interface) based transactions made the Government to enact legislation to curb undesirable activities of "*cybercrime, data theft, digital identity theft cyber-hacking, invasion of privacy of others, cyber-stalking etc*.,"
- The government intends to regulate the online activities in the public interest through specific enactments ***like Information Technology (IT) Act, 2000, Digital Personal Data Protection (DPDP) Act, 2023, National Data Governance Framework Policy, CERT (Computer Emergency Response Team)-Guidelines*** etc., But still a long way to go and stabilize these new age laws.
- The above developments clearly show that the Government is fully aware of the need and urgency of coping with the realities of constantly changing digital work environment.
- Even though the development of Information Technology is widely accepted, the world is now focused on **Artificial Intelligence** because of its reported ***ability of Human like capabilities and functional performance aspects.***
- Artificial Intelligence brought major changes in handling *routine and recurrent tasks* by eliminating human labour and replacing it with automated tools, which are capable of performing these routine and repetitive tasks more efficiently.
- This elimination of human intervention or Human presence in performing such tasks created apprehension in the minds of the workers and employees, that they may lose jobs and ultimately employers may deploy such faceless machines in the work environment.

- In high technology-oriented processes and in certain critical medical procedures, the AI driven robots are performing various tasks including complicated surgeries with minimum human intervention and increased efficiency.
- The medical diagnostic procedures, data analytics, software coding tasks, are the areas in which AI enabled tools replaced human beings. These AI tools are much more efficient in analyzing voluminous data, presenting and deriving meaningful conclusions from such data within a short time saving time and efforts.
- The increased productivity achieved through the deployment of Artificial Intelligence driven tools has encouraged employers to adopt them in specific work areas and optimize processes. This technological adoption resulted in considerable reduction in workforce, retrenchment and layoffs in the industries.
  - The perceived negativity on AI replacing human beings strongly entrenched in the minds of workers and employees. They demand the Governments to make suitable amendments in law to prohibit the use of AI tools as replacement to Human labour. Prima facie such a demand is appropriate considering the Directive Principles of State Policy as stated in the Constitution of India and also to prevent concentration of economic power in select few through technology. Thus, Technology based monopolies can be controlled through Labour laws by making appropriate amendments.

Recent Movie film piracy case (as per News channels and brief by the City Police Commissioner Hyderabad, Telangana, India-October 2025):

In a recent case of Piracy of newly released Films, the Telangana Police unearthed a crime syndicate involved in movie piracy. The crime syndicate members used an exclusive software application to record the newly released movies through mobile phones in theatres and then sharing such pirated movies on a digital platform via IP addresses (Internet Protocol address) which are dynamic and changes constantly. This movie piracy activity reportedly resulted in losses to the tune of - "In 2023, the Indian entertainment industry lost an estimated Rs 22,400 crore, and Tollywood alone suffered Rs 3,700 crore in 2024" *[source India Times News article dt.30.09.2025]*.

The process of changing IP addresses dynamically makes it difficult to identify the user uploading such pirated content on the Web. This will pose a challenge to law

enforcement authorities to identify persons responsible for such crimes. Also, it is a difficult process proving their guilt before Courts beyond reasonable doubt. The technology intensive crimes need technology-based prevention mechanism along with suitable legislative enactments to punish such violators.

- Thus, Labour laws implementation can be restricted to industrial usage of AI tools and automation processes where it is easy to pinpoint responsibility for violations of established procedures. The Manager of the establishments can be held liable for any violations pertaining to employee related working conditions or statutory rules. Similarly, employees also can be made accountable for their negligence or irresponsible behaviour at workplaces.
- In effect Labour laws and Artificial Intelligence automation, needs to be tackled through multi-pronged approach and should not be in isolation as practiced till now.
- The pace of modification to adapt to the needs of ever-changing industry must be quick and relevant.

IV. Labour Laws, AI and automation in relation with other Statutes:

The existing Labour Laws and their applicability to new age industries or services sector cannot be underestimated. These Labour Laws relating to Employer-Employee work relationships and Information Technology (IT) linked service sectors cannot exist in isolation. Now, there is an important necessity of protecting the interests of technology and application developers.

- IT development is an activity of innovation, by transforming new ideas and expressions into a form of software Programmes. This specific activity requires protection under **Intellectual Property Rights (IPRs)**. The traditional issues of working class relating to "working conditions, payment of minimum wages for work, number of hours of work" etc. no longer faced by employees in IT sector to a great extent,
- Software development and Artificial Intelligence related activities are more of an intellectual activity and are knowledge-based skills. The employees in this industry require *specialized academic qualifications, training and intellect, aptitude*.
- Their productivity and programming skills are measured in terms of their applications development capability, capability to support & maintain the existing computer applications etc., The new software Programmes developed by the software engineers need as much protection as an invention.

- "**Effort-based" approach,"** is a copyright principle that grants copyright protection based on the *effort, skill, and investment* put into creating a work, rather than its originality or creativity. Thus, Computer program copyright or software copyright legally safeguards the **expression of ideas in software**, specifically the **source code(human-readable instructions)** and **object code(machine-readable instructions)**, preventing unauthorized copying, distribution, or modification of the software without permission.
- **The Copyright Act, 1957**, protects the computer programmes automaticallyonce it is made and registration is a separate process which must be completed as per the prevalent local laws of the country.

Thus, the application of Labour laws to new-age information technology areas is limited to certain aspects of services sector. The support of other legislations like IPR legislation is required to make it a comprehensive framework.

So, the Labour Laws are an important legislative mechanism to protect the interests of all the employers and employees from exploitation and to prevent disputes while pursuing their business or service goals. They are time tested and evolved from lessons learned in real life work situations. They stood the test of time and still relevant for the current situations.

V. Unique Characteristics of AI and relation with Labour laws:

In all these developments, the important factor is the *creator of these AI tools* and robots is the Human being. The robot, machine, appliance, or computer devise which has AI tools embedded in it must necessarily follow the programing code set by the creator or developer. Thus, effectively, the AI tool is a programmed version of human mind's thinking.

In such a scenario, the developers or set of developers/programmers are either working collectively in such a development or freelancing in independent manner. The end product may be a combination of collective intellectual output of either a specific group of individuals or entities. As stated earlier, the work is mostly intellectual, not measurable except in end-product or unique features of innovations. The applicability of labour laws to such an automation process development or knowledge-based activity is truly limited. It is to be noted that in most cases, the program developers are themselves the owners or employers. The exploitation of labour in such purely knowledge based activity may not be applicable as the people involved in the activity concerned are well informed and have the choice of choosing the working conditions suited to their developmental activity Thus, to a great extent this AI and automation activity is like scientific research work.

Since development and usage of AI is at a nascent stage (early beginning stage) enacting suitable legislation with the intention of protecting employees and employers is a challenge for the legislature.

Since, the development of AI tools is integral part of Information Technology Sector, the existing laws can be applicable for issues relating to "*number of hours of work, equal pay for equal work, non-discrimination-based on gender etc.,*"

In earlier days, labour laws were perceived by employers, as they are specifically made with an inherent bias towards employees and employees used to perceive that these labour laws are mean to safeguard the interests of employers'. Labour Legislation was always viewed with suspicion by both the parties.

The real intent of the Labour Legislation was *to maintain industrial peace & harmony, social justice, to provide just and humane conditions of work and prevent exploitation of labour*. The awareness of the employers and employees regarding these laws and their active participation in law making process gained their confidence & trust in the legislation over a period of time. The adjudication mechanism constituted under the Labour Laws legislation demonstrated through various judgements pertaining to labour disputes, reinforced the object and purpose of these labour laws and confidence among stakeholders. The implementation and acceptability of the existing labour laws was proven with their consistent implementation over a period of more than four decades.

VI. Conclusion:

In view of the specific operational constraints in application of Labour laws to IT sector and the nature of unique functional requirements of Information Technology and Artificial Intelligence era, there should be a judicious blend of both existing Labour Laws and new age laws for this emerging sector to be adopted.

The technology is changing rapidly and with new innovations and applications development, the proposed enactments must be made cautiously and after stabilisation of the new systems. This dynamism was experienced is the **Information Technology Act, 2000** enacted to safeguard the electronic commerce by providing legal recognition to electronic transactions, digital signatures, and electronic filing of documents with government agencies etc.

The above Act was possible only after stabilisation of the applications platform and maturity of server systems in IT domain. The Act aims to prevent cybercrimes like hacking and identity theft etc.,

Similar way, Artificial Intelligence and automation related emerging technologies need to be regulated and governed after reaching a certain **technology maturity**

level. Thus, it is clearly evident, that the focus of protection and level playing field is now shifted from employer-employee safeguards to, incentive for innovation of new ideas and protection of such innovations from misuse by vested interests.

If we consider the working conditions, fair wages, hours of work etc. are may not be the key areas of supervision and control by the State in emerging sectors, but, regulation and use of Artificial Intelligence tools which are capable of generating new inventions and outputs based on users' creativity is the primary duty of the State.

The Artificial Intelligence tool may not prima facie encourage or intend criminal or wrongful output, but a user may use the tool to generate such dangerous results with criminal intent which needs to be controlled.

The focus is to make the users' responsible for the deeds which is a very challenging task and may need the support of technology again. The Artificial Intelligence tool is deployed in layers and multiple agencies involvement occurs by the time it reaches the final user interface.

For example, the AI tool may be **developed** by a software company, the tool will be deployed through **servers** of another company, the internet or Web services are provided by an **ISP**(Internet Service Providers) etc., In such a situation it is very difficult to fix the responsibility for any misuse.

Thus, in order to overcome such initial difficulties, the government at this stage has to keenly watch the developments and appropriate measures to safeguard the interests of different stakeholders must be made with existing laws and regulations. This can be achieved quickly by modifying existing laws and regulations. A comprehensive legislation can be made once the AI related automation reaches a maturity level like other industries.

References / Bibliography

Footnote: The following for the notice of readers.

1. Reference to major Labour Legislations sourced from academic material for LLB 3rd and 4th semester and prescribed Text book on "**Labour & Industrial Laws by S.N. Mishra-2022 reprint**"
2. The terminology, definitions for Artificial Intelligence and IP servers etc., has been sourced through AI tools embedded in Google search engine and Microsoft Co-pilot tool.