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***The Right to Work in the Era of the Fourth Industrial Revolution:
Challenges and Opportunities***

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Abstract

This article attempts to review the challenges to labor rights caused by the Fourth Industrial Revolution and examines some of the issues in terms of the reinterpretation and expansion of labor rights in the international human rights law regime. Income inequality, deepening of job polarization, and the consequent deepening of economic inequality among individuals ultimately raise various human rights issues. Of course, it is difficult to understand how labor rights will develop in future societies. However, it is questionable whether labor rights contain and resolve all the above issues under the current international human rights law, and it is necessary to reinterpret the right to work as a fundamental right of a comprehensive character that is the foundation of the future society. When the number of jobs decreases, it may be questionable whether the state's indirect obligation of building a better environment for job creation is sufficient in the era of the Fourth Industrial Revolution. Economic inequality and polarization can be brought about by automation and there is an ambiguous area here in which human rights violations occur. Moreover, for the existing vulnerable groups that do not acquire new technologies, there is a need to reconsider the relationship between the existing labor and education rights in that they are more likely to remain digitally illiterate because of remaining as unskilled workers or limited educational opportunities. The development of science and technology requires the reinterpretation of decent work in terms of (human) development for freedom. The same is true for developed as well as developing countries.

I. Introduction

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The idea of the Fourth Industrial Revolution, introduced by Klaus Schwab while promoting progressive industrial development, connotes the revolutionary transformation of industry in comparison to the appearance of personal computers and the World Wide Web. New technological advances that drive the Fourth Industrial Revolution include the Internet of Things, Big Data, the Mobile Internet, Robotics with Artificial Intelligence, and Artificial Intelligence (AI) in general. Such technological advances can lead to changes in industry and firms and in the world of vocation, labor organizations and employment relations. Klaus Schwab, for example, predicted at the World Economic Forum that the Fourth Industrial Revolution would bring about a radical change in the labor market, which would kill many jobs. The Future of Jobs report released at the forum says that 7.1 million jobs will be eliminated and 2.1 million new jobs will be created by 2020.¹

It is difficult to have a singular approach to the Fourth Industrial Revolution because there is a conflict of opinion among scholars about how the working environment will change in the future. Circumstances differ depending on the prevailing situation in each country and the industries, as well as due to unforeseen factors such as climate change. Nevertheless, it is not difficult to judge that the Fourth Industrial Revolution will affect many areas of human rights, as the development of science and technology has greatly affected human rights in the past; automation, in particular, is expected to have a large impact on labor rights. The historical experience of the past industrial revolution(s) suggests that new jobs will be created as a result of the Fourth Industrial Revolution, and job shedding may occur at the same time.² If new jobs are created in proportion to the jobs lost as a result of the Fourth Industrial Revolution, there will be no quantitative change in jobs, but their nature and quality might alter significantly.³ Thus, this article attempts to review the challenges to labor rights caused by the Fourth Industrial Revolution and examines some of the issues in terms of the reinterpretation and

¹ World Economic Forum, *The Future of Jobs: Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution* (World Economic Forum, 2016).

² ILO, “Technological changes and work in the future: making technology work for all”, The Future of Work Centenary Initiative, Issue Note Series 1, Available at: https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/publication/wcms_534201.pdf

³ For example, the World Bank's report focuses on the changing nature of work caused by the Fourth Industrial Revolution.



expansion of labor rights in the international human rights law regime.

II. Autonomy and the Threat of Jobs

Various predictions are made regarding quantitative changes in jobs in the future. On the one hand, there is a concern that the number of jobs will drop significantly,⁴ while on the other hand, even though automation does not drastically reduce the number of jobs, it is argued that changes in jobs will be the main concern.⁵ Simple iteration jobs are easy to replace with machines. As a result, there are some discussions on job threats where the focus is on blue-collar jobs. However, in the age of big data and AI, if there are enough training data, it is impossible to exclude the possibility of replacing the jobs of lawyers, bankers, doctors, journalists, scientists, etc.⁶ Some of the journalists' roles have already been replaced, and research on its ramifications is underway.⁷ Therefore, it is necessary to assume a situation in which the total number of human jobs decreases, and consider the possible social problems that could arise out of this situation.

Can it be said that job reduction or substitution violates labor rights under international human rights law? Labor rights are fundamentally related to human dignity. They are understood as a tool for human beings to make a living and fulfill their self-realization and development, and are recognized as a human right in international legal documents. However, this does not mean that human beings have the right to obtain a job.

Full employment is mentioned in General Comment No. 18: Article 6 of the International Covenant on Economic, Social and Cultural Rights (ICESCR), but it is clarified that full employment does not mean the right to obtain employment.⁸ What is then the meaning of the

⁴ World Economic Forum, *The Future of Jobs: Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution* (World Economic Forum, 2016), pp. 13-16.

⁵ ILO, *supra* note 2; D. H. Autor, "Why are there still so many jobs? The history and future of workplace automation" in *Journal of Economic Perspectives*, Vol. 29, No. 3 (2015), pp. 3-30.

⁶ Martin Ford, *Rise of the Robots: Technology and the Threat of a Jobless Future* (New York: Basic Books, 2015), p. xv.

⁷ Noam Lemelshtrich Latar, *Robot Journalism: Can Human Journalism Survive* (New Jersey: World Scientific, 2018), pp. 11-64.

⁸ UN CESCR, General Comment No. 18: The Right to Work (Art. 6 of the Covenant), 6 February 2006, E/C.12/GC/18, para. 6.



right to work proclaimed in the ICESCR? First, it means the freedom to choose a profession without state interference; therefore, it means freedom from forced labor. Second, it means the right not to be unfairly deprived of employment.⁹ In both cases, individuals can claim their rights directly from the public authority. Although the right to obtain employment is not protected by international human rights law, unemployment and underemployment are still human rights issues. State Parties to the ICESCR should ensure that everyone is protected from unemployment.¹⁰ In addition, states should take necessary measures to ensure that high unemployment does not arise, which might lead workers to depend on the informal sector of the economy.¹¹ However, this is the duty of the state, not the right of the individual. Unemployment and underemployment are only “macro” matters of state obligation.

On the other hand, this is the state's obligation on matters for which it did not provide a cause. To what extent can the state be accountable for job losses resulting from altering supply and demand in the labor market in a capitalist society? How far can the concerned state intervene to correct the market?¹² The General Comment states progressive realization of full employment as one of its aims.¹³ It should be noted that this is defined as a matter of state obligation, and no individual can claim full employment under it. In addition, while the state is obliged to create a structure for full employment, this obligation is a duty of conduct, and not of consequence. The state should do its best to gradually achieve the realization of this obligation to the best of its resources. Specifically, the state should help its citizens find a job (availability); make the labor market open to everyone in its jurisdiction (accessibility); and make the work itself acceptable, reasonable, and friendly (acceptability and quality).¹⁴ As such, even if there are human rights issues that have not yet been addressed, it is difficult to claim that there are serious human rights violations.

It is a convoluted and risky matter for the state to intervene in the change of industry itself and create jobs. Inadequate intervention can adversely affect industrial development. Therefore, the

⁹ *Ibid.*, para. 4 and 6.

¹⁰ *Ibid.*, para. 37.

¹¹ *Ibid.*, para. 10.

¹² Guy Mundlak, “The right to work: Linking human rights and employment policy”, *International Labour Review*, Vol. 146, No. 3-4 (2007), pp. 195-196.

¹³ UN CESCR, General Comment No. 18, *supra* note 8, para. 19.

¹⁴ *Ibid.*, para. 12.



state may take steps to indirectly influence the market. Ultimately, the market must create jobs in a capitalistic society. To this end, the state must play an indirect role in creating a better environment. In the era of the Fourth Industrial Revolution, however, it can be questioned whether the indirect role of the states to create a better environment is sufficient. Is it possible to proactively prohibit massive dismissals or layoffs? Unlike in the past, the government's indirect efforts to create a better environment may not change the supply-demand relationship in the labor market. Does it constitute a breach of a State Party's obligations if the state fails to prepare for a sudden job loss and responds inappropriately? It is necessary to reconsider what would be an appropriate way for the states to meet their obligation. Work, which is the most important requirement for human functioning in a capitalist society, depends on that obscure but important duty of the state.

III. Income Inequality, Job Polarization, and Disadvantaged Groups

Even if the Fourth Industrial Revolution does not bring about a rapid decrease in employment opportunities, the disappearance of traditional vocations and the emergence of new forms of vocations will result in the increase of both short term and long term unemployment. Besides involuntary unemployment due to a decrease in labor demand, frictional unemployment is also expected to increase significantly. Individuals who find themselves in a state of frictional unemployment are bound to face economic difficulties, leading to the emergence of an unskilled labor class who lacks the necessary training required to adapt to the new labor environment resulting from the Fourth Industrial Revolution. Workers who fail to adapt to the new labor environment will lose their jobs due to innovation and thus, there is a high probability that billions of workers eventually end up in the informal economy.¹⁵ Even if big data were to create new jobs, only those workers who possess highly sophisticated skill sets (digital/internet related) relevant to such jobs would be able to enter this labor market.¹⁶

According to the research of Erik Brynjolfsson and Andrew McAfee of the MIT Business

¹⁵ ILO, Global Commission on the Future of Work: Work for a Brighter Future, 22 January 2019, pp. 18-19, Available at: https://www.ilo.org/wcmsp5/groups/public/---dgreports/---cabinet/documents/publication/wcms_662410.pdf

¹⁶ The Human Rights, Big Data and Technology Project, "The Universal Declaration of Human Rights at 70: putting human rights at the heart of the design, development and deployment of artificial intelligence", 20 December 2018, pp. 19-21.



School, the benefits of the digital industry are enjoyed disproportionately on a winner-take-all basis.¹⁷ They are of the view that the shrinking middle class and deepening polarization in the US is also related to the advances in the digital industry. It can be predicted that those who can utilize and enjoy the benefits of AI, big data, and robotics will be in a much more favorable position in the labor and capital markets as compared to those who cannot do the same. It cannot be ruled out that the former will enjoy a higher income compared to the latter. As a result, income inequality is expected to increase, and job polarization will deepen.

Income inequality, deepening of job polarization, and the consequent deepening of economic inequality among individuals ultimately raise various human rights issues. Philip Alston, the UN Special Rapporteur on Extreme Poverty and Human Rights, called for a shift in awareness whereby extreme poverty and economic inequality are treated as human rights issues.¹⁸ Alston did not consider the Fourth Industrial Revolution in discussing extreme poverty, but if the rise in unemployment or frictional unemployment caused by the Fourth Industrial Revolution creates a state of personal poverty and deepens social and economic inequalities, it would raise the need to look into the situation from a human rights perspective. According to the World Bank, poverty is closely related to the life expectancy of the family, which in turn is related to the right to health.¹⁹ Poverty can also lead to violations of the right to education.²⁰ These issues can eventually develop into human rights issues, especially for the disadvantaged or special groups (or the so-called vulnerable groups).

On the one hand, the technology of the Fourth Industrial Revolution has the potential to free humans from the constraints of time and space in their working environment. This could open up new opportunities for many disadvantaged or special groups, in particular for women, many of whom have lost opportunities in the labor market typically due to their responsibilities regarding family and child care. Mobile phones can increase knowledge of and access to employment opportunities, and a positive attitude toward mobile banking will help women

¹⁷ Amy Bernstein and Anand Raman, “The Great Decoupling: An Interview with Erik Brynjolfsson and Andrew McAfee”, *Harvard Business Review*, June 2015 Issue, Available at: <https://hbr.org/2015/06/the-great-decoupling>

¹⁸ Philip Alston, *Report of the special rapporteur on extreme poverty and human rights*, Human Rights Council, Twenty-ninth session, 27 May 2015, A/HRC/29/31.

¹⁹ *Ibid.*, para. 29.

²⁰ *Ibid.*, para. 30.



workers in rural economies.²¹ Moreover, supplementing physical disabilities using robots, advocating telecommuting, and improving access to employment-related information using big data can guarantee the right to work by improving physical accessibility. In this sense, the issues of alienation, exclusion, and discrimination of the traditionally disadvantaged groups in terms of jobs could be partially resolved by the Fourth Industrial Revolution. In the era of the Fourth Industrial Revolution, the superior status enjoyed by men, youth, the non-disabled, citizens, etc., may not work as a strong advantage, and a substructure that is beneficial to the existing vulnerable groups may be realized.²²

However, in the era of the Fourth Industrial Revolution, the marginalized and excluded from the existing vulnerable groups are also likely to remain as unskilled workers because of not having acquired the new technology or being digitally illiterate due to their limited educational opportunities.²³ In particular, new business models created in the digital economy can perpetuate the gender gap, and the algorithms used for job matching can cause gender bias.²⁴ Specifically, big data can cause a big change in accessibility; the provision of personalized employment information using big data can discriminate, distort, and restrict access to this information. In addition, if individual companies use a hiring system based on big data and AI (which are based on the existing data), existing discriminatory hiring practices can be fixed.²⁵ Polarization, human rights issues, and discrimination against the disadvantaged or special groups due to the Fourth Industrial Revolution ultimately raise the question of obligations upon

²¹ ILO, *Work for a Brighter Future*, *supra* note 15, p. 24.

²² For example, in the light of industries that are heavily influenced by automation in the Fourth Industrial Revolution, primarily male-dominated industries such as manufacturing and construction, the rate of unskilled men losing jobs is higher. There is also a prospect of the Fourth Industrial Revolution being an opportunity for women in specialized fields who work in jobs that automation cannot replace.

Njideka Harry, “Will the fourth industrial revolution be a revolution for women?”, Available at: <https://www.weforum.org/agenda/2018/01/gender-inequality-and-the-fourth-industrial-revolution/>

²³ In general, women who are unskilled workers are expected to lose jobs the most due to the Fourth Industrial Revolution. Rachel Adams, “The fourth industrial revolution risks leaving women behind”, Available at: <https://www.weforum.org/agenda/2019/08/the-fourth-industrial-revolution-risks-leaving-women-behind/>

²⁴ ILO, *Work for a Brighter Future*, *supra* note 15, p. 24.

²⁵ Accessibility is an essential requirement for exercising the right to work. Access has three aspects: obtaining, obtaining information on non-discrimination, physical access and how to gain access to jobs through the establishment of an information network on the employment market at the local, national, and international levels.



States to protect human rights.

IV. Ensuring Lifelong Learning to Protect the Right to Work

Work holds collective significance in providing a network of connections and interactions that forge social cohesion, particularly in the way in which the labor market plays a major role in determining the degree of equality our societies achieve.²⁶ What should the States do in order to protect the right to work in the era of the Fourth Industrial Revolution?

Proposing a human-centered agenda for the future of work to drive growth, equity, and sustainability for the present and future generations, the ILO gives three suggestions: increasing investment in people's capabilities, increasing investment in the institutions of work, and increasing investment in decent and sustainable work.²⁷ Specific mandates include i) strengthening social protection systems based on the principles of solidarity and risk-sharing; ii) establishing an effective lifelong learning system that enables people to acquire skills (upskill and reskill) throughout their life course; iii) guaranteeing fundamental rights and safe and healthy workplaces to the workers; iv) harnessing and managing technology in support of decent work and adopting a "human-in-command" approach to technology.²⁸

Article 6 of the ICESCR prescribes the obligation of the State parties to provide technical and vocational guidance and training programs to achieve full and productive employment as well as the right to freely choose or accept work.²⁹ To ensure availability, the State parties need to develop a special service to enable individuals to find jobs. The obligation to fulfill (facilitate) the right to work requires State parties, *inter alia*, to take positive measures that would enable and assist individuals to enjoy the right to work and to implement technical and vocational

²⁶ ILO, *Work for a Brighter Future*, *supra* note 15, p. 18.

²⁷ *Ibid.*, pp. 11-13.

²⁸ *Ibid.*

²⁹ In particular, Section 3 of Article 6 provides that "The steps to be taken by a State Party to the present Covenant to achieve the full realization of this right shall include technical and vocational guidance and training programmes, policies and techniques to achieve steady economic, social and cultural development and full and productive employment under conditions safeguarding fundamental political and economic freedoms to the individual."



education plans to facilitate access to employment.³⁰

In the context of the Fourth Industrial Revolution, the obligation to protect the right to work of unskilled laborers includes not only ensuring education of new technologies to adapt to the changing labor environment, as prescribed in Article 6(2) of the ICESCR, but also the entitlement to lifelong learning support to people through transitions.³¹ Lifelong education means more than just learning a skill necessary for a job. Lifelong learning encompasses formal and informal learning from early childhood; basic education and adult learning; a combination of foundational, social, and cognitive skills (such as learning to learn) and the skills needed for specific jobs, occupations, or sectors.³²

Ensuring the accessibility of technologies is a major element to protect the right to work in the era of the Fourth Industrial Revolution. It is also noted in the ILC Recommendation No. 169 that the technology policies should contribute to the improvement of working conditions and reduction of working time, and include measures to prevent loss of jobs.³³ States need to, according to the recommendation, ensure through appropriate measures that the education and training systems offer workers sufficient opportunities for adjusting to altered employment requirements resulting from technological change.³⁴ Investment in early education, which facilitates lifelong learning, would provide a way to include those unskilled laborers who could easily be marginalized in the new labor environment in the era of the Fourth Industrial Revolution.

V. Comprehensive Understanding of Freedom and Work for the Objective of Development

³⁰ UN CESCR, General Comment No. 18, *supra* note 8, para. 27.

³¹ ILO, Work for a Brighter Future, *supra* note 15, p. 30.

³² *Ibid.*

³³ ILO Recommendation No. 169 concerning Employment Policy, adopted at Geneva, 70th ILC session, 26 June 1984, para. 20.

³⁴ *Ibid.*, para. 22.



Labor rights are recognized in a number of international legal documents as a human right, where labor is guaranteed as a right to not just any work but decent work. The concept of decent work reconstructs and synthesizes the values and ideologies of the ILO since its founding in 1919 and reflects its basic values, in particular, the enhancement of social justice and human working conditions.³⁵ However, the future of the society is not very bright. Oppenheimer estimates that in the future, there will be two types of occupation. One would be jobs that are supervised by robots, and the other would be jobs that supervise the robots.³⁶ Jobs are not just a matter of guaranteeing physical survival, but must also be considered in terms of their important role in shaping the lives and social identities of people. However, jobs and workplaces controlled, ruled, or charged by AI can undermine individual dignity. Apart from the problem of simple subjugation, the question of human lives would also arise.

How should we understand work in terms of profession and human freedom in relation to dignity in these changing societies? In human history, labor has always been considered sacred and understood as the essence of human dignity. As mentioned, the CESCR Committee explains in the General Comment that jobs and labor are integral and inseparable parts of human dignity, and essential to the realization of other human rights.³⁷ The lack of decent work is a threat to the right to life of human beings and could be seen as deprivation of human capabilities.

To properly understand and solve this problem, we need to interpret the issue of labor rights in terms of human development. International documents recognize the close interrelationship between labor and development rights. The Declaration on Social Progress and Development (1969) states that social development should be based on respect for human beings (Article 2) and guarantee the right to work for everyone (Article 6).³⁸ Article 8 of the Declaration of the Right to Development (1986) affirms that all measures for the realization of the right to

³⁵ Philippe Egger, “Towards a Policy Framework for Decent Work”, *International Review*, Vol. 141 (2002), pp. 161-174.

³⁶ Andrés Oppenheimer, *The Robots are Coming!: The Future of Jobs in the Age of Automation* (New York: Vintage Books, 2019), p. 376.

³⁷ UN CESCR, General Comment No. 18, *supra* note 8, para. 1.

³⁸ UN General Assembly, Declaration on Social Progress and Development: resolution / adopted by the General Assembly, 11 December 1969, A/RES/2542(XXIV).



development should ensure a fair distribution of basic resources, education, health services, food, housing, employment, and income.³⁹ In the same vein, the 1993 Vienna Declaration and Programme of Action para. 2 states that “All peoples have the right of self-determination. By virtue of that right, they freely determine their political status, and freely pursue their economic, social and cultural development.”⁴⁰ Every human being has the freedom to live a self-determined life and must have this freedom. As Amartya Sen points out, freedom is both the means and ends of development.⁴¹ This implies that the purpose of the development of mankind is human freedom. However, it is difficult to overlook the possibility that the development of science and technology will lead to job losses and economic inequality, which will infringe or diminish human freedom.

In the era of the Fourth Industrial Revolution, the realization of labor rights requires that human beings are able to make their own decisions in the course of economic development. Therefore, considering sustainable consumption, production, and development, decent work needs to be reinterpreted in terms of development for freedom without distinguishing between less developed and developed countries. Development, in relation to human rights discussions, tends to be regarded as an issue that is limited to underdeveloped countries. Although the 1993 Vienna Declaration and Programme of Action defines the right to development as an intrinsic human right, it is difficult to disregard how the relationship between development and human rights mainly focuses on underdeveloped countries in terms of international development cooperation. In future societies, however, the debate on development and labor would no longer be confined to the underdeveloped countries. The impact of the Fourth Industrial Revolution is expected to be higher in developing countries than in developed ones, but in the latter countries, job changes and the consequent economic inequality and polarization are inevitable.

The protection of labor rights in the era of the Fourth Industrial Revolution needs to be approached in terms of international development cooperation. General Comment No.18 recognizes that there is an obligation to provide international assistance and cooperation for

³⁹ UN General Assembly, Declaration on the Right to Development: resolution / adopted by the General Assembly, 4 December 1986, A/RES/41/128.

⁴⁰ UN General Assembly, *Vienna Declaration and Programme of Action*, 12 July 1993, A/CONF.157/23.

⁴¹ Amartya Sen, *Development as Freedom* (Oxford University Press, 1999).



the full realization of the right to work.⁴² ICESCR contains elements of international development cooperation. Article 2 of the Covenant defines international assistance and cooperation as a general obligation clause. An analysis of labor rights (Article 6), social security rights (Article 9), food rights (Article 11), health rights (Article 12), and education rights (Article 13) shows that it envisages international development cooperation. This aspect provides a basis for international cooperation in addressing the problems of job loss and inequality caused by the Fourth Industrial Revolution.

VI. Conclusion

Due to the Fourth Industrial Revolution, future projections related to jobs are inevitably not simple. This article briefly examined the threats of jobs; polarization and human rights; vulnerable groups, especially women's, labor rights; state obligations related to the Fourth Industrial Revolution; and the relationship between development and decent work aimed at freedom and attempted to point out some related conundrums.

First, when the number of jobs decreases, it may be questionable whether the state's indirect obligation of building a better environment for job creation is sufficient in the era of the Fourth Industrial Revolution, and it is necessary to reexamine what would be a proper obligation of the states. Second, economic inequality and polarization can be brought about by automation and there is an ambiguous area here in which human rights violations occur. Third, in the era of the Fourth Industrial Revolution, existing superior positions such as men, youth, the non-disabled, and citizens may not be as effective and strong as before and a structure that is beneficial to the existing vulnerable groups could be realized. However, for the existing vulnerable groups that do not acquire new technologies, there is a need to reconsider the relationship between the existing labor and education rights in that they are more likely to remain digitally illiterate because of remaining as unskilled workers or limited educational opportunities. Fourth, the development of science and technology requires the reinterpretation of decent work in terms of (human) development for freedom. The same is true for developed as well as developing countries. This is because, in the future society, it is unknown as to how much freedom can a person obtain for herself/himself through self-determination.

⁴² UN CESCR, General Comment No. 18, *supra* note 8, para. 29.



Of course, it is difficult to understand how labor rights will develop in future societies. However, it is questionable whether labor rights contain and resolve all the above issues under the current international human rights law, and it is necessary to reinterpret the right to work as a fundamental right of a comprehensive character that is the foundation of the future society. Humans have the ability to re-interpret the right to work to control human job losses. The emergence of automobiles during the Second Industrial Revolution eliminated important transportation-related industries such as horses and carriages, but new automobile-related industries appeared and replaced the old ones with various other jobs.⁴³ One of the reasons why human beings will not go away like horses is related to the foundation of democracy and republicanism. Even if surplus manpower is created by the Fourth Industrial Revolution, all the countries that are founded upon the above said features would remain as sovereign where citizens have the right to vote and take part directly or indirectly in controlling the decline of human jobs.⁴⁴

As a core human right in the era of the Fourth Industrial Revolution, labor rights are likely to be as important as the right to life. As pointed out in the General Comment, jobs and labor constitute the basic substructure for living as human beings. In a capitalist society, the absence of a job becomes a human rights issue as it threatens the survival of human beings on various levels. You have to create your own economic, social, and cultural capacities in a capitalist society. The reason is that, without work, everything can collapse. In a capitalist society, the most important competence needed to live and function as a human will be the capacity to work. If there is no work, it is difficult to create an environment suitable for human living. This is because work supports all the other competencies. In a capitalist society, the right to work may be a hidden foundational right that holds up all other rights. Labor rights, like the right to life, need to be understood as a fundamental right. Article 6, paragraph 1 of the ICESCR defines labor rights in a universal and non-limiting way by providing for the recognition of labor rights including the right to earn a living “by labor freely chosen or accepted.” It opens the possibility of new labor rights being considered in regard to social change. On the other hand, as the right to life has a comprehensive character as a supporter of other human rights, the existing labor

⁴³ Erik Brynjolfsson and Andrew McAfee, “Will Humans Go the Way of Horses?”, *The Fourth Industrial Revolution: A Davos Reader* (Foreign Affairs, 2016), pp. 106.

⁴⁴ *Ibid.*, p. 113.



rights should be further evolved for it to gain a comprehensive character. In addition, these efforts are not the sole responsibility of the governments. Clearly, in the era of the Fourth Industrial Revolution, not only the governments but also businesses, civil society, professional groups, and individuals must have the responsibility to protect labor rights. The time has come to think about defining the legal obligations in this regard, especially in the form of soft laws (e.g. guidelines) on corporate accountability.

If such intrinsic reinterpretation of the labor rights is not realized, a radical interpretation may gain momentum. The question, ‘should the concept of labor rights extend beyond the “freedom from forced labor” to protect the right to give up employment for work desired by the individual that does not fall under decent work or to remain unemployed,’ would arise. The development of labor rights in the era of the Fourth Industrial Revolution, therefore, should be observed cautiously.