

# ROBOTICS AND LAW - THE LINKS BETWEEN ROBOTICS AND LABOR LAW, IN PARTICULAR THE LEGAL PERSONALITY OF EMPLOYEES I

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## Abstract

*Recently in the fields of labour law the researchers focus connection points between robotics and law, including labor law, and raise potential problems and their answers. There are lot of types AI, or robots, but robots that may have labor law relevance, those, which move physically in the same space as humans in the workplace. These robots are called collaborative robots. Collaborative robots were developed to be able to perform a specific task in the same workplace with a human at the same time. The study examines issues related to occupational safety, employer power, employee individual and collective will, and employee legal personality in the context of the emergence of robotics.*

**Keywords:** *labour law, collaborative robots, artificial intelligence, flexibility, security.*

## 1. Introduction

Pessimistic predictions about the negative effects of automation unrest and technological change on employment are becoming more widespread. Many different organizations and researchers have already tried to calculate, estimate how many employees' work is endangered by automation. However, research and forecasts agree on only one thing, namely that automation cannot be stopped, and the development of robotics and other technologies will fundamentally reshape the labor market and labour law.

When collaborative and autonomous robots work with humans in the same workspace, there are basically three main

issues to be considered in labor law regulation and to study them is important regarding the challenges the labour law regulation has to face. of view. *On the one hand*, how is the balance between the protective nature of labor law and flexible employment conditions changing? *On the other hand*, how does the employer's power prevail in the interactions of the robot, artificial intelligence and humans, and how can the individual and collective will of employees be interpreted afterwards? Therefore, it is well grounded to take a commitment on the issue of protection during technological development, as well as to examine the development of decisions and their impact on employment and labor law, including liability.

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Thirdly, the present study also deals with future ideas and policy-making, in which the question for me is whether the broad concept of the employee's legal personality is still sustainable, and if so, how it can be interpreted. The role of the social welfare system, employment policy and education policy in the future visions of the next 25 years are of particular importance.

The first part of our study deals with automation as a phenomenon, and after that the first issue will be detailed, namely how the balance between the protective nature of labor law and flexible employment conditions has been changing recently in light of automation.

## 2. Automation as a phenomenon

*“Europe will not be made all at once, or according to a single plan. It will be built*

*through concrete achievements which first create a de facto solidarity.*”<sup>1</sup> (Excerpt from the Schuman Declaration)

There has been a paradigm shift in the economy. The period of the Industrial Revolution is long overdue, and its models have become obsolete: we have entered the digital age. If we are looking for the answer to the question of how the characters have changed, we have to look at the changes in the *game*, too, including *the playing field* and *the rules of the game*.

We might even have thought of labor law as having perpetual concepts, but almost everything seems to be shaken fundamentally. The concept of the employee<sup>2</sup> is changing and so is the structure of the employer<sup>3</sup>, new working conditions

<sup>1</sup> Europe will not be made all at once, or according to a single plan. It will be built through concrete achievements which first create a de facto solidarity. Declaration of 9th May 1950 delivered by Robert Schuman. European Issue no.204 10th May 2011.

<sup>2</sup> See about persons with similar legal status to the employee: Gy. Kiss: A munkavállalóhoz hasonló jogállású személy problémájára az Európai Unióban és a jogállás szabályozásának hiánya a Munka Törvénykönyvében. *Jogtudományi Közlemények*, 2013/1, pp.4-8., T. Prugberger: Az önfoglalkoztatás intézménye a nyugat-európai és a magyar munkajogban. *Magyar jog*, 2014/2, pp. 68-69., T. Gyulavári: A gazdaságilag függő munkavégzés szabályozása: Kényszer vagy lehetőség? *Magyar Munkajog E-folyóirat*, 2014/1, pp. 17-20. T. Gyulavári: *A szürke állomány. Gazdaságilag függő munkavégzés a munkaviszony és az önfoglalkoztatás határán.* [The Grey zone. . Economically dependent work at the frontier of employment and self-employment] *Jogtudományi Monográfiák* 6. Pázmány Press, Budapest, 2014. B. Szekeres: A szürke zóna védelme Németországban. “Jogalkotás és jogalkalmazás a XXI. század Európájában” *Doctoral student conference, University of Miskolc, Faculty of Law, March 11.*, 2016; B. Szekeres: A munkavállalóhoz hasonló jogállású személyek munkajogi és kötelmi jogi védelme a német jogrendszerben. *Spring Wind Conference, Political Science and Law Section; Labor Law, Agricultural Law Subsection, University of Óbuda, Budapest, April 15-17, 2016*; B. Szekeres: A munkavégzési viszonyok változásai, in: *XI. Ph.D. - Konferencia előadásai (szerk.: KONCZ, I., SZOVA, I.), [XI. Ph.D. - Conference lectures ed.: KONCZ, I., SZOVA, I.]*, Conference place and time: Budapest, Hungary, 30.10.2015 Budapest: Association of Professors for the European Hungary, pp. 78-85, B. Szekeres, B.: Gondolatok a munkavállalóhoz hasonló jogállású személyek helyzetéről - a munkajog és a polgári jog kapcsolatáról, *Miskolci Jogi Szemle*, 2016/12. (2.), pp. 561-569., N. Jakab: *A munkavállalói jogalanyiség munkajogi és szociális jogi kérdései- Különös tekintettel a megváltozott munkaképességű és fogyatékos személyekre*, [Labor and Social Law Issues of Legal Personality of Employees - with special regard to People with Disabilities and Work Disabilities] Miskolc, Bíbor Publishing, 2014.

<sup>3</sup> The most important changes are as follows: more and more employers' organizations appear as investment and risk communities, therefore organizational and management methods are also changing: risks and losses are minimized (*just-in-time, lean management*), the transformation of business and employers' interest network and accordingly there is also a change in employees' interests the representation; all the decisions of the often cross-border controlling and controlled companies affect employees and new consultation and information mechanisms

appear<sup>4</sup>, the need of the employee for protection also changes.

Moreover, humanity is on the threshold of an era when robots, bots, androids, and other forms of artificial intelligence with increasingly sophisticated technology may lead to a new industrial revolution, which is likely to affect all sections of society, including employment and working conditions.<sup>5</sup>

Martin Ford points out that people have always feared the machine revolution, being afraid that jobs would disappear and it will cause long-term unemployment.

Historically, skepticism, of course, has a basis, however, at the same time, technological development has a great potential.<sup>6</sup> Adaptation, and as a result, “rebirth,” has created an economic and social environment in which there has been and is an additional opportunity for development and prosperity.<sup>7</sup> At the same time, of course, we also have to deal with adverse effects. Long-term unemployment and lower demand for employees can have a devastating effect, which of course comes at a price in the economy, too. The balance between productivity, rising wages and

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must be built accordingly. The study of the changing employer structure goes beyond the scope of my research, but this will be the subject of my research in the future. See Gy. Kiss (2013) pp. 3-4., See also H. Collins – K. D. Ewing – A. Mccolgan: *Labour Law*. Cambridge University Press, Cambridge. 2012, pp. 38-44; R. Rogowski – R. Salais – N. Whiteside: *Transforming European Employment Policy- Labor Market Transitions and the Promotion of Capability*. Edward Elgar Publishing, Cheltenham, 2012. pp. 229-242.

<sup>4</sup> See Jobs, Jobs, Jobs Creating more employment in Europe, Report of the Employment Taskforce chaired by Wim Kok, November 2003, pp. 8-9.

[http://www.ciett.org/fileadmin/templates/eurociett/docs/Kok\\_Report\\_2003\\_Jobs\\_Jobs\\_Jobs.pdf](http://www.ciett.org/fileadmin/templates/eurociett/docs/Kok_Report_2003_Jobs_Jobs_Jobs.pdf) (23.06.2014) See also: M. Frey: *The Employment Strategy of the European Union*. 2004. [http://econ.core.hu/doc/mt/2004/eng/Frey\\_I.pdf](http://econ.core.hu/doc/mt/2004/eng/Frey_I.pdf) (23.06.2014) pp. 145-193. Green Paper Modernizing labor law to meet the challenges of the 21 st century, Brussels, 22.11.2006 COM(2006) 708 final, 3. M. Frey, (2004) pp. 162-164. Time to move up a Gear The European Commission’s 2006 Annual Progress Report on Growth and Jobs, 6. See also Council and Commission Joint Employment Report 2005/2006, 6, 12-13. [http://aei.pitt.edu/40091/1/COM\\_\(2006\)\\_30\\_3.pdf](http://aei.pitt.edu/40091/1/COM_(2006)_30_3.pdf) (24.06.2014).

R. Blainpain – F. Hendricks (eds.): *Labor Law between Change and Tradition*. Liber Amicorum Antoine Jacobs. Kluwer Law International, The Netherlands. 2011.

<sup>5</sup> McKinsey Global Institute (2017) 14. The speed of automation is influenced by several factors. During this transitional period, even if jobs are lost, new ones will in any case be created, to which the employee must adapt. See also: P8\_TA (2017) 0051 Civil law rules on robotics. The Resolution of the European Parliament as of 16 February 2017 with recommendations to the Commission on civil law rules on robotics (2015/2103 (INL)) (2018 / C 252/25) Preamble B.

Between 2010 and 2014, sales of robots grew by an average of 17% per year and by 29% in 2014, the largest annual increase to date, with the main drivers of growth coming from automotive component suppliers and the electrical / electronics industry; whereas the annual number of patent applications related to robotics has tripled in the last decade. P8\_TA (2017) 0051 Civil law rules on robotics. The Resolution of the European Parliament as of 16 February 2017 with recommendations to the Commission on civil law rules on robotics Recital D.

<sup>6</sup> M. Ford: *Rise of the robots: technology and the threat of a jobless future*, New York, Basic Books, 2015, ix.-x. McKinsey Global Institute (2017) 3.

<sup>7</sup> The optimistic view is that a factory that saves money on labor through automation or introduces lower prices that make its products more attractive, and increased demand may allow more employees to be hired. It can generate more profits or lead to a higher salary. This can lead to increased investment or increased consumption, which in turn can lead to more production and thus more employment. Amazon offers a more modern example of this phenomenon. The company has increased the number of robots working in its warehouses from 1,400 to 45,000 in the past three years. During the same period, the pace of recruitment did not change. It is important that we do not have to talk about the disappearance of certain professions. You need to look at professions according to which ones can be replaced with robots in parts and which ones can’t be replaced at all. See S. Kessler: *The Optimist’s Guide to the Robot Apocalypse*, March 9, 2017, available at <https://qz.com/904285/the-optimists-guide-to-the-robot-apocalypse/> (March 7, 2020). ).

consumer spending will collapse: we will also have to reckon with inequality in terms of income and consumption.<sup>8</sup> Policy makers have a huge role to play in addressing these issues, as timely preparation can alleviate employees' difficulties during the transition period.

And preparation is certainly possible, as automatization does not happen overnight. The McKinsey Global Institute estimates that by 2055, the conditions for the technology transition will be in place, but the actual transition may still lag behind in time.<sup>9</sup> However, We find it important to note that labor shortages generate automation of work processes.<sup>10</sup> Automating activities allows businesses to improve performance by reducing errors, improving quality and speed, often beyond human capabilities. Automation also contributes to productivity, so it can adequately offset the decline in the working-age population.<sup>11</sup>

However, this does not mean that there is no need for human labor.<sup>12</sup> At the current level of technological development, the more automated a production line is, the less flexible it is. An example for this is the

production of cars in different colors. The less automated a production line is, the easier it is to change and produce more kinds of products. The automated production line currently lacks intelligence. However, with the development of artificial intelligence<sup>13</sup>, this will also change. The real change will occur when robots capable of making their own decisions perform their activities in interaction with humans.

Technical, economic and social factors determine the pace and extent of automation. As it is calculated, by 2055 half of today's workflows can be automated, and conditions can speed up or slow down this process by plus or minus 20 years. In the global economy, nearly \$ 16 trillion is paid in wages for activities that can be automated. While less than 5 percent of all occupations use fully automated technologies, about 60 percent of all occupations have activities that consist of at least 30 percent automated activities. It is estimated that the number of occupations that will change in the future is

<sup>8</sup> M. Ford (2015) xvi.-xvii. Of course, technology will not shape the future in isolation. Rather, it will be interweaved with other major social and environmental issues, with challenges such as population aging, climate change and resource depletion. There will be a sudden shortage of employees as the baby boom generation leaves the labor market, however, automation will appear as a counterweight. See also McKinsey Global Institute: A future that works: automation, employment and productivity. January 2017, Executive Summary, 1. At the macroeconomic level, based on modeling, automation may globally result in growth of up to 0.8 to 1.4 percent annually.

<sup>9</sup> See McKinsey Global Institute (2017) pp. 12-13.

<sup>10</sup> As Martin Ford points out. See M. Ford (2015) pp. 42-46. McKinsey Global Institute: A future that works: automation, employment and productivity. January 2017, Executive Summary, 1.

<sup>11</sup> See McKinsey Global Institute (2017) Executive Summary, iii.

<sup>12</sup> See also McKinsey Global Institute (2017) pp. 3. See more: G. Mélypataki: A munka digitalizálódása a munkajogi alapelvek tükrében. Miskolci Jogi Szemle: A Miskolci Egyetem Állam- És Jogtudományi Karának Folyóirata Xv : 3. pp. 97-104. , 8 p. (2020), G. Mélypataki – Zs. Juhászné, Riczu: Labour Law and Employment Policy Implications of Digitizing Work and Inroducing Robotics. *Hantos Periodika* 1 : 1 pp. 57-74. , 18 p. (2020).

<sup>13</sup> See Artificial Intelligence, a non-human intelligence program in the context of a program running on an artificially created machine system, designed to operate systems that are capable of independent decision-making independent of human intervention and thus can trigger elements of each workflow. <https://ec.europa.eu/digital-single-market/en/artificial-intelligence> (9 March 2020) file: /// C: /Users/Dr.%20Jakab%20N%C3%B3ra/Downloads /AIDefinitionpdf%20(1).pdf (March 9, 2020) See also : T. Klein – A. Tóth (szerk.): *Technológia jog – Robotjog – Cyberjog*. [Law of Technology – Law of Robots – Law of Cyber] Wolters Kluwer Hungary Kft., Budapest, 2018, pp. 184.

larger than the number of occupations that will be eliminated through automation.<sup>14</sup>

As regards the effects of automation, therefore, a distinction must be made between *employment as a whole* and *labor law regulations*. With regard to the impact on employment, the European Parliament draws attention to the Commission's forecast that by 2020 Europe will face a shortage of ICT professionals of up to 825000 and that 90% of jobs will require at least basic digital skills.<sup>15</sup>

And within labor law regulation, it is *robotics* and *artificial intelligence* that determine regulatory challenges. What do We mean by these?

From a labor law perspective, robots that move physically in the same space as humans do in the workplace are important. These robots are called *collaborative robots*. Collaborative robots have been developed to be able to perform a specific task in a common workspace with a human at the same time. Man controls and supervises production processes while the robot takes over the strenuous work. The sensitive, light-built collaborative robot is able to work together with man, hand in hand, without a protective fence, with the help of innovative security solutions. Looking to the future, the goal is that the robot shall relieve workers of

the burden of monotonous work and support the execution of precision operations. This innovative technology also has economic benefits and has been shown to result in significant performance gains. To this end, however, it is important to carefully plan workflows and establish proper communication between man and the machine.<sup>16</sup>

The use of such robots obviously affects the occupational structure. It really requires different knowledge and digital skills from employees. However, the use of these robots raises serious *occupational safety issues*. In the case when the robot does its work in a space separated by a protective fence from humans, we can talk about an effect on employment, but we cannot talk about labor law effect (cases of coexistence and cooperation<sup>17</sup>). However, when working in a common space, several questions arise: *is the robot a dangerous plant? Is it a hazardous technology according to Act XCIII of 1993 on Occupational Safety and Health? How are the robot operator and the human being responsible for the damage caused?* Labor and civil liability issues also need to be resolved, which has not yet succeeded. The consequences of damage in the interaction between robots and humans must be reconsidered. In this, the European

<sup>14</sup> McKinsey Global Institute: A future that works: automation, employment and productivity. January 2017, Executive Summary, iii. The same writes on p. 2: "As processes are transformed by the automation of individual activities, people will perform activities that are complementary to the work that machines do (and vice versa). These shifts will change the organization of companies, the structure and bases of competition from industries, and business models." McKinsey examined the ability for automation of 2000 work activities in cases of 800 different occupations based on data from the U.S. Department of Labor. See McKinsey Global Institute (2017) 4-16.

<sup>15</sup> P8\_TA (2017) 0051 Civil law rules on robotics. The Resolution of the European Parliament as of 16 February 2017 with recommendations to the Commission on civil law rules on robotics Paragraph 41.

<sup>16</sup> See the information of the Hungarian Chamber of Engineers. <https://www.mmk.hu/informaciok/hirek/kollaborativ-robotok> (downloaded: March 9, 2020).

<sup>17</sup> In the case of coexistence: the robot has no contact with humans, the workspace is separated, contact is possible but unpredictable and unlikely. In the case of cooperation: the robot and the human have a direct relationship, the workspace is the same, the work processes are separated in time, contact is possible but unpredictable and unlikely. In the case of collaboration: the robot and the human have a direct connection, the workspace is the same, the work processes take place at the same time, there is a continuous direct connection. Hungarian Chamber of Engineers. <https://www.mmk.hu/informaciok/hirek/kollaborativ-robotok> (downloaded: March 9, 2020).

Parliament's resolution as of 2017 provides guidance. Today, when collaborative robots are used in the workplace, international standards are applied and occupational safety rules are of chief importance in regulation - understandably.<sup>18</sup>

However, in the European Parliament's resolution, collaborative robots have artificial intelligence as regards future conceptions: that is, they make autonomous decisions, learn and adapt. These robots should be treated as "humans" in the collaborative plant and workspace<sup>19</sup> in order that any liability issues that may arise should be resolved. At the end of the day, they need to be rewarded, and if they make a mistake, they should be punished in order to learn. Regarding these robots, it may not be

possible to maintain human control in all cases.

### 3. Flexibility and security?

The mechanization of agriculture has, logically, rerouted the worker towards cities and factories with mass-production.<sup>20</sup> Automation and globalization have paved the way for new forms of work, when the worker needs to have digital skills. Over the last nearly twenty years, discourses on the future of labor law have fundamentally determined the development of dogmatics in

<sup>18</sup> MSZ EN ISO 10218-1: 2011 Robots and robotic devices. Safety requirements for industrial robots. Part 1: Robots, MSZ EN ISO 10218-2: 2011 Robots and robotic devices. Safety requirements for industrial robots. Part 2: Robotic systems and their coordination, MSZ EN ISO 12100: 2011 Safety of machinery. General principles of design. Risk assessment and risk reduction, MSZ EN ISO 13850: 2016 Safety of machinery. Emergency stop. Design principles., MSZ EN ISO 13855: 2010 Safety of machinery. Arrangement of safety devices taking into account the approach speed of (human) body parts, ISO / TS 15066 Technical specification.

The use of collaborative robots reduces the following risks: the risk of injury to hands and arms; no sharp, puncture surface. The edges and edges are rounded, including tools and workpieces. Human responsibility. There is no need for a complicated entitlement system, therefore the incidence of injuries and accidents due to negligence is reduced. Design. It is easy to mobilize and requires little space. As a result, the risk of personal injury during installation and relocation is low. Stay in scope. Anyone can be in the immediate vicinity of the robot, without physical fencing. Dangerous obstacles. Preventable, no cluttered wiring harness and robot cell. Workloads. They can be triggered and stretch injuries can be prevented. Monotonous workflows. They can be triggered and supported, thereby reducing a person's psychological burden.

New risks arising from the use of collaborative robots: moving machine parts. If the machine shifts to speed and people are in the collaborative workspace, they may be pushed by moving machine parts. Improper use. Parts of the machine can push workers and cause minor injuries (body parts such as hands, arms). Human intervention in protective equipment. Workpiece injury, e.g. pinch, fall, blow. Energy. Damage caused by energy stored in the machine structure, e.g. in case of collision and entrapment. Psychosocial factors. Increase in load. Hungarian Chamber of Engineers. <https://www.mmk.hu/informaciok/hirek/kollaborativ-robotok> (downloaded: March 9, 2020).

<sup>19</sup> Collaborative plant: the state in which a robot specially designed for this process works together with the robot operator in the collaborative workspace. Collaborative workspace: A place within the operating range of a robot where the robot, including the workpiece, and the operator can perform work at the same time during the technological process. Quasi-static connection: contact between the operator and a part of the robot, where a part of the operator's body can be pinched between the moving parts of the robot or another fixed or moving part of the robot cell.

<sup>20</sup> In the context of the decline in agricultural employment during the Industrial Revolution, we expected a significant proportion of agricultural workers to become unemployed. But that's not what happened. Instead, employment in other sectors increased over the same period as the decline in agricultural employment happened. People started to work in factories, and then computers, airplanes, and transport of freight also appeared — occupations that were almost unimaginable in 1900. See also S. Kessler: The Optimist's Guide to the Root Apocalypse, March 9, 2017, available at: <https://qz.com/904285/the-optimists-guide-to-the-robot-apocalypse/> (March 2020) 7.)

labor law.<sup>21</sup> In the development of labor law, consequently, new forms of work have questioned the need for the fundamental function of labor law: the protection of the worker. The question arose with a good reason: *is the task of the law still to ensure job security, or has that time passed and should it rather be to protect income and employability?* The response of labor law to this was the introduction of the concept of 'flexicurity'.<sup>22</sup> In the debate on flexicurity, We believe that the European Pillar of Social Rights (hereinafter referred to as the 'Pillar') provides guidance. Like the Schuman Declaration, it is a declaration, however, it takes a position on the essential elements of security. In both declarations, it is important to preserve solidarity as an indisputable value, a norm. When we talk about the effects of robotics and artificial intelligence

on employment and labor law regulation, We think that responses to technological challenges must be interpreted on the part of the working person within the framework of safety walls. In what follows, We address the issue of flexibility and security from the focus of automation and artificial intelligence.

The Preamble to the Pillar emphasizes that "*Economic and social development are closely interlinked and the creation of a European Pillar of Social Rights should support efforts to form an employment model through improving the competitiveness of a more inclusive and sustainable Europe and strengthening investments, job creation and social cohesion.*"<sup>23</sup> When analyzing the Pillar, it is already striking that we are talking about principles rather than rights.<sup>24</sup> The development of the social dimension,

<sup>21</sup> See S. Deakin – G. S. Morris: *Labor Law*. Sixth Edition. Hart Publishing. Oxford and Portland, Oregon, 2012. pp. 30-37. 131-190., M. Freedland – N. Countouris: *The Legal Construction of Personal Work Relations*. Oxford University Press, Oxford., 2011, ILO (1997) Contract Labor - Fifth item on the agenda Report V (1) to the 86th Session of the International Labor Conference 1998, Geneva. S. Deakin – F. Wilkinson: *The Law of the Labor Market. Industrialization. Employment and Legal Evolution*. Oxford University Press, Oxford, 2005.; R. Blainpain – F. Hendricks: *European Labor Law*. Kluwer Law International Bv, The Netherlands 2010.; B. Veneziani: *The Employment Relationship*. In: Hepple, B. - Veneziani, B. (ed.): *The Transformation of Labor Law in Europe. A Comparative Study of 15 Countries 1945-2004*. Hart Publishing. Oxford and Portland, Oregon. 2009; S. Deakin: *The Contribution of Labor Law to Economic and Human Development*. In: G. Davidov – B. Langille (ed.): *The Idea of Labor Law*. Oxford University Press, Oxford, 2011. pp. 156-178; M. Freedland – N. Countouris: *The Legal Characterization of Personal Work Relationships and the Idea of Labor Law*. In: Guy Davidov - Brian Langille (ed.): *The Idea of Labor law*. Oxford University Press, Oxford 2011, pp. 190-208.; A. Bronstein: *International and Comparative Labour Law*. Palgrave Macmillan, International Labour Organisation. 2009. pp. 1-22.

<sup>22</sup> See Y. Stevenst – van B. Buggenhou (1999-2000): *The Influence of Flexibility as a Motor of Changing Work Patterns on Occupational Pension as a Part of Social Protection in Europe*. *Comparative Labor Law & Policy Journal*, 21. pp. 331-370; Stone, K. V. W.: *Flexibilization, Globalization, and Privatization: Three Challenges to Labor Rights in our Time*. In: Bercusson, B. - Estlund, C. (ed.): *Regulating Labor Law in the Wake of Globalization. New Challenges, New Institutions*. Hart Publishing, Oxford and Portland, Oregon. 2009. pp. 115-136.; J. Michie. – M. Sheehan: *Labor 'flexibility' - securing management's right to manage badly?* In: Brendan Burchell - Simon Deakin - Jonathan Michie - Jill Rubery (ed.): *Systems of Production, Markets, Organizations and Performance*. Routledge, London and New-York. 2005. pp. 178-191.

<sup>23</sup> Commission Recommendation of 26.4.2017 on the European Pillar of Social Rights; 6. (The English text can be found at: [https://ec.europa.eu/commission/priorities/deeper-and-fairer-economic-and-monetary-union/european-pillar-social-rights/european-pillar-social-rights-20-principles\\_en](https://ec.europa.eu/commission/priorities/deeper-and-fairer-economic-and-monetary-union/european-pillar-social-rights/european-pillar-social-rights-20-principles_en)) (For the English text, see: [https://ec.europa.eu/commission/priorities/deeper-and-fairer-economic-and-monetary-union/european-pillar-social-rights/european-pillar-social-rights-20-principles\\_en](https://ec.europa.eu/commission/priorities/deeper-and-fairer-economic-and-monetary-union/european-pillar-social-rights/european-pillar-social-rights-20-principles_en)).

<sup>24</sup> The Pillar embodies the principles and rights of a fair and well-functioning labor market and welfare systems of Europe in 21st century. It reaffirms existing rights and highlights principles that address the challenges of economic, technological and social development. Hendrickx said that because of its effect of this, we must be careful. It certainly has a new, political momentum, which is different from the pre-Millennium documents. F. Hendrickx:

which has been emphasized since the Paris Declaration, is indeed a condition for a competitive and sustainable Europe, in which the principles laid down in the Pillar aim to create *an employment model*. However, in the development of the employment model, automation must be considered as another stage of economic and social development in the next 25 years.

Change is not necessarily bad. The potential arising from this is also confirmed by the European Parliament, which states that the development of robotics and artificial intelligence can offer an opportunity to change human life and working methods and increase levels of efficiency, savings and safety.<sup>25</sup> Moreover, the widespread use of robots does not necessarily lead to labor replacement automatically, though in labor-intensive sectors, lower-skilled jobs are likely to be more exposed to the risk of automation. This trend could bring production processes back to the European Union: whereas researches have shown that employment is growing significantly faster in occupations that use computers to a greater extent; whereas the automation of work provides an opportunity

for people who do monotonous work to switch to more creative and meaningful tasks; whereas automation requires governments to invest in education and to execute other reforms in order to prioritize the development of the skills that tomorrow's workers will need.<sup>26</sup>

The workers of tomorrow really need to have new abilities and skills<sup>27</sup>, however, robotics and artificial intelligence will not change people's basic needs. Jobs will be classified according to the criteria of whether or not the workflow can be replaced by a robot.<sup>28</sup> Nonetheless, We are convinced that the *working person*, even when working with robots with artificial intelligence, *still needs protection*. The questions are what kind of protection this is and whether the full adaptation of technological results in a sector will change the level of protection.

When we are trying to achieve a balance between flexible working conditions and security in the present labor law debates, We think it is the Pillar that can help. In my view, the minimum level of a *life worthy of a working person* has been formulated in the Pillar, in which the value of work is unquestionable, and which is also *timeless* in

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European Labor Law and the Millennium Shift: From Post to (Social) Pillar. In: F. Hendrickx, –V. Stefano (eds.): Game Changers in Labor Law. Shaping the Future of Work. *Bulletin of Comparative Labor Relations - 100*. Kluwer Law International BV, Netherlands, 2018. pp. 60-61.

<sup>25</sup> ... And to provide a higher level of services; whereas, in the short and medium term, robotics and artificial intelligence promise efficiencies and savings not only in production and trade, but also in areas such as transport, medical care, rescue, education and training; agriculture, while making it possible to avoid exposing people to dangerous conditions, such as the clean-up of areas contaminated with toxic substances,... P8\_TA (2017) 0051 Civil law rules on robotics. European Parliament resolution as of 16 February 2017 with recommendations to the Commission on civil law rules on robotics Recital E.

<sup>26</sup> P8\_TA (2017) 0051 Civil law rules on robotics. European Parliament resolution of 16 February 2017 with recommendations to the Commission on civil law rules on robotics Recital J. Sarah Kessler: The optimist's guide to the robot apocalypse, March 9, 2017, available at: <https://qz.com/904285/the-optimists-guide-to-the-robot-apocalypse/> (March 6, 2020).

<sup>27</sup> See M. Ford (2015) xv.-xvi. In the past, automation technology was more of a specialization in one employment sector, therefore workers had to switch to another industrial sector. Today's situation is quite different. Information technology is indeed technology with a general purpose and its impact is ubiquitous. Almost every industry will be less labor intensive as the new technology becomes part of the business model.

Martin Ford analyzes the phenomenon of automation in certain sectors at great length. He points out that the service sector and agriculture are the most exposed to the replacement of manual labor by robots. See M. Ford (2015) 5-27.

<sup>28</sup> See M. Ford (2015) xvi.



the employment and economic changes caused by technological development.

A *work-based society* is one that can truly remain *competitive* in the 21st and the subsequent centuries. The European Commission in the Pillar and the European Parliament in the resolution provide guidance on how and under what conditions this should be executed. First, We will examine the model of the Pillar.

We see the employment model outlined by the Pillar as *a social and labor market program*. In our opinion, an employment model has been developed in the Pillar in which *the degree of compromise between flexibility and security has become visible*. The Pillar sets out what the European

Union considers to be a minimum level of social protection in order to maintain and enhance competitiveness, as Member States can also promote social rights in a more ambitious way than the way the rights laid down in the Pillar define. It can be stated from the Pillar that the joint realization of economic and social development can take place along the following principles: *equal opportunities and employment rights*<sup>29</sup>, *fair working conditions*<sup>30</sup>, *social protection and social inclusion*<sup>31</sup>. These can be considered as *the mainstays* of the employment relationship in the development of the employment model. The spread of innovative forms of work is guaranteed only if a minimum of protection is provided<sup>32</sup>.

<sup>29</sup> The employment model is based on equal opportunities. In this context: Everyone has the right to quality and inclusive education, training and lifelong learning. Equal treatment and equal opportunities for women and men must be ensured in all areas. Everyone has the right to equal treatment in employment, social protection and education, and to have access to goods and services which are available to the public. Besides, everyone has the right to active support for employment, that is, we have reached the employment policy leg of the social and labor market program. It is clear from the provisions that the jobseeker must be provided with services that will lead him back to the labor market as soon as possible. The principles of the transit labor market are also set out in this section. Everyone has the right to timely and personalized assistance to improve their employment or self-employment prospects. This includes the right to support for job search, training and retraining. Everyone has the right to social protection and training during a career change. Young people have the right to continuing education, apprenticeships, traineeships or a fair job offer within 4 months of becoming unemployed or leaving education. Unemployed people have the right to personalized, continuous and consistent support. The long-term unemployed are entitled to a personalized, detailed assessment no later than the 18th month of unemployment.

<sup>30</sup> The section on fair working conditions describes the basic rules of the labor law, in which the following principles and rights are the mainstays: secure and flexible employment, wage protection, information on employment conditions, protection against dismissal, social dialogue and employee participation, work-life balance, a healthy, safe and well-designed work environment and data protection.

<sup>31</sup> Alongside the employment policy and labor law regulatory legs of the social and labor market program, the social protection system is emerging. I myself see employment policy as part of the social protection system, but it seems to be separate here. Social protection and social inclusion involve important building blocks of the social dimension: Childcare and child support, Social protection, Unemployment benefit, Minimum income, Old-age income and old-age pensions, Health care, Social inclusion of people with disabilities, Long-term care, Housing and assistance to the homeless, Access to basic services.

<sup>32</sup> It is important to distinguish between different types of self-employment when planning EU activities to promote self-employment, as well as when designing policies, either to encourage self-employment or to protect self-employed workers more effectively. Eurofound (2016), *Exploring the fraudulent contracting of work in the European Union*, Publications Office of the European Union, Luxembourg. Executive summary, 2. The impact of digitization is confirmed by another report: Eurofound (2017), *Aspects of non-standard employment in Europe*, Eurofound, Dublin. 3. See also:

De Stefano, V. (2016): The rise of the “just-in-time workforce”: on-demand work, crowd work and labor protection in the “gig-economy”. *Comparative Labor Law and Policy Journal*, Vol 37 (3) 471-503; Finkin, M. (2016): Beclouded Work in Historical Perspective. *Comparative Labor Law and Policy Journal*, 37 (3) 603–618; Kovács, E. (2017): Regulatory Techniques for ‘Virtual Workers’. *Hungarian Labor Law E-Journal*, 2. 1-15; Schiek, D. – Gideon, A. (2018): Outsmarting the gig-economy through collective bargaining - EU competition law as a barrier?

Digitalization and automation are expected to further increase the diversity that currently exists in working conditions.<sup>33</sup>

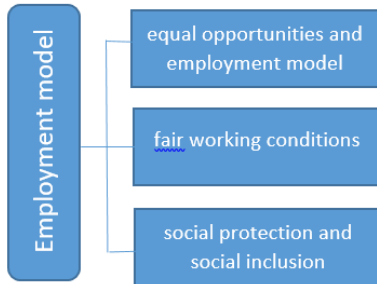


Figure 1 Mainstays of the Employment Model of the Pillar

Within the framework of these mainstays, the issues of automation must also be interpreted, since the basis of working conditions is man. As a result of technological development, the creation of rules to protect the working person may remain one of the main objectives: the definition of a minimum level of protection in which the human right to human dignity is most fully exercised. In this minimum of protection, We continue to consider the principle of equal opportunities, fair working conditions and, from an employment point of view, the principles of social inclusion and social protection to be essential.

The European Parliament's resolution as of 2017 also outlines the value system

*International Review of Law Computers & Technology*, 32 (3) 1-20, [https://www.researchgate.net/publication/324449617\\_Outsmarting\\_the\\_gigeconomy\\_through\\_collective\\_bargaining\\_-\\_EU\\_competition\\_law\\_as\\_a\\_barrier\\_to\\_smart\\_cities](https://www.researchgate.net/publication/324449617_Outsmarting_the_gigeconomy_through_collective_bargaining_-_EU_competition_law_as_a_barrier_to_smart_cities); Smith, R. - Leberstein, S. (2015): *Rights on Demand: Ensuring Workplace Standards and Worker Security in the On-Demand Economy*. New York, National Employment Law Project, <http://www.nelp.org/content/uploads/Rights-On-Demand-Report.pdf> 2015; Florisson, R. - Mandl, I. (2018): *Digital age Platform work: Types and implications for work and employment - Literature review*. Eurofound, Publications Office of the European Union, Luxembourg 1.; Cherry, M. - Poster, W. (2016): *Crowdwork, Corporate Social Responsibility, and Fair Labor Practices*. Saint Louis University Legal Studies Research Paper no. 2016-8, <https://ssrn.com/abstract=2777201>.

<sup>33</sup> I also consider it important to be careful to avoid employment relationships that lead to the exclusion of workers, precarious work, even by improper exercise of rights under atypical contracts. Precarious work, according to an EU study as of 2013, involves instability, a lack of labor protection, characterized by social and economic vulnerability. *Social protection rights of economically dependent self-employed workers*; Study; (2013); Directorate General for internal policies; Policy department A: Employment policy; 14. Precarious work is nothing more than unstable work. On the sociological side of the topic, see: <http://ujegyloseg.hu/rossz-fizetes-letbizonytalansag-itt-a-prekariatus/>; (Downloaded: March 5, 2018).

“The development of employment relationships which lead to precarious working conditions must be prevented, inter alia, by prohibiting the abuse of non-traditional employment contracts.” *Commission Recommendation of 26.4.2017 on the European Pillar of Social Rights*; [https://ec.europa.eu/commission/priorities/deeper-and-fairer-economic-and-monetary-union/european-pillar-social-rights/european-pillar-social-rights-20-principles\\_en](https://ec.europa.eu/commission/priorities/deeper-and-fairer-economic-and-monetary-union/european-pillar-social-rights/european-pillar-social-rights-20-principles_en) (Downloaded: March 5, 2018).

For the concept of self-employment, see Gy. Kiss, (2013), T. Prugberger (2014), Szekeres, B.: *Munkajogon innen - munkaviszonyon túl*. Miskolci Egyetem, Deák Ferenc Állam- és Jogtudományi Doktori Iskola, 2018, pp. 55-68. Szekeres, B.: Fogalmi zárzavar a munkajogtudományban: az önfoglalkoztatás problematikája. *Publicationes Universitatis Miskolcensis Series Juridica Et Politica XXXVI/2*, pp. 472-484. Recently, digitization has significantly increased the pace of change. Companies and businesses need to adapt their economic activities more quickly to different markets in order to carry out new product cycles or seasonal activities and to deal effectively with fluctuations in business volume and turnover. In many cases, businesses prefer new forms of employment and contracts, such as on-call work, voucher-based employment and temporary work, in order to be able to respond to these needs. Other forms of self-employment or employment, such as platform-based work, also create new opportunities for people to enter or remain in the labor market and to supplement their income from their main job. See Council Recommendation on access to social protection for workers and the self-employed, COM (2018) 132final 1.

without which technological development will generate dangers. These are as follows: human dignity, equality, justice and fairness, non-discrimination, information-based consent, the protection of privacy and family life, and the principle of data protection, as well as other fundamental principles and values of EU law, for example, the principles of non-stigma, transparency, autonomy, individual responsibility and social responsibility.<sup>34</sup>

In our view, the predicted technological changes do not change this protection, either. And the only reason for this is that *these principles are fundamental to man himself*. And the working person does not disappear, he must 'merely' adapt - as always - to change. The question arises in us with good reason: *will the change in the decision-making power transform our perception of protection?* The definition of the minimum level of protection must not change in any way, however, the principles of flexibility in labor law, such as the principle of fair consideration, will only be relevant to man.

#### 4. Conclusions

Thus, in the first part of the study, one of the three planned questions was answered. We have found that when collaborative and autonomous robots work with humans in the same workspace, it is

justified to examine three additional issues in labor law regulation. On the one hand, how the balance between the protective nature of labor law and flexible employment conditions is changing. On the other hand, robot and artificial intelligence, as well as how employer death prevails in human interactions, and how employee individual and collective will can be interpreted thereafter. That is why it is justified to take a position on the issue of protection during technological development, as well as to examine the development of decisions and their impact on employment and labor law, including liability.

We addressed the issue of protection, namely it was important to see where it can be found under the pressure of the economic and social changes. *As a result of technological development, the creation of rules to protect the working person may remain one of the main objectives*: the definition of a minimum level of protection in which the human right to human dignity is most fully exercised. In this minimum of protection, we continue to consider the principle of equal opportunities, fair working conditions and, from an employment point of view, the principles of social inclusion and social protection to be essential.

Second part of the study will discuss the importance of the decision-making power and future visions on the automation.

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