

ROBOTICS AND LAW - THE LINKS BETWEEN ROBOTICS AND LABOR LAW, IN PARTICULAR THE LEGAL PERSONALITY OF EMPLOYEES II.

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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. Contents

When collaborative and autonomous robots work with humans in the same workspace, there are basically three issues to consider 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.

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

Since I answered the first question in the first part of the study, the second and third questions are explained in this part of the study.

The transformation of decision-making power opens a new front in regulatory debates. Since artificial autonomous robots, and thus collaborative

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The present paper represents the second part of the study "ROBOTICS AND LAW - THE LINKS BETWEEN ROBOTICS AND LABOR LAW, IN PARTICULAR THE LEGAL PERSONALITY OF EMPLOYEES", and the first part of the study was published in LESIJ no. XXXVII, vol. 2/2020, pp. 73-86, please see http://lexetscientia.univnt.ro/download/2020_XXVII_2_7_LESII.pdf.

autonomous robots, will also be able to perform activities in a collaborative workspace that were previously typically and exclusively performed by humans. As the European Parliament points out, ensuring *non-discrimination, i.e. equal opportunities, due process, transparency and comprehensibility of decision-making processes*, is essential when defining the legal framework. Safeguards shall be incorporated in automated and algorithmic decision-making processes and human monitoring and control shall be made possible.¹ In the following, therefore, we deal with the issue of decision-making power.

In labor law, similarly to civil law relations, the decision plays a key role due to the specific position of the parties. Decisions made by the employer, the employee (individual will) and the community of employees (collective will) are of great importance. Let us first review *the importance of decisions* in the employment relationship from the point of view of individual and then collective will.

The basic principle of the private law of employment is the so-called contractual principle. More specifically, this means that everyone has the opportunity to establish and shape their legal relationships through self-determination regulation - through decisions.² In addition, however, it is the

task of the legislature to enact regulations that protect the individual employee against the power of the employer.

During the Industrial Revolution, in the 18th-19th century, the legal system applied the principles of private law and property law to the sale of labor. At first, the employment contract was considered as a classical private law contract. Freedom of property took absolute precedence over the interests of employees. At the same time, keeping labor law purely within the framework of private law was unsustainable in the long run, as the subjects of private law relations are ancillary parties at the market, whereas the asymmetry between the employer and employee is clear.³ The contractual freedom of the employee was only an illusion, in the last century the unbridled pursuit of the employer's interest may have led to the vacancy of the employment contract, and today - I believe - *one of the marginal problems of (Hungarian and foreign) labor law is the vacancy of employment contracts*.⁴ There are two ways to protect the weaker party and thus restrict contractual freedom: collective action and state intervention.⁵

According to György Kiss, labor law is primarily the right of those who are not at such a degree of independence that they would not need to use their labor force for

¹ It is also important to note that as divisions in society continue to increase as the middle class shrinks, we must keep in mind that the development of robotics may result in the concentration of large wealth and considerable influence in small groups. 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 Preamble Sections H and K and Q.

² Kiss, Gy. (2005) 27.

³ Hajdú, J., Kun, A. (2011): Labor Law I., Budapest, Patrocinium, 59.

⁴ 'It may seem that the employment contract is only relevant as a causa, it has little or no role in shaping the legal relationship at the time of performance.' Kiss, Gy. (2014) 40. This is also reflected in the fact that Dutch labor law treats the employment contract as similar to civil consumer contracts, which view is not unfamiliar to Tamás Prugberger and György Kiss, either, which can also provide protection for the weaker party, the employee.

⁵ Hajdú, J., Kun, A. (2011) 59. Prugberger, T. (2002a): The issue of the protection of the more vulnerable party in the contract law part of the Concept of the new Hungarian Civil Code, *Civil Law Codification*, 3, 37. 39. Kiss, Gy. (2010) 29-30.

others” interests.⁶ All this led to the incorporation of safeguards into the legal relationship, which served to maintain a state of equilibrium between the parties. This has become a primary task of labor law. While legal relations of work under civil law are synallagmatic, the content of the employment relationship needs to be made *more synallagmatic*.

Private law is “*the right of individuals, which really becomes that with the institutionalization of individual self-government.*⁷ *The special and concrete right that results from this is the truest private law, and its central concept is the contract.*” The significance of the individual self-government is what, by its nature, labor law lacks due to its subject matter, the indeterminacy of the job and its

concretization, namely, in accordance with the right of the employer to give instructions, to control and management.⁸ That is, the imbalance is inherent in the legal relationship because of its subject matter (the indeterminacy of the service) and the associated “right of employer to specify”.⁹ The employer’s individual self-government is seemingly and actually strong. The definition of performance by the employer does not mean a change in the basic conditions of the employment relationship, but the concretization of performance, which can basically be deduced from the contract.¹⁰ The unilateral definition of performance is an important decision that is limited by the principle of fair consideration.¹¹

⁶ Kiss, Gy. (2001) 200-202. József Radnay considers collective bargaining autonomy to be such a protective measure. Radnay, J. (2001): The relationship between the Civil Code and labor law, with special regard to Hungarian law. In: Manfred Ploetz - Hilda Tóth (ed.): *The codification and functional relations of labor law and civil law*. Study volume. Novotni Publishing House, Miskolc, 259-260. Kiss, Gy. (2013) 6., Kiss, Gy. (2006) 255.

⁷ Kelemen, L. (1941) 17.

⁸ The Labor Code (Mt.) does not contain Section 102 (3) (b) of the Mt. as of 1992, according to which the employer is obliged to provide the employee with the information and guidance necessary for the performance of the work. This obligation is incumbent on the employer even in the absence of an explicit statutory provision. This also follows from the fact that the employer directs the work and, as the Explanatory Memorandum to Section 51 of the Mt. emphasizes, ‘it follows from the provision in Section 42 (2) of the Mt. that it is not only a right but also an obligation of the employer, so he must organize the work in such a way that the employee can perform his job properly.’ Berke, Gy. - Kiss, Gy. (2015).

⁹ ‘*The effects of the indicated characteristics of the employment relationship are analyzed by Wank, who calls the employment relationship an Äquivalenzverhältnis that gives the employer ample scope to influence the content of the employment relationship in the performance process. In German law, this is referred to as the Einseitige Leistungsbestimmung or Leistungsmacht.*’ Kiss, Gy. (2014) 40.

¹⁰ The two basic duties of an employee are the duty of availability and the duty to work. The employment relationship is distinguished from all other private employment relationships by the duty of availability. The dogmatic basis of availability can be deduced from the nature of the employment contract and the employment relationship, so to that extent it has a contractual basis. In the employment contract, the object, i.e. the service, is defined only in a framework, according to a ‘kind’ and consequently the employer has the right to determine the manner of performance of the employee. ... Although the duty of availability is an independent duty of the employee and a defining criterion of the employment relationship, it is not an obligation for one’s own purposes. Passive behavior, which otherwise requires the employee to comply with a number of other behavioral requirements, has the direct purpose of fulfilling the duty to work, which is realized through the acceptance of the employer’s instruction. Berke, Gy. - Kiss, Gy. (2015) In contrast, the employer’s right to form (Gestaltungsrecht) in this capacity covers a wider scope. This distinction is also important from the point of view of Hungarian labor law. The difference between the two legal systems is that while in German law the determination of the legal basis of the Weisungsrecht, Direktionsrecht and the removal of its limits is a legal issue, in Hungarian labor law the power of concretization occurs *ex lege* - at least in the legislator’s concept – and its limits are also defined by law. Kiss, Gy. (2014) 40-41.

¹¹ According to Section 6 (3) of the Labor Code, ‘The employer is obliged to take into account the interests of the employee on the basis of fair consideration, the unilateral determination of the method of performance may

A working person really needs protection, but once he or she can protect himself or herself, he or she *does not want* to work in a strict labor regulatory environment. I do not want to simplify the problem in any way; however, it must be seen that the changes in the world around us *simultaneously shape the playing field, the players*, with the direct consequence that *the rules of the game* also change. That is why we are talking about the future of labor law. Of course, labor law has a future, only *in a different context, on different bases* than in the last nearly 200 years.

Over the last fifty years, regarding changes in the economic and social environment, we have to highlight three major challenges to which the legal system has had to respond: *globalization, changing forms of work, the strengthening of the individual, and thus the decline of collective consciousness*. What all three have in common is that technological innovation has had a major impact on the development of the processes.¹² In this development, in my view, economic and social changes make *employment relations shift towards civil employment relationships*, the sharp boundaries between individual relationships

are blurred, and employment relationships are often transformed.

However, the rules of the game need to be reconsidered when, due to technological advances, namely automation, certain work processes are carried out by collaborative autonomous robots / artificial intelligence. From this point of view, it is appropriate to deal in detail with the legal personality of the robot and artificial intelligence, as well as with labor law liability. Since we cannot talk about the contractual principle, the individual and collective will of the parties, which shape the employment relationship in this case. At this point, the role of the social partners, and that of the collective will, arises.¹³ *Globalization, the changing nature of work and the increased role of the individual* can be said to shake the foundations of labor law regulation at the same time, reinforcing each other. In the 19th and 20th centuries, working conditions were improved through collective bargaining. The collective consciousness of the workers was strong. However, as a result of the cross-border activities of multinational companies, the organization of

not cause disproportionate harm to the employee.' The institution of fair consideration is related to the so-called right to unilateral performance determination.

Paragraph 315 of the German Civil Code (BGB) governs the facts in which one of the parties has the right to determine the manner in which the contract is to be performed. Under the rule, if performance is determined by one of the contracting parties, in case of doubt, the decision must be interpreted on the basis of fair consideration. However, this principle must also be interpreted in conjunction with the General Code of Conduct (§ 6 of the Mt.), such as good faith, fairness, the obligation of mutual cooperation, and the principle of 'Nemo suam turpitudinem allegans auditur'.

¹² Bellace, J.R. (2018) 15. In this connection, Arturo Borstein considered the crisis symptoms of labor law to be synthesizable in four main points: the uncertainty pervading labor law, including the increasingly more difficulty for labor law to adapt to changes in economic conditions as regards the examination of the limits of labor protection, the declining relevance of labor law provisions at national level, and there is no real transnational labor law which would prioritize the system of labor law ideas seeking to give greater effect to the social and protective nature of labor law against the market aspects of economic competitiveness. Quotes: Attila Kun: The New Labor Code, In: https://jog.tk.mta.hu/uploads/files/13_Kun_Attila.pdf (Downloaded: October 23, 2018).

¹³ It is clearly stated in the Pillar that the social partners have a very important role in the development of the *employment model*, so the freedom of organization and the right to collective action can also be considered the core of the rights included in the Pillar.

workers has weakened.¹⁴ In the digital economy, it is not easy to solve the issue of workers taking collective action, as the playing field is completely different.¹⁵ And in the cooperation of humans and robots, collective action cannot be interpreted. In this uncertainty, we must continue to adhere to core values.

The fundamental value of labor law is that it *provides security* and thus *predictability* in economic terms: on the one hand, with rules to protect the employee, and on the other hand, by building a social network from the side of the state in case the employee is unable to work in some

disturbance. Another very important value is a healthy and safe work environment.

In 1998, the ILO set out the fundamental rights that all states must respect: “(a) the freedom of association and the effective recognition of the right to collective bargaining; (b) the liquidation of all forms of forced and obligatory labor; (c) the effective abolition of child labor; and (d) the elimination of discrimination in respect of employment and occupation. ...”¹⁶ *These rights must prevail as basic rules of the game, regardless of the playing field.*¹⁷ So security means upholding fundamental values within labor law.¹⁸

¹⁴ During this period, we find such an unfavorable situation in Hungary and other former socialist countries that, after the change of regime, workers with a modest collective consciousness were even more vulnerable. It can be felt that nearly forty years of disadvantage after the 2nd world war is very difficult to compensate up to this day. Meanwhile, we can see the changes in the Labor Code of 1992 and 2012, and the emergence of a civil law approach can be clearly established. See later.

¹⁵ In the 21st century, another very important component of the employment relationship has changed. Namely, the employer paid the wage not so much for the work done as for the time spent at the workplace. As Bellace puts it, ‘the platform and algorithms work automatically’. Nowadays, however, the employer pays wages more for the task performed, making the place of work less significant. Accordingly, non-typical work, such as teleworking and outsourcing, has developed, in which case the employer’s right to specify is narrowed. One can agree with the view that in the world of algorithms and applications, in the gig-economy arena, the information age is seen as *an industrial revolution in home work*, and there is no point in fighting for a minimum wage, a decent wage for extra time. At this level, it is of great importance whether the employee is considered an employee or a self-employed person (capitalist, owner). As the European Court of Justice has considered Uber drivers to be more of an employee, the question arises what kind of protection employees on the new platform are entitled to. Bellace herself takes the view that the answer of labor law may be its return to its core values. Bellace, J. R. (2018) 20-22.

¹⁶ ILO Declaration on Fundamental Principles and Rights at Work and its Follow-up, adopted by the International Labor Conference at its Eighty-sixth Session, Geneva, 18 June 1998 (Annex revised 15 June 2010).

‘... *The International Labor Conference...* (2) Declares that all Member States, even if they have not ratified the Conventions in question, are obliged, by virtue of their membership of the Organization, to respect, promote and implement fundamental rights in good faith and in accordance with the Constitution; principles to which these Conventions apply. These principles are: (a) freedom of association and the effective recognition of the right to collective bargaining; (b) The elimination of all forms of forced and compulsory labor; (c) the effective abolition of child labor; and (d) the elimination of discrimination in respect of employment and occupation. ...’

¹⁷ Regarding algorithms, Mangan also refers to what Bellace drew attention to. Namely, that algorithms can lead to inequalities, i.e., discrimination. Mangan, D. (2018) 72.

¹⁸ *I do not analyze Freedland and Countouris' theory of personal working relationships in the present research, as I do not consider the concept feasible. However, there are a number of elements in the concept that deserve to be highlighted. One of these is about the values that appear in work.* They point out that, correctly, the normative basis of labor law regulation is to balance the situation of unequal parties. Human dignity is already known to all of us, a first-generation right included in many international documents. Freedland and Countouris complement thinking about dignity with a concept of autonomy and equality. Autonomy means that a person makes decisions about his or her own life (working life) independently, without any coercion. This is complemented by equality, which, like human dignity, is also one of the oldest first-generation human rights. However, equality is thought of in Amartya Sen’s concept of equality, which is equality based on ability, considering this to be the most appropriate for labor law and social law. Dignity is closely linked to the person of the employee, which is based on personal work. Freedland, M. - Countouris, N. (2011b) 372-376.

All these thoughts seem irrelevant with a view to the collaborative autonomous robot. At the same time, we must keep it, as the working person will not step off the playing field, his role will change and he must adapt to the changed circumstances.

It is a question *what happens to the social partners and their decisions with the development of robotics and artificial intelligence*. After all, in the long run, current trends towards the development of intelligent and autonomous machines that can be taught and make decisions independently not only bring economic benefits, but also raise various concerns about the direct and indirect effects¹⁹ on society and the economy as a whole, which must be discussed.

As a result of automation, in my opinion, with the development and improvement of digital skills, both individual and collective will can be strengthened, and thus the ability of those involved to negotiate the definition of working conditions, which is a fundamental

institution of labor law.²⁰ This is true even when individual work processes can be replaced by a robot, and in these processes man is increasingly pushed into the background. It is predicted that in the collaborative workspace, to help the human work will remain the task of the robot. In the case of production lines, flexibility may not be guaranteed without the human factor. With regard to the *decision-making power* attached to the individual, I consider it very important to state the following from the European Parliament's resolution:

On the one hand, the development of autonomous and cognitive functions²¹, such as the ability to learn from experience and make quasi-independent decisions, makes the robot²² and artificial intelligence more and more similar to those actors who interact with their environment and are able to change it significantly; and in this context, legal liability (and not just legal liability) arising from damage caused by the robot becomes an important issue.²³ The intelligent robot is thus capable of

¹⁹ Martin Ford (2015) xvi. 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 G.

²⁰ Blanpain wrote about globalization and technological innovation that it leads to the disintegration of companies into interconnected groups, where work is organized on a project basis. All this changes the role of the employment relationship and the social partners. The *gig economy* actually represents a network of connected individuals along separate projects. Blanplain, R (1999): European Social Policies: One Bridge Too Short, *Comparative Labor Law and Policy Journal*, 20. 497. Mangan, D. (2018): Labor Law: The Medium and the Message. In: Frank Hendrickx - Valerio de Stefano (eds.): *Game Changers in Labor Law. Shaping the Future of Work. Bulletin of Comparative Labor Relations - 100*. Kluwer Law International BV, Netherlands, 65. See also martin Ford (2015) 53-55.

²¹ See also McKinsey Global Institute: A future that works: automation, employment and productivity. January 2017, Executive Summary, 1.

²² What characterizes an intelligent robot? Achieving autonomy through sensors and / or exchanging data with the environment (connectivity) and through exchanging and analyzing this data, independent learning through experience and interaction (optional criterion), at least a small physical appearance, behavior and adaptation of actions to the environment; lack of life in the biological sense. See: 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 Point 1. See also: Tamás Klein - András Tóth (ed.): *Technology Law - Robot Law - Cyber Law*. Wolters Kluwer Hungary Kft., Budapest, 2018, 181-182.

²³ 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 Z.

With regard to non-contractual liability, Directive 85/374 / EEC can only cover damage caused by a manufacturing defect in a robot and only on condition that the injured party can prove actual damage, a defect in

adaptation and independent decision-making. This changes the player, the playing field and certainly the rules of the game, too. In this respect, research in the field of civil liability is also relevant to Hungarian labor law regulatory issues, as labor liability is based on civil law principles.

In the case of autonomous and collaborative robots, the responsibility of the trainer may arise within the scope of contractual responsibility, and it may also be important to develop a sense of responsibility of the intelligent robot. As I mentioned earlier, we need to treat the intelligent robot as a "human" in order to resolve liability issues. At this point, I must refer to the point of view that an analogy between the robot and human should be avoided during regulation.²⁴ Regarding responsibility, I cannot interpret collective responsibility in any other way unless we provide the robot with commands that teach people to adapt to the rules. Thus, in case of damage, the robot is penalized. In this case, it is not a social problem that actually arises, but a legal situation that needs to be resolved.

At the same time, it is important to emphasize that robotics has a huge potential to improve workplace safety by transferring many dangerous or harmful work tasks from humans to robots, but also carries with it the potential for a number of new risks.²⁵

the product or a causal link between the damage and the defect, so a framework of liability without objectivity or no fault may not be sufficient.

Despite the scope of Directive 85/374 / EEC, the current legal framework would not be able to cover the damage caused by the new generation of robots if robots can be endowed with adaptive and learning skills that make their behavior somewhat unpredictable, as these robots would learn on their own from their changing experience and interact with their environment in a unique and unpredictable way.

²⁴ See Tamás Klein - András Tóth (ed.) 183.

²⁵ See Section 46 of the resolution. 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 Section 46.

²⁶ 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 Preamble Recital AA.

²⁷ 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. Preamble Recital AF.

On the other hand, the autonomy of the robot can be defined as the ability to make decisions and implement them in the outside world, independent of external control or influence. This autonomy is purely technological in nature and its extent depends on how sophisticated the interactions between the robot and its environment have been designed.²⁶ It is important that the intelligent robot is able to learn, its knowledge is not lost but can be "transferred".

Thirdly, although we cannot yet talk about this, but if the robot is able to make its own decisions, the traditional rules will not be sufficient to establish legal liability for the damage caused by the robot, as they would not allow the party responsible for compensation to be identified and enforcement of the party's obligation to pay compensation for the damage caused.²⁷ This finding, in my view, needs to be nuanced because the responsibility of the trainer cannot be ignored, and so must the responsibility of the employer be analyzed from the point of view of control.

In view of the above, it is clear that the current legal framework is incomplete, but not only in the area of contractual liability. Machines designed to select partners, negotiate contract terms, conclude contracts, and decide on the performance of contracts

render traditional civil and labor law inapplicable.²⁸

Thus, the development of robotics and artificial intelligence has an impact on the work environment by all means, which generates new concerns about the dynamic and static elements of the employment relationship. It is also important from an employment law point of view that the development of robotics requires more knowledge to develop a common position on the joint action of humans and robots, which should be based on two basic interdependencies: predictability and controllability. If controllability is lost, the responsibility of the trainer also becomes questionable. These two interdependent relationships play a key role in determining what information should be shared between humans and robots and how a common human-robot basis can be formed to ensure the smooth co-operation of humans and robots.²⁹

In this respect, it is important that the specific legal personality of robots be established in the long term, so that at least the most sophisticated autonomous robots can be classified as electronic persons with specific rights and obligations - including compensation for any damage they may cause – especially in cases where robots

make independent decisions or otherwise interact independently with third parties.³⁰ I do not consider it necessary to analyze the concepts of legal capacity and capacity to act in today's sense. Klein and Tóth³¹ have done this, however, I think it is important to emphasize that we do not have to respond to the technological challenges we face with today's meaning of our concepts. *In today's conceptual system, the issue of the legal personality of the robot making collaborative autonomous decisions cannot be solved, therefore, it is pointless to talk about it.* However, it will be the subject of rights and obligations anyway, in cases where it makes independent decisions or otherwise interacts independently with third parties, including the working person.

After the considerations regarding decisions, it can be stated with certainty that by observing the mainstays mentioned in the Pillar and the values highlighted by the European Parliament³², we will get to the fundamental principles of the Schuman Declaration and regardless of the level of adaptation to technological development, there is a need for concrete achievements in the construction of not only Europe but the whole world, in particular for the establishment of real solidarity. What are

²⁸ See: 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 Preamble Recital G.

²⁹ Boston-based Rethink Robotics designed Baxter, a humanoid robot that performs a number of repetitive tasks in close proximity to humans. Martin Ford (2015) 5. and 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 Section 50.

³⁰ 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 Section 50.

³¹ See Klein - Tóth (2018) 192-199.

³² See 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 U: whereas the further development and increasing use of automated and algorithmic decision-making undoubtedly has an impact both on the choices of individuals (such as businesses or internet users) and on the final decisions of administrative, judicial or other public authorities, whether consumer, business or regulatory; whereas, as a general principle, rules on accountability, transparency and accountability, in particular, are useful and necessary, reflecting the essentially European and universal humanist values that characterize Europe's contribution to society; whereas these rules must not affect research, innovation and development in the field of robotics.

these specific achievements? I will examine them below.

The basic rules of future ideas

For businesses, the benefits of automation are relatively clear, however, the issue is already much more complex for policy makers. On the one hand, they need to exploit the potential for productivity growth and develop policies that encourage investment and market functioning to foster continuous development and innovation. At the same time, employees and institutions need to be helped to adapt to employment. This includes rethinking education and training, income support and building safety nets, including support for jobseekers.³³ As part of their day-to-day activities, individuals need to deal with machines in a more comprehensive way and acquire the new skills needed in the new era of automation.³⁴

So how can a gradual, pragmatic and cautious approach to all future initiatives on robotics and artificial intelligence be implemented?³⁵

Automation does not happen overnight, and at least five key factors influence its actual realization. The first is technical feasibility³⁶, as technology needs to be adapted to work processes. Second is the development of solutions and their installation cost, which affects the ability of the business to adapt. Third, labor market dynamics³⁷, including human labor supply, demand and costs. Fourth is the economic benefit, which can include better quality as well as wage savings. Finally, social acceptance and willingness to regulate can also influence the success of adaptation. Taking all these factors into account, there is a chance in decades that automation will have measurable labor market and economic impacts. It is expected that the effects of automation will be slower at the macro level, while it will be felt earlier at the micro level within a company or between companies.³⁸ After all, automation creates a competitive situation. However, it is important to point out that the degree of automation at the current level of technological development, as I mentioned earlier, can cause inflexibility, as it is difficult to meet changing customer needs.

³³ This can also be treated as a transit state. See about this. Auer, P. – Gazier, B. (2011) 34-36. Individuals are not always able to retain and take with them their social protection rights when switching between different labor market statuses, such as moving from employment to self-employment or unemployment, combining employment as an employee with self-employment, starting a business or terminating a business. The portability and aggregation of rights between schemes is also crucial in order to ensure that workers who work in several jobs or change jobs or change from an employee status to a self-employed person or vice versa can actually benefit from contributory schemes and receive adequate coverage, and to encourage their participation in voluntary social protection schemes. Council Recommendation on access to social protection for workers and the self-employed, COM (2018) 132final. 20.

³⁴ McKinsey Global Institute (2017) 3. 18-20.

³⁵ 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 (2015/2103 (INL)) (2018 / C 252/25) Preamble Recital U.

³⁶ While planning, optimization, information gathering are very well automated activities, the following definitely need development: understanding natural language, emotional and reasoning ability, sensory perception and movement. The latter, of course, come at a very serious cost. McKinsey Global Institute (2017) 10.

³⁷ The dynamics of the labor market is also determined by geographical location and labor supply is influenced by not only changing demographic factors, but also wage rates. Manufacturing automation is likely to be implemented sooner in countries with high wages, such as North America and Western Europe, than in developing countries with lower wages. McKinsey Global Institute (2017) 10.

³⁸ McKinsey Global Institute (2017) 2. 10-11.

In fact, if we do not recognize and adapt to technological development, we will indeed find ourselves right in the middle of a great storm, where the cyclone will bring inequality³⁹, technological unemployment, climate change, and obviously they will have a mutually reinforcing effect.⁴⁰

In developing the strategy, the European Commission's initiative should be highlighted. It proposes a roadmap for the possible use and revision of the framework of digital skills and a description of digital skills at all levels of learners. The European Parliament has called on the Commission to provide significant support for the development of digital skills in all age groups, regardless of employment status. It stresses that, in order to achieve growth in the field of robotics, Member States need to develop more flexible education and training systems to ensure that strategies relating to skills shall meet the needs of the robotics-based economy.⁴¹ In all this, the support of women is also important.⁴² Medium- and long-term trends in jobs need to be assessed, with a special focus on job creation and loss

in different areas of skills, in order to identify where jobs are being created and are being lost as a result of increased use of robots.⁴³ Real social problems are very important to be mapped. We must see the potentials and the dangers, too.⁴⁴ Particular attention should be paid to the viability of Member States' social security systems.⁴⁵

With regard to civil liability, the following principles need to be emphasized:

Civil liability is an important issue that must be pursued throughout the European Union, for the benefit of citizens, consumers and businesses alike, in order to ensure the same level of efficiency, transparency, consistency, enforcement and legal certainty.⁴⁶ It is important that under no circumstances should it limit the type and extent of compensable damage or limit the forms of compensation that can be offered to the injured party on the sole ground that the damage was not caused by a human being.⁴⁷

With regard to liability, two approaches can be taken: a system based on risk management and a system based on strict liability.

³⁹ Economists studying finance show a strong correlation between, for example, the growth in the financial sector, inequality, and a decline in the share of workers in national income. However, the financial sector could not have achieved results without technological development, indeed.

⁴⁰ Martin Ford (2015) xiii. Martin Ford asked whether technological advances could destroy our entire system to such an extent that we need to fundamentally rethink the principles we will follow to survive and thrive.

⁴¹ It stresses the importance of flexible skills and social, creative and digital skills in education; it is convinced that, in addition to the transfer of theoretical knowledge in schools, lifelong learning must be achieved through taking lifelong action 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, Sections 41 and 45.

⁴² 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 Section 42.

⁴³ 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 Section 43.

⁴⁴ Tamás Klein - András Tóth (ed.) 182-183.

⁴⁵ 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 Section 44 Tamás Klein - András Tóth (ed.) (2018) 199-200.

⁴⁶ 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 Section 49 Tamás Klein - András Tóth (ed.) (2018) 200.

⁴⁷ 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. Section 55 Tamás Klein - András Tóth (ed.) (2018) 200.

The risk management approach does not focus on the “negligent person” as the individual responsible, but on the person who, in certain circumstances, is able to minimize the risks and manage the negative effects.⁴⁸ Objective liability only requires proof that damage has occurred and that there is a causal link between the malicious operation of the robot and the damage suffered by the injured party.⁴⁹

The most important thing is therefore to determine the liable persons, after which the risk is implemented.

Once the ultimately responsible parties have been identified, their responsibilities should be commensurate with the actual level of instructions given to the robot and the robot’s autonomy, so the greater the robot’s learning ability or autonomy, the less responsibility the other parties should have and the longer the “educating” of a robot took place, the greater the responsibility of the “educator” is. It notes, in particular, that when it comes to identifying the person to whom the robot’s harmful behavior can actually be attributed, the robot’s skills gained from “training” should not be confused with skills that depend strictly on its own learning abilities. It notes, however, that with regard to the transition period, at least at the current stage, the responsibility should be taken by humans and not robots.⁵⁰

The European Parliament considers it important to take out compulsory robot

liability insurance, which would be supported by a venture capital fund.⁵¹

I asked the question earlier if an intelligent robot could be considered as a dangerous plant. Klein and Tóth reject the possibility of dangerous operational liability, finding it to have an adverse effect on the development of robot technology. In practice, co-operation and coexistence are realized due to the objective responsibility of occupational safety and health, indeed. Because of this, it is really difficult for employers to go in the direction of collaborative technology.⁵² As long as technological advances do not reach the level where collaborative autonomous robots work with humans in a collaborative workspace, responsibility cannot be deployed on the robot, but the responsibility of the robot’s trainer may still exist, considering the circumstances under the employer’s control.

Besides autonomous means of transport (autonomous vehicles, drones), the European Parliament emphasizes that research and development into robots for the elderly has become more common and cheaper over time, and they creating more useful and consumer-friendly products. It also notes that these technologies provide prevention, assistance, follow-up, stimulation and companionship for the elderly, people with disabilities and those

⁴⁸ 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. Section 52 Tamás Klein - András Tóth (ed.) (2018) 200.

⁴⁹ 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. Section 54 Tamás Klein - András Tóth (ed.) (2018) 201.

⁵⁰ 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 Section 56.

⁵¹ 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 Section 66.

⁵² Tamás Klein - András Tóth (ed.) (2018) 203.

with dementia, cognitive impairment or memory impairment.⁵³

One fundamental aspect of human care is the human relationship. It believes that the full replacement of the human factor by robots could render care impersonal, while it recognizes that robots can help automate caring tasks and facilitate the work of caregivers while enhancing human care and making the rehabilitation process more targeted. This would give doctors and caregivers more time to diagnose and better plan treatment options. It stresses that, although robotics has the potential to increase the mobility and integration of people with disabilities and the elderly, there will still be a need for human care-givers who will continue to provide them with an important, fully irreplaceable source of social contact.⁵⁴

How can the adverse effects on the employee be addressed? The question that arose in me was to what extent the broad concept of the employee's legal personality could be applied in solving the tasks ahead of us?

There is a broader concept of the employee's legal personality, which is the sum of environmental and personal factors in *legal, economic and social terms*. This is because not only the health status and abilities of an individual determine the success of employment, but also economic and labor market conditions, subsequent labor law regulations, adult protection regulations, the development and capacity of the education and training system, the functioning of the social welfare system, including access to rehabilitation services and relief policy.

It is certain that a specific, country-specific social and labor market model and

strategy needs to be developed. One element of this is the nature of labor law regulation, in which achieving a balance between flexibility and security is a big issue. *Balance* means the intensity of legal guarantees in a legal relationship to such an extent that it is still motivating for an employer requiring flexibility to keep the given legal relationship within the framework of labor law.

In such a consistent labor market program, I believe that the applicability of human and constitutional rights in a labor law environment can be more successful, that is, the employee's legal personality must be viewed in a complex way.

The broad concept of the employee's legal personality draws attention to the fact that the purpose of labor law is not only to redress imbalances between the parties. The objectives of labor law must include *promoting the principle of autonomy and equality at work by extending individual capacity, as well as ensuring a decent living in an automated environment*.

If the aim is to integrate as many people as possible into the labor market in a changing economic and social environment, the legislator must take a *holistic approach* and recognize that labor market integration is not only a matter of labor law, but also of employment, rehabilitation, and also an issue of education and social protection. The complex thinking about the employee's legal personality is in line with the European Union's and state goal of achieving the highest possible employment and productivity, as well as the European

⁵³ 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 Section 31.

⁵⁴ 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. Section 32.

Parliament's future ideas related to automation.⁵⁵

I am convinced that the changes in the labor market over the next fifty years can only be addressed through employment and

education policy instruments as well as ensuring the joint provision of social protection in order to create *de facto* solidarity.

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⁵⁵ The widest possible integration of the labor market is enshrined in Title IX on Employment of the Treaty on European Union and Title X on Social Policy. Similarly, the Explanatory Memorandum of the Hungarian Labor Code also points out that the Fundamental Law attaches special importance to the work-based community and society. Section 1 of Article XII states that 'Everyone has the right to freedom of choice of employment and occupation and to the right to free enterprise.' Regarding the latter: 'By working in accordance with their abilities and capabilities, everyone has a duty to contribute to the growth of the community.' The focus of the Green Paper, like the Wim-Kok report, is on how to achieve the goal of sustainable development set out in the above-mentioned Lisbon Strategy with more and better jobs. Modernizing labor law plays a key role in the success of the adaptability of workers and companies. The objectives must be pursued with productivity, full employment and social cohesion in mind. See Green Paper: Modernizing labor law to meet the challenges of the 21st century, Brussels, 22.11.2006 COM (2006) 708 final.

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