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The Right of Trade Unions to Information in the Era of the Fourth and Fifth Industrial Revolutions

Abstract: The dynamic technological transformations that are taking place in the third decade of the twenty-first century, described as the Fourth and even Fifth Industrial Revolutions, pose significant challenges for community partners who act in labour relationships. Transparency and the related right to information are some of the factors that define a democratic state under the rule of law. This also applies to labour relationships as widely understood. The regulations of collective employment law grant various rights in this respect to entities that represent staff, who may, among other things, demand information on the use of artificial intelligence by the employer in the work environment. In the Polish labour law system, the widest scope of competences in this regard is granted to trade unions. This article focuses on the legal and functional aspects that are related to the transfer of this type of data.
Keywords: artificial intelligence, Fifth Industrial Revolution, Fourth Industrial Revolution, right to information, trade unions

Introduction

The dynamic technological transformations (Świątkowski, 2019) that are taking place in the third decade of the twenty-first century, described as the Fourth or even Fifth Industrial Revolutions, pose significant challenges for community partners who act in labour relationships. From a broad social, economic, and technological perspective, the Fourth Industrial Revolution is defined as an extensive digitisation that leads to the automation and robotisation of processes in industry, services, and administration through the implementation of advanced IT systems, the Internet of Things, data analysis, and artificial intelligence (Schwab, 2016; Popławski & Bajczuk,

2019; Wodnicka, 2023, p. 49 ff.). On the other hand, at the core of the Fifth Industrial Revolution (Furmanek, 2018, p. 277 ff.; Zamorska, 2020, p. 7 ff.) are cognitive technologies that enable machines to perform tasks which were previously reserved for humans (Bytniewski & Marcin, 2016). These technologies allow smart humanoid robots to cooperate in harmony with workers in the application of artificial intelligence. As such, a certain type of bridge between machines and humans is created, leading to deeper integration between people and machines that employ machine learning. In industry, in particular, we are witnessing direct cooperation between human workers and artificial intelligence that controls autonomous or semi-autonomous equipment.

The common denominator of the Fourth and Fifth Industrial Revolutions is the rapid development of artificial intelligence programs that affect both data processing and the communication between employees and equipment. It is obvious that in employment relationships, both these 'revolutions' intertwine, creating a new quality not only in terms of technology but also in social, economic, and psychological aspects. In industrial relations, in particular, in the very near future, tedious, repetitive actions will be taken over by robots that will sometimes have humanoid traits, while workers will be able to focus their professional activity on tasks that require creative thinking (Binek, 2020, p. 23 ff.; Potocka-Pasionek, 2022, p. 106 ff.).

Artificial intelligence plays a special role in shaping post-industrial relations in the era of the Fourth and/or Fifth Industrial Revolution (Chłopecki, 2021; Świątkowski, 2021a, p. 2 ff.; Tegmark, 2019, p. 60; Zalewski, 2020, pp. 3–5). However, it does not have a single well-established definition; instead, it may be understood in arious ways (Boden, 2020, pp. 33–34; Zalewski, 2020, p. 3 ff.). In general, artificial intelligence (Bytniewski & Marcin, 2016, pp. 7–15; Płocha, 2020; Stylec-Szromek, 2018) is sometimes defined as a special type of software that enables computers to perform actions that are usually in the human domain, in particular those that require human intellect or logic to be applied. This technology emerges at the meeting point of information technology with neurology, psychology, and cognitive sciences. Its aim is to teach machines to engage in behaviour similar to humans, based on models of knowledge that enable understanding, drawing conclusions, and acting, as well as diagnosing and solving problems. AI enables vast amounts of data to be organised and analysed, not only in industry and services but also in administration. Skilful application of artificial intelligence in widely understood labour relationships contributes to improvement in work efficiency and the quality of services. It also often enables employment-related expenses, including social expenditures, to be optimised.

No definition of artificial intelligence has been provided so far in Polish labour law (Płocha, 2020). A definition was formulated in Art. 3 item 1 of the draft Proposal for a Regulation of the European Parliament and of the Council Laying Down Harmonised Rules on Artificial Intelligence (Artificial Intelligence Act) and Amending

Certain Union Legislative Acts (European Commission, 2021).[1] The provision is of a general nature and provides a definition of artificial intelligence based on reference, defining it as software that is developed with one or more of the techniques and approaches listed in Annex I to the Regulation. Since the definition is a blanket one, it is not overly precise as regards its subject, but, on the one hand, it seems sufficiently flexible not to limit the development of technology and, on the other hand, it introduces important limitations to the application of AI in the form of a list of enumerated prohibitions. Two provisions banning certain uses of AI, specified in Art. 5 items (a) and (b) of the cited Regulation, seem to be extremely important for entities that function in labour law relationships, as they prohibit:

- the placing on the market, putting into service or use of an AI system that deploys subliminal techniques beyond a person's consciousness in order to materially distort a person's behaviour in a manner that causes or is likely to cause that person or another person physical or psychological harm; and
- the placing on the market, putting into service or use of an AI system that exploits any of the vulnerabilities of a specific group of persons due to their age, physical or mental disability, in order to materially distort the behaviour of a person pertaining to that group in a manner that causes or is likely to cause that person or another person physical or psychological harm.

Both these provisions may also apply to practices that are used by employers. Therefore, information on the applied mechanisms of artificial intelligence is of key importance for representative entities that operate in the workplace and whose task is to protect the rights and interests of workers (employees). This study reflects on the issue of the right to information about new technologies from the perspectives *de lege lata* and *de lege ferenda*.

1. The right of trade unions to information

In a subjective approach, an important issue is the question of which representative bodies may demand information on the application of AI by an employer. Trade unions should undoubtedly be included in this category (Nowik, 2022, p. 122 ff.). From the point of view of Art. 28 of the Act on Trade Unions, workplace trade unions have this right. This refers specifically to all trade unions that have the right to information pursuant to Art. 25(1) item 1 of the Act on Trade Unions. Analogous information-related competences are granted to inter-company trade union

1 On the legal regulation of artificial intelligence in the European Union, see European Commission (2020). Also see Florczak (2022, pp. 167–168); Mazur (2020, p. 13 ff.); Stylec-Szromek (2018, p. 501 ff.); and Świątkowski (2021b, p. 113 ff.).

organisations, which is derived explicitly from Art. 34 of the Act on Trade Unions (Baran, 2019, p. 238 ff.).

In the axiological sphere, the right of trade unions to information originates from Art. 61 of the Constitution of the Republic of Poland, as transparency is one of the factors that define a democratic state under the rule of law. This also applies to the widely understood labour relationships. Therefore, the provisions of collective employment law grant various rights in this matter to bodies that represent employees – not only trade unions, but also non-trade union participation bodies such as workers' councils (Baran, 2019, pp. 538–539) or special negotiation teams that operate on the union level. In practice, however, the competences of trade unions related to obtaining information are crucial. Polish legislation is characterised by a pluralism of normative regulations, both objectively and subjectively (Baran, 2023, p. 174 ff.). In this context, it is thus worth considering the extent to which trade unions have a statutory right to obtain information of the kind of technological nature that shapes the Fourth or Fifth Industrial Revolution from the employers in whose workplaces these unions are operating.

The provisions of Art. 28 of the Act on Trade Unions are of fundamental importance in this matter in the Polish collective employment law system. The provision stipulates that at the request of a trade union, the employer shall provide information necessary to conduct trade union activity (Baran, 2023, pp. 177–178). Further items contain examples of the specific categories of information that the trade union may obtain. In a holistic interpretation, this provision also applies to any information of an organisational or technological nature. The proposed interpretational option is justified in *lege non distinguente* argumentation. This normative context refers to data that concern the advanced technologies applied by the employer.

The analysis of the issue of the right to information related to technology should begin with the conditions of work and remuneration that are specified in Art. 28 item 1(1) of the Act on Trade Unions (Baran, 2023, p. 178). New technologies, including generative artificial intelligence, robotisation, and related automation, shape new working conditions to a large extent, and they may be used to perform a variety of tasks, either as part of whole technological processes or for specific types of work which are dangerous, tedious, or onerous. Thus, workers who used to perform these tasks may be transferred to perform easier, more interesting duties that at the same time require more creativity or additional professional skills. In this context, it is undoubtedly the case that trade unions should be aware of the extent to which new technological solutions will modify the working conditions of the employees and which will affect their salaries. Generative artificial intelligence that forces employees to cooperate with smart machinery will, in particular, undoubtedly contribute to improving workers' qualifications and thus will directly influence their level of education. The consequences of this phenomenon will affect not only working conditions, but also salaries and, as a result, will lead to a new shape for their objective struc-

ture, such as pay scales. This refers not only to the transformation of financial benefits that are part of the basic salary, but also various additional elements of remuneration, such as various technology allowances (e.g. an allowance for knowledge of AI algorithms). In this normative light, it is doubtless the case that information about the applied technological instruments that are characteristic of the Fourth or Fifth Industrial Revolution, in terms of the work and remuneration conditions of employees, is necessary to effectively protect the rights and interests of employees as part of trade union activity. However, it is worth noting here that such information must be on a super-individual level and that it can never contain data that refer to a specific individual.

In practice, the issue of providing trade unions with detailed information on specific software, algorithms, and other technological instruments that shape work and remuneration conditions is a problem. In my opinion, the employer is not obliged to disclose this type of data, in particular information on the software used, as it may constitute a company secret that is protected by trade secrecy. Nevertheless, the employer has a statutory obligation to define the specific consequences of the application of such technological means for specific groups of employees, both in organisational and technological terms and in terms of finance.

Essentially, information on the operations and financial standing of the employer connected with employment, and changes foreseen in this respect, should be provided at a similar level of detail to trade unions under Art. 28 item 1(2) of the Act on Trade Unions (Baran, 2023, p. 179). However, the realisation of this item in practice seems particularly complex, as it is extremely difficult to foresee the consequences of the application of AI, robotisation, or automation to the economic and financial standing of the employer. *Natura rerum*, data related to it will be speculative, as no employer is able to precisely define the consequences of technological progress from a long-term perspective, particularly in the conditions of a globalised, competitive market. Considering the difficulties related to providing this type of information, it should be emphasised that the employer should prepare comprehensive information for trade unions in good faith, including both the positive and negative effects of the technological solutions implemented.

Widely understood new technologies that are characteristic of the Fourth and/or Fifth Industrial Revolution affect and will continue to influence the level and structure of employment, not only on the whole labour market, but also at a specific employer. They will play a major role especially for those sectors and groups of workers where professional duties may be relatively easily automated or robotised. The influence of artificial intelligence applies to all grounds of employment, starting from the recruitment of employees to terminations. As far as recruitment is concerned, the use of artificial intelligence brings a variety of problems and threats (Otto, 2022, p. 145 ff.). From the point of view of trade unions, the issue of the criteria used in recruitment is of vital importance. If these criteria are not transparent, this may lead

to discrimination against applicants or new staff members. Knowledge of recruitment mechanisms and systems is therefore crucial for trade unions. Another aspect of the issue is the process during which algorithms make decisions while screening documents provided by applicants. Also in this matter, knowledge of the principles and operating standards of the software used by the employer is indispensable, as defined in Art. 28 item 1 of the Act on Trade Unions.

The introduction of the new technological solutions that are characteristic of the Fourth and/or Fifth Industrial Revolution evokes a natural fear of redundancies and unemployment among workers. Its origins are similar to the fears expressed by the Luddites during the first Industrial Revolution, who feared the use of machinery. Personally, I have no doubt that the implementation of new technologies will result in a variety of fluctuations on national and regional labour markets, and also in the employment structure of specific employers. In the near future, various groups of employees will likely suffer from redundancies for technological reasons. The currently developed form of generative artificial intelligence and related robotic technologies will probably help automate simple tasks, which now tend to consume even several dozen per cent of employees' time. One of the consequences of their introduction may be collective redundancies at employers who operate not only in industry and services, but even in public administration as widely understood. Thus, it seems natural for trade unions to be particularly interested in information about changes in employment structure that result from the implementation of new technologies; this focus is justified both socially and axiologically. An example of such a situation is the consequences of introducing automated control systems in transport (e.g. in rail or road traffic).

In the normative aspect, the right to information in this matter is governed to the widest possible extent by Art. 28 item 1(3) of the Act on Trade Unions, which obliges the employer to provide information on the state, structure, and proposed changes in employment as well as actions aimed at maintaining the current level of employment. The scope of these data should be as detailed as it is possible to foresee the consequences of the introduction of new technologies for the level and structure of employment at a workplace. There will naturally be some estimates. The disappearance of jobs that require low qualifications carries the risk of negative consequences for those employees who perform simple work, with collective redundancies being a result. In such an event, the employer is obliged to notify both the trade unions and the district employment office about the redundancies. The detailed obligations of the employer are provided explicitly in Art. 2 item 3 of the Act on special principles for terminating employment with employees due to reasons not attributable to employees (Baran & Lekston, 2019, p. 628 ff.). If artificial intelligence, robotisation, or automation is applied, the notification should precisely identify the groups of employees who are at a risk of losing their jobs and specify the size of and criteria for the planned redundancies, as well as their sequence. Having this kind of information allows the

trade unions to start consultations and thus to mitigate the most distressing effects of planned redundancies for technological reasons. This refers in particular to launching potential training programmes, which will allow participants to become employed in the post-industrial economy, and voluntary departure schemes.

Pursuant to Art. 28 item 1(4) of the Act on Trade Unions, the right of trade unions to information also includes any actions of the employer that might cause significant changes in work organisation or in the basis for employment. It is obvious that the new technologies used in the Fourth and Fifth Industrial Revolution lead to such changes. The progressing unification of manufacturing and service equipment with the virtual world, which is shaped by digital technologies and in particular generative artificial intelligence, directly affects workers' competences, both professionally and socially. The appropriate preparation of employees for performing work under conditions of rapid technological transformation should consist in offering them correctly prepared and conducted adaptation training. Trade unions should play an important role in shaping the model of the post-industrial education of workers. Information on the related actions of the employer is thus important from the practical point of view, as it allows employees to remain competitive on the labour market under conditions of high demand for digital skills. The process of acquiring new skills in order to perform a different job (also known as reskilling) or acquiring additional skills (upskilling) is important for the functioning of the employee on the competitive labour market. In this respect, information provided to trade unions is doubtless indispensable for performing their fundamental duties of protecting and defending the interests of workers.

2. The right of trade unions to information on new technologies *de lege ferenda*

In the conditions of technological expansion that are characteristic of the Fourth and/or Fifth Industrial Revolution, the Ministry of Digital Affairs (Sejm, 2022) approved an amendment to the Act on Trade Unions concerning the right to information, adding point 5 to Art. 28 item 1. Pursuant to the draft, an employer would be obliged to provide the trade union with information on the parameters, principles, and instructions that are the basis for the functioning of algorithms or artificial intelligence systems which may influence work and remuneration conditions, access to employment, and maintaining employment, including profiling. The draft was assessed positively by NSZZ Solidarność (Sejm, 2022) and the Chief Labour Inspector. However, the latter pointed to certain disadvantages of the draft, such as the lack of a definition of artificial intelligence and the fact that the notions of parameters, principles, and instructions that are the basis for the functioning of algorithms were not explained (Opinion of the Chief Labour Inspector, 2022). I share these reservations;

in particular, I have some doubts concerning the objective scope foreseen in the draft. The parameters, principles, and instructions that refer to the functioning of artificial intelligence may be part of the employer's knowledge, for example concerning an increase in work efficiency, and may be protected by employer or business secrecy. In my opinion, the proposed point 5 of Art. 28 item 2 of the Act on Trade Unions is redundant in Polish employment law, as it repeats the existing standards of Art. 28 of the Act, thus creating a legal mechanism beyond the real need and thereby violating the universal directive of Ockham's razor, which states that *entia non sunt multiplicanda praeter necessitatem*. This view is justified by the fact that the other items of the analysed provision allow trade unions to obtain the necessary information about the influence of the application of artificial intelligence on work and remuneration conditions, the level of employment and the ability to maintain it, and profiling. Even more, they allow trade unions to obtain information on other modern technologies used by the employer. As a result, the provisions of the Act on Trade Unions that exist *de lege lata* are holistic, so it is not necessary to supplement them. All information that is necessary for trade union activity should be provided by the employer to the workplace or inter-company trade union organisation, pursuant to Art. 28 item 1(1–4) of the Act on Trade Unions.

A serious problem with obtaining information, not only about new technologies used by an employer, is how it may be obtained. A disadvantage of Art. 28 of the Act on Trade Unions is the fact that it does not precisely specify the grounds for a refusal to provide trade unions with necessary information or the legal mechanisms of maintaining confidentiality. Therefore, *de lege ferenda*, I would like to propose introducing regulations that would release the employer from the obligation to provide information, including information on new technologies used, if this might interfere with company activities or expose the company to severe damage. In practical labour relationships, this threat should be objectified, for example, in a situation that involves a serious risk that the trade unions might disclose the data on new technologies to unauthorised persons or third parties. This kind of legal mechanism would reduce the occurrence of industrial espionage or unfair competition activities. If the employer refuses to disclose data that are necessary for the trade union to conduct its activities, the competent body of the trade union should have the possibility of applying to the labour court for an order to provide information. These types of cases should be dealt with under the nonprocedural procedure regulated by the Civil Procedure Code. If information is provided, in particular information concerning new technologies characteristic of the Fourth or Fifth Industrial Revolution, the employer should be able to reserve its confidentiality when forwarding it to a statutorily authorised body of a company or an inter-company trade union organisation. This will make it possible to limit the transfer of technologically sensitive data, at least formally.

Conclusions

In conclusion, it should be stated that the systems of artificial intelligence used by an employer are particularly important among the information obtained by trade unions on new technologies that are used in the Fourth or Fifth Industrial Revolution. The information obtained may be used by trade unions only for the purposes related to their organisational activities, for example during negotiations with the employer. The provisions concerning the use of these data by trade unions may be defined in collective agreements, including collective labour agreements and the by-laws of the work establishment. Work regulations seem to be particularly predisposed to defining standards for the use of software related to artificial intelligence. On the one hand, they allow its use by the employer to be regulated in a flexible manner, while on the other, they enable trade unions to exercise reasonable control with respect to protecting the interests of workers and applicants. This type of normative mechanism ensures homeostasis in labour relationships as far as the use of new technologies in the era of the Fourth and Fifth Industrial Revolutions is concerned.

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