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DIGITAL TRANSFORMATION OF COURT PROCEEDINGS, ARTIFICIAL INTELLIGENCE AND THE PRINCIPLES OF CIVIL PROCEDURE*

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Abstract

The article analyses the relationship between artificial intelligence and the principles of civil procedure law. It pays attention to fields of tension, future challenges and how we should draw the limits of the introducing of AI in civil justice.

Keywords: AI, digital transformation, civil justice, civil procedure law, principles

Undoubtedly, the development of information technology has an impact on every aspect of civil proceedings,[1] the "new technologies have the capacity to change the core values of civil litigation by making litigation more efficient and effective, by making the civil justice system more accessible, and by changing the way we determine the facts and decide the case."[2] Nevertheless, at the beginning of our examinations, it is worth noting that the technology of our days, especially artificial intelligence (AI) could provide a wide range of devices, beyond actual need via electronic processing of judicial proceedings. This might lay foundations for handling effective and up-to-date litigious and non-litigious proceedings meanwhile safeguarding for the required guarantees.

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1 Richard K. Sherwin – Neal Feigenson – Christina Spiesel: Law in the Digital Age: How Visual Communication Technologies Are Transforming the Practice, Theory and Teaching of Law. *Boston University Journal of Science and Technology Law,* (2006), 227.

2 Janet Walker – Garry D. Watson: New Technologies and the Civil Litigation Process. Common Law – General Report. In: Ada Pellegrini Grinover – Petrônio Calmon (ed.): *Direito Processual Comparado. [Comparative Civil Procedure Law].* Rio de Janeiro, Editora Forense, 2007. 122., 142.

Hence, the task experts of procedural law need to cope with is finding the scope of applicability IT may have instead of integrating without due criticism whatever technical possibilities into the proceedings. When establishing this scope, attention should be paid to numerous theoretical and practical aspects. One should find the "core" of the procedural rules serving the aim of proceedings; the basic values, the continuity of which must be ensured.

Thus, when analysing this problem, it is necessary to carry out a thorough review of the basic principles,[3] to be open to modern solutions, albeit applying criticism and searching for the equilibrium at the same time.

In consideration of the foregoing, it may not be exaggerated to claim that the development of IT constitutes one of the greatest challenges for procedural cultures deeply rooted in traditions.[4] Citing *Lord Woolf's* remark, several authors draw attention to the fact that IT does not only contribute to the improvement of the present-day system but may also serve as a catalyst for radical change.[5] This is even truer for artificial intelligence. Apart from the change in "technique" of the procedure, one must focus to change in basic questions. This process will not leave intact traditional procedural principles either, such as the principle of party control of the facts and means of proof, or the principles of orality, immediacy etc.

By the time of compiling national reports for the *Vienna World Conference of Procedural Law (1999)*, completely digitalized court proceedings were unimaginable. In the beginning, IT was mainly applied in the electronic administration of court affairs. Nowadays we can actually deal with the question of whether AI can be suitable for replacing humans in certain procedural tasks. Even if the automation of the entire procedure might not be necessary, the chances of AI as support have been definitely arising.

1. The principles of orality and immediacy and the principle of free evaluation of evidence

Orality plays an important role mainly at the trial, where it also ensures the implementation of the principle of immediacy. In the traditional model of litigation, public control is primarily guaranteed by the trial. The trial (oral proceeding) and the evidentiary proceeding have always been considered the central element, the core of civil litigation.[6] Consequently, they may also be regarded the "most sensitive" points

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3 Walker –Watson: op. cit. (footnote 2) 119.

4 Walker –Watson op. cit. 119., 122.

5 Lord Woolf: Access to Justice. Final Report. London, 1996.; Peter Gilles: Zur beginnenden Elektronifizierung von Zivilgerichtsverfahren und ihrer Verrechtlichung in der deutschen Zivilprozessordnung durch Sondernormen eines neuen „E−Prozeβrechts". In: Daisy Kiss – István Varga (ed.): *Magister artis boni et aequi. Studia in honorem Németh János.* Budapest, ELTE Eötvös Kiadó, 2003. 276.; cf. Richard L. Marcus: The Impact of Computers on the Legal Profession: Evolution or Revolution? *Northwestern University Law Review*, (2008), 1828−1829.

6 Heinrich Cf. Nagel: *Die Grundzüge des Beweisrechts im europäischen Zivilprozeß.* Nomos, Baden-Baden 1967. 20.; Dagmar Coester-Waltjen: *Internationales Beweisrecht.* Ebelsbach am Main, Verlag

of proceedings. Any effect on them may concern questions of basic principle directly or indirectly.

The question of orality and immediacy first arises when taking the evidence; while establishing the facts, a decisive role is played by personal conviction, directly and personally perceived impressions concerning people or objects, which serve as the guarantee for the legitimacy of the decision.

Nowadays professionals working in the field are to cope with the AI gaining ground and the resulting challenges. Hungarian courts have carried out numerous developments in recent years: introducing, e-files, client inspection and electronic payment systems, the distance hearing system (ViaVideo system) as well as the artificial intelligence-based speech recognition and transcription softwares[7]. Thus, technology has taken a leap from regulation. Not always can the gap arising be bridged over by judicial practice. The area in Hungary where this gap is smaller yet clearly perceivable is the emergence of new (electronic) means of proof and their integration into the civil action. Apart from the means of proof the fate of which has already been settled (for example, electronic documents), there are other means to which the legal system has not been able to react at a proper pace or in an appropriate manner. In this regard, it would be necessary to examine whether or not Acts on prodecure should elaborate new rules relating to recently emerging electronic means of proof. Since the internet has become the most relevant source of information for both the court and the parties, we should consider ways information found on the internet could be used during civil proceedings. Evidently, this question cannot be treated and answered uniformly due to the diversity of information available on the internet. However, it is a prompt to the world of AI; information accessible on the internet, exactly because of its quantity, sometimes requires us to apply a new approach and novel methods. This poses the question whether a new legal regulation or a substantial modification of the existing regulation will be necessary in case AI gains more ground in the examination of evidence. The fact that these rules may change the conduct of parties and other persons involved in the legal action is a circumstance to consider; parties may have to pay increased attention to the preservation of evidence.

This paper has a part aiming at reviewing judicial practice. It may provide assistance to reveal whether there is an increasing tendency to use new types as means of proof in civil proceedings. The following are to be solved consequently: the way these new means may become integrated into the demonstrative evidence system (if applicable). In addition, finding what may hinder the admissibility of such types of evidence; how their authenticity is to be determined by the court and proven by the parties; in what form these types of evidence are to be presented to the court by the parties, and how such evidence should be examined by the latter. Especially due to their fast-changing and changeable content, it may raise some difficulty for the court how to

Rolf Gremer, 1983. 1.; Walter H. Rechberger – Daphne-Ariane Simotta: *Grundriß des österreichischen Zivilprozeßrechts.* Wien, Manz'sche Verlags- und Universitätsbuchhandlung GmbH, 2000. 363.

[7] Martin Cp. Spitzer: Digitalisierung und Verfahrensmaximen. In: Christoph Althammer – Herbert Roth (ed.): *Prozessuales Denken und Künstliche Intelligenz.* Tübingen, Mohr, 2023. 38.

treat a printed version and how such information may be preserved and retrieved in an authentic format. The problem of authenticity and unadulterated solutions comes to the foreground due to a greater risk of manipulation compared with traditional means of proof. Moreover, judges have less experience in this field, so often the contribution of an IT expert may become necessary. All this is combined with the issue of unlawfully obtained evidence as reflected in the evolving practice of the new Hungarian Code of Civil Procedure. This could raise the question of reconsidering when judges themselves should be permitted to do research on the internet (ex officio), and whether they should be allowed to use the obtained information to establish the facts of the case and evaluate the evidence.

The issue of the *Internet of Things (IoT)* may require a new approach (and maybe even new regulation) due to its increasing spread. IoT enables us to connect devices on the internet and to save data to the local device as well as to transmit data between the connected devices and, possibly, to the cloud, too. So-called smart devices can include household gadgets, medical or office equipment, sensors and public utility meters, but one may also list here smart watches and, in a given case, also vehicles. At this point, the question of smart cities (e.g. with regard to parking cases) and smart homes and the main subject of my planned research become inseparable. As far as it may be predicted at present, in the near future, IoT could become relevant in the following fields apart from the above-mentioned: competition law, labour law, medical malpractice cases etc.

2. Impartiality and judicial independence is crucial

In the courts AI is rather expected to play a role in the preparation and support of decisions (e.g. Big Data analysis), or it may support the judge's work as an expert (e.g. in the field of handwriting analysis, facial recognition or the interpretation of radiograms). Moreover, automatic speech recognition systems enable real time recording of trials, which may improve courtroom culture and promote effectiveness. Introduction of the former has already started in Hungary. Algorithms analysing and evaluating jurisprudence exist already in foreign countries, which may be an important step towards predictability. The application of AI may also generate a significant change in cross-border disputes. Essentially, it could substantially reduce the extra costs stemming from the international character of the lawsuit (e.g. AI may be used in translation and interpreting, and video conferences can often replace travel). So-called self-enforcing contracts will pose a challenge to traditional forms of claim enforcement, while the use of blockchain technologies could possibly present another challenge with regard to registration procedures.

These possibilities provided by technology also imply legal and ethical problems, such as the responsibility of the creators of AI and the possibility for the court to hear AI (and in what capacity). It raises further questions whether the judge understands the operating mechanism of AI while possibly relying on it. It could be difficult to handle the fact that no human element is involved in the learning process of deep-learning algorithms. Possibilities for tracking this process and the relating system of liability have not been duly explored or thought over.

Opportunities offered by Legal Tech are presumed to bring about substantial changes in the work of law firms (mainly with the help of document analysis, document drafting and risk analysis). The question is how this process will influence competitiveness respective of smaller law firms. Due to quantitative factors, some differences may be expected in big and smaller countries using Legal Tech.

If we replaced the human factor with algorythms in any field of justice (decisions made by algorythms) in the future, this would evidently lead to a change in codification techniques. Legal regulations would have to appear in a form allowing them to be processed by a machine (algorythmic thinking).

According to Shetreet, using digitalization and AI in the work of courts should be done carefully in order to „avoid undue pressure on judicial independence and on the quality of the judicial process."[8] Also, Pérez Ragone and Vitorelli has a cautious approach. He draws attention to the fact that „if AI were to replace judge, the „robot Judge" should be able to take over all tasks (and value) of a human judge […]" who would „continually superwise the fairness of the trial as a whole." He thinks that it is „too difficult to weight for a machine in order to determine a correct and fair decision. The mixture of skills including logic, research, language, creative problem solving, social etc. is challenge for an AI system."[9]

AI can have a supportive function, assisting the judge to find a larger number of consistent, effective decisions.[10] It is worth contemplating the benefits for going further than this. A second question is whether a human supervising only a draft decision made by the AI can be justified. Alternatively, whether the first instance decision can be made by the AI meanwhile a human will work only at the second instance.

This topic would deserve a separate study by itself, hence the author plans to address it in a later work. The complex structure of litigious proceedings impedes, to some extent, the application of new information technologies even if for technical reasons only. If in specific proceedings automated processing is made possible, the "decision-making" programme must contain examinations equivalent to their counterparts in the traditional proceedings.[11]

3. "Access to justice" and equal opportunity during proceedings

Digital communication may be useful for the majority of the participants in civil litigation; on the other hand, it may have the effect of marginalizing those who lack

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8 Shimon Shetreet: Judicial Independence and Due Process of Law. In: Eduardo Oteiza – Giovanni Priori Posada (ed.): *Independencia judicial en el tercer Milenio. [Judicial Independence in the Third Millennium].* Lima, Palestra Editores, 2023. 84.

9 Álvaro Pérez Ragone – Edilson Vitorelli: Judicial independence, impartiality, and judicial decision-making. In: Eduardo Oteiza – Priori Posada, (ed.): *Independencia judicial en el tercer Milenio. [Judicial Independence in the Third Millennium].* Lima, Palestra Editores, 2023. 151.

10 Pérez-Ragone – Vitorelli op. cit. 152.

11 Uwe Salten – Karsten Gräve: *Gerichtliches Mahnverfahren und Zwangsvollstreckung.* 2. Aufl., Köln, Verlag Dr. Otto Schmidt, 2005. 34.

the required means or the skills to use these means.[12] With respect to ensuring access to justice and equal opportunities during electronic proceedings, it is crucial whether the party has the adequate means or internet access. Purchasing the infrastructure may cause problems mainly for smaller enterprises and private individuals.

IT also offers possibilities by which access to justice may definitely be improved and proceedings without a legal representative may become better available. Let us think of e.g. the introduction of electronic forms and their publication on the internet. Through these, a higher level of automatism may be achieved, especially if their actual online fill-in is alleviated by assisting programmes. Such solutions also render the court's work less complicated from several aspects, e.g. the later preparation of statistics; it may reduce the workload on courts in the long run. In addition, the assisting programme could reduce the number of errors made during the fill-in process, e.g. through the examination of jurisdiction and competence and the automated calculation of duties, costs and deadlines.[13]

AI also has the potential to help access to justice and make litigation preparation more efficient. As a matter of fact, however, this may appear dominantly in the work of larger law firms. The smaller ones will definitely be at a competitive disadvantage if they are not able to recognize the benefits provided by AI in time and integrate them into their work processes.

4. The requirement of effective proceedings

Rationalizing and accelerating potential resulting from the application of modern IT in court proceedings depends to some extent on the structure of the given proceeding. It offers larger space to proceedings with a simple structure and a routine course, a schematic and standardisable decision-making process. Not by chance, order for payment proceedings havebeen considered within this category in numerous countries. Automated processing is typically characterised by centralisation[14] as building the infrastructure requires lower financial resources. Moreover, the geographic location of the processing court is insignificant in automated proceedings as communication takes place through the internet anyway. For cost-efficiency, the whole proceeding must be fulfilled by a restricted number of specialized staff.

Nowadays several countries have been conducting experiments to work out how artificial intelligence could be used to serve the administration of justice. However, it is difficult to predict how AI will transform the justice system. We have more solid grounds when reviewing what AI is capable of (e.g. predictive encoding, predictive analytics, machine learning). The exploitation of these possibilities by larger law firms has considerably changed the work of lawyers already. How the work of lawyers will become restructured in the future may be of crucial importance. We may proceed from the fact that AI will not endanger the work of judges (as a whole) seriously for

[12] Cf.: Walker – Watson op. cit. 145.

[13] Bartosz Sujecki: *Mahnverfahren.* Heidelberg, C.F. Müller, 2007. 186–191.

[14] Salten – Gräve op. cit. 14–16.

a considerable time; it will rather be present having a supportive character. It will be worth finding an answer to the question as to what fields allow for a realistic prospect of effective cooperation between man and machine and, thus, what the future generation of lawyers should be prepared and trained for.

5. Publicity, inspection of documents, data protection

In the era of modern IT, electronic publicity has a meaning rather different from the first definition of the principle of publicity in the era of Napoleon. Because of its nature, using the internet may lead to wider publicity in any case; it may likewise ensure access to the data of the lawsuit and the litigation materials for a substantially wider group of people than publicity taken in its traditional sense would imply.

Court judgments anonymized by the aid of AI are now a reality, although sometimes there are problems with the use of such judgments. AI removes from the system data relevant from the factual background of a case, which would be important for lawyers who want to analyse the judgment later on.

Overextending the principle of publicity could cause crucial conflicts with other constitutional rights (e.g. data protection, protection of secrets, personal rights). Technology may also offer more possibilities than one should necessarily incorporate into the "texture" of the rules of civil procedure. It is not easy to strike the right balance in this field, though.

Theoretical and practical problems are generated by possible public access to files and that of data protection. Providing access to electronic court files may easily be implemented technically and it may have numerous practical advantages. Making the whole material of files accessible for anybody is obviously undesirable for data protection reasons. Electronic files may contain parts (such as judgments) of public relevance.

A primary issue could be the need for anonymizing, which may lead to the over-restriction of publicity in the majority of cases. Despite the main rule of public trials, in legal literature one may encounter positions objecting to the electronic publishing of trial records.[15]

However, finding a solution is a must to secure data protection and to prevent unauthorised access to electronic court files. When viewing and analysing documents, access should be recorded by the programme, and a solution must be found to preserve the intact and integral content of e-files.

6. Summary

The use of IT does not have the same impact on all principles; problems of conflict may arise more frequently with respect to certain principles and less frequently regarding others. In recent years, however, several possibilities have become available as a result

[15] Georg E. Kodek: Der Zivilprozeß und neue Formen der Informationstechnik. *Zeitschrift für Zivilprozeß,* 115, 4. (2002), 486.

of modern technology. Incorporating the appropriate legal guarantees, these may serve the better realization of some principles. As a result, it may lead us to partly reconstruct specific traditional principles. Problems present themselves more intensively concerning litigious proceedings and to a lesser frequency in de facto non-litigious or some type of non-litigious proceedings. However, both procedural law experts encouraging change and those holding more conservative views are likely to agree that the new IT may generate positive changes concerning both the procedural input and the output. The issue characterised by stronger differences in opinion is the trial itself, accompanied by questions of procedural law relating to it; the problem of virtualising a trial.

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