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Transition to the Digital Era – Fundamental Interconnections Between Civil Litigation and Digitalization, With a Look at the Effects of the State of Emergency

Propositions of the Doctoral Dissertation

KÁROLI GÁSPÁR UNIVERSITY
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1.1. The Subject of the Doctoral Thesis and the Rationale for the Choice of Topic

Perhaps never before have such profound changes occurred as rapidly as in the late 20th and early 21st centuries. The explosive growth of digitalization has transformed not only our everyday lives – such as reading, writing, note-taking, language learning, and shopping – but also long-established institutions, including the courts. As a natural consequence, information technology has entered the field of law: on the one hand, there is a need to manage, navigate and analyze the ever-growing volumes of digital data, on the other hand, the increasing digitalization of legal processes requires the legal framework to adapt accordingly. Information technology is a defining presence throughout the complex and diverse system of applying the law. Furthermore, the legal system shall endeavor not only to foster economic competitiveness, but also to comply with the standards of legal competitiveness: it must provide a stable, transparent, and predictable legal environment, while remaining responsive and adaptable to new challenges and continuous change. Similarly, changes in the economic and social environment are presenting the courts with new challenges – both in terms of the emergence of new types of cases and in the context of access to justice, as information technology continues to evolve.

The EU Justice Scoreboard clearly demonstrates that indicators reflecting the level of information and communication technology development in the judiciary has a key role in assessing the judicial systems of the Member States. Modernization in this area is also an increasing need, as a high level of IT infrastructure alone is no longer sufficient— an active use of the latest technologies is now considered essential. In other words, while twenty years ago it was still a novelty to use a computer instead of a typewriter to draft decisions, manage cases, and process submissions, those documents could then be filed and registered in electronic databases. The next step was the establishment of electronic communication between courts, clients, and public authorities, followed by the emergence of electronic case files (hereinafter: e-akta), accessible online at any time. With the implementation of the digital court, remote hearings have become a part of judicial practice, moreover, a significant proportion of the judgments are anonymized and stored in a searchable database that is available online for free to anyone. Simplified electronic attendance can emerge and, in the near future, it could be widely adopted supplant the written format with video and audio documentation of courtroom

procedures. As the following step – as shown inter alia by the observed data from the EU Justice Scoreboard – the use of artificial intelligence applications and distributed ledger technologies in courts to carry out core activities is drawn to focus. Progress is therefore continuous and is clarified that law and IT will continue to influence each other and gain an increasing significance in this process.

Of particular interest is how the interaction and close relationship between law and IT, moreover their coexistence affects the field of technical legal language: due to digitalization the ability to interpret and algorithmize text by machine is required, which is an area that now is increasingly the subject of interdisciplinary research. Notably, the need to produce machine-readable court decisions has emerged as a new element among the areas covered by the European Union's Justice Scoreboard for 2020. In the field of machine-readability of judgments, as in roughly half of the Member States, a number of tasks remain to be solved in Hungary in the absence of standardized modelling. This expectation also points to a possible direction for future digital development.

This thesis examines the path leading to the digital court, its milestones and challenges it presents. The term *digital court* – in line with the Hungarian legal literature – refers to the electronic accessibility of courts and court documents. This includes the development of electronic communication and the possibility of the electronical payment of fees, therefore the availability of online and remotely accessible litigation material (e-akta), the development and availability of networks capable of simultaneous transmission of images and sound. This concept doffers with the concept of an *online court*, which mainly supports the resolution of private disputes (mostly for the rapid online resolution of small-scale disputes arising in global e-commerce, e.g. eBay, Vinted) and the concept of a – currently in China widespread - *internet court*, which is increasingly using artificial intelligence to direct court disputes to the online space. The presentation and analysis of the latter two institutions is beyond the scope of this thesis and will not be discussed in detail.

Development and progress in this area is continuous as well, but we must not forget that development must serve the people. According to Nándor BIRHER – since the achievements of the modern age can now transform our environment and the human condition in a very short space of time – technical optimization must be reconciled with humanization; namely in

addition to increasing the effectiveness of regulation, attention must also be paid to preserving values,[1] which is becoming more challenging as technical optimization increases.

1.2. The Structure, Research Methods and Sources of the Thesis

In selecting the topic of this thesis, as well as in identifying and analyzing the necessary sources, I sought to apply adequate scientific methods and to draw on the insights of relevant schools of legal thought applicable to the subject. Due to the multidisciplinary nature of the subject of the research referred to in the title, I had to keep abreast of the latest developments in legal informatics and the scientific methodological experiences that have become the subject of academic research in this relatively new field of knowledge in the course of law enforcement, especially in the application of the law in the courts. In this respect, I have endeavored to apply a branch-specific legal approach, as my thesis is essentially jurisprudential in nature and has been written on the subject of the practical effectiveness of law. In the preparation of the questionnaire survey, in determining the appropriate sample and in the analysis of the data, I considered the requirements of the sociological methodology of empirical studies.

In my review of the domestic situation of court digitalization, I aimed at the conscious application of the comparative jurisprudential methodology among the scientific methodological trends. Since the international roots and connections of the subject under study are of fundamental importance in the development of domestic theory and jurisprudence, I tried to trace the results of the subject and their domestic effects in the various countries and regional legal cultures. I followed the comparative findings of the thesis in the analysis of the individual legal institutions, because this offered a better opportunity to present foreign solutions and to trace their domestic impact.

Due to the specific nature of the subject of the thesis, it was necessary to strive for a concentrated treatment of a new and specific area of judicial law without tradition. In this respect, I followed the guidelines of the focal jurisprudential method, which is playing an increasingly important role in domestic jurisprudence. Accordingly, in terms of defining the structure of the thesis, developing the content units within the chapters, formulating the

[1] Nándor BIRHER: Az egyéb normarendeknek a modern technológiai szabályozással összefüggésben történő alakítása, a jogalkotással párhuzamosan. In: Árpád Olivér HOMICSKÓ (ed.): *Technológiai kihívások az egyes jogterületeken*. Károli Gáspár Református Egyetem, Állam- és Jogtudományi Kar. Budapest, 2018. 21-22. p., see also: Nándor BIRHER: A modern technológiák szabályozásának változásai: theoria versus praxis, etika versus protokoll. In: Árpád Olivér HOMICSKÓ (ed.): *A digitalizáció hatása az egyes jogterületeken*. Károli Gáspár Református Egyetem, Állam- és Jogtudományi Kar. Budapest, 2020. 11-23. p.

hypotheses and interpreting the legal terminology, I focused on the issues appropriate to the subject matter (title), even though a number of other, more important issues could have been examined and the concepts related to them analyzed.

The very choice of topic implies that there are countless areas that can be covered within this wide-ranging discipline, but due to reasons connected with – in particular – the length of the document, I have not analyzed the impact of digitalization in other areas of law, nor the impact of the duration of proceedings on efficiency, since a detailed analysis of the conditions for sound judgments could be the subject of a separate treatise in itself, given its complexity, diversity and importance.

The thesis has drawn on a considerable number of sources in foreign languages. I have used the traditional methods of normative jurisprudence (grammatical, taxonomic, logical and historical) to explore the content of legal terms related to digitalization and those that have emerged recently, but in several cases I have had to use content paraphrasing or linguistic neologisms to translate the sources I have translated. In the course of my research, I have endeavored to use the widest possible range of national and international literature on the subject. My aim was to present in depth the issues and problems arising in connection with the research topic and to suggest possible solutions to them. My primary sources were books, monographs, doctoral theses, studies and publications in scientific journals. In addition, I have also placed a strong emphasis on relevant legislation, legal commentaries and official documents.

A particular challenge for me was the presentation of the process and history of digitalization of courts in Hungary, as there are still few available sources in this field due to the lack of theoretical work. Similarly, the history of the development of new legal instruments introduced in recent years – such as simplified telecommunication presence or courtroom video and audio recording – and the process of building on previous developments, has also proved to be a poorly explored area. I have sought to address these issues as a result of my own research, analyzing primary sources and professional reports.

In the context of the research topic, I paid particular attention to the previous and current legislation on civil procedure. In analyzing the concept of the new Code of Civil Procedure, the bill, its explanatory memorandum and the related commentaries, as well as the detailed legislation on emergency situations, I considered it important to process the multifaceted legislation in order to gain a comprehensive picture of the legislative process and the reasons

for the legislation. In analyzing the normative text of previous legislation, I also applied the comparative law method, which allowed me to place Hungarian legislation in an international context.

As regards international surveys and statistical data, I mainly used publicly available databases. From these, I carried out qualitative and quantitative analyses in line with the research focus, which allowed me to draw relevant conclusions. I also reviewed and analyzed a number of foreign academic sources when examining digitalization processes and applied the comparative law method when analyzing international examples.

Overall, my aim was to explore the literature from as many perspectives and sources as possible, to interpret the relevant international and domestic legal norms and to analyze the practical experience of the subject, and thus to contribute to a deeper understanding and future development of the digitalization of the courts in Hungary.

1.3. Hypotheses of the thesis

In the dissertation, I examined three interrelated – and partly interdependent – hypotheses. The first hypothesis is that digitalization developments increase the resilience of courts, which has a significant impact on the framework within which civil proceedings are conducted, while also supporting higher quality adjudication in courts. It is known from international research that courts in other European countries also experienced significant operational difficulties during the pandemic, and therefore – although it may be argued that the positive impact of digitalization can be taken as evidence – it was necessary to examine the issue of the operational capacity of domestic courts during this critical period in the thesis.

My second hypothesis was that the solutions of court digitalization so far facilitate the principle and systemic efficiency of litigation in civil procedure. This assumption is also – seemingly – evidence-based, but it was legitimate to validate it by measurements. There are, moreover, several arguments against its apparent self-evidence. On the one hand, there are technical and infrastructural problems, namely that courts do not always have the equipment and infrastructure to conduct digital procedures, which limits the effective use of electronic systems. On the other hand, professional concerns may occur, i.e. that judges, members of other legal professions or clients may consider that these solutions could jeopardize the fundamental principles of justice, such as the right to a fair trial or the principle of impartiality. Thirdly, there may be sociological resistance, as the people involved (judges, clients) are not always prepared to use digital technologies, which slows down acceptance and adaptation in our country.

Finally, I hypothesize that, in case the first and second hypotheses are confirmed, further development of the digital acquis is needed to sustain them. It is not just a question of maintaining the computer (‘hardware’) and ‘software’ provision that has been achieved. It is also necessary to maintain further digital developments affecting the entire state organization [e.g. the provisions of Act CIII of 2023 on the Digital State and Certain Rules for the Provision of Digital Services (hereinafter: the “DÁP Act”)] in the field of legislation, and to ensure compatibility and interoperability with them. Without this, the benefits previously gained in the field of digitization could easily be lost.

2. The Content Structure and Organization of the Thesis

The focus of the thesis is on the impact of the achievements of digitalization on the fundamental context of litigation. I have examined how the new rules of civil procedure, in the context of the acquis of digitalization, serve to improve the efficiency of litigation and whether digitalization can play a role in supporting the completion of proceedings within a reasonable time.

I presented the process of digitalization developments and their regulation in Hungary, which were completed by the end of 2019 with *e-akta*, when the equipment of judges with IT tools was almost complete, with the purchase of innovative mobile devices and office software packages. At that time, all conditions were given for the judicial organization to continue on the path of digitalization, building on the improvements already made, when the Covid-19 virus epidemic appeared, and in this new situation it was necessary to keep the courts operational by keeping personal contact to a minimum. In the thesis, I also examined how the achievements of digitalization, which enabled remote working and online access for the parties, could be used in civil litigation during the emergency operation of the supreme court authority, the Curia of Hungary (hereinafter: Curia), in order to enable this forum to fulfil its constitutional function. The rationale for a closer examination of the Curia is that, as a consequence of Act CXXVII of 2019 amending certain Acts in connection with the creation of single-instance district court proceedings, this forum has been simultaneously involved in first, second and third instance judgments and reviews since mid-2020, so that the digital systems operating there had to meet the requirements governing all levels of court. The mere fact of proceeding in a frequently large panel[2] already posed difficulties: board members should see the same document in the electronic file and work together on the same document through secure remote access. In addition, the highest forum of adjudication is not the most digitally-connected age group, which poses an additional challenge for the introduction and use of new methods.

After an overview of the development of the digital court and its use in emergency situations, it was also worth observing where the level of digitization in Hungary stands in international comparison with other European countries. Using the primary information available in Council of Europe and European Union organizations, I examined the level of

[2] Within the Curia, three- and five-member panels operate within the individual judicial departments. The Uniformity Complaint Panel, which initially consisted of nine members and has been expanded to 41 members as of 1 June 2023, operates in two sub-panels of 21 members each. In the case of a motion for a preliminary ruling, the sub-panel may decide either to hear the case with the addition of Curia judges from the relevant department, or to refer the matter to the full session of the Curia [§ 35, § 41/A (1) of the Bszi.].

electronification in the period before and after the pandemic, seeking to draw lessons and identify the obligations and opportunities for the period ahead.

Finally, I analyzed the experiences of an empirical research on the digitalization of the judiciary among judges serving in the Curia. This involved a questionnaire survey and, as a purely qualitative method, an analysis of semi-structured personal interviews. Through this empirical research, I aimed to validate and support the results of the thesis achieved through other research methods. I deliberately chose the group of persons to be included in the study; I undertook a more restricted research, exclusively within the Curia and not covering the entire court organization, because interviewing the entire judiciary could be a subject of research that goes significantly beyond the scope of this thesis.

The complexity of the scope of the research also demonstrates that an institution as ancient (and fundamentally conservative in character) as the judiciary faces serious challenges in the context of digitalization: it must constantly adapt to a changing world, while maintaining the trust of law-seekers and its authority in the eyes of society in the 21st century, in a world of social media, artificial intelligence and the advance of blockchain technology.

3. The Results and Findings of the Research

First Hypothesis

Digitalization developments in the courts increase the resilience of the courts, which also has an impact on the framework within which civil proceedings are conducted. It will also help to ensure the conditions for high quality judicial activity in the courts.

The first hypothesis was supported by the indicators of the international justice scoreboards, as well as by the data collected through the questionnaire survey and in-depth interviews. In fact, digital developments in the justice sector have been accelerating since the mid-2010s (e.g. the possibility and later the obligation of electronic communication; the first steps of *e-akta* with the development of the BETFR system; remote hearings), followed by the procurement of an innovative tool and office software package (2018) and the establishment of the *e-akta* and Consultative Body of Heads of Public Law Departments and Judicial Spokespersons (hereinafter: KKSZB) connection, by the end of 2019 – as if the need for it had been foreseen due to an exceptional situation – the digital court was practically implemented, with full remote access to court case files for both clients and judges.

So far, there has been serious debate about the extent to which electronification should be allowed, especially in litigation, thereby deeply affecting the principle of immediacy. Academic thinking on this matter has tended to be skeptical, and then, with the emergence of foreign examples of online courts, has tended to point to the need to uphold the principles by identifying the path of progress and the inevitability of progress. In addition, the issue of equal access to justice and the protection of the 'weaker party' has been raised – particularly in the context of the epidemic – with particular reference to vulnerable groups, especially children. In this latter context, the research has highlighted the need for better regulation of the situation of clients without digital means, particularly in the context of proceedings before lower courts.

The applicability and use of the acquis of digitalization – as it was completed shortly before the epidemic – was therefore particularly in the spotlight during this extraordinary period, and as a result its use became widespread and commonplace. As it was crucial to maintain the functioning of the judiciary, judges – and gradually an increasing proportion of judicial staff – were able to use *e-akta*, the KKSZB connection, Skype for secure communication between themselves, the Court Decision Library (hereinafter: BHGY) and

electronic legal databases, as part of their daily work on the portable devices, mostly laptops, provided to them, in the context of the "home office" approach which was very common during this period. There is also ample evidence of a significant increase in the number of people registering and requesting notifications in BETFR during the epidemic period, and of active use of the ÜIR and LIR systems by clients.

Based on the responses to the questions posed during the questionnaire survey and the interview, it can be stated that this emergency situation has facilitated and accelerated the implementation process of the acquis of digitalization. It is reasonable to assume that without this compelling situation, the acceptance and mastery of their use could have occurred as a slower process.

In legal literature, the utilization of new institutions that were introduced out of necessity during the pandemic period, but have a positive impact, has also been raised for later use. One of the tangible effects of this period on civil procedural law – also reflected in legislation – is the codification of simplified remote presence within the rules governing electronic court communication. It would have been unimaginable just a few years ago for certain participants in the proceedings to connect to a Skype conference, for instance, from their own mobile phones, during which they would be heard as witnesses. If the court had deemed the personal presence of the witness absolutely necessary, they would not have allowed this form of communication; however, the introduction of this legal institution for the "normal" period outside of the extraordinary situation certainly illustrates the change induced by the positive application of digital achievements.

It is also clear that digital developments facilitate the provision of essential material conditions for the high-quality adjudicative activities of the courts: portable digital devices available to judges, online *e-akta* accessible regardless of space and time, an electronic legal database containing laws, justifications, commentaries, and professional articles, and the BHGY, which most effectively assists in finding the precedent-like decisions of the Curia. These have been essential for ensuring the continuous operation of the courts, thus it can be stated that they have increased the resilience of the judicial organization, as it remained operational even during the pandemic period, thereby preventing significant delays in cases.

Second Hypothesis

The existing solutions of court digitalization support the enforcement of procedural efficiency, which appears as both a fundamental principle and a systemic element in the Code of Civil Procedure.

During my research, the second hypothesis was also confirmed, as the facts confirming this are undoubtedly verified by the experiences of the judicial scoreboard. During the research, those interviewed unanimously highlighted the aspect of litigation efficiency in addition to the timely completion of trials, which were both promoted by the achievements of digitalization, moreover, this was also reflected in the statistical data of the epidemic period. Consequently, in addition to ideal operation, these also help the effective enforcement of substantive law, through easier access to legislation and judicial practice: a specific example of this is remote, full-scale electronic (e-akta) access to court documents (similar to paper-based, but available 0-24 hours a day), the existence of secure communication via Skype, and the accessibility of relevant decisions through the BHGY.

Third Hypothesis

Should the assumptions of the first and second hypotheses be validated, the continued advancement of digitalisation achievements will be required to preserve their effects.

In response to the questions posed in the context of the third hypothesis, several respondents and interviewees explicitly justified the need for continuous improvement, noting that it should be sufficiently "flexible". The rapid changes in the world around us cause the rapid changes in technology and legislation as well, thus the judiciary must constantly remain prepared for them and keep abreast of these changes; i.e. flexibility and foresight are fundamental requirements. The experience based on the research states that future developments should always involve colleagues (judges and judicial staff) with sufficient experience of procedural law and the operation of court systems, in order to ensure that the knowledge gained is used in the best possible way. In my point of view, it is also a matter of resilience that public confidence in the judicial organization, reinforced by a rapid and flexible response to change, is one of the major prerequisites for ensuring that the role of the court is not diminished in the future, especially in providing procedural guarantees to the parties.

According to Zsolt ZŐDI's categorization, we are currently in a period of transition from the second era of legal technologies to the third era, when technology moves from its previous service role, typical of the second era, to a "creative" area and becomes capable of creating or changing things (this also means the entry of artificial intelligence).[3] This fact is also interesting in connection with the suggestion that several interviewees mentioned the use of artificial intelligence, primarily in the context of search engines: the legal unifying role of the Curia – in which it is necessary to search effectively among the precedent-like decisions (published in the BHGY) and their content – may raise the use of legal analysis software already in the third era. In addition, there is the question of a wider use of the automatic document creation software[4] currently available, which is used daily in the anonymization process and belongs to the second era of legal technologies, but which is suitable for more limited use: primarily for matching data already entered into the system, moreover, inserting template texts. However, its more efficient use requires appropriate training.

[3] Zsolt ZŐDI: A járvány, a jogi szféra és a technológia – Hogyan vészelték át a jogrendszerek a járványt, mekkora szerepe volt ebben a technológiának, és mennyire lesznek tartósak a változások? *In Medias Res,* 2020/2. (hereinafter: ZŐDI) 340-341. p.
[4] ZŐDI, i. m. 343-344. p.

It has to be also emphasized that based on the research, it has been proven that there is no need for the development of automatism without human factor in the decision-making process, and the role of the judge in this was considered essential by the respondents of the questionnaire and the interviewees. The rejection of the possibility of "automated decision-making" implies that a synthesizing, discretion-based final decision must be made by a judge (a human), because "Only a judge can guarantee genuine respect for fundamental rights, balance conflicting interests and reflect the constant changes in society in the analysis of a case."[5]

The area where artificial intelligence could play a role in the near future, according to the results of this research, is also the support of judicial decisions: text analysis of precedential decisions of the Curia (published in the BHGY) in order to filter out relevant decisions or processing of larger amounts of data (e.g. invoice data, asset balance data). This also shows that the introduction of systems in this area, even partially without human intervention, requires very serious consideration and thorough preparation involving stakeholders. Digitalization and artificial intelligence pose significant challenges for legislative and judicial thinking in other areas of law, but these issues are not insurmountable, although in many cases they require a paradigm shift.

The potential dangers of digital-only systems have also been raised as a scientific issue, given that the recent energy crisis has highlighted the vulnerability and fragility of systems that have been secure so far. Should an energy supply disruption or IT problem occur, access to electronic systems may become – at least temporarily – impossible, and in light of this, it is advisable to preserve the "paper-based" nature of the procedure for the majority of procedures, at least until a more advanced and secure alternative becomes available.

In conclusion, it is a natural necessity to continue to develop digitalization. It is necessary to adapt to changes in the outside world in this field as well, but this adaptation necessarily presupposes the consideration and use of experience gained in the judicial organization during the preparation, development and implementation phases, and can only be envisaged with the "live" introduction of a thoughtful systems that have been modelled, tested and tried out for the entire process.

[5] Communication from the Commission (Digitalisation of justice in the European Union A toolbox of opportunities) {SWD(2020) 540 final} 13. p. https://eur-lex.europa.eu/legal-content/HU/TXT/PDF/?uri=CELEX:52020DC0710 Retrieved: 6th September 2024.

Digital devices and technologies have a major impact on our everyday lives, with electronic devices and the software they run becoming part of our lives: we use them as a matter of course for communication, administration and entertainment. It is not an exaggeration to say that they have changed the way we live and work, and that this transformation is not over, it is still ongoing and, of course, it directly affects the functioning of the state and, therefore, of the judiciary.

It is precisely because of this recognition and the importance of this transformation that the legislator has recently considered it important that the Fundamental Law expresses the state's commitment to promoting digitalization and the use of related technological solutions. The Twelfth Amendment to the Fundamental Law of Hungary, which entered into force on 1 July 2024, stipulated that the digital management of affairs in Hungary is a priority, for which the state shall provide everyone with a unique digital identifier, as defined by law. This led to the promulgation of the aforementioned Digital Citizenship Act (hereinafter: DÁP), which aimed to develop a mobile phone application to provide citizens with simple, convenient and efficient online services. It allows voluntary users of the service to manage their official affairs, providing, among other things, identification and signature, secure electronic communication and document management, and an online payment system for services.

The direction set is clear: a digital way of doing things takes precedence over paper-based, face-to-face administration, and everyone has a unique, permanent, universally and voluntarily usable ID to facilitate this. It will also become clear in the near future what role this development can play in practice in the context of court proceedings.

All of this shows that the events of the "outside world", particularly new digitalization developments affecting large-scale state systems, must be continuously monitored, as has been done – according to the details presented in the dissertation – within the court organization as well. The small-scale developments that started in the early 2000s accelerated from the middle of the decade following predetermined directions, and then in the 2010s, they advanced explosively along a specific strategy outlined in the analyzed projects, both in terms of content elements (software) and the procurement of physical devices. The latest developments, the EU legislative directions, the DÁP Act, the emergence and rapid spread of artificial intelligence, and the frequent mention of the demand for online courts all indicate that there is a need to outline a vision of what the Hungarian court should look like in ten years. Indeed, all future planning and development should be thought through and executed along the lines of this strategy.

It is also clear that digitalization is not an end itself, but must serve the purpose of easier access to justice, as I have shown in the dissertation in several aspects, such as litigation efficiency supported by procedural rules, as well as the applicability in exceptional situations, ensuring the functioning of the court.

The research also confirmed that digitalization increases the resilience and flexibility of the judicial organization. In the pandemic situation that caught the entire world by surprise and unprepared, those courts were able to remain operational whose digitalization – through remote access to documents and secure remote communication – had already been resolved. It is worth highlighting that in civil cases, the principles of the Code of Civil Procedure could be applied (timeliness – cases did not drag on, procedural efficiency – the enforcement of substantive law was ensured, within fair procedural frameworks).

Since similar situations, which restrict or make impossible personal contacts and are even difficult to imagine today, may still occur in the unpredictable future, the "flexible response" already tried and tested in the field of legislation can play a major role in resolving them. It is also clear that digital-only systems pose a serious risk because of the vulnerability and vulnerability that this exclusivity entails. Indeed, as we have seen recently, in the event of a power cut or IT problem, access may be impossible, at least temporarily, which makes it worthwhile to maintain a 'paper-based' approach to most procedures, but modernizing the rules of procedure is a priority for the near future.

Nor can we ignore the trend towards "out-of-court justice". In Susskind's words, our courts are "too expensive, too slow and too difficult to understand", and the best way to enhance access to justice is through online courts, including digital platforms for alternative dispute resolution. Although I will not touch on this area in this thesis due to scope limitations, it is clear that the justified and necessary reforms must also be implemented with great care, especially to ensure guarantees of court proceedings.

4. The Author's list of publications releated to the thesis

1. GYARMATHY Judit: A bírósági igazgatás kihívásai. In.: Sárközy Tamás (ed.): *A harminchetedik Jogász Vándorgyűlés előadásaiból*. Magyar Jogászegyleti Értekezések. Budapest, Magyar Jogász Egylet, 2015. 13-24. p.

2. GYARMATHY Judit: XI. fejezet Perindítás 172-173. §. In: Wopera Zsuzsa (ed.): *Nagykommentár a polgári perrendtartásról szóló 2016. évi CXXX. törvényhez*. Wolters Kluwer Hungary Kft. Budapest, 2019. 311-314. p.

3. GYARMATHY Judit: XXV. fejezet A határozatok fajtái, tartalma és közlése. In: Wopera Zsuzsa (ed.): *Nagykommentár a polgári perrendtartásról szóló 2016. évi CXXX. törvényhez*. Wolters Kluwer Hungary Kft. Budapest, 2019. 687-718. p.

4. GYARMATHY Judit – SÁNDOR-SZŐKE Zsuzsanna: Országos konferencia az új polgári perrendtartás tapasztalatairól. *Jogtudományi Közlöny*, 2019/11. 467-468. p.

5. GYARMATHY Judit: Veszélyhelyzeti szabályozás és annak kihatása a felülvizsgálati eljárásra. In: *Jog és Állam. XXIII. Jogász Doktoranduszok Országos Konferenciája*. Károli Gáspár Református Egyetem Állam- és Jogtudományi Kar. Budapest, 2022. 63-72. p.

6. GYARMATHY Judit: Polgári perek a Kúrián a koronavírus idején. In: Bodzási Balázs – Csehi Zoltán (ed.): *A Covid–19 és a gazdasági jog. A koronavírus-járvány és a rendkívüli jogrend hatása a magyar gazdasági jogi szabályozásra*. Magyar Jogász Egylet. Budapest, 2023. 171-197. p.

7. SZILÁGYI, Gábor – GYARMATHY, Judit: Emergence of Digitalization and Artificial Intelligence in the Intellectual Property System. (2023). *Institutiones Administrationis - Journal of Administrative Sciences*, 3(2), 122-141. p.

8. GYARMATHY Judit: A bírósági digitalizáció Magyarországon. A bírósági informatikai rendszer kezdeti lépéseitől a digitalizáció felé. I. rész. *Magyar Jog*, 2025/2. 65-71. p.

9. GYARMATHY Judit: A bírósági digitalizáció Magyarországon. Digitális-e az elektronikus? II. rész. *Magyar Jog*, 2025/3. 154-162. p.

10. GYARMATHY Judit: Bírósági digitalizáció hazánkban a nemzetközi felmérések tükrében. *Fontes Iuris*, 2024/3-4. (accepted, in press)

11. GYARMATHY Judit: A bírósági határozatok közzététele és annak következményei. *Infokommunikáció és Jog*, 2025/1. (accepted, in press)