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**The Role of Artificial Intelligence in Online Dispute Resolution: Opportunities
and Challenges**

Dirbtinio intelekto vaidmuo sprendžiant ginčus internete: galimybės ir iššūkiai

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ABSTRACT AND KEY WORDS

This work analyses the potential opportunities and obstacles for using Artificial Intelligence in Online Dispute Resolution. Artificial Intelligence (AI) provides various benefits to the legal realm, including learning, reasoning, and problem resolution. Litigation is becoming obsolete, and online conflict resolution is faster, cheaper, and more pleasant. The first chapter of the research examines the main understanding of Online Dispute Resolution in the historical phases of Alternative Dispute Resolution. The second chapter is devoted to the place of Artificial Intelligence in the legal fields and Online Dispute Resolution. The third and last chapter explains the regulatory and practical aspects of Online Dispute Resolution.

Key words: Online Dispute Resolution, Artificial Intelligence, Regulatory, Access to Justice, Three Step Model of Online Dispute Resolution, BATNA

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LIST OF ABBREVIATIONS

ADR – Alternative dispute resolution

AI – Artificial intelligence

CEDR - Center for Effective Dispute Resolution

EU – European Union

ODR – Online dispute resolution

UN- United Nations

UNCITRAL – United Nations Commission on International Trade Law

UNCTAD - United Nations Conference on Trade and Development

USA – United States of America

METI – Ministry of Economy, Trade and Industry of Japan

JIDRC – Japan International Dispute Resolution Centre

WIPO - World Intellectual Property Organization

INTRODUCTION

Developments in artificial intelligence affect almost every aspect of human life. It is not possible for law, like other fields, to be independent of these developments. As a matter of fact, with the developments in the field of artificial intelligence, it is becoming more and more desirable for artificial intelligence to find a place in law. The point that stands out here is that the impact of artificial intelligence is not only transformative but also transformative. In this context, artificial intelligence has the potential to be disruptive to traditional understandings of law. However, how artificial intelligence will affect the law depends on the developments in the field of artificial intelligence as well as the discussions in the field of law. In this regard, it is important to examine the relationship between artificial intelligence and law. Alternative dispute resolutions such as arbitration and mediation around the world are carried out by various institutional organizations in various countries. Some of these organizations have expanded their practices within the scope of online dispute resolution since 2010. Especially since 2015, it has been observed that arbitration institutions in some countries have regulated their online arbitration rules in order to carry out offline arbitration in the cyber environment over the internet in the context of online dispute resolution. In the context of online dispute resolution, although the rapidity, effectiveness and low-cost resolution of disputes in terms of online arbitration constitute the positive aspects of this process, there are also some negative aspects of arbitration proceedings conducted online. Undoubtedly, technology-based technical problems that may arise in terms of access to the internet; It can be resolved quickly through technological developments that accelerated with the Covid-19 epidemic. However, the real problem, beyond access to the internet, is to ensure that the basic principles of the trial, such as the right to a fair trial and the right to be heard, are implemented in the online arbitration environment, and to ensure that fair and just decisions are made in terms of access to justice. Today Artificial Intelligence includes everywhere and bounds with different phenomenons. We will go through its relations with Online Dispute Resolution and so about the law. AI can be helpful for Online Dispute Resolution (ODR). AI has similar thinking ability like humans. We can tell AI imitates our thinking ability. AI makes it in so quick and productive way. AI does not have any feelings. Therefore, AI thinks so cold-blooded. AI benefits from permanence, dependability, and cost-effectiveness while also addressing uncertainty and speed in either solving an issue or making a choice.

The aim, object and tasks:

The main aim of this research is to explore and present a clear understanding of the evolving relationship between AI and ODR in the context of the global legal system. It involves analyzing the current challenges in online dispute resolution, examining existing legal frameworks, addressing uncertainties in certain legal provisions, and identifying the potential contributions of AI to online dispute resolution.

The objectives:

The *objectives* of the research are the following: 1) to identify influential aspects of AI and ODR to understand how AI can be more productive in ODR; 2) to conduct a historical overview of the ODR and define its concept; 3) to review existing forms of AI tools for ODR; 4) based on an analysis of the current states, to foreshadow possible future technologies that have the potential for the implementation in ODR.

The tasks:

It would be appropriate to answer the following questions in order to determine the research tasks:

- 1) What kind of AI is used for Online Dispute Resolution?
- 2) What kind of legal acts regulate the usage of AI in Online Dispute Resolution?
- 3) What are the future endeavours of Online Dispute Resolution?

The relevance of the topic:

Online Dispute Resolution is a trend of digitalization. Today, digitalization spreads so quickly and Alternative Dispute Resolution cannot avoid digitalization. Therefore, in the middle of the 90s Alternative Dispute Resolution started to be transferred to Online Dispute Resolution. Online Dispute Resolution gained broad popularity in the 2010s. Particularly, the COVID-19 pandemic made a great demand for non-human element dispute resolution. Also, Artificial Intelligence is living its the most popular time. Everyone and all fields use AI for different aims. Lawyers adapt AI in different parts of legal fields. The popularity and smooth surface of ODR make it easy to accommodate AI in ODR. The significance of precisely defining the theoretical and practical components of carrying out the ODR's operations has been demonstrated once more via all of these events.

Originality of the research:

The fast changes in digital tech, along with lots of people using online shopping and everything going digital, mean we need to rethink how things are usually done in society. While we're going through this big change, there are some specific problems making it a bit hard to put everything together smoothly. What makes this study different from what others have done before is that it doesn't just talk about the problems; it also suggests some smart ways to fix them. The research is just one of the problems of the usage of AI in Online Dispute Resolution.

Methods of the research:

The current study employs various research methods. Firstly, the comparative historical method is utilized to uncover the historical prerequisites that shaped the development of ODR and AI concepts. Secondly, the statistical analysis method is applied to identify statistical data regarding ODR development and key areas of disputes. Thirdly, the linguistic (grammatical) method involves interpreting legal rules, be they regulatory legal acts or non-legislative acts. Lastly, the analytical method is employed to highlight challenges in AI usage in ODR. Analyzing regional acts and laws of internal states serves as an indicator for ODR development, allowing the author to anticipate the future trajectory of the topic at hand.

The most important sources:

In order to achieve the established objectives, the author relies on regional regulatory legal acts and international recommendations. These serve as potential models for globally recognized documents in the future. Notable documents in this context include the New York Convention 1958, UNCITRAL Technical Notes on Online Dispute Resolution 2016, and Regulation 524/2013 of the European Union regarding Online Dispute Resolution for Consumers. To conduct a thorough investigation and draw specific conclusions, the author examines the works of primary contributors such as Pablo Cortes, Colin Rule, Ethan Katsh, Faye Wang, John Zeleznikow, Jie Zheng, Mohammed Abdel Wahab, and Marcelo Corrales.

I. THEORETICAL BACKGROUND OF DISPUTE RESOLUTION

1.1. Chapter I. Historical Background and definition of Dispute Resolution

Disputes commenced appearing at the same time humans started to live together. Even first-generation humans did not know why disputes happened and how they could solve them, but disputes were part of their lives. Historically, humans handled disputes in various ways which arose suddenly and naturally. For example, property problems used to be solved by wars and local fights. (Attaullah Q., Saqib L., 2017, p. 240)

Talion rules can also be considered as dispute resolution. Conflicts that came from damages were handled the same as causal acts. An eye for an eye and a tooth for a tooth was the main idea of Talion rules. (Rojtman, B., Stavsky J., 2005, p. 7)

After some years wise persons started to solve conflicts within tribes. Property problems used to be solved by advice or exchange. To our mind, wise and older people's advice was the first version of mediation and negotiations. (Carstensen, L. L., 2017).

Generally, if we look at the first dispute resolutions mentioned above, we can conclude and tell that they were simple and primitive because they were considered just to "find solutions". It does not matter if they were not logical, fair or based on any experience. However, this kind of dispute resolution was also profitable for modern Alternative Dispute Resolution. They made a surface for modern experiences.

At this point, it would be better to explain some terms related to Dispute Resolution before continuing to talk about the history of Dispute Resolution. Usually, Dispute Resolution and Alternative Dispute Resolution are accepted as same terms. Technically, this is correct, but we consider there are some differences between the two words. Dispute Resolution is a general word and form. We can tell Dispute Resolution surrounds all kinds of solving conflicts. (Brooks, R., 2022). Court and non-court methods are included to the Dispute Resolution term. Dispute Resolution has formal and informal forms. It does not matter the way of solving disputes as mentioned in old times. The main point of Dispute Resolution is to get any result or solution. Alternative Dispute Resolution is a more specific and modified term. It determines only non-court and formal ways of Dispute Resolution. (Imm, J., 2023)

After the points above, We can explain Dispute Resolution and Alternative Dispute Resolution similar below statements:

Dispute Resolution refers to the sum of judicial and non-judicial, formal and informal methods aimed at resolving disputes encountered in people’s daily lives.

Alternative Dispute Resolution is the resolution of conflicts that may lead to legal disputes through alternative predetermined mechanisms without going to court.

The main explanatory elements of ADR are a legally related problem, alternative and defined solution methods, and before court case. As mentioned above, ADR is a modified version of Dispute Resolution and it has only some well-known and structured kinds such as “**Arbitration, Collaborative Law, Mediation, Neutral Evaluation, Parenting Coordination (PC), Restorative Justice, Settlement Conferencing, Special Master, Summary Jury Trials (SJT)**”. (What is ADR? 2023) At this point, We would like to give more information about the historical trace of ADR. The definition, features and sorts of ADR will be explained after the history part.

The first example of ADR is related to Sumerians in Iraq in 3100 BCE. In the first decade of the twenty-first century, a stone tablet was found in northern Iraq. Regarding the stone, there was a dispute regarding borders and water sources. (Attaullah Q., Saqib L., 2017, p. 249).

“Another popular historical fact is about the Mari Kingdom. The Mari Kingdom was situated in modern Syria. The kingdom used Arbitration and Mediation to solve disputes between other kingdoms in 1800 BCE.” (Jerome T. B., Joseph P. B., 2004, p. 25)

The Judgement of Solomon is a famous example of historical Arbitration. It happened somewhere in BCE 960. The king of Israel Solomon found a solution for the dispute by a simple way. The mothers who each have an infant son went to Solomon to resolve a dispute. One kid died after a couple of days and the mothers started to argue about second kid. Each woman said alive one is my kid and they asked Solomon’s decision. Solomon thought carefully and asked for a sword to cut the baby separately to give to each woman. One of them said I agree, however, the real mother shouted and said: do not cut my baby, instead of killing him, please give my son to the claimer. Later King Solomon gave the baby to the second lady. His wise decision is used as a perfect Arbitration example today still. (Judgment of Solomon, 2023)

Some authors mention Dispute Resolution is old same as the common-law system. We can witness examples of Arbitration in 1224 in English law. Some agreements included dispute resolution ways. (Hill, Marvin F. Jr., and Anthony V. Sinicropi, 1991, p. 465).

The Medieval Merchant Law had also a significant place during the progress of Alternative Dispute Resolution. (Kadens, E., 2004, p. 51) In the Middle Ages, merchants used to travel to a lot of countries and fairs to do business. When any disputes happened they always needed to solve them. Royal courts were not sufficient, because they had focused on land disputes, not on business–commercial cases. Local courts did not have enough experience. (Jerome T. B., Joseph P. B., 2004, p. 225). During the thirteenth century, a few towns and lords started creating special courts to deal with problems between merchants. However, the people who gave them the power usually kept some control over them.

In the past, mercantile laws covered various aspects, including rules for both local and foreign traders. Towns set up trading halls where guild and town officials could make sure that the goods being traded met certain quality standards. In Ghent, for instance, well-off citizens chosen by the aldermen and bailiff acted as overseers of these halls. They were in charge of keeping an eye on sales, recording them, and taking action against those who didn't follow the rules. (Piers, M., Aschauer, C., 2018, p. 69). Additionally, in many important trading towns, merchants had a big influence on the town councils. In places like Venice and Genoa, merchants had such a strong presence that guilds were not even necessary. In northern Europe, merchant guilds and city governments shared power, like in Paris during the 1260s when the four sworn officials of the Merchants of the Water, a long-distance trading guild, became the town's four aldermen. (Kadens, E., 2004, p. 55).

1.2.Chapter II. Types of Alternative Dispute Resolution

As a phenomenon, ADR has specific elements which consist of it. ADR has 3 main elements.

The first element is the intervention of a third person who will help to solve the problem. Therefore, Alternative Dispute Resolution provides a solution for the next stage when conflicts are not resolved by the parties and turn into a dispute. The third-party acting in reaching a solution is generally referred to as a neutral third party. This third party may be named differently according to each ADR method. (Ozbay I., 2005, p. 470)

The second element of ADR is that the methods in question can be used with the will of the parties, or while the state or arbitration jurisdiction is ongoing, they can be applied upon request or directly on the initiative of the judge or arbitrator. Also, Alternative Dispute Resolution is a mandatory part of the trials in some jurisdictions. For example, after the Mediation Law of Azerbaijan on 19 June 2020, it is mandatory to ask for the help of mediators before trials for labour, family and commercial suits. (the Mediation Law of Azerbaijan, 2020)

The third element of ADR is that solutions reached by ADR are not binding for parties. However, it is possible to make it binding and compulsory for parties. It depends on ADR agreements. (Ozbay I., 2005, p. 460)

After the explanation of the elements of ADR above, we can explain it in the following way: **“Alternative Dispute Resolution is a sum of alternative and volunteer ways to solve problems without trial by third parties.”** Since we have already mentioned our opinion about the differences between Dispute Resolution and Alternative Dispute Resolution, we can proceed to talk about the kinds of Alternative Dispute Resolution.

Kinds of ADR change regarding the jurisdictions and law systems of countries. The explained sorts of ADR below are based on the general Theory of Law. All ADR procedures share the ability for parties to find acceptable solutions to their issues outside of traditional legal/judicial proceedings, but they are controlled by distinguished standards.

1. Conciliation.

The concept of "Conciliation" is used in its dictionary meaning to mean the peaceful resolution of disputes. Conciliation refers to the activity of reconciliation and the concept of this term comes from Latins. Coming from the root "Conciliation", meaning to combine and bring together thoughts. Conciliation is the use of a third party to resolve the conflicts between the parties amicably, without using force on the parties to resolve the disputes. It is an initiative that encourages them to develop their solution proposals. In this sense, the main thing in Conciliation is that the parties resolve their disputes based on their ideas. (Ozbay I., 2005, p. 464)

2. Mediation

Mediation is a popular alternative to going to court to resolve disagreements. A mediator is a neutral third party who will lead you through a structured procedure to help you resolve your issue. It is up to the parties to achieve an agreement and decide what that

agreement will entail. Parties to mediation may refuse to accept the agreement if they are dissatisfied with the conditions established or the proposed outcome. Mediation agreements are not legally binding unless the parties sign a declaration agreeing to be legally bound by the agreement. (Types of Alternative Dispute Resolution, 2023)

In other words, the mediator helps the parties. He does not offer a solution like a judge and does not force a decision on them, on the contrary, he helps the parties reach a solution themselves.

The quality and success of Mediation depend on the approaches of Mediators. Therefore there are some countries in which professional advocates and former judges work as mediators. (Patterson, C.J., 1997, p.14).

Although Mediation and Conciliation are used interchangeably, they are theoretically different from each other, because the mediator takes an active role by intervening at the last stage of the dispute and participating in the negotiations.

In addition, the Mediator is more independent than the Conciliator and can act without knowing the parties beforehand. By contributing to disputes, he helps the parties find a solution on their own. If the parties are not successful in resolving the dispute, he offers his suggestions. Additionally, mediation also includes the conciliation phase. (Ozbay I., 2005, p. 470)

The common feature of conciliation and mediation is that all efforts are made to resolve the dispute between the parties. None of them (the conciliator and the mediator) has the authority to force the parties to reach a solution. Their decisions are not binding on the parties and the solution is only possible with the agreement of the parties.

“Before starting mediation, you must be willing to go to Mediation. The opposing party must be convinced, so a preliminary meeting must be held. Sometimes parties are not happy to go Mediation. Particularly, the excessive cost of filing a lawsuit and the desire to maintain continuous and constructive business relations may be effective in persuading the reluctant party to go to Mediation. In practice, mediation is carried out by lawyers as well. The main point is that lawyers should be professional in Mediation and they must be aware of Mediation methods.

The end of Mediation sessions Mediators provide the report of mediation sessions. If mediation cannot solve the problem, this report will be another proof for trials.” (Ozbay I., 2005, p. 464)

3. Arbitration

Arbitration is also a kind of Dispute Resolution and it is widespread. We can tell Arbitration trials are private courts. They are not the same as national or international court procedures, but they are similar. (What is ADR? 2023)

Arbitration depends on some conditions and rules. Arbitration means that the law does not prohibit the settlement of the relevant dispute by Arbitration in cases of disputes that have arisen or may arise between the parties, instead of being resolved in its jurisdiction, disputes will be handled by Arbitrators chosen by the parties. A dispute can be resolved by arbitration only registered with the express will of the parties and for is aimed Conflict. At the same time, the law should not prohibit Arbitration. It is possible to forbid some disputes from being resolved by Arbitration in some jurisdictions. That kind of phrase can be seen in national laws.

We can sort Arbitration nationally and internationally. National Arbitration is regulated by national laws of countries and the national Arbitrations stipulate some cases to use it. Usually, National Arbitration is regulated by fully national laws. Depending on jurisdictions, it is possible to use international laws.

International Arbitration has main 2 types: Ad-Hoc and Institutional Arbitration. (Ozby I., 2005, p. 470)

Ad-Hoc Arbitration has a flexible style and parties are free to choose arbitrators without informing or permission of any Arbitration Institute or Organization. In that kind of arbitration, the parties want to take more control of Arbitration and decide independently. UNICITRAL model rules can be used for Ad-Hoc Arbitration. Usually, parties use UNICITRAL rules to fill gaps. Ad-Hoc type is more popular than Institutional Arbitration for expenses. Particularly, small disputes are solved easily in Ad-Hoc Arbitrations.

Institutional Arbitration is well-known for its statutory documents. Institutional Arbitrations are international and they usually handle expensive and major commercial disputes. *International Chamber of Commerce, American Arbitration Association and Riga International Commercial Arbitration Court* are examples.

“Institutional Arbitrations have some general differences from Ad-Hoc Arbitrations:

- 1) Institutional Arbitrations are more trustable than Ad-Hoc Arbitrations, because Institutional Arbitrations are organizations and they have to serve regarding their statutory laws.
- 2) Periods, administrative procedures and operational issues in institutional arbitration are more systematic than ad-hoc arbitration, because Institutional Arbitrations are

experienced usually and they provide a lot of courses and seminars for their arbitrators.” (Ertike T., 2007, p.24)

4. Early Neutral Evaluation (ENE)

Early Neutral Evaluation is a common and general way of solving disputes. The main idea of ENE is it should be taken place in early stage of a dispute. As usual for all types of ADR, we will need a third person to help. That person will be called "neutral preliminary evaluator". Also, parties should be quick and understand problem is arising. Only after a nimble step of parties, neutral preliminary evaluator can help to them. (Levine, D. I., 1987, p. 237).

The third party will summarize the dispute by based on the short statements of the parties and he will give his assumed and planned answer to parties. The parties may use the opinion resulting from the evaluation method if they wish. If the dispute is not resolved by this method, the evaluation remains secret.

It is difficult to distinguish this method from other Alternative Dispute Resolution methods. However, this method is especially useful in non-complex disputes. Particularly, It would be better to use this method for compensation disputes. In addition, other benefits of this method are low cost, confidentiality and without damaging the reputation of the parties. (Levine, D. I., 1987, p. 239).

1.3. Chapter III. Interrelation between Alternative Dispute Resolution and Online Dispute resolution

We can see the trace of Online Dispute Resolution after the 1990s. Online Dispute Resolution is a modified and modern form of Alternative Dispute Resolution. Online Dispute Resolution involves applying established methods of Alternative Dispute Resolution to make them accessible and applicable through the Internet. Online Dispute Resolution provides also alternative ways to solve disputes. Today Online Dispute Resolution performs as a subtopic of Alternative Dispute Resolution. That is why they have some common points. It could encompass strategies for preventing disputes, initiatives such as ombudsman programs, conflict resolution, facilitated negotiation, early neutral evaluations, and assessment, as well as consumer-focused programs. (Chan, Gerard L., 2009, p. 531).

Virtual environments are an appealing space to implement Online Dispute Resolution (ODR) because participants have shown a willingness to engage in experimental online interactions. As a result, these spaces not only require ODR solutions but also consist

of a population that is likely to accept new methods for resolving disputes remotely. (Katsh, E., 2004, p. 274).

There was a special period in the middle of the 1990s, the main point was to solve disputes that originated online. Users of the Internet suffered to solve disputes that the World Wide Web. The main problems were the same during the long years. Later, the researchers of the field wrote a lot remarkable notes and works. Also, international organizations and conferences helped to solve dispute-related problems. The 15th Online Dispute Resolution (ODR) Conference, which took place in the Hague, Netherlands, on May 23-24, 2016, Twelve issues were considered during the conference.

We can consider all legal phenomenons created for exact reasons and facts. ODR was made for also similar causes. Prosperity of technology and the internet brought new kinds of problems. Those problems were digital. Humans had some issues with one another's.

The internet changed a lot in 1992. It went from being just for research to also being used for business. At the same time, more college students started using it through their universities, often for free. Then, easy-to-use web browsers were created, and people could easily get internet access through service providers. (Rabinovich-E.O., and Katsh. E., 2017, p. 645)

No doubt, there were also human-centric ethic problems which we can call them disputes. Professor M. Ethan Katsh was a first person who mentioned the digital disputes which happened on the Internet. He examined a couple of digital disputes in his "Dispute Resolution in Cyberspace" article. The problem was that the disputes were resolved in informal ways. At that time, 3 main projects were made by the different institutions.

Online Dispute Resolution has 2 main components. The first one is Alternative Dispute Resolution and the second element is technology. From the first view, Online Dispute Resolution can be seen as just a digital type of ADR. Technically, it is correct, because Online Dispute Resolution was made by ADR and it carries functions of ADR. Both of them have similar elements. Online Dispute Resolution was made for new trends and demands. ODR and ADR are sharing a lot of common points and we cannot apart them each other's and also some differences. (Rabinovich-E.O., and Katsh. E., 2017, p. 647)

Usually, the key factor distinguishing various dispute resolution models is primarily how information is handled and governed. In one approach, a set of guidelines known as rules takes center stage in the decision-making process. On the contrary, in

alternative processes, the involved parties might prioritize other forms of information over rules. In broad terms, mediators, arbitrators, and judges all engage in processing information, yet they employ distinct methods for varying reasons and with different objectives. (Ethan K., 2004, p. 273). The main difference between ADR and ODR is that ODR is digitalized. Based on this reason, there are also a lot of colours of the styles. The digitalisation makes the process easier and reduces the costs.

We can line the similarities as below:

1) Both of them happen before the trials.

Without differences, the forms of Dispute Resolution, ADR and ODR happen before court. It is the main aim of Dispute Resolution that to avoid long suits. We cannot tell which one is more effective and sufficient, because the effectiveness depends on disputes, but the statement above is a common point.

2) Voluntary participation.

To apply for ADR and ODR is voluntary and depends on the parties' choice. The parties of disputes can agree in advance about to resolution way.

3) Neutrality.

ODR and ADR methods include unbiased third parties like mediators or arbitrators. These individuals assist in communication, guide negotiations, and ensure fairness during the resolution process. Maintaining neutrality is very important for building trust in the resolution process. . (Ethan K., 2004, p. 277).

4) Confidentiality.

Not only ADR, but also ODR support and prioritize confidentiality. We cannot imagine any legal instrument without confidentiality. Any confidentiality breach can cause big chaos. Dispute Resolution is also a kind of the trial. The difference is that trials are formal and organizations of countries and almost all confidentiality rules of trials can be used in Dispute Resolution. (Types of Alternative Dispute Resolution, 2023).

5) Small cost.

ODR and ADR aim to offer affordable options as an alternative to traditional legal processes. By steering clear of court fees, costs related to legal representation, and other associated expenses, both methods can substantially lessen the financial strain on the involved parties. (Charlotte, A. 2017, p. 10).

6) Diversity.

ODR and ADR can be used in different situations, such as business disagreements, family disputes, workplace problems, and other scenarios. Their adaptability enables them to handle a broad spectrum of conflicts.

This list can be expanded with different statements and opinions. We consider ODR is a subcategory of ADR and it carries a lot of features of ADR. General principles of ADR can be adapted and used for Online Dispute Resolution. Just we cannot forget the influence of the technology and Internet to Online Dispute Resolution. (Marsden P., 2017)

PART II. IMPLEMENTATION OF AI IN ONLINE DISPUTE RESOLUTION

2.1. Chapter I. General understanding and existing benefits of AI in Online Dispute Resolution

Many people have put forth various definitions for artificial intelligence (AI), each with its perspective. However, most of these definitions revolve around the idea of creating computer programs or machines that can demonstrate behaviour we would consider intelligent if it were exhibited by humans. Back in 1955, John McCarthy described AI in the following sentence: “that of making a machine behave in ways that would be called intelligent if a human was so behaving”. (Marsden P., 2017)

Machines can do things that people can't, and sometimes these things seem really smart. Like, a security program might think there's a cyber attack if it sees a weird pattern in how data is being used in just half a second. Or, a system that warns about tsunamis could go off if it notices tiny changes in the ocean that show the shape of the sea floor.

In the era of innovation, e-commerce, and rapid development, the resolution of disputes has taken a new and innovative turn, utilizing technology as a means to address conflicts. (Katsh E. and Rabinovich E. O., 2017) In the digital age, it's undeniable that "conflict is a growth industry." (Chan, Gerard L., 2009, p. 528)

Consequently, the demand for dispute resolution tools is expected to increase in tandem. Providing a proper explanation of Online Dispute Resolution is very important to our research. The definition of Online Dispute Resolution can be explained from several aspects. ODR is a phenomenon that uses information and communication technologies to assist individuals in conflict prevention and resolution. (Orr D. and Rule C., 2017, p.2) ODR broadly represents a more accessible, faster and efficient mode of implementing Alternative Dispute Resolution (ADR). (Mania, K., 2015, p. 76). Although this research does not delve into a detailed examination of the various definitions of ADR, it is generally understood as a means of resolving disputes without recourse to litigation or traditional legal systems, including negotiation, mediation and arbitration. It should also be noted that nothing prevents ODR from being a part of the traditional judicial process, as technology and technical equipment are evolving and intertwining with the law every day. (Carneiro et al., 2012, p. 213).

However, a simplistic definition of ODR as “ADR” and “online” tools would be overbroad in an era of widespread networked communication. It is hard to imagine any modern conflict that does not involve at least one email or text exchange between the parties

involved. Thus, a more nuanced definition that includes dispute resolution processes and the creation of a “virtual environment” for dispute resolution is useful. (Katsh, E., Rifkin, J., 2001, p.17). Although the previous definition seems a bit confusing, in ODR all processes are supposed to be carried out based on simple technology. For example, simply scanning an invoice and sending it as evidence involves an online process, but cannot be regarded as creating a virtual environment for dispute resolution. (Civil Justice Council, 2015, p. 13). Instead, such a virtual environment may involve communication only through a chat room, with documents uploaded for all parties to access. Alternatively, computer translation can convert requests into numerical values. (Hairong. L., Daugherty, T. and Biocca. F., 2001, p. 17) This can differ significantly from more traditional ADR methods involving face-to-face meetings, where tone, body language and environment can significantly influence proceedings. (Orr, D. and Rule C., 2017, p. 10)

ODR has gained popularity since the 1990s, with widespread adoption by many companies by 1999. (Orr, D. and Rule C., 2017, p. 11) The United States of America saw the initial use of ODR, and since then, it has become widely embraced. Today, ODR is still widely used, mainly by the United States of America. (Wang, F., 2010, p. 25). Over the years, various commercial service providers have used ODR, including eBay, the SquareTrade portal, and CyberSettle. (Katsh, E., Rifkin, J. and Gaitenby, A. 2021, p. 45) However, it wasn't until 2001 that governments recognized the value of ODR. Many observed that by transitioning disputes online, the burden on the courts diminished, and the efficiency of dispute resolution improved. For instance, the "Money Claim Online" platform in England and Wales serves as a judicial ODR platform, addressing legal issues for fixed-sum claims up to £100,000. (Money Claim, HM Courts..., 2017)

The law could not avoid and run from AI. There are a lot of examples of the usage of AI at the law. The idea of merging IT and Law has been known for quite a while. Bruce G. Buchanan and Thomas E. Headrick shared their opinions in 1970 in their article - Some Speculation about Artificial Intelligence and Legal Reasoning. For their opinion Computers can be used by lawyers in addition to their laboratory and classical functions. Lawyers themselves have made light touches in the development of computers. (Buchanan, B, G., and Headrick, E, T., 1970, p. 42).

They thought that artificial intelligence was a part of computer science and noted that through artificial intelligence, lawyers would be able to conduct their research more effectively. In their writings, the authors talked about the interaction of computer science, artificial intelligence and law. (Schwarcz, D., 2023). They also addressed the

misunderstanding of the field relations between Computer Science and Law. This and similar considerations have led to computers being used by lawyers for many years simply as a database or storage device. The authors point out that a robot or artificial intelligence conducting legal research must fulfill many permanent obligations. (Schwarcz, D., 2023). At a minimum, computers should be able to find statutes, case language, case contents, and other relevant information. Funds are limited in developing computer capabilities. Not only because it is difficult to gather information and assemble it on the ground, but also because it is difficult to develop such software. (Schwarcz, D., 2023).

AI has a couple of types of apps which influence and help to legal systems. It is possible to say that there are three types of technologies with which artificial intelligence can change the legal system. These; supporting, replacing and disruptive technologies. Assistive technologies are systems that inform, support and advise people within the legal system. Replacement technology is the technology taking over the functions and activities that were previously undertaken by humans. Finally, disruptive technology is the radical change of the legal system. (Sourdin, T., 2017). In accordance with this classification, technological applications will be examined under three headings.

Supporting activities don't alter the core of the existing legal system; instead, they simply enhance operational procedures and, in a sense, assist in making things easier. An instance from the United States is the 'ROSS Intelligence application. This tool enables users to seek legal help using natural language processing methods. Users can pose legal questions directly to the search engine, discover comparable sentences in legal texts based on a selected sentence, and receive guidance by examining petitions. (Ross Intelligence, 2014).

There are a few types of Supportive AI. We will talk about them.

In the first category, we can discuss contract review. Certain startups like Lawgeex, Klarity, and Clearlaw have designed artificial intelligence systems utilizing natural language processing techniques to analyze proposed contracts. These systems determine which parts of the contract are acceptable and which parts may pose issues. It's worth noting that these systems involve human input and ultimately rely on humans for the final decision. (Rangaiah, M., 2021).

The second type of contract analysis is specifically crafted for auditing comprehensive contracts. This process is simplified for companies and shareholders through the extraction and evaluation of critical data within contracts using natural

language processing techniques. Examples of companies in this category include Seal Software and Kira Systems. (Rangaiah, M., 2021).

The third type involves case prediction, where various AI teams predict outcomes by comparing a case with machine-learned techniques from similar cases. Many law firms have adopted these systems to prepare and potentially resolve cases through mediation without going to court. Blue J Legal is an initiative that exemplifies this type. (Rangaiah, M., 2021)

The fourth type of legal research utilizes large online legal data sources to assist lawyers in discovering relevant materials for a case. Some firms, like LexisNexis and Practical Law, continuously enhance their search algorithms. (Rangaiah, M., 2021).

The fifth type, predictive coding, employs a search algorithm to classify documents based on their relevance level. The software aids in determining which document is better suited for a particular purpose. (Rangaiah, M., 2021).

The sixth type involves chatbots, which are software capable of automating tasks typically performed by lawyers. In addition to these tasks, chatbots are effective in automating the preparation of necessary documents, generating invoices for customers, and similar functions. Examples of chatbots include DoNotPay, Automio, and BillyBot. (Rangaiah, M., 2021).

The seventh and final type accelerates status monitoring, particularly in the context of due diligence—evaluating the assets and liabilities of a potential buyer. This process, usually time-consuming for lawyers, is expedited with the support of artificial intelligence platforms. (Rangaiah, M., 2021).

As evident, these practices do not directly alter the judicial system; rather, they contribute to the legal practice of lawyers. The number of these applications is increasing, and their operational principles are evolving over time.

Replacement Technology Applications

This type of application refers to substituting traditional operational methods with technological application practices. Consequently, the fundamental nature of the legal system remains unchanged, but certain procedures evolve. For instance, the Technology Court in Hong Kong serves as an illustration. The article titled "Introduction of the Technology Court" (2021) on the official website states that the court aims to streamline

business and transactions in response to current evolving conditions. In this context, the court utilizes technological applications like a video conferencing system, multimedia presentation of evidence, and translation services—all integrated into a centrally controlled network. These technologies are employed to gather evidence, such as obtaining statements from witnesses who don't need to be physically present in court. (Introduction of the Technology Court, 2021).

Another example is the smart courts project in China, which seeks to modernize the entire judicial system through technological innovations. In this initiative, decisions from all courts are published on a common online platform, creating a substantial data pool. Online courts, where cases can be filed and heard, have been established. Blockchain technology is employed for evidence preservation in internet courts. The Covid-19 pandemic has led to an increase in the number of smart courts, with a rise in online hearings. As evident, the smart court project is progressively changing the court system in China through technological advancements (Shi, C., Sourdin, T. and Li, B., 2021).

The global use of video conferencing methods and other technological applications in courts has surged, particularly with the onset of the Covid-19 pandemic (Sourdin, T., 2021a). The experiences gained during the pandemic have fostered greater acceptance among lawyers, judges, officials, and court personnel that judicial and court affairs may be conducted differently in the upcoming years. Consequently, online practices in courts have seen an uptick (Susskind, R., 2020, p.7).

According to the Remote Courts Worldwide initiative, which compiles information from online court users, lawyers, and judges across different parts of the world, online courts are utilized in over 40 countries to uphold justice during the pandemic. Technology has thus enabled courts to remain operational. With the widespread adoption of video and audio hearings, access to justice is being provided on a global scale. The initiative aims to discern effective practices and areas for improvement based on global feedback, working towards enhancing performance with concrete experiences as a guide (Cross, M., 2020). It is apparent that the pandemic has accelerated the remote functioning of courts; however, only time will reveal the extent to which these practices will become permanent or further evolve.

Disruptive Technology Applications

This section will explore certain practices that have significantly transformed the legal system. The term "radical change" is used here not to imply irreversibility but rather

to highlight the transformative impact of these applications on the functions of the legal system. In this context, the applications discussed under this heading can be considered as pioneers. This is because their effects are currently under assessment, and both the positive and negative consequences are being thoroughly examined.

COMPAS is defined by its developers as an "automated decision-making software package that integrates risk and needs assessment with many other areas, including sentencing decisions, treatment and case management, and recidivism." This artificial intelligence program, developed and utilized by a private company in the United States, is considered intellectual property. (Brennan, T., Dieterich, W., and Ehret, B. 2009, p. 22-23) Its operational methodology is kept confidential, and it calculates the recidivism rate of suspects on a scale from one to ten based on 137 factors such as age, gender, and criminal record. Although the risk assessment is not legally binding, it does influence judges' decisions (Ulenaers, J. 2020).

The COMPAS software plays a direct role in criminal justice. While the software's risk assessment is not mandatory for judges, its function can be likened to expert reports in the Turkish judiciary. Consequently, COMPAS stands out as a focal point in discussions about artificial intelligence judges, especially in terms of its impact on trial proceedings. In the upcoming third chapter, where we will delve into the consequences of using artificial intelligence in judgments, the COMPAS example will be closely examined, revealing potential negative outcomes. (Compass Software, 2023).

It is essential to scrutinize a legal case related to COMPAS that has been brought before the judiciary. The lawsuit against the State of Wisconsin, filed by an individual named Loomis, was appealed to the United States Supreme Court, resulting in the decision with the number 881 N.W.2d 749. The plaintiff presented three primary arguments in the case. Firstly, it was contended that the intellectual property status of COMPAS hinders the evaluation of the software's accuracy, and convicting the defendant based on accurate information is a right. Secondly, the assertion was made that there was a lack of individuality in the punishment, thereby violating the right to a fair trial. Thirdly, it was argued that making sentencing decisions based on gender is inappropriate. However, the Supreme Court ruled that the utilization of COMPAS was lawful. The rationale provided emphasized that the defendant had access to the COMPAS score and its associated report, offering an opportunity to challenge, supplement, and clarify the COMPAS risk assessment score. Consequently, the court did not prohibit the use of

COMPAS in criminal proceedings. Nevertheless, it was acknowledged that such risk assessment software could pose challenges for judges, and four concerns were outlined:

Firstly, attention was drawn to the fact that COMPAS, being subject to intellectual property, keeps confidential how the factors used in the evaluation are determined.

Secondly, it was highlighted that the risk assessment compares defendants to a national sample, yet a statistical cross-validation study for a Wisconsin population is still pending.

Thirdly, there were observations that some studies on COMPAS risk assessment scores raise questions about whether they disproportionately classify minority offenders as at a higher risk of recidivism.

Fourthly, it was noted that risk assessment tools need ongoing monitoring and adjustment for accuracy since populations and subpopulations are in constant flux.

These court opinions reflect a common concern regarding the skepticism towards algorithmic risk assessment. However, without sufficient understanding of the algorithmic process, it appears challenging for judges to use and evaluate COMPAS comments effectively. In this context, the discussions in this case underscore the difficulty of striking the right balance in terms of knowledge level and independence from automation. (Fortes, P. R. B. 2020, p. 460).

Robot Judges in Estonia

Estonia stands out as a leading country in the realm of electronicization and digitalization across various sectors, including tax, health, and law (Kerikmäe, T. and Pärn, L. E., 2021, p. 563). In a 2019 news publication, it was reported that Estonia had initiated the development of a robot judge. According to the news, these robot judges would handle disputes involving amounts under 7,000 Euros, to streamline the processing of small cases and enhance the efficiency of the courts (Niiler, E., 2019). The cases designated for robot judges are intended to be those where clear decisions can be reached without extensive commentary or complex issues. Theoretically, these initiatives are expected to result in more accessible, faster, and fairer decisions (Ulenaers, J., 2020).

However, following Niiler's report on the robot judges in Estonia, an official statement from the Public Relations Consultant on the Estonian Ministry of Justice's website indicated that Niiler's news might be misleading. The statement clarified that there was no such project or even an aspiration for it within the public sector. It was emphasized that the Ministry of Justice is indeed interested in artificial intelligence projects and does

not rule out the possibility of using AI solutions to aid courts in the future (Tuulik, M.E., 2022). Therefore, it can be affirmed that the concept of implementing robot judges in Estonia is still in the conceptual stage and has not been put into practice.

In the early 2010s, the Netherlands established an e-court for swift decision-making. From 2011 onwards, artificial intelligence judges were introduced in debt collection transactions. However, as per Dutch law, the use of an artificial intelligence judge is not permitted, and the e-court's exclusive decision-making authority is not legally regulated. Moreover, the decisions rendered by the artificial intelligence judge were referred to a public court, and the final decisions were reached based on the calculations made by this court. These decisions pertain to straightforward disputes such as debt collection, which do not necessitate separate case law or argumentation. Nevertheless, concerns about transparency and the right to a fair trial led to the de facto discontinuation of e-courts in the Netherlands in 2018 (Ulenaers, J., 2020).

There are over twenty studies in the literature that employ machine learning and natural language processing techniques to analyze the texts of judicial decisions and subsequently make statistical predictions about the outcomes of these decisions (Medvedeva, M., Wieling, M. and Vols, M., 2022, p. 13). The quantity of such studies is on the rise. Even though these studies have not yet been formally documented in scientific literature, there is a substantial potential for us to witness the practical implications of these developments in the future. Indeed, as Farhangi, A., Sohmshtetty, A. assert, these studies have garnered interest from both the private sector and academia as a means to enhance performance in various fields, particularly in litigation. (Farhangi, A., Sohmshtetty, A., 2021, p. 185). For instance, lawyers may assess the significance of different features to determine which points to emphasize in a persuasive argument. They might also employ algorithms to assess the practicality of challenging a decision.

In a research conducted by Aletras (Aletras et al., 2016, p. 4), the outcomes of decisions from the European Court of Human Rights were forecasted solely based on text contents. Natural language processing and machine learning techniques were applied to analyze the text contents, and models were developed to predict whether a human rights violation had occurred. Consequently, the predictions generated by the models were compared with the actual judicial decisions. The fundamental hypothesis of the article posits that a higher degree of similarity between texts enhances the accuracy of the study's predictions. The researchers reported that the models achieved an average prediction accuracy of 79%.

While a 79% success rate is notably high and promising, some critiques can be directed at the study when evaluating the modelling method used. Firstly, the rationale behind the decisions served as the study's data. In this context, it is argued that any lawyer could make a 100% accurate prediction about the outcome of a decision simply by reading its justification. Therefore, it is challenging to assert that the study identified a pattern predicting future decisions that the court has not yet ruled on. Secondly, the writing style of the court itself might be influenced by the anticipated decision outcome. In other words, the study may have identified a pattern based on the court's distinctive writing style. Thirdly, concerns were raised about the study's use of words like Ukraine, Russia, worker, and region for predictions, suggesting an issue with associating non-essential words with the outcome, leading some to view the study as drawing definitive conclusions (Scherer, M., 2019)

In the study carried out by Katz et al. (Katz, D. M., Bommarito, M. J. and Blackman, J., 2017, p. 12) a model was crafted aligning with advancements in machine learning to forecast the votes of over 240,000 judges and the outcomes of more than 28,000 cases in the United States Supreme Court spanning from 1816 to 2015. The research aims to establish a model not limited to a specific period of the Supreme Court but encompassing its past and future. Two questions related to decisions were formulated, leading to the development of a prediction model. The first question focuses on whether the high court will affirm or overturn the decisions previously rendered by lower courts, while the second question pertains to whether the high court judges will vote to affirm or overturn the lower court decisions. Ultimately, the researchers achieved a 70.2% accuracy rate in predicting case outcomes and a 71.9% accuracy rate in predicting judges' votes. (Katz, D. M., Bommarito, M. J. and Blackman, J., 2017, p. 12)

In this research, a binary model was created to determine whether decisions of the United States Supreme Court in general, and the votes of its judges in particular, would be overturned or affirmed. Notably, the modeling does not autonomously decide by evaluating case contents; rather, it is geared toward predicting how the court or its judges will decide. As emphasized by Scherer at this juncture, the research methodology may not readily apply to lower court decisions, whose primary task is to initially adjudicate a dispute rather than review previous decisions of another court, making the creation of a binary model challenging. (Scherer, M., 2019)

2.2. Chapter II. Future targets of AI in ODR

Interest in the concept of digital jurisdiction has grown. There's something alluring about the idea that in the future, clever electronic decision-makers rather than people could resolve complex human disputes. Even though this is an attractive concept, switching from human-based justice to computerized justice is a big deal. Though the technology isn't quite there yet, many people think this future is near, much as how we now have smartwatches and self-driving cars. (Carneiro, D., Novais, P. and Neves, J., 2023, p. 74)

AI research has resulted in the creation of numerous technologies that are now widely utilized, often within the realm of significant systems. These technologies are primarily employed to optimize processes based on knowledge, enhance user-friendly product interfaces through intelligent adoption, and automate various tasks. Within AI research, key issues addressed encompass novel methodologies for problem-solving, challenges related to knowledge representation and reasoning procedures, planning, learning, natural language processing, motion and manipulation, perception, social and evolutionary intelligence, emotions, and creativity. These techniques find application across diverse domains, including medicine, weather forecasting, finance, transportation, gaming, aviation, and law. In the legal domain specifically, the use of AI techniques is not novel and presents an opportunity for mutual benefit. (Carneiro, D., Novais, P. and Neves, J., 2023, p. 84)

Historically, the initial automated systems designed for the legal sphere comprised purely logical systems that were relatively intricate to use and highly domain-specific. Consequently, only a limited number of trained specialists could effectively utilize them. To address this limitation, there arose a need for applications capable of employing these logical tools more broadly. According to Oskamp (Oskamp, A., Tragter, M., Groendijk, C, 1995, p. 213-215) researchers should focus on developing practical and intuitive applications accessible to non-experts. It is our belief that the optimal approach to achieving such applications involves integrating concepts from both AI and law. This integration can lead to the development of Online Dispute Resolution (ODR) platforms that effectively tackle the challenges currently confronting the legal domain. (Oskamp, A., Tragter, M., Groendijk, C, 1995, p. 211).

Advancements in Artificial Intelligence (AI) and The Law have been slower than initially anticipated. Initially, there was excitement that computers would soon possess the skills and computational power necessary to replace judges and attorneys. However, this expectation is far from realization, and currently, it is not the primary objective of the

ongoing work in this field. (Katz, D. M., Bommarito, M. J., Blackman, J., (2017, p. 10). Lawyers, primarily, express opposition to the idea of placing computers in the roles of judges and attorneys, citing moral undesirability as the main reason. (Fortes, P. R. B., 2020, p. 465). Nevertheless, this objection alone does not impede the research conducted in the AI and The Law domain; at most, it might delay its implementation but not its development. One of the primary factors contributing to this delay is that computers function as straightforward rule executors, whereas the legal field demands interpretation. (Lodder, A. R., Zeleznikow, J., 2005, p. 310).

Furthermore, the field of law is intricate and characterized by ambiguity. The interpretation of norms often gives rise to uncertainties among legal practitioners, leading to divergent and conflicting interpretations, and consequently, disparate outcomes. (Katz, D. M., Bommarito, M. J., Blackman, J., 2017, p. 12). Initially, it might seem necessary to have a more precise definition of norms to achieve unambiguous interpretations. (Oskamp, A., Tragter, M., Groendijk, C, 1995, p. 213). However, the complexity of society, with its numerous conflicting values and norms of conduct, makes such an endeavour appear utopian. Assuming such an accomplishment is feasible—that norms can be defined to the extent that their interpretation becomes straightforward—it becomes evident that this would require a significantly higher number of more specific norms. (Aletras et al., 2016, p. 13), The question then arises: is it practical to manage such a complex legal system? Can computer systems be developed to handle this level of complexity?

Another challenge awaiting future research in AI and The Law pertains to the evolving nature of laws. In civil law systems, the frequency of legislative changes is on the rise. (Cockfield, A., 2018). Furthermore, in common law systems, as the number of cases resolved by courts increases, a broader range of cases becomes relevant when addressing a new one. Consequently, a significant challenge is managing the growing and ever-changing volume of information. (Jenner, A., 2017).

Technologically, for ODR systems operating in civil law domains (typically rule-based), this implies that whenever a legal norm changes, someone must search the system for the rules or ontologies implementing that norm and modify them accordingly. Hence, there will be an increasing effort to maintain and update such systems without introducing ambiguities. (Marsden, P., 2017). The same challenge applies to common law domains, where systems tend to be case-based. In these systems, the question arises as to whether a past case should be considered after a clear trend of change in more recent cases. Here,

there is also an escalating effort to uphold a database of relevant information. (Hattotuwa, S., 2006).

Undoubtedly, there are numerous challenges in the development of AI and Law research. It remains uncertain whether the creation of fully autonomous software agents capable of assuming the roles of judges and attorneys will occur in the near future. (Ozby, I. 2005, p. 22). Nevertheless, by aspiring to this ambitious goal, researchers will continue to devise practical tools that gradually enhance legal systems, making them more efficient, and ultimately, more accessible to people. From our perspective, the objective of future AI and Law research should be to develop systems not highly advanced and complex, scarcely used by anyone, but systems that can be utilized by individuals with little to no knowledge of the legal field, essentially serving as decision support tools. (Chan, C. and Gerard L., 2009, p. 558).

Lodder-Zeleznikow Three Step Model for Online Dispute Resolution

They designed a thorough three-step model for Online Dispute Resolution (ODR), envisioning the ODR environment as a virtual space equipped with a diverse set of dispute resolution tools. (Lodder, A. R., Zeleznikow, J., 2005, p. 301). In this extensive space, those involved in a dispute have the flexibility to choose from various tools for resolving conflicts. Participants can choose any tool they find suitable, using them in any order or manner they prefer. Alternatively, they can opt for a guided process. (Lodder, A. R., Zeleznikow, J., 2012, p. 62).

The carefully proposed three-step model follows a specific sequence that, in our view, significantly enhances an effective ODR environment:

Negotiation Support Tool with BATNA Feedback: The first step involves a negotiation support tool that provides detailed feedback on potential dispute outcomes if negotiations were to break down, including a thorough evaluation of the "best alternative to a negotiated agreement" (BATNA).

Conflict Resolution through Argumentation or Dialogue Techniques: In the second step, the tool works diligently to resolve lingering conflicts by skillfully using advanced argumentation or dialogue techniques.

Decision Analysis Techniques and Compensation/Trade-off Strategies: For issues that remain unresolved in the second step, the tool employs advanced decision analysis

techniques and intricate compensation/trade-off strategies, facilitating the prompt resolution of the intricate dispute. (Lodder, A. R., Zeleznikow, J., 2012, p. 70).

If, at the end of the third step, the outcome is unsatisfactory for those involved, the tool allows them to seamlessly return to the second step, enabling them to repeat the process iteratively until the dispute reaches resolution or a clear stalemate is reached. A stalemate, characterized by a deadlock with no apparent progress moving from step two to step three or vice versa, triggers the use of alternative forms of Alternative Dispute Resolution (such as blind bidding or arbitration) for a more focused set of issues. This strategic approach not only efficiently saves time and resources but also provides disputants with a valuable opportunity to thoroughly reconsider their initially conceived goals in light of the existing impasse. (Lodder, A. R., Zeleznikow, J., 2012, p. 73).

AI and Access to Justice

Like the development of various new technologies, the advancement of AI in Online Dispute Resolution (ODR) seems to represent a liberalization process. It indicates the expansion of easier, more affordable, and accessible resolution processes that are also efficient. (Thompson, D., 2015, p. 43). However, this viewpoint can be criticized as oversimplifying the potential long-term impacts of AI in ODR. Contrary to the notion that AI will enhance access to justice, it can be argued that its implementation might actually be detrimental. (Arsdale, S. V. 2015, p. 15). There are two main perspectives in this argument. First, removing traditional third parties could have certain positive effects. Second, the nature of AI as a technology may create a two-tiered system of dispute resolution. These perspectives are discussed in more detail below. (Alessa, H, 2022, p. 336).

New technologies often start with high costs, limiting their widespread use and full potential until they become refined and more affordable. Initially, only well-funded organizations benefit from these technologies, similar to how high-end businesses were the first to adopt mobile phones before they became common. The same trend is expected for AI-ODR techniques (Menkel, C. M., 1997, p. 35). Like state-appointed mediators integrated into traditional judicial processes, AI-based ODR is expected to follow, offering potential advantages like more effective communication and cost reduction compared to traditional third parties. (Alessa, H., 2022, p. 337)

The idea that AI will eventually meet the demand in ODR seems plausible. Many individuals involved in civil disputes lack the financial means to hire professional advisors,

like lawyers or dispute resolution experts. (Zelevnikow, J., 2017, p. 31). They often have to represent themselves or abandon legitimate claims due to issues like court closures, increased fees, and limited legal aid. This gap in the market suggests that while traditional human actors in dispute resolution can be expensive, AI systems, once well-developed, could become relatively affordable after the initial operational years. (The Law Society, 2018)

Moreover, AI in ODR could make it easier to access professional advisors by automating processes like applying for legal aid, and saving resources for other purposes. (Zelevnikow, J., 2017, p. 37). This automation potential extends to various dispute resolution areas, streamlining labour-intensive processes and making resolution more cost-effective and accessible. Examples like Family_Winner and ODR systems used by eBay and PayPal showcase AI's role in reducing costs, expanding access to justice, and resolving disputes more efficiently. (Rule, C., 2008).

The potential of AI in future dispute resolution is clear, with over 80% of eBay disputes being settled using AI software. If available globally, this technology could significantly increase daily dispute resolution. While it could handle simpler claims and provide diligence for complex cases struggling to get court time, caution is needed. Using AI to resolve minor criminal offences, while reducing court burdens, may not ensure fairness. (Edwards, L. and Theunissen, A., 2006, p. 1). Implementing AI in ODR should be done cautiously, learning from examples like the DoNotPay service, which automated ODR for simple citizen-government disputes. (Edwards, L. and Theunissen, A., 2006, p. 4).

These examples emphasize that AI in ODR isn't merely a complex technology simplified for majority use. Instead, it can be considered a 'trickle-up' technology—initially simple when widely applied but potentially customized and developed into more complex forms for minority use. (Hattotuwa, S., 2006).

Examining the possible influence of AI in Online Dispute Resolution (ODR) requires a thorough analysis to pinpoint potential adverse effects on equality. Before incorporating AI into ODR in any jurisdiction, it's crucial to conduct a comprehensive analysis. It's necessary to confirm if a baseline level of familiarity and knowledge is universally attained, considering the notable obstacles in human-AI interaction due to inherent translation processes. (Jenner, A., 2017).

The capability of individuals, especially the elderly who might be less adept with computers, to confidently engage with modern technology is vital for accessing AI in ODR

services. (Bailey, E.,2018) .Education becomes vital to bridge this gap and ensure that a specific segment of society isn't excluded from justice. Just providing access might not be enough, as highlighted by the UK government's shift to digital methods potentially leaving behind those lacking internet access. (Bailey, E., 2018).

A potential outcome of AI advancement in the private sector is the formation of a two-tier dispute resolution system. Exclusive access to highly efficient AI systems might emerge for expensive service providers, leading to disparities between those affording advanced technology and those who can't. This could result in an imbalance, especially in intricate commercial disputes where some parties swiftly access AI systems while others manually handle extensive documents. (Jenner, A., 2017). While this potential two-tier system mirrors existing disparities in litigation and traditional ADR mechanisms, the integration of AI could worsen access issues. If sophisticated dispute resolution technologies become exclusive to specific companies, the situation may arise where justice accessibility depends on a party's access to AI technology, rather than the merits of their case. (Bailey, E., 2018).

Furthermore, the evolution of AI in ODR might impact pro bono services, with AI replacing tasks traditionally managed by junior lawyers offering free legal aid. The availability of pro bono advice might decline as AI systems take over functions handled by junior lawyers. This shift could lead to smaller law firms struggling to provide pro bono or affordable services. (Chernick, R., 2004, p. 187) Concerns also arise about a potential market dumping scenario, where AI reduces the market share of pro bono or low-cost lawyers. If AI systems become the primary alternative for those seeking affordable legal services, it could impact access to justice. (Richard, E. S., 2017, p. 98). The extent of this impact depends on how accessible replacement AIs are to the average disputant and the potential for charitable intent or government regulation. Even if a market dumping scenario doesn't unfold, there's an expectation of an emphasis on AI-driven ODR handling lower-value cases. Lord Justice Briggs envisions a future where online court systems prioritize financial thresholds before granting access to traditional courts. This raises worries about justice being tied to financial value rather than fundamental principles, potentially creating a situation where access to justice becomes a privilege of the affluent, with only AI alternatives available to those with limited means. (Hanretty, C., 2016, p. 198).

Ensuring fair access to AI systems is a critical consideration. Ideally, this involves creating an easy-to-use interface for the majority or using intermediaries to facilitate communication between clients and AI systems. However, the latter option is not ideal as

it contradicts the main advantage of AI – removing time and resource constraints associated with human agents. (Cockfield, A., 2018).

Another concern is the potential gaps between those with access to AI systems and those without. This is a complex issue. Establishing a two-tier system might negatively impact justice, but obstructing the development of promising technologies is also undesirable. A positive outcome could rely on the natural progression of technology. (The Law Gazette, 2013). While initially, privileged parties (such as wealthier organizations and their clients) might access advanced AI technologies first, these technologies are likely to become widespread over time, similar to past computer technologies. Consequently, the initial observation of disparities may level off eventually. However, there is a valid concern that changes in legal/ADR/ODR culture could occur during this temporary disparity, especially if it results in the erosion of the role of junior lawyers. (The Law Gazette, 2013). To maintain affordable dispute resolution services, organizations using AI may need to reaffirm their commitment to providing pro bono services, or additional government resources may be necessary for the legal aid system. (Cockfield, A., 2018).

Lastly, it's crucial not to see AI-based resolution systems as a convenient and cheap way to handle lower-value cases if these systems offer a significantly poorer service compared to human counterparts. Implementing such a system would make justice dependent on one's financial status. Therefore, it is essential to strike a balance that ensures fairness and effectiveness in AI-based resolution processes. (Alessa, H. 2022, p. 340-341).

PART III. PRACTICAL CHALLENGES OF IMPLEMENTATION OF AI IN ODR

3.1. Chapter I. Regulatory aspects of Artificial Intelligence and Online Dispute Resolution

UNCITRAL Model Law

Regulation of Artificial Intelligence and Online Dispute Resolution are complex because 2 different elements are together and they are not regulated fully. The first reason is that there is not only a point to regulate for interrelation of AI and ODR. A lot of aspects should be regulated regarding the features of the phenomena. The second reason is that both elements are not fully regulated individually. The third reason is that AI and ODR are not similar components and their differences should be considered before regulation.

There are some International and European legal acts for the regulation of AI and ODR. Firstly, we will look for International and European legal acts to define a place of ODR.

The UNCITRAL Model Law on International Commercial Arbitration is a significant legal framework created by the United Nations Commission on International Trade Law (UNCITRAL). It aims to provide a unified and modern approach to international commercial arbitration. Initially adopted in 1985, the Model Law has gained widespread acknowledgment and approval from many countries globally. (Slate, W. K., 2004, p. 78) It has become a fundamental element in the realm of international commercial arbitration, with its influence extending worldwide. Various nations have recognized its importance and incorporated its principles, establishing it as a widely accepted and respected legal tool in this domain. (Cohen, N. B., 2010, p. 323). The main focus of the Model Law is primarily on arbitration in the context of international commercial disputes. This extensive legal framework provides a structured set of rules and procedures that countries can adopt to regulate arbitration proceedings globally. (Slate, W. K., 2004, p. 100) Acting as a crucial guide, the Model Law establishes a strong foundation for organizing and conducting arbitration processes related to cross-border commercial disputes. Its diverse provisions cover various aspects, aiming to promote fair, efficient, and consistent arbitration practices across different jurisdictions worldwide. (Cohen, N. B., 2010, p. 334).

The Model Law strongly underscores the importance of maintaining the independence of the arbitral tribunal. This crucial element grants the participating parties the freedom to choose arbitrators from any nationality, promoting a varied and impartial composition. Additionally, it ensures with careful attention that the tribunal operates without bias and is shielded from any undue influence, ultimately upholding the integrity

and equity of the arbitration proceedings. The Model Law is dedicated to upholding the autonomy and fairness of the arbitral tribunal, representing a foundational principle that significantly enhances the credibility and efficiency of international commercial arbitration processes. (United Nations Commission on International Trade..., 1994, p. 341). Although the Model Law doesn't explicitly discuss Online Dispute Resolution ODR, its inherent flexibility and extensive framework are well-suited for modifications that can adapt to technological advancements, specifically in the domain of online arbitration practices. The legal principles and procedural rules articulated in the Model Law are deliberately designed to maintain a neutral stance towards technology. (Cohen, N. B., 2010, p. 325). This design allows jurisdictions the freedom to amend and customize their legal structures to incorporate ODR mechanisms as necessary. There is not any direct regulative sentence about Online Dispute Resolution in UNCITRAL Model Law on International Commercial Arbitration. UNCITRAL Model Law did not touch AI aspects also.

Regulation (EU) No 524/2013 on Online Dispute Resolution for Consumer Disputes

The ODR Regulation was created to meet the need for a straightforward and accessible system, providing an efficient resolution for conflicts arising from online transactions. Essentially, the regulation outlines the establishment of a crucial Online Dispute Resolution Platform (ODR Platform) managed by the esteemed European Commission.

Operating as a central hub, the ODR Platform plays a key role, offering a unified space where consumers and online traders involved in digital transactions can initiate the resolution of their disputes. The regulatory focus is specifically geared toward handling consumer disputes arising from online purchases or services provided by digital merchants.

This comprehensive scope covers disputes related to goods or services when the trader operates within the European Union, and the consumer presenting the dispute resides in the EU. The ODR Platform, in its role, facilitates communication between the disputing parties by providing a standardized electronic form, effectively aiding in the submission of complaints and offers.

In line with the contemporary landscape, the regulation strongly supports the use of electronic means throughout the resolution process, aligning with the digital paradigm. The fundamental philosophy behind the ODR Platform emphasizes neutrality and independence, actively fostering an environment conducive to a fair, impartial, and unbiased resolution process.

ODR regulation is a great step for Online Dispute Resolution, however it did not say anything about AI and ODR relation.

Consumer Rights Directive (Directive 2011/83/EU)

The Consumer Rights Directive (Directive 2011/83/EU) is a rule from the European Union that makes sure that certain things about what consumers can expect are the same in all EU countries. This rule was made to make consumer protection rules stronger and simpler, especially when people buy things from a distance or outside a shop. It tells consumers what they have the right to when they make contracts for goods and services. The rule was put in place to make consumers feel more confident and to make trading between EU countries easier. It's for contracts between sellers and buyers for things like selling goods and giving digital stuff and services. Sellers must give clear and full information to consumers before they are tied to a contract. This includes details about what the product or service is like, how much it costs in total, delivery charges, the right to cancel, and other important information. The Consumer Rights Directive wants to make sure consumers are well-protected in the EU and that the rules are the same for everyone, helping trade between countries. It sets up a common set of rules for consumer rights and tries to find a fair balance between what consumers want and what businesses need. It's very important for businesses in the EU to know and follow this rule to make sure they have fair and open dealings with consumers.

3.2. Chapter II. Current practice of countries on Online Dispute Resolution area

ODR in Europe

A crucial context for Online Dispute Resolution (ODR) in Europe is the European Commission's active support for using Alternative Dispute Resolution (ADR) in addressing cross-border disputes. In recent years, the European Commission has acknowledged the need to establish a strong legal framework conducive to the success of ADR programs, with a particular focus on safeguarding European consumers.

As early as 1993, the Green Paper on Consumer Access to Justice in the Internal Market highlighted the increasing presence of ADR services, including arbitration schemes, in European countries dealing with consumer disputes. This concern led to the adoption of the "Action Plan on Consumer Access to Justice and the Settlement of consumer disputes in the Internal Market," a decisive move endorsing the use of ADR. The plan stressed that achieving "consumer access to justice" could involve various approaches beyond court

access and urged consideration of available alternatives. (Commission's Green Paper., 1993, p. 76).

Similarly, the Commission Recommendation of 30 March 1998 aimed to set standards for the out-of-court settlement of consumer disputes. It sought to harmonize the diverse ADR types created by Member States, providing principles for out-of-court procedures in consumer dispute resolution. (Commission recommendation on the..., 1998, p. 198.) This effort was followed in 2001 by another Commission Recommendation on the principles for out-of-court bodies involved in the consensual resolution of consumer disputes, addressing aspects not covered by the previous recommendation. (Commission recommendation on the..., 2001, p.

Recent years have witnessed significant normative initiatives in civil and commercial matters, including the introduction of the European Small Claims Procedure and the adoption of the Directive on Mediation in Civil and Commercial Matters. The European Small Claims Procedure aims to simplify, expedite, and reduce litigation costs for small claims in cross-border cases. Notably, Article 8 of the Regulation recognizes the possibility of conducting oral hearings through video conference or other communication technology.

In 2008, the European Directive on Mediation in Civil and Commercial Matters (Directive 2008/52/EC) was issued to ease access to mediation in cross-border disputes. It requires Member States to actively encourage mediation training and provision and make agreements resulting from mediation enforceable. The directive also suspends any limitation period within which legal proceedings would ordinarily be initiated when parties engage in mediation. (Directive 2008/52/EC)

Regarding the implementation of the Mediation Directive, the Spanish Government is developing a draft Bill that mandates the electronic handling of civil and commercial disputes under €300. While this may reduce the impact of applying ODR technologies to mediation, it provides an environment conducive to their development.

In the UK, the implementation of the Directive is supported by a new Civil Procedure Rule (Part 78) introduced in April 2011. Part 78.24 enables parties to obtain a Mediation Settlement Enforcement Order for disputes covered by the Directive, encouraging ODR by permitting the enforcement of mediation agreements through the courts. This rule, applicable to cross-border disputes, aligns well with the suitability of online platforms for such cases, thereby reinforcing and endorsing ODR practices. The

ODR group's research for the White Book on Mediation in Catalonia provides a more detailed look into European Online Dispute Resolution (ODR) service providers.

The table outlines key features of major EU ODR providers. Mediation emerges as the most common online service, with some also offering recommendations, arbitration, assisted mediation, and early neutral evaluation. Some ODR services provide additional features like mediator lists, training, or trust marks. (Kersten, G. and Lai. H. 2007, p. 570). In terms of functionality, EU ODR services typically include automated processes, structured forms, automated messages for different ODR stages, and confidential case registers. Most ODR services in the table rely on asynchronous communication, though some incorporate synchronous methods like video conferences or chat. The table categorizes ODR services into basic ODR using modern Internet tools, those using proprietary technology, services selling software licenses, and those providing software on demand (Kersten, G. and Lai. H. 2007, p. 556)

It's crucial to highlight that this research excluded internal complaint management systems for dissatisfied customers that lacked ADR mechanisms or only offered a complaint initiation form. Additionally, domain name dispute resolution systems and online courts (cybercourts) were not considered. The table doesn't include ODR websites addressing domain name disputes, a topic deserving specific research. For example, the Czech Arbitration Court was appointed in 2005 to resolve .eu domain name disputes, offering an online arbitration platform supporting disputes in all EU languages except Maltese. (RDS | RDS (adr.eu))

ODR in Australia.

There is substantial literature and academic leadership on various aspects of Online Dispute Resolution (ODR) in Australia. Australian researchers have delved into legal issues, accreditation matters, the effectiveness of non-litigation redress methods, technological considerations related to ODR, online dispute resolution in family disputes, ODR and government-sponsored courts, building client confidence in ODR, issues associated with the enforceability of online arbitration agreements in commercial arbitration, development of negotiation support systems, and barriers to ODR. (Clark, E and Cho, G., 2001, p. 3-4).

Australia has been fortunate to witness experimental work in AI sponsored by the Australian Research Council. This work involves the creation, testing, research, and extension of AI systems in the ODR environment, pioneered by Zeleznikow.

In terms of government contribution, various government-sponsored national bodies, including the Australian Law Reform Commission (ALRC) and dispute resolution organizations, are engaged in ODR development. Some aspects of ODR have been addressed in reports by the National Alternative Dispute Resolution Advisory Committee (NADRAC), providing overviews, advantages, disadvantages, and barriers to ODR. Specific research reports focus on online ADR. (Wentworth, E., 2002, p. 25).

While Australia is gradually contributing to global ODR literature, the literature is somewhat limited in certain aspects. The international Fourth UN Forum on Online Dispute Resolution Report and Recommendations have influenced ODR approaches globally. In the domestic Australian sector, an "institutional" phase has been recognized as the fourth development stage of ODR, involving increased engagement of government institutions. (Gawith, D., 2006, p. 124).

Government sectors in Australia, particularly in certain sectors, have recognized and utilized ODR as a viable dispute-resolution mechanism. Institutional action at state and federal levels reflects this acknowledgement, with specific examples of government sites offering a supported ODR environment. (Garnett, R., 2004, p. 245).

ODR growth in Australia, particularly in e-commerce and consumer-based schemes, has been substantial. Litigation system insiders note that technological changes have the potential to transform dispute resolution. (Wentworth, E., 2002, p. 27). Technology courts, virtual courts, or cyber courts exist in many jurisdictions, potentially enhancing participatory court processes, communication, and document management. (Clark, E and Cho, G., 2001, p. 11).

Despite advancements, an appropriate legal framework for domestic ODR is still lacking in Australia. However, e-commerce-friendly laws and e-court-related court rules support ongoing ODR development. The Australian Guidelines for Electronic Commerce in 2006 contributed to establishing a regulatory framework. Legislative developments, such as the Electronic Transactions Act 1999 (Cth), support e-commerce. E-signature laws are evolving, positively impacting the Australian e-commerce market and dispute resolution mechanisms. (The Australian Guidelines for Electronic Commerce, 2006). These regulatory responses are dynamic and evolving to support e-commerce and resolve disputes in various relationships.

ODR in China.

The history of the Internet in China is relatively short, starting with Prof. Tianbai Qian's first email in September 1987. China quickly embraced the Internet, achieving significant milestones in modern information technology. By June 2011, the Internet user population in China reached a staggering 485 million, leading to substantial changes in dispute resolution. (CNNIC, 2010, p. 26).

Traditionally, China relied on negotiation, mediation, arbitration, and litigation. However, the widespread use of the Internet led to the unprecedented acceptance of online schemes for dispute resolution. The term "online dispute resolution (ODR)" is comprehensive, encompassing not only purely online alternative dispute resolution but also incorporating online applications into court procedures, creating a nuanced and multifaceted concept. (Yun, Z., Sze, T. and Tommy L., 2011, p. 516).

Examining ODR in China, it is crucial to focus on two promising areas: (a) the Asian Domain Name Dispute Resolution Center (ADNDRC, 2010), and (b) the Online Dispute Resolution Center at the China International Economic and Trade Arbitration Commission (CIETAC, 2011). Additional efforts by entities like the Hong Kong International Arbitration Center contribute to promoting ODR.

The Guangdong Arbitration Commission (GAC) established the China Commercial Arbitration website in 2005, providing online arbitration services for e-commerce disputes. Entire arbitration processes, especially in consumer transactions, can now be conducted online. Major platforms like Taobao have introduced consumer protection mechanisms to efficiently address complaints. (Hong Kong Domain Name Registration Company Limited Domain Name Dispute Resolution Policy, 2005, Art. 4)

Despite private entities launching ODR websites, their success has been limited due to low consumer familiarity and a lack of defined rules governing their operation. Some scholars argue for increased government involvement in promoting ODR to enhance its effectiveness and societal recognition. The development of ODR in China depends not only on private entities' efforts but also on government initiatives and legal reforms. (Yun, Z., Sze, T. and Tommy L., 2011, p. 511).

Chinese people's courts have notably integrated information technology into litigation procedures, especially in remote areas. The combination of online and offline mechanisms proves cost-effective and efficient. The widespread adoption of computers,

videos, and other high-tech products in Chinese courtrooms reflects the increasing integration of technology into the judicial process.

Given these developments, it is increasingly clear that Online Dispute Resolution (ODR) has become firmly established in China. Scholars are actively researching ODR, and practitioners are exploring its everyday applications across the country. The China International Economic and Trade Arbitration Commission (CIETAC, 2011) is leading the way in ODR practices in China. Despite various private entities launching ODR platforms in the early 2000s, their success did not meet expectations.

On a different note, some network transaction platforms have introduced internal complaint mechanisms to address consumer concerns. However, these mechanisms primarily focus on avoiding disputes rather than resolving them. As a result, they cannot replace suitable ODR mechanisms, which aim to resolve disputes rather than simply avoiding them.

In conclusion, it is asserted that CIETAC is exceptionally well-positioned to drive future ODR applications in China. Nevertheless, private initiatives may also play a complementary role, supporting CIETAC's efforts in promoting ODR throughout the country.

ODR in Japan.

It's quite evident that Japan excels as a global leader in information and communication technologies (ICTs). Over the past ten years, numerous efforts and projects have focused on exploring the intricate relationship between Online Dispute Resolution (ODR) and the execution of business-to-business (B2B) and business-to-consumer (B2C) e-commerce transactions. (Trade SAFE, 2006).

A notable achievement is the successful implementation of online application or case filing systems, exemplified by the Ministry of Justice's online case filing system. However, despite organizations offering comprehensive online dispute resolution services, such as the EC network, which resolves small claim disputes through emails, ODR is still in its experimental or start-up phase in Japan. Many users and service providers see ODR more as an online consultation tool than a reliable forum for dispute resolution. The prevailing belief is that high-volume disputes continue to be resolved in domestic courts. (Japan ODR Association, 2023).

Japanese law firms actively use their websites, chat rooms, blogs, and Twitter to respond to queries, promote their consulting business, and engage with clients or potential customers. Recognizing the need for governmental support for ODR development, it's crucial to highlight the significant roles played by two main ministries—the Ministry of Public Management, Home Affairs, Post and Telecommunications (MPHPT), and the Ministry of Economy, Trade and Industry (METI)—in domestic legislation related to online transactions. (JIDRC, 2023).

Recommendations from a research report on effective dispute resolution mechanisms underscore ODR as an effective means to resolve e-commerce disputes that cannot be addressed through normal legal processes. The establishment of an e-commerce dispute consultation room in 2000 reflects this acknowledgment, focusing on studying the effectiveness of various dispute resolution mechanisms and relevant personnel training and education. (JIDRC, 2023).

In 2001, METI introduced the "Guidelines on e-commerce related transactions" to regulate the market environment of e-commerce and provide a legal framework for online transactions. The guidelines underwent revisions in June 2004 to address the regulation of online auctions, the timing of contractual relationships, and limitation periods for specific online activities.

METI's collaboration with the Software Information Center (SOFTIC) of Nippon Foundation Corporation in 2005 resulted in proposed amendments and updates to existing laws and regulations governing the jurisdiction and applicable laws for cross-border e-commerce transactions. Additionally, METI commissioned the Japan Information Processing Development Corporation to establish research and investigation committees on online transactions and the legal system of cross-border trades. (Yun, Z., Sze, T., Tommy L., 2011, p. 523).

The Consumer Agency, in its 2011 work plan, emphasizes the effective resolution of web-based cross-border disputes, urging active communication and interaction with relevant governmental departments, corporations, and NGOs. The plan advocates for Japan's proactive use of online platforms in case investigation and consultation, leveraging Internet networks to facilitate cross-border consumer dispute resolution. (Yun, Z., Sze, T., Tommy L., 2011, p. 522).

Various governmental, public, and private ODR initiatives suggest that Japan is on the verge of a new era for ODR. However, challenges and uncertainties persist as Japan

navigates the ODR landscape, including complexities related to cultural, political, legal, standards, and language differences. The interconnected regional system appears more effective than a global system for resolving cross-border e-commerce disputes, and Japan's experience may contribute to identifying domestic and regional requirements for the development of a global ODR regime.

The interdisciplinary nature of ODR applications and schemes, adapted to national contexts, emphasizes the involvement of professionals from diverse fields such as psychology, artificial intelligence, medicine, and business. Essentially, ODR isn't confined to online disputes; it equally proves efficient in resolving high-volume offline disputes. (JIDRC, 2023).

ODR in India.

Back in the 1800s, when the British Raj took charge in India, they introduced the court system, replacing the community-based dispute resolution led by local elders. Even today, we still have local panchayats (councils) that handle issues in rural areas. Unfortunately, the Indian court system is dealing with a backlog so massive it would take more than 320 years to clear. To tackle this, India's legal system is encouraging alternative methods like arbitration, mediation, and Lok Adalats (People's Court). Interestingly, the Mahatma Gandhi dispute-free village scheme, recognized by the United Nations, aims to prevent and resolve disputes at the village level. (Jerome T. B., Joseph P. B., 2004, p. 321).

Fast forward to the 21st century, the era of the Internet and millions of disputes overwhelm traditional resolution methods. India's economic growth, driven by the Internet and IT revolution, has been remarkable. However, the real game-changer is the use of mobile phones, with over 700 million users. (Jerome T. B., Joseph P. B., 2004, p. 324).

While it boosts communication and transactions, it also brings about disputes. E-governance, gaining traction, is laying down the groundwork for a suitable IT infrastructure. (NITI, 2023).

Although India wasn't an early player in Online Dispute Resolution (ODR) until 2003, subtle changes have been happening. In the e-commerce industry, technology-backed ODR tools are resolving complaints. Legal outsourcing and debt recovery outsourcing, relying heavily on technology, have seen significant growth. Some states even handle police complaints via email, and various online platforms cater to consumer grievances. ODR is

adapting to mobile technology, making dispute resolution tools accessible to India's vast population through mobile phones. (NALSA, 2023).

The challenges of adapting ODR to rural markets with growing purchasing power are apparent. Designing an effective ODR system requires sensitivity to the unique needs of rural users, who often approach issues emotionally rather than rationally. ODR, once exclusive to the Internet, now extends to mobile technology, reaching India's one billion-plus population through mobile phones. (NALSA, 2023).

The government's role in ODR has shifted from commercial applications to addressing citizen-related issues. Governments adopting a multidisciplinary approach can efficiently clear backlogs of judicial cases through ODR. Initiatives like ICPEN's econsumer.gov.in contribute to global consumer protection, impacting India's consumer complaint rankings. (Yun, Z., Sze, T., Tommy L., 2011, p. 527).

Online Dispute Resolution is gradually becoming mainstream globally and in India. While ODR programs are evolving, initiatives by the Tamil Nadu and Delhi governments emphasize the recognized value of technology-facilitated dispute resolution. (NITI, 2023). As technology continues to shape global society, the widespread adoption of ODR is expected to eliminate the remaining barriers, promising a bright future for ODR in India. Though distinguishing between ADR and ODR remains tricky, it's clear that ODR holds significant potential in India, bringing exciting innovations in the years ahead. (Yun, Z., Sze, T., Tommy L., 2011, p. 528).

CONCLUSION

1. Artificial Intelligence has a lot of general positive sides and spreads so quickly. The growing fame of Artificial Intelligence makes to use it in Online Dispute Resolution as well. At this point, it is impossible to refuse the power of AI. However it has also bad sides, it is also useful for the resolution of disputes. There are a lot of different types of machine learning for ODR. My first conclusion is that the Lodder-Zeleznikow Three-Step Model can be a really helpful and innovative step for the usage of AI in Online Dispute Resolution. It would be better to prepare a similar tool by using the Lodder-Zeleznikow Three-Step Model and test it at a national level. No doubt, after successful results, there will be a lot of followers.
2. Currently there are some legal documents to regulate ODR. These documents are at national, European and International levels, but none of them regulates the usage of AI in ODR. Not only for AI but also we cannot see any comprehensive document to control ODR and its types. My second conclusion is that the proper legislative act is needed to regulate fully ODR and its all types (hereafter the Model Law). Considering the flexible form of the European Union, we can prepare the Model Law at the European level. The next level can be the International stage.
3. AI will proceed to prosper and influence ODR. One of the main features of AI is dehumanization. AI thrive by itself and we will not be able to control its limit. My third and last conclusion is for further endeavour. It is offered to define the limits of AI. The usage of AI should be monitored by authoritative organizations. Therefore, it is necessary to keep control of the usage of AI in ODR. In all cases, I believe the results of the usage of AI will be checked by authoritative organizations or supervisors.

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SUMMARY

The Role of Artificial Intelligence in Online Dispute Resolution: Opportunities and Challenges

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This master thesis is devoted to defining the relationship between Artificial Intelligence and Online Dispute Resolution. The thesis provides a clear background about the history, challenges, and potential of Online Dispute Resolution. Place of Online Dispute Resolution is defined via the system of Alternative Dispute Resolution. A lot of classic methods are used for the research, such as; Method of analysis, comparative historical method, statistical analysis, linguistic (grammatical) method.

The research has three main chapters. The first chapter – part defines the historical aspects of Online Dispute Resolution. The history of Online Dispute Resolution is explained in the basis of Dispute Resolution. How disputes started, how people solved them in early stages and how Alternative Dispute Resolution is transferred to Online Dispute Resolution are the main elements of the history part. There is also a place for the interrelation between Alternative Dispute Resolution and Online Dispute Resolution. The second chapter is written for mainly to explain the necessity of Artificial Intelligence and its role in Online Dispute Resolution. Some famous AI technologies are exemplified in the second chapter. The third and last chapter is a practical part of the master thesis. The regulatory aspects of the topic is explained. Also, the practice of other countries in Online Dispute Resolution field is showed in the third part of the master thesis.