



## **The Shifting of Alternative Dispute Resolution: from Traditional Form to the Online Dispute Resolution**

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**Abstract:** *The emergence of disruptive technologies has transformed how the conflict is resolved. If Alternative Dispute Resolution (ADR) has been understood as a more efficient method of resolving dispute than through the court, then in line with the development of technologies, Online Dispute Resolution (ODR) considered as the most efficient mechanism in ADR. Through ODR, access barriers are reduced, effectiveness increases, software becomes smarter and some ADR elements are challenged. This article focuses on the shifting of dispute resolution from the traditional approach to the new generation one which called digital justice.*

**Keywords:** *digital justice; online dispute resolution; alternative dispute resolution.*

### **I. INTRODUCTION**

Technological revolution taken place today has brought many significant impacts for human life. New technologies disrupt not only by changing how we do things but by

changing how we think about what we are doing, about what needs to be done and what can be done.<sup>1</sup> Similarly, in case of dispute resolution, the emergence of disruptive technologies<sup>2</sup> has transformed how the

<sup>1</sup> Orna Rabinovich-Einy and Ethan Katsh, 'Digital Justice: Reshaping Boundaries in an Online Dispute Resolution Environment' (2014) (1)1 *International Journal of Online Dispute Resolution*, 6.

<sup>2</sup> In recent years, the word "disruption" has increasingly been used to figure out technology's

impact on law. See: N. Katyal, 'Disruptive Technologies and the Law', (2014) *Geo L. J.* 102, 1685-1689; Raymond H. Brescia, 'What We Know and Need to Know about Disruptive Innovation', (2016) *South Carolina Law Review* 67, 2013-222. Moreover, the notion that technology "disrupts" has its origins in Harvard Business

conflict is resolved. If Alternative Dispute Resolution (ADR) has been understood as a more efficient method of resolving dispute than through the court, then in line with the development of technologies, Online Dispute Resolution (ODR) considered as the most efficient mechanism in ADR. Through ODR, access barriers are reduced,<sup>3</sup> effectiveness increases, software becomes smarter and some ADR elements are challenged.

Sela noted that the evolution of ODR was driven by two primary pragmatic and ideological forces.<sup>4</sup> The main force of emergence of ODR was the rise in online activities and services, spearheaded by e-commerce and fueled by unprecedented advancements in online communication, computation, and Artificial Intelligence (AI) technologies. The second catalyst of ODR was the growing impact of the “effective access to justice” movement, the “efficiency paradigm” in dispute resolution, and the associated recourse to methods of ADR.<sup>5</sup> Moreover, the multi-faceted process by which these forces jointly promoted the development of ODR systems can be briefly summarized as follows: (1) a new class of online disputes emerged, and existing fora appeared inappropriate or impractical for resolving them; (2) online technologies presented unprecedented opportunities to dynamically tailor the forum to the fuss; (3) the demands for improving access to justice and redress and lowering the cost of dispute resolution, could be met, in part, by offering services online; and (4) dispute resolution

service providers, like other service providers, were eager to expand online.<sup>6</sup>

The spread of internet communication is giving rise to new challenges to access to justice, as well as creating new opportunities for lowering barriers to justice.<sup>7</sup> Impact of this phenomenon, a growing number of disputes emerged for which courts and ADR processes provided no feasible avenue of redress. At the same time, new technologies and online communication also became a means for making existing dispute resolution avenues more accessible and for designing novel online processes and institutions for delivering justice.

This article would like to examine the moving of dispute resolution approach from traditional justice to digital justice.

## II. LEGAL MATERIALS AND METHODS

It is a normative legal research using secondary data, included primary, secondary, and tertiary legal materials. The data were collected using library research, then legal interpretation method was employed to analysis data. Specifically, the secondary data including: the references, consist of books, journal articles as well as conference papers and other documents having correlation with the issues.

## III. RESULT AND DISCUSSION

### The Relationship between Technology, Law, and Dispute Resolution

School's Clayton Christensen's 1997 The Innovator's Dilemma. See: J.L. Bower & C.M. Christensen, "Disruptive Technologies: Catching the Wave", (1995) 73 (1) *Harvard Business Review*, 43-53.

<sup>3</sup> Susan Sturm & Howard Gadlin, "Conflict Resolution and Systemic Change", (2007) 1 *J. Disp. Resol.*, 2-3.

<sup>4</sup> Ayelet Sela, "The Effect of Online Technologies on Dispute Resolution System Design:

Antecedents, Current Trends and Future Directions', (2017) 21 (3) *Lewis & Clark Law Review*, 635-636.

<sup>5</sup> Ibid.

<sup>6</sup> Ibid.

<sup>7</sup> Ethan Katsh and Orna Rabinovich-Einy, *Digital Justice: Technology and the Internet of Dispute* (Oxford University Press, 2017), 45-54.

Technology have gradually changed the approach law, the way to practice it, the way to do business and finally, at the crossroad of these trends, technology have begun to change the way to resolve disputes.<sup>8</sup> Setting up dispute resolution procedures that rely heavily on technology, especially information technology, is in this regard not a spontaneous innovation, but merely a logical next step in the history of how technology penetrate the law.<sup>9</sup>

Law-making is a slow process, while technology changes rapidly resulted technological innovation.<sup>10</sup> The two different circumstance may effect legal certainty and cause people to act in an ambiguous environment where rights and responsibilities can not be clearly acknowledged or predicted.<sup>11</sup> Technological changes is usually more difficult to predict when a law is drafted. Drafting strict regulation may create obstacles to advance technologies and hinder potential benefits from them.<sup>12</sup> Underlying reason to detention of law-making around scientific research and its application is the fear of creating obstacles for scientists which causes burdening competitiveness or generating economic and other inefficiencies.<sup>13</sup>

Moreover, the emergence of Online Dispute Resolution (ODR) is one of the product of relation between legal and technological. As Kaufmann-Kohler and

Schultz said that internet-based information technology generates the circulation of information, including legal information, which in turn becomes the driving factor of economic and legal globalization. In other words, ODR can be said as an information technology product that is a symbol of the global dispute resolution process.<sup>14</sup>

Related to alternative dispute resolution, Alexander stated that technology has facilitated the globalization of alternative dispute resolution (ADR) in two ways.<sup>15</sup> Firstly, technology is used as a tool to disseminate information and knowledge both nationally and internationally. At this point, the alternative dispute resolution which was originally from a western country was introduced to the third world countries in order to improve the dispute resolution system in these countries as part of economic and legal reforms.<sup>16</sup> The second way in which technology has influenced the globalization of ADR is through the emergence of online dispute resolution (ODR).<sup>17</sup> ODR has many faces, from automated blind-bidding mechanism and e-mediators, to online mediation platforms with human facilitator and online filling and case management in court programs. The ODR development and integration into immense transactional and system on management of conflict describes its acceptance and utility.<sup>18</sup>

<sup>8</sup> Thomas Schultz, *Information Technology and Arbitration: A Practitioner's Guide* (Kluwer Law International, 2006), 6.

<sup>9</sup> Brian Simpson, 'Disrupting Technology, Disruptive Norms: The Role of Laws in A Digital World', (2017) 26(1) *Information & Communications Technology Law*, 1-5.

<sup>10</sup> Erica Palmerini, *The Interplay between Law and Technology, or the RoboLaw Project in Context*, in Erica Palmerini, and Elettra Stradella, *Law and Technology: The Challenge of Regulating Technological Developments* (Pisa University Press, 2013), 15.

<sup>11</sup> Ibid.

<sup>12</sup> Ibid.

<sup>13</sup> Ibid, 15-16.

<sup>14</sup> G. Kaufmann-Kohler and Thomas Schultz, *Online Dispute Resolution: Challenges for Contemporary Justice* (Kluwer Law International, 2004), 7.

<sup>15</sup> Nadja Alexander, 'Mobile Mediation: How Technology is Driving the Globalization of ADR' (2006) 27 (2) *Hamline Journal of Public Law and Policy*, 244-245. Available at: <[http://ink.library.smu.edu.sg/soI\\_research/1879](http://ink.library.smu.edu.sg/soI_research/1879)>

<sup>16</sup> Ibid.

<sup>17</sup> Ibid. See also G. Kaufmann-Kohler and Thomas Schultz, above n 14, 7.

<sup>18</sup> Ibid.

## The concept of Online Dispute Resolution (ODR)

Online Dispute Resolution (hereinafter refers to as ODR) is an implementation of existing forms of ADR that enables its use on the Internet.<sup>19</sup> ODR was first introduced and recognized as dispute resolution model in the earlier of the 2000s.<sup>20</sup> Although there is no uniform definition, ODR is seen as private dispute resolution based on the consent of the parties in the same manner as alternative dispute resolution (ADR) models.<sup>21</sup> Notwithstanding originally meant only online disputes, the scope of ODR has later expanded to include also disputes that have risen in the offline context.<sup>22</sup> ODR could be provided by several different intermediaries such as e-commerce platforms, private ODR

provider, credit card companies, or private actors performing public functions, as is the case with Internet Registry for Assigned Names and Numbers (ICANN).<sup>23</sup>

ODR is an online settlement form that uses alternative methods for dispute resolution. ODR applies information and communications technology to resolve the dispute,<sup>24</sup> taking place partly or entirely online. ODR solves disputes from cyberspace as well as disputes outside of it.<sup>25</sup> ADR processes are applied to solve the issue. In order for the resolution to be considered as ODR, four parties have to be incorporated: initiating party (a claimant), a respondent, a neutral party and technology-based intermediary, which has been labeled as “the fourth party”<sup>26</sup>. According to Lodder, “a fifth

<sup>19</sup> Susan Nauss Exon, ‘The Next Generation of Online Dispute Resolution: The Significance of Holography to Enhance and Transform Dispute Resolution’ (2010) 12(19) *Cardozo J. of Conflict Resolution* 20.

<sup>20</sup> The first articles on ODR were published by Ethan Katsh as early as 1996. See: Ethan M. Katsh, ‘Dispute Resolution in Cyberspace’ (1996) 28 *Connecticut Law Review* 953; Ethan M. Katsh, ‘The Online Ombuds Office: Adapting Dispute Resolution to Cyberspace’ (1996) <<https://www.umass.edu/dispute/ncair/katsh.htm#fn1>>. Beside that, Katsh and Rifkin also published the first monograph on ODR in 2001 examined analyzing the role of technology as the fourth party of dispute resolution proceedings. See: Ethan M Katsh and Janet Rifkin, *Online Dispute Resolution: Resolving Conflict in Cyberspace* (Jossey Bass, 2001).

<sup>21</sup> Rule points out that the main difference between ADR and ODR lies in the role of technology, which gives the neutral third party greater control of the process. Further, see Collin Rule, *Online Dispute Resolution for Business. B2B, E-Commerce, Consumer, Employment, Insurance, and Other Commercial Conflict* (Jossey-Bass, 2002), 45. Vilalta considers that ODR has its connection points to ADR but it is also a unique Phenomenon. See: Vilalta, ‘ODR and E-Commerce’ in Mohammed S. Abdel Wahab, Ethan Katsh, and Daniel Rainey (Eds), *Online Dispute Resolution: Theory and Practice. A Treatise on Technological and Dispute Resolution* (Eleven International Publishing, 2012), 115.

<sup>22</sup> Ethan Katsh and Leah Wing, ‘Ten Years of Online Dispute Resolution (ODR): Looking at the Past and Constructing the Future’ (2006) 38(19) *University of Toledo Law Review*, 27.

<sup>23</sup> ICANN is responsible for the distribution of unique Internet Protocol (IP) address spaces which are an essential part of the structure and functioning of the Internet. ICANN has established its own dispute resolution model called Uniform Dispute Resolution Policy (UDRP) in co-operation with World Intellectual Property Organization (WIPO). ICANN gives a binding decision in domain name disputes which is also directly enforced by ICANN. Because in the end, ICANN is a private organisation entrusted with responsibilities of public interest, it has been criticised for its lack of adequate accountability mechanisms. See: Rudolf W Rijgersberg, *The State of Interdependence: Globalization, Internet and Constitutional Governance* (TMC Asser Press 2010), 69, 217.

<sup>24</sup> Enas Qutieshat, ‘Online Dispute Resolution’, (2017) 18(2), *British Journal of Humanities and Social Sciences*, 10-20. <[http://www.ajournal.co.uk/HSpdfs/HSvolume18\(2\)/HSVol.18%20\(2\)%20Article%202.pdf](http://www.ajournal.co.uk/HSpdfs/HSvolume18(2)/HSVol.18%20(2)%20Article%202.pdf)>

<sup>25</sup> Ibid.

<sup>26</sup> The other word, technology within ODR regarded as the fourth party of resolution process, in which its task and role vary depending on the context. Further, the fourth party does not except in a few well-defined instances such as blind-bidding, replace the third party. But it can be considered to

party”, the service providers for the technological elements, is also involved.<sup>27</sup>

ODR can be used for online disputes such as eBay<sup>28</sup> user problems but it can also be used for marital dispute resolution, court disputes, and other conflicts. ODR developed as combination of alternative dispute resolution (ADR) and information and communication technology. Technology involved within dispute resolution in this case does not refer to court-room lamps or type writers but looks more towards such technologies as videoconferencing,<sup>29</sup> online platforms, complex case management systems, and ultimately legal artificial intelligence.<sup>30</sup> The result of ODR is a constantly developing form of dispute resolution that uses technology as a tool to satisfactorily conclude a conflict.

Actually, there is not yet official terminology and definition of ODR in international agreement. The synonymous term of ODR is “electronic-ADR” (eADR), “online-ADR” (oADR), and “Internet Dispute Resolution” (iDR).<sup>31</sup> The term encompasses disputes that are partially or

fully settled over the Internet, having been initiated in cyberspace but with a source outside it.<sup>32</sup> The terms “online”-, “e”- and “cyber-ADR” all recognize the fact that online dispute resolution has grown out of the alternative dispute resolution phenomenon. One might even speak in terms of traditional offline ADR, on one hand, and online-, e- and cyber- ADR applications, representing the new generation of ADR processes, on the other. Both online- and cyber- ADR highlight the use of internet-based applications in ADR, while e-ADR and eDR are broader terms referring to electronic applications of ADR.<sup>33</sup>

The presence of third parties in the ODR as mediators in reaching agreement is the important element.<sup>34</sup> Therefore, ODR can be used in online mediation and electronic arbitration, the two most often used as electronic forms of alternative methods for dispute resolution. Furthermore, ODR has also used a “modern form of communication” that distinguishes with traditional ADR. From the form of modern communication, ODR is divided into two types.<sup>35</sup> The first type is ODR with a synchronous

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displace the third party in the sense that new skills, knowledge and strategies may be needed by the third party. It may not be coequal in influence to the third party neutral, but it can be an ally, collaborator, and partner. Further, see Ethan M Katsh and Janet Rifkin, above n 22, 93.

<sup>27</sup> Arno R. Lodder, ‘The Third Party and Beyond. An Analysis of the Different Parties, in Particular the Fifth, Involved in Online Dispute Resolution’, (2006) 15(2) *Information & Communications Technology Law*, 143-145.

<sup>28</sup> eBay is an online market place where the sellers list items on sale and buyers may bid the items and thus enter into a binding agreement for sale of goods with the seller. As conflicts may rise when the payment is not done or the buyer does not receive an item, eBay has included an ODR process to its website. eBay has been solved sixty million e-commerce cases per year through its Resolution Center. See: Mohamed S Abdel Wahab, Ethan Katsh and Daniel Rainey, ‘Introduction’, in Mohamed S Abdel Wahab, Ethan Katsh and Daniel Rainey (Eds), *Online Dispute Resolution: Theory and Practice. A Treatise on Technological*

*and Dispute Resolution* (Eleven International Publishing, 2012), 2.

<sup>29</sup> Niki Panteli & Patrick Dawson, ‘Video Conferencing Meetings: Changing Patterns of Business Communication’, (2001) 2(16) *New Tech., Work & Emp*, 89.

<sup>30</sup> Riikka Koulu, *Dispute Resolution and Technology: Revisiting the Justification of Conflict Management* (University of Helsinki Conflict Management Institute, 2016), 94.

<sup>31</sup> Karolina Mania, ‘Online Dispute Resolution: The Future of Justice’ (2015) 1 *International Comparative Jurisprudence*, 78.

<sup>32</sup> Mohammad S. Abdel Wahab, Ethan Katsh and Daniel Rainey, above n 30, 2.

<sup>33</sup> Nadja Alexander, ‘Mobile Mediation: How Technology is Driving the Globalization of ADR’, (2006) 1 *Hamline Journal of Law and Public Policy*, 248.

<sup>34</sup> Karolina Mania, ‘Online Dispute Resolution: The Future Justice’, (2015) 1 *International Comparative Justice*, 78.

<sup>35</sup> A. R. Lodder and J. Zeleznikow, *Enhanced Dispute Resolution Through the Use of*

communication approach, in which the disputing parties can communicate with each other in real time using possible media such as skype, teleconference, and other media.<sup>36</sup> While the second type is ODR with an unsynchronized communication approach, where party communication is not carried out at the same time.<sup>37</sup>

Moreover, ODR system can be categorized according to the function that machinery may play.<sup>38</sup> First generation ODR provides the important role to human being for resolving dispute. Computational tools are evidently used, but they are seen as no more than equipment, without any autonomy or a major role in the course of action. In such ODR, the main technologies used are instant messaging, forums, video and phone calls, videoconference, mailing lists, and more recently, video presence. Autonomous or intelligent systems are not being used in the first generation. The system is common nowadays and is usually supported by a web page. It represents a first necessary step before the consideration of it that may be more autonomous, a characteristic that may be achieved through the use of intelligent system.<sup>39</sup>

The second generation of ODR is using the technological instrument effectively.<sup>40</sup> Such instrument is not only used to create access to information easier, but also is used to resulting ideas, organizing, creating the strategies and decision making processes. The technologies used in this new generation of ODR system will comprise not only the

communication technologies used nowadays but also subfields of areas such as Artificial Intelligence, mathematics, or philosophy: neural networks, intelligence agents, case-based reasoning, logical deduction, argumentation, methods for uncertain reasoning and learning methods. Thus being, the development of second generation ODR, in which an ODR system might act “as an autonomous agent” is an appealing way for solving disputes. Thus, this generation shifts from a paradigm in which reactive communication tools are used by parties to share information, to a virtual environment in which ODR services proactively assist the disputant parties. Therefore, it is clear that the involvement of different areas of research, namely the one of Artificial Intelligence, may evolve ODR process that will handle various types of complicated problems. Using such technologies will be also easier to develop processes that mimic the cognitive processes of human experts, leading to more efficient ODR tools.

### Digital Justice: Changing Approaches of ODR

Justice systems around the world are moving away from legacy of information technological system and paper-based procedures to embrace digital technology. This transition to so-called digital justice<sup>41</sup> is redefining the ways in which justice is delivered. The goal of digital justice is to clarify not only how technology generates disputes of all types, but also how technology

*Information Technology*, (Cambridge University Press, 2010), 73.

<sup>36</sup> Ibid.

<sup>37</sup> Ibid.

<sup>38</sup> G. Peruginelli & G. Chiti ‘Artificial Intelligence in Alternative Dispute Resolution’, in G. Sartor (Eds), *Proceedings of the Workshop on the Law of Electronic Agent* (LEA02) (2002). <<http://www.cirfid.unibo.it/~lea-02/online.html>>.

<sup>39</sup> Ibid.

<sup>40</sup> Francisco Andrade et al, ‘Using BATNAs and WATNAs in Online Dispute Resolution’ in Kumiyo Nakakoji, Yohei Murakami, Eric McCready (Eds.), *New Frontier in Artificial Intelligence*, JSAI-isAI 2009 Workshops LENLS, JURISIN, KCSO, LLLL, Tokyo, Japan, November 2009, 6.

<sup>41</sup> Ethan Katsh and Orna Rabinovich-Einy, above n 7, 3.

can be employed to resolve and prevent them.<sup>42</sup> In other words, technology can solve the problems created by technology.<sup>43</sup> Unburdened by the old processes and procedures, this digital justice system of tomorrow promises to be more efficient, fairer, and less expensive.

Judicial procedure affects the perceptions of judicial fairness.<sup>44</sup> According to Amy Gangl, there are three factors affect the assessment of the legitimacy of a judicial decision.<sup>45</sup> *First*, individuals must believe that the decision-making process takes their views into account.<sup>46</sup> *Second*, decision-making should be neutral and all opinions must be granted equal consideration without favoritism.<sup>47</sup> *Third*, citizens must trust the judicial system and its representatives.<sup>48</sup> Parties' satisfaction with the procedural justice affects their perception of legitimacy over and above their preferred outcome. Thus, citizens' favorable perception of the fairness or justice of the process increases the likelihood that they will report satisfaction

with the process of decision-making and the decision itself. They are more likely to accept outcomes when the process is perceived favorably.<sup>49</sup> Implicitly, individuals accept that in an adversarial situation, sometimes one wins and sometimes one loses. However, such acceptance is only possible when everyone has a fair hearing in the decision-making process.

As technology developed and algorithms<sup>50</sup> could play an important role in tailoring the dispute resolution process to party needs, preferences, and interests, ODR came to represent a deep shift from traditional dispute resolution, laying the foundation for realizing digital justice, offering fair and efficient processes that are designed for the digital era. ODR emerged from an online environment that was rich with misunderstandings and disputes, but deficient in avenues for effectively addressing them.<sup>51</sup> Originally, developers of ODR mechanisms sought to mimic traditional ADR processes and offer online

<sup>42</sup> Ibid.

<sup>43</sup> Mary Anne Franks, 'Justice beyond Dispute', (2018) 131 *Harvard Law Review*, 1380.

<sup>44</sup> John Thibaut & Laurens Walker, *Procedural Justice: A Psychological Analysis* (Lawrence Erlbaum Associates, 1975).

<sup>45</sup> Amy Gangl, 'Procedural Justice Theory and Evaluation of Lawmaking Process', (2003) 25(119) *Pol. Behav.*, 121.

<sup>46</sup> Ibid.

<sup>47</sup> Ibid.

<sup>48</sup> Ibid.

<sup>49</sup> Ibid, 127.

<sup>50</sup> The term "algorithm" is assigned disparate technical meanings in the literatures of computer science and other fields. In computer science, algorithms defined as separate from mathematical formulae in that (1) they must "always terminate after a finite number of steps"; (2) "each step of an algorithm must be precisely defined; the actions to be carried out must be rigorously and unambiguously specified for each case"; (3) input to the algorithm is "quantities that are given to it initially before the algorithm begins"; (4) an algorithm's output is "quantities that have a specified relation to the inputs"; and (5) the operations to be performed in the algorithm "must

all be sufficiently basic that they can in principle be done exactly and in a finite length of time by someone using pencil and paper." Further, see Donald E. Knuth, *The Art of Computer Programming: Fundamental Algorithms* (Addison-Wesley, 1968), 6. Similarly and more simply, a widely used computer science textbook defines an algorithm as "any well-defined computational procedure that takes some value, or set of values, as input and produces some value, or set of values, as output." See: Thomas H. Cormen et al., *Introduction to Algorithms* (MIT Press, 2001), 10. By contrast, communications scholar, Nicholas Diakopoulos, defines algorithms in the narrow sense as "a series of steps undertaken in order to solve a particular problem or accomplish a defined outcome," and in the broad sense, saying that "algorithms can arguably make mistakes and operate with biases." Further, see: Nicholas Diakopoulos, 'Algorithmic Accountability: Journalistic Investigation of Computational Power Structures', (2015) 3 *Digital Journalism*, 400.

<sup>51</sup> Orna Rabinovich-Einy & Ethan Katsh, 'Access to Digital Justice: Fair and Efficient Progress for the Modern Age', (2017) 18 *Cardozo J. of Conflict Resolution*, 646.

equivalents to these dispute resolution channels. This was evidenced in the early attempts to offer equivalents of familiar offline ADR processes such as negotiation, mediation, and arbitration. More significantly perhaps, the desire to imitate traditional processes was evident in the principal assumption underlying the design of ODR systems: such processes would be appropriate solely for small value, large scale, non-emotional, e-commerce disputes where the reduced privacy of communications and the lack of rich face-to-face communication would be less important.

Over time, it became clear that the new generation ODR processes came to celebrate the unique qualities of online interaction and the shifts associated with the transition to digital means of addressing conflict: (1) the shift from physical to online communications, (2) the shift from a human “third party” to the “fourth party,” (3) the shift from a “data-less” mentality to processes that revolve around data;<sup>52</sup> and (4) the shift from human decision making to the intelligence of the machine. While many of these features were initially viewed as shortcomings, over time they have come to be seen as potentially advantageous. Thus, for example, while the lack of physical interaction reduces the richness of communication, it also conveys advantages for those who benefit from asynchronous communication (time to consult and conduct research before replying). Similarly, the decrease in privacy due to documentation can assist in quality control and dispute prevention efforts. The intelligence of the machine can enhance efficiency through automation, allowing ODR systems to handle staggering numbers of small-scale conflicts.

Further, each of the shifts associated with ODR holds enormous potential for increasing access to justice. Each also creates opportunities for frustrating access and giving rise to digital injustice. On the one hand, efficiency and justice can be enhanced by enabling easy, distant, and round the clock communication without having to miss work and pay for travel. The simple language and tailored options offered in the newly designed platforms also allow non-represented parties to better understand their rights and options and figure out their interests and needs. In addition, the enhanced capacity associated with the “fourth party”<sup>53</sup> that is not dependant on human capacity or on physical space allows for huge numbers of claims to be processed, allowing access to some avenue of dispute resolution for problems that in the past were in the “lump it” category. Also, the pre-designed algorithmic options and pre-configuration associated with software can help curb some of the biases associated with human decision-making resulting, perhaps, in more fair outcomes for various parties. Often, big data can allow monitoring the quality of processes and outcomes, uncovering biases and problems in the operation of dispute resolution algorithms, and even allowing for dispute prevention.<sup>54</sup> Instead of waiting for human third parties to analyze their experiences post-dispute resolution, the data on disputes can signal disputes before parties are aware of them, in some cases, even before they occur.

<sup>52</sup> Ibid.

<sup>53</sup> Ethan Katsh & Janet Rifkin, *Online Dispute Resolution: Resolving Conflicts in Cyberspace* (Jossey-Bass, 2001) 94.

<sup>54</sup> Gauthier Vannieuwnhuyse, ‘Arbitration and New Technologies: Mutual Benefits’ (2018) 35(1) *Journal of International Arbitration* 119-129.



#### IV. CONCLUSION AND SUGGESTION

ODR came to represent a deep shift from traditional dispute resolution, laying the foundation for realizing digital justice, offering fair and efficient processes that are designed for the digital era. ODR emerged from an online environment that was rich with misunderstandings and disputes, but deficient in avenues for effectively addressing them. Various features of ODR that were initially viewed as short-comings, such as documentation, are now seen as potentially advantageous by facilitating better monitoring, quality control, consistency, and a higher degree of transparency in informal dispute resolution.

#### REFERENCES

##### Book

- Cormen, Thomas H., et al., *Introduction to Algorithms* (MIT Press, 2001).
- Katsh, Ethan M and Janet Rifkin, *Online Dispute Resolution: Resolving Conflict in Cyberspace* (Jossey Bass, 2001).
- Katsh, Ethan and Orna Rabinovich-Einy, *Digital Justice: Technology and the Internet of Dispute* (Oxford University Press, 2017).
- Kaufmann-Kohler, G. and Thomas Schultz, *Online Dispute Resolution: Challenges for Contemporary Justice* (Kluwer Law International, 2004).
- Knuth, Donald E., *The Art of Computer Programming: Fundamental Algorithms* (Addison-Wesley, 1968).
- Koulu, Riikka, *Dispute Resolution and Technology: Revisiting the Justification of Conflict Management* (University of Helsinki Conflict Management Institute, 2016).
- Lodder, A. R. and J. Zeleznikow, *Enhanced Dispute Resolution Through the Use*

*of Information Technology*, (Cambridge University Press, 2010).

- Palmerini, Erica 'The Interplay between Law and Technology, or the RoboLaw Project in Context', in Erica Palmerini, Elettra Stradella, *Law and Technology: The Challenge of Regulating Technological Developments* (Pisa University Press, 2013).
- Rijgersberg, Rudolf W., *The State of Interdependence: Globalization, Internet and Constitutional Governance* (TMC Asser Press, 2010).
- Rule, *Online Dispute Resolution for Business. B2B, E-Commerce, Consumer, Employment, Insurance, and Other Commercial Conflict* (Jossey-Bass, 2002).
- Schultz, Thomas, *Information Technology and Arbitration: A Practitioner's Guide* (TKluwer Law International, 2006).
- Thibaut, John & Laurens Walker, *Procedural Justice: A Psychological Analysis* (Lawrence Erlbaum Associates, 1975).
- Vilalta, 'ODR and E-Commerce' in Mohammed S. Abdel Wahab, Ethan Katsh, and Daniel Rainey (Eds), *Online Dispute Resolution: Theory and Practice. A Treatise on Technological and Dispute Resolution* (Eleven International Publishing, 2012).
- Wahab, Mohamed S Abdel, Ethan Katsh, and Daniel Rainey, 'Introduction', in Mohamed S Abdel Wahab, Ethan Katsh and Daniel Rainey (Eds), *Online Dispute Resolution: Theory and Practice. A Treatise on Technology and Dispute Resolution* (Eleven International Publishing, 2012).
- ##### Journal
- Alexander, Nadja 'Mobile Mediation: How Technology is Driving the Globalization of ADR' (2006) 27(2) *Hamline Journal of Public Law and*

- Policy.  
<[http://ink.library.smu.edu.sg/sol\\_research/1879](http://ink.library.smu.edu.sg/sol_research/1879)>
- Bower, J.L. & C.M. Christensen, 'Disruptive Technologies: Catching the Wave', (1995) 73(1) *Harvard Business Review*.
- Brescia, Raymond H., 'What We Know and Need to Know about Disruptive Innovation', (2016) 67 *South Carolina Law Review*.
- Diakopoulos, Nicholas, 'Algorithmic Accountability: Journalistic Investigation of Computational Power Structures', (2015) 3 *Digital Journalism*.
- Franks, Mary Anne, 'Justice beyond Dispute', (2018) 131 *Harvard Law Review*.
- Gangl, Amy, 'Procedural Justice Theory and Evaluation of Lawmaking Process', (2003) 25(119) *Pol. Behav.*
- Katyal, N., 'Disruptive Technologies and the Law', (2014) 102 *Geo L. J.*
- Katsh, Ethan and Leah Wing, 'Ten Years of Online Dispute Resolution (ODR): Looking at the Past and Constructing the Future' (2006) 38(19) *University of Toledo Law Review*.
- Katsh, Ethan M., 'Dispute Resolution in Cyberspace' (1996) 28 *Connecticut Law Review*.
- Lodder, Arno R., 'The Third Party and Beyond. An Analysis of the Different Parties, in Particular the Fifth, Involved in Online Dispute Resolution' (2006) 15(2) *Information & Communications Technology Law*.
- Mania, Karolina, 'Online Dispute Resolution: The Future of Justice' (2015) 1 *International Comparative Jurisprudence*.
- Nauss Exon, Susan, 'The Next Generation of Online Dispute Resolution: The Significance of Holography to Enhance and Transform Dispute Resolution' (2010) 12(19) *Cardozo J. of Conflict Resolution*.
- Panteli, Niki & Patrick Dawson, 'Video Conferencing Meetings: Changing Patterns of Business Communication', (2001) 2 (16) *New Tech., Work & Emp.*
- Qutieshat, Enas, 'Online Dispute Resolution', (2017) *British Journal of Humanities and Social Sciences* 18 (2). Available at: <[http://www.ajournal.co.uk/HSpdfs/HSvolume18\(2\)/HSVol.18%20\(2\)%20Article%202.pdf](http://www.ajournal.co.uk/HSpdfs/HSvolume18(2)/HSVol.18%20(2)%20Article%202.pdf)>
- Rabinovich-Einy, Orna and Ethan Katsh, 'Digital Justice: Reshaping Boundaries in an Online Dispute Resolution Environment' (2014) 1(1) *International Journal of Online Dispute Resolution*.
- Rabinovich-Einy, Orna & Ethan Katsh, 'Access to Digital Justice: Fair and Efficient Progress for the Modern Age', (2017) 18 *Cardozo J. of Conflict Resolution*.
- Sela, Ayelet, 'The Effect of Online Technologies on Dispute Resolution System Design: Antecedents, Current Trends and Future Directions', (2017) 21(3) *Lewis & Clark Law Review*.
- Simpson, Brian, 'Disrupting Technology, Disruptive Norms: The Role of Laws in A Digital World', (2017) 26(1) *Information & Communications Technology Law*.
- Sturm, Susan & Howard Gadlin, 'Conflict Resolution and Systemic Change', (2007) 1 *J. Disp. Resol.*
- Vannieuwnhuysse, Gauthier, 'Arbitration and New Technologies: Mutual Benefits', (2018) 35(1) *Journal of International Arbitration*.

### Proceeding, Internet

- Andrade, Francisco, et al, 'Using BATNAs and WATNAs in Online Dispute Resolution' in Kumiyo Nakakoji, Yohei Murakami, Eric McCready (Eds.), *New Frontier in Artificial Intelligence*, JSAI-isAI 2009 Workshops LENLS, JURISIN, KCSD, LLLL, Tokyo, Japan, November 2009.
- Peruginelli, G. & G. Chiti, 'Artificial Intelligence in Alternative Dispute

Resolution', in G. Sartor (Eds), *Proceedings of the Workshop on the Law of Electronic Agent (LEA02)* (2002).  
<<http://www.cirfid.unibo.it/~lea-02/online.html>>.

Katsh, Ethan M., 'The Online Ombuds Office: Adapting Dispute Resolution to Cyberspace' (1996)  
<<https://www.umass.edu/dispute/ncair/katsh.htm#fn1>>.