

THE IMPENDING BATTLE FOR THE SOUL OF ODR: EVOLVING TECHNOLOGIES AND ETHICAL FACTORS INFLUENCING THE FIELD

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ABSTRACT

Legal professionals and disputants are increasingly recognizing the value of online dispute resolution (“ODR”). While the coronavirus pandemic forced many to resolve disputes exclusively online, potentially resulting in long-term changed preferences for different stakeholders, the pre-pandemic trend has involved a dramatic increase in technological tools that can be used for resolving disputes, particularly with facilitative technologies, artificial intelligence, and blockchains. Though this has the added benefit of increasing optionality in the dispute resolution process, these novel technologies come with their own limitations and also raise challenging ethical considerations for how ODR should be designed and implemented. In considering whether the pandemic’s tectonic shifts will have a permanent impact, this piece has important implications for the future of the legal profession, as greater reliance on ODR technologies may change what it means to be a judge, lawyer, and disputant. The impending battle for the soul of ODR raises important considerations for fairness, access to justice, and effective dispute resolution—principles that will continue to be ever-present in the field.

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I. INTRODUCTION

Technology and dispute resolution are intertwined. Technological innovations have contributed to the emergence of online dispute resolution (“ODR”), and ODR processes are increasingly influencing the broader dispute resolution industry. Combining experimentation in ODR with technological innovation has led to a dramatic increase in optionality for disputants seeking to avoid adversarial litigation. Though ODR remains youthful, there have been noteworthy evolutions in the types of technology being incorporated into ODR’s system design. Consequently, these technologies have presented novel considerations about ethical factors that must be considered in how ODR is conceived and implemented. Symbolically, perhaps the first ODR opportunity came on the heels of Y2K when eResolution managed a domain name dispute based on rules the Internet Corporation for Assigned Names and Numbers (“ICANN”) prescribed.¹ Much has changed since this moment, yet understanding ODR and the Internet’s history will be particularly valuable for scrutinizing the impending battle for ODR’s soul. Section II of this article provides an abbreviated overview to the history of ODR, a history that is closely connected with technology and the dispute resolution field. Section III explores how the three main branches of ODR—Artificial Intelligence ODR (“AI ODR”), Blockchain ODR, and Facilitative ODR—each present unique benefits and trade-offs. This section also recognizes that these branches are not mutually exclusive, as some ODR processes incorporate more than one branch. Section IV explores the contours of ODR and proposes a new framework for the industry: a greater emphasis may need to be placed on ODR’s capabilities to resolve online exclusive disputes to differentiate them from other dispute systems that are increasingly using information communication technology (“ICT”), and to be responsive to the dramatic rise in interactions and disputes that occur exclusively online with limited connection to the physical world. Section V explores the uniqueness of ODR’s soul with respect to the broader dispute resolution industry. Section V proposes a framework that prioritizes greater flexibility to core ethical tenets in a manner that focuses on the needs of disputants and requires some degree of divergence from alternative dispute resolution (“ADR”), ODR’s highly influential older sibling. Section VI con-

¹ Karim Benyekhlef & Fabien Gélinas, *Online Dispute Resolution*, 10 *LEX ELECTRONICA* 1 (Summer 2005).

siders that a corrupted soul is one incapable of promoting justice, and notes ways that ODR can, in fact, promote access to justice when certain factors are satisfied. Section VII emphasizes the important role the pandemic has played in increasing the adoption of ODR processes while also blurring lines between ODR and the broader dispute resolution industry. Rather than remaining static, ODR is constantly adapting to changing circumstances in a manner that promotes efficiency, yet the wider range of disputes being addressed through these processes will require a greater focus on access to justice, fairness, and ethics.

II. ORIGIN STORY: AN ABBREVIATED HISTORY OF ONLINE DISPUTE RESOLUTION

ODR's origin story can be traced to the 1990s, a time when the Internet became more accessible to the general public. The Internet had previously been a closed system, accessible predominantly for military usage, particularly in enhancing communication networks during the Cold War.² While restricted for military use with the Advanced Research Projects Agency Network ("ARPANET") in the 1960s,³ the Internet would evolve and gain recognition as a vehicle to promote resource sharing while facilitating relatively efficient communication with parties in the network. An increase in access to the Internet would come when the U.S. National Science Foundation ("NSF") helped create the Computer Science Network ("CSNET"). Though the Internet remained a permissioned system, CSNET would allow computer scientists to gain access to the Internet, increasing the number of nodes in the network from 2,000 in 1985 to more than 1.7 million in 1993.⁴ Despite this growth, the Internet's permissioned nature would reveal inequities from the earliest moments, as only those with access to the technology would be able to build novel platforms and have access to new communication methods. The inequitable nature of the Internet, empowering those with access while overlooking those without access, continues to be a concern to the extent ODR

² See John Naughton, *The Evolution of the Internet: From Military Experiment to General Purpose Technology*, 1 J. CYBER POL'Y 5 (2016).

³ The Advanced Research Projects Agency would invent ARPANET under a broad Department of Defense directive to ensure that technological surprise would never be repeated, but rather that the government agency would do the surprising through innovation. See Stephen J. Lukasik, *Why the Arpanet Was Built*, 33 IEEE ANNALS HIST. COMPUTING 4, 9–14 (2011).

⁴ Naughton, *supra* note 2, at 11.

can promote access to justice, a concern that will be addressed in-depth in Section VI. With limited access and restrictions on the Internet's commercial use, ODR was in low demand during the Internet's early era. Two monumental changes would occur respectively in 1991 and 1993, with the passage of the High-Performance Computing Act⁵ ("HPCA") and the NSF's privatization of the Internet. The HPCA would promote the creation of a nationwide infrastructure—including high-speed telecommunications and training for use of new telecommunication technology—to allow wider adoption of the Internet.⁶ Meanwhile, the Internet's privatization incentivized commercial use of the Internet in a manner not previously seen with the military's control of ARPNET.⁷ The Internet would transition from a permissioned system with restrictions into a permissionless, widely accessible network for the general public. Dial-up connections allowed a larger number of individuals to access the Internet. Meanwhile Tim Berners-Lee's invention of the World Wide Web presented a significant incentive for individuals to *want* access to the Internet, both to build and use new applications. Despite user growth, the early years of the Internet were peaceful with limited disputes. Early users have been described as people valuing "collective work and the communal aspects of public communications[,] . . . people who discuss and debate topics in a constructive manner[,] . . . [and] especially not people who come online for individual gain or profit."⁸ Though not a commonly held view at the time, Internet users and scholars in the mid-1990s would identify elements that would soon require ODR's intervention, including how individuals' identities and interests changed when they used the Internet.⁹

This level of peace and absence of commercial transactions on the Internet would change as new use cases were introduced and more users joined the network. Individuals recognized they could manipulate space and time: rather than being restricted to a physi-

⁵ High-Performance Computing Act of 1991, Pub. L. No. 102-194, 105 Stat. 1594.

⁶ See Donald A.B. Lindberg, MD & Betsy L. Humphreys, MLS, *The High-Performance Computing and Communications Program, the National Information Infrastructure, and Health Care*, 2 J. AM. MED. INFORMATICS ASS'N 156 (May/June 1995).

⁷ See SHANE GREENSTEIN, *HOW THE INTERNET BECAME COMMERCIAL: INNOVATION, PRIVATIZATION, AND THE BIRTH OF A NEW NETWORK* 135–36 (2015).

⁸ MICHAEL HAUBEN & RONDA HAUBEN, *NETIZENS: ON THE HISTORY AND IMPACT OF USENET AND THE INTERNET*, (Wiley-IEEE Computer Society Pr, 1st ed. 1997).

⁹ See, e.g., SHERRY TURKLE, *LIFE ON THE SCREEN: IDENTITY IN THE AGE OF THE INTERNET* 26 (1995) ("Computers don't just do things for us, they do things to us, including our ways of thinking about ourselves and other people.").

cal location or by time, cyberspace¹⁰ allowed individuals to communicate and transact without regard to geography and political borders, whenever they wanted. In 1996, John Perry Barlow, founder of the Electronic Frontier Foundation, eloquently captured this early Internet era: “Ours is a world that is both everywhere and nowhere, but it is not where bodies live.”¹¹ These new possibilities drove the creation of e-commerce, where merchants and buyers could transcend physical space. EBay would be among the earliest platforms facilitating e-commerce transactions, increasing net revenues from \$41 million in 1997 to \$748 million by 2001.¹² While eBay served as a general-purpose e-commerce platform, Amazon would initially specialize in e-commerce transactions for books, selling the first book, *Fluid Concepts and Creative Analogies*, in April 1995.¹³ Amazon would experience comparable exponential growth, reaching an annual revenue of \$15.7 million in 1996 and \$147.8 million in 1997¹⁴ predominantly from book sales.¹⁵

The development of dispute resolution systems on the Internet reflects a historical trend. Indeed, commerce and dispute resolution have a long history of being intertwined, as transacting parties benefit from having clear rules and procedures for managing situations that were previously not contemplated when entering into a transaction. Moreover, transacting parties benefit from having clear and reliable enforcement mechanism for addressing unsatisfied expectations from pre-existing agreements. Clarity as to how to manage these disputes has created an important enforcement role for the State and judiciary. When international commerce was

¹⁰ William Gibson’s seminal science fiction novel *Neuromancer* included one of the earliest uses of this term, in 1984. Lawrence Lessig would provide greater clarity for the term, as, in contrast to the Internet merely making life easier, cyberspace “is about making life different, or perhaps better” and a place where code regulates how individuals relate to one another. LAWRENCE LESSIG, *CODE VERSION 2.0* 83–84 (2006).

¹¹ John Perry Barlow, *A Declaration of the Independence of Cyberspace*, ELEC. FRONTIER FOUND. (Feb. 8, 1996), <https://www.eff.org/cyberspace-independence> [<https://perma.cc/F7JN-NU7E>].

¹² EBay Inc., *Form 10-K: Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934*, SEC. & EXCH. COMM’N (Mar. 1, 2002), <https://www.sec.gov/Archives/edgar/data/1065088/000089161802001364/f79949e10-k.htm> [<https://perma.cc/EL9K-WJKR>].

¹³ BRAD STONE, *THE EVERYTHING STORE: JEFF BEZOS AND THE AGE OF AMAZON* 36 (2013).

¹⁴ Amazon.com, Inc., *Form 10-K: Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934*, SEC. & EXCH. COMM’N (Mar. 13, 1998), <https://www.sec.gov/Archives/edgar/data/1018724/0000891020-98-000448.txt> [<https://perma.cc/N9A4-Y26G>].

¹⁵ See Alex Wilhelm, *A Look Back in IPO: Amazon’s 1997 Move*, TECHCRUNCH (June 28, 2017, 1:30 PM), <https://techcrunch.com/2017/06/28/a-look-back-at-amazons-1997-ipo/?guccounter=1> [<http://tcn.ch/2tYUBNI>].

emerging during the medieval era, however, the State became less reliable at enforcing contract breaches, as parties struggled to determine which sovereign had jurisdiction over a particular transaction. This would create a similar dynamic seen centuries later through e-commerce. Reduced reliability of State enforcement during the medieval era contributed to the growth of *lex mercatoria*, where medieval merchants established dispute resolution practices that were not restricted to one kingdom's laws.¹⁶ As commerce became more cross-jurisdictional, merchants merged multiple different jurisdictional laws with non-State customs to have dispute resolution systems that provided the certainty and predictability that one State's laws could not provide.¹⁷ Prior to Western Europe's exploitation of Africa, the continent had extensive inter-ethnic trading networks that shared characteristics of medieval *lex mercatoria* through the ability to transcend one kingdom's laws. For instance, while originating in the ancient Mali and Songhai kingdoms, the Wangara Trading Network would develop into an inter-ethnic trading route transcending multiple kingdoms in modern-day West Africa with merchant-specific dispute resolution systems.¹⁸ Principles of *lex mercatoria* in these regions illustrate how innovations in groups transacting with one another often require new dispute resolution systems to match the particularities of commerce.

Just as growth in international trade led to the historical innovation of *lex mercatoria*, e-commerce has also required innovation. As eBay and Amazon were driving exponential growth in e-commerce, these platforms¹⁹ also recognized that they were birthing new types of disputes that posed unique challenges for traditional dispute resolution systems: low-value, cross-jurisdictional disputes,

¹⁶ Emily Kadens, *Order Within Law, Variety Within Custom: The Character of the Medieval Merchant Law*, 5 CHI. J. INT'L L. 39, 52 (2004) ("Merchant courts certainly did exist, but they do not appear to have preceded the lord or town's grant of jurisdiction.").

¹⁷ See Ralf Michaels, *The True Lex Mercatoria: Law Beyond the State*, 14 IND. J. GLOB. LEGAL STUD. 447, 454 (2007) ("Lex mercatoria was not non-state law—it was an amalgam of state and non-state rules and procedures, kept together by its subject: the merchants.").

¹⁸ See MOSES E. OCHONU, *THE WANGARA TRADING NETWORK IN PRECOLONIAL WEST AFRICA: AN EARLY EXAMPLE OF AFRICANS INVESTING IN AFRICA* (Terence McNamee et al. eds., 2015).

¹⁹ These two e-commerce platforms were not working in silos. From the beginning, both were well aware of each other, and eBay's broader sales strategy led a young Jeff Bezos to seek to invest hundreds of millions of dollars into his competitor. See STONE, *supra* note 13, at 78.

where parties had a preference for fast resolution.²⁰ Indeed, early Internet-based disputes led to problematic jurisdictional questions for courts while the Internet was gaining greater adoption.²¹ E-commerce companies recognized that, although there was plenty of attention being given to their respective platforms, sustained growth and mass adoption could not be achieved without promoting user trust in their platforms.²² This was even more critical, as early users of the Internet viewed cyberspace as beyond the purview of government regulation.²³ Just as historical merchants pioneering international trade recognized the complexities in relying entirely on the State to resolve their disputes, these e-commerce platforms and their users also recognized the complexities of using State enforcement to resolve their disputes. The added challenge in e-commerce was that all interactions took place digitally, meaning there would be uncertainties in physically finding the defendant to initiate the dispute resolution process. Moreover, the costs of litigation compared with the low monetary value of the online dispute often meant that online disputants could not engage with the court system in a financially realistic manner. A system was needed to match the unique characteristics of the digital world; platforms independently sought to develop clear procedures for how to manage and resolve disputes occurring on the platform in order to address user trust concerns. For eBay, this meant creating a Trust and Safety Department that had three main objectives: (1) developing a digital reputation system for users; (2) investigating fraud; and (3) developing a framework to resolve disputes.²⁴ This illustrates that from the very beginning, ODR was about more than merely resolving disputes—ODR also focused on developing systems to promote clarity and to prevent the likelihood that a dispute would occur. By using a multi-faceted approach to promote clarity, these early ODR systems were implicitly reflecting the early Internet's aspiration for a dispute-free environment. Given that

²⁰ See e.g., Louis F. Del Duca et al., *eBay's De Facto Low Value High Volume Resolution Process: Lessons and Best Practices for ODR Systems Designers*, 6 Y.B. ARB. & MEDIATION 204, 205–06 (2014).

²¹ See Ethan Katsh, *ODR: A Look at History*, ONLINE DISP. RESOL. THEORY AND PRAC. 21, 24, <https://www.mediate.com/pdf/katsh.pdf> [<https://perma.cc/3FYN-9PNJ>].

²² See AMY J. SCHMITZ & COLIN RULE, *THE NEW HANDSHAKE: ONLINE DISPUTE RESOLUTION AND THE FUTURE OF CONSUMER PROTECTION* 33 (2017).

²³ See, e.g., LESSIG, *supra* note 10, at 3 (“[T]he bond between freedom and the absence of the state was said to be even stronger than in post-Communist Europe. The claim for cyberspace was not just that government would not regulate cyberspace—it was that government could not regulate cyberspace.”).

²⁴ SCHMITZ & RULE, *supra* note 22.

the majority of interactions occurred digitally, eBay now had the digital footprint (i.e., user data) to create novel approaches to reduce the likelihood of disputes, a variable lacking a parallel in a physical dispute context.

Though ODR's initial use case was tied to e-commerce, much of ODR's ideological underpinnings and system design was inseparable from ADR, ODR's older sibling. ADR has an extensive history throughout much of the world, from arbitration in Ancient Greece during the eighth century BCE,²⁵ to the use of *al-Wasata* from the dawn of Islamic Law,²⁶ and the precolonial *Panchayat* system in India.²⁷ The establishment of America as a colonial settlement also saw significant use of voluntary arbitration, with early settlers recognizing that "survival depended on cooperation" rather than potentially damaging their relationships through litigation.²⁸ Religious and utopian commitments would lead several settler-communities in colonial America to "reject[] the courts in favor of community-based dispute resolution."²⁹

Decades later, ADR would gain greater prominence in part due to the substantial backlog of court cases, which made the already expensive court process even more time-consuming.³⁰ Unifying principles of many ADR processes include impartiality, the absence of a conflict of interest, confidentiality, and procedural fairness for individuals.³¹ These principles would prove useful as legitimating factors for why disputants should seek justice and re-

²⁵ Kaja Harter-Uibopuu, *Ancient Greek Approaches Toward Alternative Dispute Resolution*, 10 WILLAMETTE J. INT'L L. & DISP. RESOL. 47 (2002).

²⁶ Michael Palmer, *ADR Missionaries*, 12 DISP. RESOL. MAG. 13, 14 (Spring 2006).

²⁷ Anil Xavier, *Mediation: Its Origin & Growth in India*, 27 HAMLIN J. PUB. L. & POL'Y 275 (2006).

²⁸ See Bruce H. Mann, *The Formalization of Informal Law: Arbitration Before the American Revolution*, 59 N.Y.U. L. REV. 443, 449 (1984).

²⁹ Andrew B. Mamo, *Three Ways of Looking at Dispute Resolution*, 54 WAKE FOREST L. REV. 1399, 1405–06 (2019).

³⁰ In an address before the American Bar Association in 1906, Roscoe Pound, who would later become Dean of Harvard Law School, described "delay and expense [to] have created a deep-seated desire to keep out of court, right or wrong, on the part of every sensible business [person] in the community." Roscoe Pound, *The Causes of Popular Dissatisfaction with the Administration of Justice*, Address Before the American Bar Association (Aug. 29, 1906), in REP. TWENTY-NINTH ANN. MEETING A.B.A., pt. 1, at 408.

³¹ See, e.g., American Bar Association, *Model Standards of Conduct for Mediators*, AM. BAR ASS'N (Sept. 2005), https://www.americanbar.org/content/dam/aba/administrative/dispute_resolution/dispute_resolution/model_standards_conduct_april2007.pdf [<https://perma.cc/VA9A-8XLS>]; American Bar Association, *The Code of Ethics for Arbitrators in Commercial Disputes* 3, 7, 9, AM. BAR ASS'N (Feb. 9, 2004), https://www.americanbar.org/content/dam/aba/administrative/dispute_resolution/dispute_resolution/commercial_disputes.pdf [<https://perma.cc/LRC3-FRN6>]; International Ombudsman Association, *IOA Code of Ethics*, INT'L OMBUDSMAN ASS'N (Jan.

solve their disputes without engaging in litigation. Indeed, while providing a certain amount of formality, these unifying principles can also be found in court-based adjudication—so disputing parties could trust ADR systems to a similar extent as courts. Leading system design thinkers from ADR would migrate to ODR, bringing a continuation for how non-court disputes should be managed. Indeed, early pilot projects were described as Online ADR, where an ADR practitioner used what today can be called limited-purpose Facilitative ODR—such as email—to resolve digital disputes.³²

Further uniting ADR and ODR would be the recognition of the need to “fit the forum to the fuss,” as envisioned when U.S. courts experienced significant case backlogs and delays in the mid-20th century.³³ This approach emphasizes a bottom-up system design structure, where a recognition for the unique interests and needs of disputants drives how the dispute resolution system is designed. This continues to be in sharp contrast to court-based dispute resolution, with a top-down system design structure requiring disputants to conform to procedural and substantive design elements. Top-down procedural examples include the scope of a court’s jurisdiction³⁴ and requirements to submit briefs to the judiciary, while substantive design examples include the precedential and the preclusive³⁵ nature of court decisions. By incorporating technology into the system design, ODR has developed new capabilities unparalleled in the physical dispute resolution context. Through a stakeholder-driven system design approach, ODR continues to use technology to address new types of fusses that were being created in cyberspace—most significantly through e-commerce—while also identifying ways to resolve disputes that may

2007), <https://www.ombudsassociation.org/assets/IOA%20Code%20of%20Ethics.pdf> [<https://perma.cc/2EVC-325L>].

³² See, e.g., Ethan Katsh & Colin Rule, *What We Know and Need to Know About Online Dispute Resolution*, 67 S.C. L. REV. 329, 329–30 (2016).

³³ Frank E.A. Sander, Address Before the National Conference on the Causes of Dissatisfaction with the Administration of Justice: Varieties of Dispute Processing (Apr. 7–9, 1976), in ADDRESSES DELIVERED NAT’L CONF. ON CAUSES DISSATISFACTION WITH ADMIN. JUST., 70 F.R.D. 79, 111–13 (1976).

³⁴ Ranging from subject matter jurisdiction, quasi in rem jurisdiction, and personal jurisdiction, there are a host of different jurisdictional requirements that can narrow the scope of cases that the judiciary can hear, even if all disputants consent to appear before a particular court and forum.

³⁵ Here, too, we see the top-down structure of the judiciary; where, even in a rare instance, where all disputants were to consent to re-litigating a case, preclusive court decisions restrict re-litigation.

have been previously overlooked in an in-person context, thus promoting access to justice for the under-justiced. Entrepreneurial ODR practitioners would adapt different technological tools to suit the particular needs and circumstances of disputants, increasing optionality for disputants and expanding access to justice for communities previously overlooked by court systems.

III. THE THREE BRANCHES OF ODR

Due to ADR professionals incorporating information communication technology (“ICT”) in their practices, and because of the expansion of a variety of complex technological tools, ODR has evolved dramatically from its creation era. Today, there are three main technological categories through which ODR is being implemented. First is AI ODR, where algorithms, written by “Fifth Party”³⁶ programmers, analyze and aggregate data to support the work of a third-party neutral or to independently provide a proposed resolution for disputants. The second, more nascent,³⁷ branch is Blockchain ODR, where nodes in a blockchain system harness cryptography to crowdsource decision-making to an arbitral panel, akin to juries, for resolving disputes. The third, old-guard, branch is Facilitative ODR, where ICT tools serve to bring disputing parties together so that a third-party neutral can facilitate the dispute predominantly or exclusively through a digital forum. These three branches are not mutually exclusive: dispute resolution systems are capable of using more than one branch in managing disputes. For instance, this can be seen with China’s *Smart Courts*, which mix facilitative technologies and blockchain-based tools to promote evidentiary security, or with ODR platforms that mix facilitative technologies with limited-purpose AI. These branches relate to traditional dispute resolution systems in vastly different ways, including in their ability to complement or disrupt pre-existing dispute resolution systems. Rather than an adversarial, zero-sum battle for ODR’s soul, these three branches—and future different branches—will provide greater optionality for disputants to

³⁶ While the third party is typically associated with a dispute resolution practitioner and the fourth party with the technology underpinning an ODR platform, the developers writing the code for an ODR platform can have an important influence in how disputants interact with one another and the technology.

³⁷ Two of the largest Blockchain ODR platforms are Kleros and Jur.io, created in 2019 and 2018, respectively.

efficiently reach resolutions based on the particularities of their disputes.

When thinking about the three branches, sophistication and speed are two noteworthy factors that will impact the decision as to which branch is best suited for a given dispute. This is because the need for faster resolution often requires an ODR platform that is less complex, with fewer steps needed for a resolution to be reached. AI and Blockchain ODR will likely continue to be faster than Facilitative ODR, as these processes are more streamlined. However, Facilitative ODR will have an important role to play for more complex disputes, such as those where a third-party neutral's active listening and ability to understand disputing parties' interests play a vital role in reaching a resolution.³⁸ In keeping with ADR's aspiration for letting the forum fit the fuss, there will be more forums from which disputants can choose. In addition, no branch of ODR is perfect and each has unique benefits and trade-offs, which are factors that disputants and entrepreneurial ODR practitioners will need to consider.

A. AI ODR

AI-driven ODR pushes the limits of our conception of the "Fourth Party"³⁹ due to AI's ability to provide support to traditional third parties during the dispute resolution process. AI has a comparative advantage in quickly analyzing large pools of data and recognizing patterns when compared to human counterparts.⁴⁰ Meanwhile, the third-party neutral can focus on using their comparative advantage, such as a rich amount of emotional intelligence through active listening and recognizing social nuances, to engage with disputing parties and generate proposed resolutions in collaboration with AI's data analysis. This collaboration between third-party neutrals and AI should be unsurprising as AI struggles most with creative and flexible thinking while humans, especially those trained in ADR, have great comfort in this form of thinking.⁴¹ Ad-

³⁸ See, e.g., Mamo, *supra* note 29, at 1420.

³⁹ Ethan Katsh coined this term, recognizing that technology can provide support to third-party neutrals. ETHAN KATSH, *DIGITAL JUSTICE: TECHNOLOGY AND THE INTERNET OF DISPUTES* 37 (2017).

⁴⁰ See, e.g., Daniel E. O'Leary, *Artificial Intelligence and Big Data*, 28 *IEEE INTELLIGENT Sys.* 96, 99 (Mar./Apr. 2013).

⁴¹ See generally JAY W. RICHARDS, *THE HUMAN ADVANTAGE: THE FUTURE OF AMERICAN WORK IN AN AGE OF SMART MACHINES* (2018).

ditionally, the underlying algorithms benefit from the network effects⁴² of the platform as a larger pool of users, and their accompanying disputes, leads to smarter AI analysis. In seeking to fit the forum to the fuss, those disputes that operate under significant time constraints will benefit from the speed and efficiency with which AI operates when there is a reduced need for emotional intelligence from a human third party. Even when the need for a human third party is valuable, AI can serve as a fourth party and give flexibility to the third party to focus on their comparative advantage.

While integrated with Facilitative ODR, there are some ODR platforms that use limited-purpose AI during the dispute resolution process. As will be discussed in the Facilitative ODR section, family law disputes are particularly well-suited for ODR's management of the process. These are often pre-existing, emotionally-driven disputes that benefit from technology's intervention to reduce the likelihood of escalated tension. OurFamilyWizard, for instance, uses limited-purpose AI in their proprietary ToneMeter so that negative messages sent between parents are flagged if they are considered detrimental to a collaborative process.⁴³ CoParenter, another ODR platform that manages family law disputes, uses a similar system called Intelligent Dispute Resolution to avoid negative exchanges between parties.⁴⁴ AI has also been used to provide guidance relating to the equitable distribution of marital property.⁴⁵ The use of AI for family law disputes is still novel and limited. As datasets grow, AI will be able to recognize greater nuances in communication and a broader breadth of words that are likely to be detrimental to a collaborative process. AI further illustrates the benefits of a fourth party because a third party would have greater difficulty in monitoring exchanges between parents. This can free the third party to focus on more difficult disputes, where harmful communication is less of the problem.

⁴² Under Metcalfe's law, the value of a network is proportional to the square of the number of nodes in the system.

⁴³ *Analyze Your Tone with ToneMeter™*, OUR FAM. WIZARD, <https://www.ourfamilywizard.com/knowledge-center/tips-tricks/parents-mobile/tonemeter> [<https://perma.cc/AC22-6NS2>] (last visited June 22, 2021).

⁴⁴ *Communicate, Manage, and Organize Everyday coParenting Responsibilities*, COPARENTER, <https://coparenter.com/features/mediation-coaching/> [<https://perma.cc/JMJ9-B8ZY>] (last visited June 22, 2021).

⁴⁵ John Zeleznikow, *Using Artificial Intelligence to Provide Intelligent Dispute Resolution Support*, 30 *GRP. DECISION & NEGOT.* 789, 793 (2021).

The recently established Shanghai AI Assistive System for Criminal Cases has used AI to examine evidence from criminal cases to reduce the likelihood that innocent defendants are improperly charged with crimes, promoting greater reliability in judicial decision-making.⁴⁶ In Britain, the University of Sheffield also produced an AI system that can support managing disputes and predicting results with nearly an 80% success rate, according to self-reporting.⁴⁷ China's State Council issued an order for the development of *Smart Courts*, focusing on applying AI for "evidence collection, case analysis, and legal document reading and analysis . . . [to] [a]chieve the intelligentization of courts and trial systems."⁴⁸ Over the years, a variety of Chinese courts have used different AI skillsets in judicial proceedings. AI-use cases cover a broad range, from the efficient processing of legal documents, to the use of intelligent voice conversion to transcribe statements during judicial proceedings.⁴⁹ Interestingly, AI has been used to verify evidentiary information and provide data-driven references for judicial decision-making.⁵⁰ Illustrating the role of ODR to prevent disputes, *Smart Courts* have used AI-driven chatbots to provide informal legal advice, to reduce the likelihood of disputes, and to promote legal clarity.⁵¹ Shanghai's Intermediate People's Court has also been used to reduce judgment differences between similarly situated cases, thus promoting greater equity.⁵²

There is a maximalist version of AI ODR where AI moves closer to tasks normally reserved for third-party neutrals, such as generating a proposed resolution agreement and facilitating conversations between disputing parties in the absence of a third party. In family law, this can be seen through AI-generated child visitation schedules, based on preferences parents have shared with the platform and historical datasets describing what similarly situated parents prefer for scheduling. Under this approach, AI would reduce the need for a mediator or judge to be heavily involved in the

⁴⁶ YADONG CUI, *ARTIFICIAL INTELLIGENCE AND JUDICIAL MODERNIZATION* 22 (Springer 2020).

⁴⁷ *Id.* at 23.

⁴⁸ Graham Webster et al., *Full Translation: China's 'New Generation Artificial Intelligence Development Plan' (2017)*, *NEW AM.* (Aug. 1, 2017), <https://www.newamerica.org/cybersecurity-initiative/digichina/blog/full-translation-chinas-new-generation-artificial-intelligence-development-plan-2017/> [https://perma.cc/KV8A-PFMN].

⁴⁹ CUI, *supra* note 46, at 25.

⁵⁰ *Id.* at 25–26.

⁵¹ *Id.*

⁵² Nu Wang, "Black Box Justice": Robot Judges and AI-based Judgment Processes in China's Court System, 2020 IEEE INT'L SYMP. TECH. SOC'Y 58, 59 (2020).

process. Some even anticipate that AI will be able to efficiently identify factors contributing to a family law dispute so as to create more time for the ADR practitioners and spouses to think creatively about ways of resolving the dispute.⁵³ Using deductive reasoning, AI can evaluate established legal precedent and other authoritative sources relevant to a particular circumstance (i.e., inputs), in order to generate a proposed resolution (i.e., an output). The maximalist would also argue that it is misplaced to believe ADR professionals have a comparative advantage in using emotional intelligence.⁵⁴ Elements of maximalist AI ODR are seen with Modria—a platform covering a variety of categories of legal disputes—where AI explores underlying interests motivating disputing parties while helping disputing parties generate agreements. Additionally, SmartSettle has used AI to serve as an intermediary between groups experiencing hostility in supporting and opposing Brexit.⁵⁵ The maximalist version of AI ODR’s ability to gain wider adoption will depend on the extent AI can foster trust with parties. A recent study found that AI can increase trust between parties, and when misunderstandings do develop, the attribution of blame assigned to human counterparts decreased, leading to greater peer-to-peer collaboration.⁵⁶

The role of AI in art helps to provide a framework for the possibilities of AI in ODR. Generative AI is defined as “a computational system . . . taking on particular responsibilities, exhibit[ing] behaviours that unbiased observers would deem . . . creative.”⁵⁷ These systems use previous human-created art as inputs in order to identify themes between different art pieces and create a distinct piece of art. Google’s DeepDream system uses an artificial network to detect patterns between images and create something

⁵³ Darren Gingras & Joshua Morrison, *Artificial Intelligence and Family ODR*, 59 FAM. CT. REV. 227, 229 (2021).

⁵⁴ See Wu Youyou, Michal Kosinski, & David Stillwell, *Computer-based Personality Judgments Are More Accurate than Those Made by Humans*, 112 PROC. NAT’L ACAD. OF SCI. 1036, 1039 (2015) (presenting a series of studies that illustrate how computer judgments are more accurate than humans in assessing social situations, including political beliefs and substance use).

⁵⁵ See Charlie Irvine, *Brexit Negotiated? Online Dispute Resolution Will be More Than an Alternative*, KLUWER MEDIATION BLOG (Dec. 16, 2018), http://mediationblog.kluwerarbitration.com/2018/12/16/odr-will-be-more-than-an-alternative/?doing_wp_cron=1592377477.8860759735107421875000 [<https://perma.cc/54XV-8CRF>].

⁵⁶ Jess Hohenstein & Malte Jung, *AI as a Moral Crumple Zone: The Effects of AI-mediated Communication on Attribution and Trust*, 106 COMPUT. HUM. BEHAV. 1 (2020).

⁵⁷ See Jessica Fjeld & Mason Kortz, *A Legal Anatomy of AI-generated Art: Part I*, HARV. J. ON L. & TECH. DIG. (Nov. 21, 2017), <https://jolt.law.harvard.edu/digest/a-legal-anatomy-of-ai-generated-art-part-i> [<https://perma.cc/35A8-22BT>].

somewhat distinct.⁵⁸ Meanwhile, Amazon’s DeepComposer converts a short melody an individual provides into a complete song by using some degree of creativity.⁵⁹ These examples are far from the high standards humans expect from one another. Yet, AI is still a new technology. Future breakthroughs could allow AI to make proposals with some degree of creativity and to resolve a dispute using historical datasets. The key questions are whether disputants would place a sufficient degree of trust in machine learning to abdicate greater decision-making to an AI system, and whether this is an acceptable outcome for the dispute resolution field.

i. AI ODR Trade-Offs & Complications

Despite these benefits, AI has some shortcomings that should be considered for ODR system design. AI is highly reliant on quality information being used as inputs, so flawed or incomplete information can generate problematic outputs. This has been described as the “garbage in, garbage out” conundrum, where algorithms experience difficulty in distinguishing useful information from problematic information for the purposes of generating a reasonable output.⁶⁰ When AI uses inductive reasoning—where multiple examples are used to infer a rule—the “garbage in, garbage out” problem is further accentuated, as AI may use unrepresentative or incomplete information to infer outputs and rules. As seen with Tay, Microsoft’s AI bot that became explicitly racist and sexist, AI that insufficiently filters out bad data can lead to problematic outcomes.⁶¹ To be sure, this is not a one-off problem; there have been other instances where AI generates problematic outputs, due to insufficient filtering of inputs used in the system.⁶² In fact, an extensive survey conducted through Harvard’s Berkman Klein Center found that considerations of fairness and non-discrimination was the most consistent theme, appearing in all of the AI ethics reports

⁵⁸ *Id.*

⁵⁹ See Ben Rogerson, *Amazon AWS DeepComposer is “The World’s First Machine Learning-Enabled Musical Keyboard”*, MUSICRADAR (Dec. 3, 2019), <https://www.musicradar.com/news/amazon-aws-deepcomposer-is-the-worlds-first-machine-learning-enabled-musical-keyboard> [<https://perma.cc/R56R-87DV>].

⁶⁰ See CATHY O’NEIL, *WEAPONS OF MATH DESTRUCTION: HOW BIG DATA INCREASES INEQUALITY AND THREATENS DEMOCRACY* 150 (Crown, 2016).

⁶¹ See James Vincent, *Twitter Taught Microsoft’s AI Chatbot to be a Racist Asshole in Less Than a Day*, VERGE (Mar. 24, 2016, 6:43 AM), <https://www.theverge.com/2016/3/24/11297050/tay-microsoft-chatbot-racist> [<https://perma.cc/9HBM-KYTH>].

⁶² See generally Cade Metz, *We Teach A.I. Systems Everything, Including Our Biases*, N.Y. TIMES (Nov. 11, 2019), <https://www.nytimes.com/2019/11/11/technology/artificial-intelligence-bias.html> [<https://perma.cc/FV5R-XL72>].

included in the survey.⁶³ Stated eloquently from the German government, “individuals can only determine if an automated decision is biased or discriminatory if they can ‘examine the basis—the criteria, objectives, logic—upon which the decision was made.’”⁶⁴ As such, considerations for AI governance will be critical to promoting trust among a variety of different stakeholders.

When used to resolve disputes, an AI system that insufficiently filters bad data raises the concern of inconsistent or harmful outcomes, based on a disputant’s group or information provided. Moreover, although addressing bias from human third-party neutrals is an oft-mentioned concern,⁶⁵ developers write the algorithms that define the parameters for AI. As ODR seeks to resolve disputes that are global in nature, the demographics of programmers writing the algorithms in AI are limited and may result in unrepresentative algorithms. For instance, fewer than 25% of employees at large tech companies are female, and fewer than 10% are Black and Latinx.⁶⁶ As such, problematic biases from the programmers can seep into the constructed algorithm. Cathy O’Neil, an acclaimed author and data scientist, eloquently recognized that “algorithms are simply opinions embedded in code.”⁶⁷ In reality, the lived experiences of programmers may not be representative of their global user population. Bias in AI ODR is also problematic because AI ODR is far more scalable when compared to a human third party. Unlike a single human third party, bound by space and time, AI ODR has fewer constraints, so any bias would be externalized on a larger scale.

The AI maximalists, believing AI will have the capability of resolving disputes in the absence of a third-party neutral, face the

⁶³ Jessica Fjeld et al., *Principled Artificial Intelligence: Mapping Consensus in Ethical and Rights-Based Approaches to Principles for AI*, BERKMAN KLEIN CTR., 5 (2020), https://dash.harvard.edu/bitstream/handle/1/42160420/HLS%20White%20Paper%20Final_v3.pdf?sequence=1&isAllowed=Y [<https://perma.cc/TE9E-X8NU>].

⁶⁴ *Id.* at 42.

⁶⁵ See Carol Izumi, *Implicit Bias and the Illusion of Mediator Neutrality*, 34 WASH. UNIV. J. L. & POL’Y 71, 102 (2010) (addressing studies where ADR professionals express explicit and implicit biases).

⁶⁶ See Sarah Myers West, *Discriminating Systems: Gender, Race, and Power in AI*, AI NOW INST. 11 (Apr. 2019), <https://ainowinstitute.org/discriminatingystems.pdf> [<https://perma.cc/VB9E-3LM7>].

⁶⁷ Cathy O’Neil, Ted Talks, *The Era of Blind Faith in Big Data Must End*, YOUTUBE (Sept. 7, 2017) https://www.youtube.com/watch?v=_2u_eHHzRto [<https://perma.cc/JMZZ-MMFX>]; see also CATHY O’NEIL, WEAPONS OF MATH DESTRUCTION: HOW BIG DATA INCREASES INEQUALITY AND THREATENS DEMOCRACY 3 (Crown, 2016) (algorithms “encode human prejudice, misunderstanding, and bias”).

challenge of AI being able to understand the moral context of a given dispute. Societal morals are ever evolving, and legal history reveals that what one society currently views as moral could have been perceived as immoral in prior generations. Ranging from same sex marriage,⁶⁸ interracial schooling,⁶⁹ and classification of an entire ethnicity as a suspect class,⁷⁰ morals reflected through laws are constantly changing and an AI system presented with historical data may struggle to understand the moral context in the absence of a third party's support. Moreover, ODR platforms have the capability of operating on a global level, and the moral differences⁷¹ between countries may require AI to exhibit comparable flexibility in certain contexts. Although the global perspective may not be relevant for AI's application to local family law disputes, the need for a broader perspective increases the more disputants have access to the platform, as is evinced with cross-jurisdictional e-commerce transactions. The temptation may be for human developers to feed the AI cases, statutes, and other legal material throughout history to provide the full extent of a society's morals, as reflected in the law. For this to apply, AI would need to be able to better understand contextual circumstances than what it is currently able to do.⁷² Theoretically, programmers would provide AI with established rules using authoritative sources, disputants would provide information about their particular circumstances, and the system would develop a hypothesis to explain the relationship between authoritative sources and the disputants' information. At present, humans engage in abductive reasoning much more seamlessly than AI does, because abduction requires experimenting with different scenarios and determining which is most relevant to the particular context of a dispute.⁷³ As the large amount of data reflecting prior generations' morals can crowd-out the present generation's moral expectations, this could lead to an AI system generating outputs with outdated information or outputs that are not applicable to a given context. Developers

⁶⁸ *Obergefell v. Hodges*, 576 U.S. 644 (2015); *cf.* *Baker v. Nelson*, 409 U.S. 810 (1972).

⁶⁹ *Brown v. Board of Educ.*, 349 U.S. 294 (1955); *cf.* *Plessy v. Ferguson*, 163 U.S. 537 (1896).

⁷⁰ *Korematsu v. United States*, 323 U.S. 214 (1944); *cf.* *Trump v. Hawaii*, 138 S. Ct. 2392 (2018).

⁷¹ Within North America alone, what is considered a drug is treated differently on a federal level.

⁷² See generally JAMES A. CROWDER, JOHN CARBONE & SHELLI FRIESS, *ARTIFICIAL PSYCHOLOGY* 51–62 (Springer Nature Switzerland AG, 2020).

⁷³ See, e.g., William Littlefield II, *The Human Skills AI Can't Replace*, QUILLETTE (Sept. 25, 2019), <https://quillette.com/2019/09/25/the-human-skills-ai-cant-replace/> [<https://perma.cc/7EYS-XKS7>].

could also choose to only feed the AI legal material from the present generation, in order to produce a more responsive system to present disputes. Even with a narrower data set, it is unlikely that AI would conduct abduction as quickly as a third-party neutral.

The AI maximalist vision in ODR is further complicated by the nuanced success of using AI in medicine. The maximalist's aspiration for AI to supplant tasks typically reserved for doctors is similar to the aspiration for AI to supplant ADR practitioners: Using natural-language processing ("NLP") to assess a broad range of information—whether relevant statutes, medical or law review journals, and data about the disputants or patient circumstances—AI could generate a medical diagnosis or a proposed resolution that is suitable to the interests and needs of disputants. In response to the National Academies of Sciences, Engineering, and Medicine statement, that improving medical diagnoses was a “moral, professional, and public health imperative,”⁷⁴ IBM created Watson Health to use AI in the medical diagnosis process. However, while Ginni Rometty, IBM's former CEO and AI maximalist, predicted in 2016 that by 2021 every important decision would be made with IBM Watson's help,⁷⁵ IBM would actively seek the sale of Watson Health in 2021 due to unsatisfied commercial expectations.⁷⁶ In part, these unsatisfied expectations are due to the current limitations in NLP to strengthen AI's abductive reasoning, in order to generate reliable outputs/diagnoses from data that involves nuances.⁷⁷ Although future improvements can be made,⁷⁸ Watson

⁷⁴ ERIN P. BALOGH, BRYAN T. MILLER & JOHN R. BALL, *IMPROVING DIAGNOSIS IN HEALTH CARE* (National Academies Press, 2015).

⁷⁵ See Sharon Gaudin, *IBM: In 5 Years, Watson A.I. Will be Behind Your Every Decision*, *COMPUTERWORLD* (Oct. 27, 2016, 4:30 AM), <https://www.computerworld.com/article/3135852/ibm-in-5-years-watson-ai-will-be-behind-your-every-decision.html> [<https://perma.cc/43VU-W2BP>]; see also Lauren F. Friedman, *The CEO of IBM Just Made a Bold Prediction About the Future of Artificial Intelligence*, *BUS. INSIDER* (May 14, 2015, 2:49 PM), <https://www.businessinsider.com/ginni-rometty-on-ibm-watson-and-ai-2015-5> [<https://perma.cc/93M3-G6K6>].

⁷⁶ See Laura Cooper & Cara Lombardo, *IBM Explores Sale of IBM Watson Health*, *WALL ST. J.* (Feb. 18, 2021, 8:21 PM), <https://www.wsj.com/articles/ibm-explores-sale-of-ibm-watson-health-11613696770> [<https://perma.cc/A2Z7-S7A4>].

⁷⁷ See ROBERT M. WACHTER, *THE DIGITAL DOCTOR: HOPE, HYPE, AND HARM AT THE DAWN OF MEDICINE'S COMPUTER AGE* (McGraw Hill Education, 2015).

⁷⁸ In May 2021, Google and HCA Healthcare, a national hospital chain, entered into an arrangement to create algorithms using patient healthcare records to help improve operating efficiency, monitor patients, and guide doctors' decisions. Such a development will need to recognize the challenges that IBM Watson Health has experienced over the years. See Melanie Evans, *Google Strikes Deal with Hospital Chain to Develop Healthcare Algorithms*, *WALL ST. J.* (May 26, 2021, 4:34 PM), <https://www.wsj.com/articles/google-strikes-deal-with-hospital-chain-to-develop-healthcare-algorithms-11622030401> [<https://perma.cc/ZZ7T-C2JY>].

Health's use of NLP struggled to understand words with double-meaning and phrases with negation and was limited in drawing distinctions based on when a health-related event occurred.⁷⁹ While the maximalist's vision currently remains impractical, the synergistic relationship between physicians and AI, as with ADR practitioners and AI, continues to demonstrate effectiveness. For instance, digital health applications (where patients record data that AI will process and assess) and omics-based tests (where machine learning analyzes a population pool to find correlations) allow physicians to provide more personalized treatments to patients using AI.⁸⁰ This illustrates that the current state of AI is most effective when serving to complement, rather than supplant, the skills of an ADR practitioner.

A potential resolution to some of the shortcomings of AI ODR, particularly in fostering greater user trust, is for the algorithm's code to be open source. Open-source technology can allow users and the general public to analyze the code to see biases that may exist within the system or disparities the code can create. As this is the open-source generation,⁸¹ where programmers increasingly share their code with others to collaborate, gain legitimacy, or to educate, ODR platform creators can similarly disseminate their computer code to a broader segment of the public. It is critical to recognize that in managing disputes and promoting justice, ODR platforms are engaging in responsibilities that have historically been the prerogative of the State. Additionally, in democratic societies, there is often an expectation of government transparency. As such, the use of AI with ODR may require greater transparency than in other use cases, such as where AI is not engaging in a quasi-State function. In arguing for greater open-source code, academic and political activist Lawrence Lessig identified that "where transparency of government action matters, so too should the kind of code it uses."⁸² As AI ODR relies heavily on algorithms to support quasi-State actions, and the programmer's method for developing the AI system can have important implications for outcomes and disparities between groups, having transparency with the code can be critical—not just for promoting trust, but also from a public policy perspective. Yet, making an

⁷⁹ WACHTER, *supra* note 77.

⁸⁰ ADAM BOHR & KAVEH MEMARZADEH, *ARTIFICIAL INTELLIGENCE IN HEALTHCARE* 28–29 (2020).

⁸¹ See generally Josh Lerner & Jean Tirole, *The Economics of Technology Sharing: Open Source and Beyond*, 19 J. ECON. PERSP. 99 (2005).

⁸² LESSIG, *supra* note 10, at 141.

algorithm open source comes with intellectual property considerations, as investments into creating the algorithm would be freely accessible to the public and even competitors. A potential compromise could include making the code accessible only to users of the platform and, perhaps, creating a non-disclosure framework restricting the ability of disputants to share this information with the general public. Greater access for potential disputants can provide informed consent so that disputants can better understand how a specific AI system could impact the dispute resolution process.

B. *Blockchain ODR*

“Whereas most technologies tend to automate workers on the periphery doing menial tasks, blockchains automate away the center. Instead of putting the taxi driver out of a job, blockchain puts Uber out of a job and lets the taxi drivers work with the customer.”⁸³

—*Vitalik Buterin, Co-Founder of Ethereum*

Use of blockchains is a recent development that has grown quickly as an additional technological mechanism for parties to resolve disputes.⁸⁴ Finance can serve as a valuable point of departure, as this is the largest use case for blockchains through cryptocurrencies.⁸⁵ Relying on what has become known as Nakamoto Consensus, Bitcoin—the largest cryptocurrency by market capitalization—allows for peer-to-peer transactions where nodes on the blockchain transact based on cryptographic proofs, rather than trust.⁸⁶ Bitcoin was created shortly after the 2008 financial crisis, during a period of heightened global distrust⁸⁷ of

⁸³ See DON TAPSCOTT & ALEX TAPSCOTT, *BLOCKCHAIN REVOLUTION: HOW THE TECHNOLOGY BEHIND BITCOIN IS CHANGING MONEY, BUSINESS, AND THE WORLD* 280 (2016).

⁸⁴ Currently, there are only a handful of companies using blockchains in ODR. See, e.g., Orna Rabinovich-Einy & Ethan Katsh, *Blockchain and the Inevitability of Disputes: The Role for Online Dispute Resolution*, 2019 J. DISP. RESOL. 47, 59–73 (2019).

⁸⁵ Considering that an important feature of blockchain is the distributed ledger technology, blockchain adoption into finance should not be surprising.

⁸⁶ See generally Satoshi Nakamoto, *Bitcoin: A Peer-to-Peer Electronic Cash System*, BITCOIN (2008), <https://bitcoin.org/bitcoin.pdf> [<https://perma.cc/7WHM-M73N>].

⁸⁷ See generally Ed Saiedi et al., *Distrust in Banks and Fintech Participation: The Case of Peer-to-Peer Lending*, ENTREPRENEURSHIP THEORY & PRAC. 1 (2020), <https://journals.sagepub.com/doi/pdf/10.1177/1042258720958020> [<https://perma.cc/TA4C-N6DC>]; see also Felix Roth, *The Effect of the Financial Crisis on Systemic Trust*, 44 INTERECONOMICS 203, 203–08 (July/Aug. 2009), <https://www.intereconomics.eu/contents/year/2009/number/4/article/the-effect-of-the-financial-crisis-on-systemic-trust.html> [<https://perma.cc/HB9G-68XQ>].

centralized intermediaries and their role in causing this crisis.⁸⁸ Directly related with the Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994,⁸⁹ finance has seen increased market concentration and rent-seeking that is externalized onto customers and retail investors, resulting in the ten largest banks controlling more than half of America's total banking assets.⁹⁰ The rise of cryptocurrencies using permissionless blockchains provides an alternative to the traditional banking model, so that individuals can avoid high banking transaction costs, including rent-seeking.⁹¹ As recognized in the Coase Theorem, economic activity that involves high transaction costs results in involvement from centralized entities, rather than relying on “the price mechanism” and private negotiations.⁹²

While finance has used blockchain technology to promote lower transaction costs and greater decentralization, in dispute resolution, blockchains are valuable for their ability to crowdsource decisions in a manner not limited by space and time. As will be discussed in Section V(A), trust of peers and distrust of centralized decision-making are the leading underlying motivations for disputants choosing Blockchain ODR. Blockchain ODR seeks to address some of the costs of centralization in the judicial system, particularly in the context of cross-jurisdictional disputes, low-monetary value disputes, or disputes in need of fast resolution.

⁸⁸ Over the years, Bitcoin and other cryptocurrencies have altered from existing in the absence of centralized intermediaries to becoming increasingly connected for these intermediaries to facilitate transactions, particularly through hosted wallets. See Andrew Kang, *Bitcoin's Growing Pains: Intermediation and the Need for an Effective Loss Allocation Mechanism*, 6 MICH. BUS. & ENTREPRENEURIAL L. REV. 263, 274 (2017), <https://repository.law.umich.edu/cgi/viewcontent.cgi?article=1061&context=mbelr> [<https://perma.cc/77DR-XCBD>].

⁸⁹ Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994, Pub. L. No. 103-328, 108 Stat. 2338 (1994), <https://www.govinfo.gov/content/pkg/STATUTE-108/pdf/STATUTE-108-Pg2338.pdf> [<https://perma.cc/SG4R-FQ3A>]. This statute was in response to the National Bank Act of 1863 that, interpreted by the Comptroller of the Currency, sought to prohibit national banks. Riegle-Neal would dramatically reduce geographic restrictions on interstate banking. See Grant E. Buerstetta & David E. Runck, *Developments in Banking Law: 1994*, 14 ANN. REV. BANKING L. 1, 2 (1995).

⁹⁰ See Jeffery Y. Zhang, *The Rise of Market Concentration and Rent Seeking in the Financial Sector*, HARV. JOHN M. OLIN CTR. L., ECON., & BUS. 1, 2 (2017), http://www.law.harvard.edu/programs/olin_center/fellows_papers/pdf/Zhang_72.pdf [<https://perma.cc/B3C4-J3GM>] (discussing the increased concentration of banking assets from 1980 to 2017).

⁹¹ Sinclair Davidson, Primavera de Filippi, & Jason Potts, *Economics of Blockchain*, PUB. CHOICE CONF. 1, 5 (May 2016), <https://hal.archives-ouvertes.fr/hal-01382002/document> [<https://perma.cc/ESPY-GU83>] (discussing how complex systems evolve from centralization to decentralization when the costs of centralized systems through inflation, corruption, and rent-seeking exceed the benefits of centralized creating, establishing, and enforcing rules).

⁹² Ronald H. Coase, *The Nature of the Firm*, 4 ECONOMICA 386, 390–92 (Nov. 1937).

Blockchain technology is a new tool being incorporated into dispute resolution systems, yet the ideological underpinning that relates to trust of the community has a rich history in the dispute resolution field.⁹³ Prior to the adoption of interest-based ADR, communities had a greater role in managing and resolving disputes. This historical approach of dispute resolution places a value preference on empowering the community and a disputant's peers to manage disputes, as opposed to having an expert third party with limited community connections manage a dispute.⁹⁴ This community motif relates closely with Blockchain ODR—except rather than a community being defined based on geographic identities, this branch of ODR uses communities based on shared interests between nodes in a system, as is often the case with the Internet. Within this branch, conferring decision-making to a peer holds considerable sway while abdicating decision-making to AI, despite its efficiencies, or to a single third party raises concerns. This communitarian ethos means that Blockchain ODR prioritizes the role of the community in managing disputes that impact the interest-based community.

In addition, just as the Internet and e-commerce have demonstrated, new technologies can lead to new forms of disputes, so the use of blockchain and smart contracts⁹⁵ can create new types of disputes that are ill-suited for traditional dispute systems. Blockchain ODR has an indispensable role for disputes that arise on blockchains, particularly with smart contracts. Without this branch of ODR, other dispute resolution systems would struggle to address the preferences of disputants using smart contracts where pseudonymity is prioritized and transactions are finalized in a matter of moments, thus threatening access to justice for a class of disputants. Pseudonymity may seem trivial when parties define themselves solely within the bounds of the physical world. Yet, with blockchains, where physical conditions are deprioritized in favor of a digital context, pseudonymity is critical for parties to fo-

⁹³ Blockchain ODR's use of crowdsourced decision-making is inspired from community trust, even as the use of cryptography—for instance, through asymmetric cryptography—reduces the reliance on orthodox systems of trust.

⁹⁴ See Mamo, *supra* note 29, at 1426 (“Community-based dispute resolution held the promise of strengthening local self-government and empowering laypeople to directly address disputes with their fellow community members rather than having disputes managed by professionals.”).

⁹⁵ Smart Contracts Alliance & Deloitte, *Smart Contracts: 12 Use Cases for Business & Beyond*, CHAMBER DIGIT. COM. 1, 40 (Dec. 2016), <http://digitalchamber.org/assets/smart-contracts-12-use-cases-for-business-and-beyond.pdf> [<https://perma.cc/GV83-4WMB>] (providing an overview of smart contracts and their business proposition in a variety of different sectors, ranging from real estate to financial markets).

cus on the interests that bring them together, as opposed to physical identification that can create distractions for community-based interests.

Cryptocurrencies use cryptoeconomics⁹⁶ to address the Byzantine General's Problem,⁹⁷ so that parties can transact with one another in the absence of trust. With Blockchain ODR, cryptoeconomics seeks to align users' monetary incentives to reach the appropriate outcome for disputants, without relying on trusted intermediaries. This concept is built on Schelling points, where certain incentives can allow parties to act consistently with one another in the absence of communication.⁹⁸ While AI can struggle to understand nuances and can, from a certain perspective, disempower individual decision-making, blockchains allow nodes⁹⁹ in a network to review the dispute and identify nuances, in order to reach a just outcome. Using cryptoeconomics, blockchain nodes are specifically incentivized to reach an outcome that would be fair, based on the circumstances. Cryptoeconomics can impose financial penalties for "bad-actors" who seek an unfair or unjust outcome, while also filtering out those nodes that do not do enough due diligence in analyzing the dispute when these groups vote inconsistently with the majority.¹⁰⁰ So long as a majority of nodes in a dispute have monetary incentives to reach a fair outcome, incentives that are greater than the incentives of undermining the process in bad faith, the expectation is that a fair outcome would be reached. This is because nodes are financially rewarded for voting in a consistent manner with other nodes, while voting inconsistently with the majority results in financial loss. An underlying assumption is that arbitrators with some degree of knowledge in a

⁹⁶ Josh Stark, *Making Sense of Cryptoeconomics*, COINDESK (Sept. 13, 2021, 2:50 AM), <https://www.coindesk.com/making-sense-cryptoeconomics> [<https://perma.cc/UG67-2C92>] (Narrowly defined, cryptoeconomics is the use of incentives and cryptography to design systems, applications, and networks.).

⁹⁷ Leslie Lamport, Robert Shostak, & Marshall Pease, *The Byzantine Generals Problem*, ACM TRANSACTIONS PROGRAMMING LANGUAGES SYS. 382, 384 (1982), <http://pages.cs.wisc.edu/~bart/739/papers/byzantine.pdf> [<https://perma.cc/N6C2-TZZH>] (describing a framework for building consensus and reaching decisions, even when there are bad actors seeking to undermine the system's integrity).

⁹⁸ THOMAS C. SCHELLING, *THE STRATEGY OF CONFLICT* 5 (Harvard University Press, 1960), <http://elcena.com/iamapirate/schelling.pdf> [<https://perma.cc/V2BG-WQDT>].

⁹⁹ Human users typically have some degree of pseudonymity when using asymmetric cryptography. While there can only be one user, a user can have multiple nodes. Blockchain ODR platforms can require some sort of confirmation to ensure that a user is not using multiple nodes in resolving a dispute.

¹⁰⁰ See, e.g., Federico Ast et al., *Dispute Revolution: The Kleros Handbook of Decentralized Justice*, KLEROS 1, 54–55 (2020), <https://kleros.io/book.pdf> [<https://perma.cc/2UEP-TGC8>].

given area of law would self-select for those types of disputes, as expertise means a greater likelihood of voting with a majority of others with an understanding of the area of law. A blockchain's use of cryptoeconomics can also reduce the extent of the "garbage in, garbage out" conundrum seen with AI ODR, as nodes that are unable to distinguish useful from useless information are more likely to reach the wrong outcome and therefore experience financial loss.

i. Blockchain ODR Trade-Offs & Complications

Despite these benefits, the application of blockchains to dispute resolution comes with potential shortcomings. The emphasis that cryptoeconomics places on financial incentives can create problematic outcomes for certain types of disputes. When nodes are being compensated based on the value of the dispute, nodes may be financially incentivized to avoid low-value disputes or disputes that are time-consuming to resolve. Because of the incentives to vote with the majority, complex disputes—including those where individuals are unsure how other nodes would treat a case—may receive less attention due to fear of experiencing financial loss. That is, cases where the outcome is uncertain may be more likely to be overlooked in comparison to non-ambiguous outcomes. The cryptocurrency analogy to this is with miners¹⁰¹ on Ethereum, the largest general purpose blockchain. Those parties transacting on the Ethereum blockchain, who do not offer a high enough gas price to incentivize miners to verify a transaction, have long waits and may never have the transaction verified until the gas price is increased.¹⁰² The outcome of these conditions with Blockchain ODR is decreased access to justice, as some disputes may be crowded-out due to low monetary value, or because the disputes have expected outcomes that are hard to predict for arbitrators. Indeed, access to justice has historically been a challenge¹⁰³ for dispute resolution

¹⁰¹ Under the proof-of-work consensus mechanism, miners process new blocks of data filled with transactions that are subsequently added to the Ethereum blockchain.

¹⁰² See, e.g., Michael Garbade, *High Gas Fees Prevent Ethereum from Being Ethereum*, COINDESK (Sept. 14, 2021, 6:09 AM), <https://www.coindesk.com/tech/2020/10/14/high-gas-fees-prevent-ethereum-from-being-ethereum/> [<https://perma.cc/9K8J-JYS2>].

¹⁰³ See generally Russell Engler, *And Justice for All-Including the Unrepresented Poor: Revisiting the Roles of the Judges, Mediators, and Clerks*, 67 *FORDHAM L. REV.* 1987 (1999); see also Leonard Wills, *Access to Justice: Mitigating the Justice Gap*, AM. BAR ASS'N (Dec. 3, 2017), <https://www.americanbar.org/groups/litigation/committees/minority-trial-lawyer/practice/2017/access-to-justice-mitigating-justice-gap/> [<https://perma.cc/MJ4V-PEQA>].

systems, and Blockchain ODR can be seen as a tool to mitigate—without entirely curing—this phenomenon.

Blockchain ODR's use of cryptoeconomics to incentivize voting with the majority also raises the question of the value in having disagreement and dissent in a panel of adjudicators. In judicial decision-making, a dissent can provide some social value without holding any precedential value. Supreme Court Chief Justice Hughes stated that “[a] dissent in a court of last resort is an appeal to the brooding spirit of the law, to the intelligence of a future day, when a later decision may possibly correct the error into which the dissenting judge believes the court to have been betrayed.”¹⁰⁴ As such, a dissent can highlight values and considerations that the majority overlooked. Blockchain ODR's use of cryptoeconomics may diminish the willingness of arbitrators to go against the majority, even as doing so could be valuable for future arbitrators to understand the shortcomings of one panel's perspective. Justice Ruth Bader Ginsburg also classified dissents as valuable for their ability to “attract immediate public attention and . . . propel legislative change.”¹⁰⁵ For Blockchain ODR, an arbitrator may use a dissent as an opportunity to attract attention from a broader, relevant community about an important, or perhaps ambiguous, element that underlies a given dispute, even when the arbitrator knows they will be in the minority of arbitrators. With how cryptoeconomics is currently modeled, voting against the majority results in a monetary penalty. There are moments where voting against the majority can be an intentional act to subvert the process. There are also moments where voting with the majority and providing consistent decisions are valuable for the ODR platforms legitimacy.¹⁰⁶ Indeed, dissents can make a dispute resolution system “appear indecisive and quarrelsome,”¹⁰⁷ yet, although rare, there are important instances where a dissent can speak to a future panel of adjudicators or outline important considerations for the relevant community. The current model of Blockchain ODR diminishes the likelihood that arbitrators would opt for being in the minority and accept the financial costs of such an act, even though there may be social value in this form of self-sacrifice.

¹⁰⁴ Ruth Bader Ginsburg, *Remarks on Writing Separately*, 65 WASH. L. REV. 133, 144 (1990).

¹⁰⁵ Ruth Bader Ginsburg, *The Role of Dissenting Opinions*, 95 MINN. L. REV. 1, 6 (2010), <https://scholarship.law.umn.edu/cgi/viewcontent.cgi?article=1427&context=mlr> [<https://perma.cc/3UDR-6CDD>].

¹⁰⁶ *Id.* at 3 (“In civil-law systems . . . the disallowance of dissent [is] thought to foster the public's perception of the law as dependably stable and secure.”).

¹⁰⁷ *Id.* at 7.

An additional drawback is based on a system design consideration: permissionless blockchains typically use asymmetric cryptography in order to provide pseudonymity for nodes in the network.¹⁰⁸ In keeping with fitting the forum to the fuss,¹⁰⁹ this can be valuable for online transactions that already use a certain degree of pseudonymity, where users mask their true identity with an identity unique to the platform. The use case is clearest with smart contracts,¹¹⁰ because parties transacting with a smart contract already operate under the pseudonymous conditions of a blockchain. As a group of scholars have already recognized, “disputes regarding smart contracts are inevitable, and parties will need means for dealing with smart contract issues.”¹¹¹ As with e-commerce, litigation and traditional ADR will struggle to resolve disputes originating from smart contracts, given their cross-jurisdictional and pseudonymous nature.¹¹² What transacting parties using smart contracts can learn from e-commerce is that having protocols for managing and resolving disputes will be critical for wider engagement with this novel industry. Blockchain ODR has the added value of already operating on the blockchain system—the technology driving smart contracts—thus promoting greater efficiency in operability.

A current impediment to Blockchain ODR scaling further is a lack of interoperability between different blockchains and a need to enhance the ease of exchanging data on and off the blockchain.

¹⁰⁸ See, e.g., Symposium, *Hawk: The Blockchain Model of Cryptography and Privacy-Preserving Smart Contracts*, 2016 IEEE SYMP. SEC. & PRIV. 839 (2016), <https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7546538> [<https://perma.cc/7YSE-RHY7>] (describing the incorporation of zero-knowledge proof cryptography to enhance the privacy of smart contracts).

¹⁰⁹ GREENSTEIN, *supra* note 7.

¹¹⁰ See generally Nick Szabo, *Smart Contracts: Building Blocks for Digital Markets*, PHONETIC SCI., AMSTERDAM (1996) <http://www.truevaluemetrics.org/DBpdfs/BlockChain/Nick-Szabo-Smart-Contracts-Building-Blocks-for-Digital-Markets-1996-14591.pdf> [<https://perma.cc/C7ZY-8CZJ>] (Smart contracts are self-executing lines of code, capable of incorporating data that reside on a blockchain.); see also Vitalik Buterin, *Ethereum Whitepaper*, ETHEREUM (2013), <https://ethereum.org/en/whitepaper/> [<https://perma.cc/7MDF-649V>].

¹¹¹ SCHMITZ & RULE, *supra* note 22. At present, smart contracts have their own limitations, so it is unlikely for this system to be the default transacting method. See generally Stuart Levi & Alex Lipton, *An Introduction to Smart Contracts and Their Potential and Inherent Limitations*, HARV. L. SCHOOL ON CORP. GOVERNANCE (May 26, 2018), <https://corp.gov.law.harvard.edu/2018/05/26/an-introduction-to-smart-contracts-and-their-potential-and-inherent-limitations> [<https://perma.cc/KR74-7V8M>] (identifying limitations to smart contracts scaling, including non-technical parties negotiating or drafting smart contracts and incorporating data not on the blockchain).

¹¹² See Amy J. Schmitz & Colin Rule, *Online Dispute Resolution for Smart Contracts*, 2019 J. DISP. RESOL. 103, 105 (2019).

To illustrate the latter scenario, a family law dispute on a blockchain platform would face hurdles, as the parties would need to incorporate information that is not on the blockchain, such as marital assets. The parties' true identities would also be masked with public keys, complicating the accuracy for third-party nodes to verify their disputing parties' identities. Of note, digitizing an offline record (e.g., offline identities or products) onto a blockchain comes with increased verification costs, in determining the accuracy of the offline information.¹¹³ Additionally, when an ODR platform is on a different blockchain from the blockchain that contains data relevant to the dispute, there can be challenges in having interoperability between the different blockchains. To be sure, technology is still evolving to resolve operability challenges. Though limited, atomic swaps have the capabilities of transferring data between different blockchains.¹¹⁴ Oracles allow for data from the physical world to be stored on a blockchain, thus promoting blockchain interoperability.¹¹⁵ However, the use of oracles is still novel, with room for improvement,¹¹⁶ and has not reached scale within the blockchain industry. In seeking to address the interoperability challenge, blockchain companies like Chainlink and Kleros present a potential solution. Chainlink uses oracles to allow data from the physical world to be inserted into a blockchain, in addition to facilitating communication between blockchains.¹¹⁷ As a Blockchain ODR platform, Kleros has implied that its ability to serve as an oracle is more narrowly tailored, such as in serving as a price oracle, though the aspiration is for a more robust oracle capa-

¹¹³ See Christian Catalini & Joshua Gans, *Some Simple Economics of the Blockchain*, 63 NAT'L BUREAU ECON. RSCH. 80 (2019), <https://dl.acm.org/doi/fullHtml/10.1145/3359552> [<https://perma.cc/7P7D-4XC2>].

¹¹⁴ Though this has been limited to using smart contracts to swap cryptocurrencies, there is the potential for more robust exchanges of data between different blockchains. See Ron van der Meyden, *On the Specification and Verification of Atomic Swap Smart Contracts*, 2019 IEEE INT'L CONF. BLOCKCHAIN & CRYPTOCURRENCY 3 (2019), <https://ieeexplore.ieee.org/document/8751250> [<https://perma.cc/2L6P-CLUA>].

¹¹⁵ See, e.g., Lorenz Breidenbach et al., *Chainlink 2.0: Next Steps in the Evolution of Decentralized Oracle Networks* 1, 6 (Apr. 15, 2021), <https://research.chain.link/whitepaper-v2.pdf> [<https://perma.cc/82JK-PBH3>].

¹¹⁶ A group of researchers has also scrutinized the accuracy and trustworthiness of oracles, finding that there remains room for further improvements. Hamda Al-Breiki & Muhammad Habib Ur Rehman, *Trustworthy Blockchain Oracles: Review, Comparison, and Open Research Challenges*, 2019 IEEE ACCESS 1, 10 (Jan. 2020).

¹¹⁷ *Id.* at 6; see generally *Interoperability and Connectivity: Unlocking Smart Contracts 3.0*, CHAINLINK (Oct. 18, 2019), <https://blog.chain.link/interoperability-and-connectivity-unlocking-smart-contracts-3-0-2/> [<https://perma.cc/SER7-AAVT>].

bility.¹¹⁸ Until oracles are sufficiently trusted, without the accompanying concern that physical data will be corrupted during the process of digitizing data onto a blockchain, Blockchain ODR will, to some extent, be restricted to blockchain-based or digital disputes.

C. *Facilitative ODR*

Facilitative ODR presents noteworthy benefits and limitations when compared to the more transformative branch of AI and blockchain-based ODR. The National Center for State Courts (“NCSC”) has articulated this form of ODR as a “public-facing digital space for parties to resolve their dispute or case.”¹¹⁹ This use of ODR recognizes ICT as a tool through which parties and ADR practitioners can engage with each other to resolve a given dispute. Rather than the technology being actively involved in resolving the dispute—as with AI—or incorporating platform-specific incentives to promote efficient resolution—as with Blockchain ODR—Facilitative ODR merely brings parties together remotely in order to promote resolution. This branch was particularly critical during the pandemic, when health and safety concerns restricted the ability of parties to resolve disputes in-person. In contrast to the other two forms of ODR, Facilitative ODR is most closely connected with the court system, as court-annexed ODR has grown significantly in recent years and has relied on facilitative technology tools for this growth.¹²⁰ In 2014, there was only one court-implemented ODR system; by the end of 2019, though, there were a total of sixty-six court-implemented ODR systems dispersed throughout America, all of which fall within the Facilitative ODR branch.¹²¹ Indeed, the NCSC advertises Facilitative ODR use cases to courts while providing a series of models for courts to engage with the technology.¹²²

¹¹⁸ Federico Ast et al., *supra* note 100, at 147–49.

¹¹⁹ *Online Dispute Resolution*, NAT’L CTR. STATE CT., <https://www.ncsc.org/odr> [<https://perma.cc/TH68-9FLK>] (last visited May 10, 2021).

¹²⁰ See American Bar Association, *Online Dispute Resolution in the United States: Data Visualizations*, AM. BAR ASS’N CTR. INNOVATION 1 (Sept. 2020), <https://www.americanbar.org/content/dam/aba/administrative/center-for-innovation/odrvisualizationreport.pdf> [<https://perma.cc/YF9Z-N6YZ>].

¹²¹ *Id.* at 3.

¹²² *National Center for State Courts*, NAT’L CTR. STATE CT., <https://www.ncsc.org> [<https://perma.cc/F3YV-VS97>] (last visited Dec. 22, 2021).

Courts have a strong need for incorporating a digital forum to resolve disputes, as court facilities have geographic limitations. Additionally, with the use of court-annexed ADR, there has been a shortage of space within courts.¹²³ A digital forum also allows for enhanced confidentiality and responsiveness to disabled individuals, something that a physical environment struggles to handle.¹²⁴ Relatedly, a digital forum provides flexibility for parties to participate in a similar process to ADR while worrying less about logistics, such as commuting to the courthouse. This level of flexibility is well-illustrated with cross-jurisdictional disputes, where parties no longer face geographic constraints. When one party presents safety concerns to their counterpart, such as in domestic violence cases, Facilitative ODR may also provide a safer method for disputing parties to reach a resolution, as geographic separation and the ability to mute disruptive individuals can reduce threats or intimidation that can occur with in-person ADR proceedings. For decades, the use of ADR has been criticized when instances of power imbalances and safety concerns arise, which can undermine ADR's expectation of equal bargaining power and party autonomy.¹²⁵ Though far from being a complete cure, Facilitative ODR should be explored to maximize safety and comfort throughout the dispute resolution process.

One of the leading use cases of Facilitative ODR has been in family law, where parties seek collaborative processes to create agreements that will redefine their relationships into the future. ODR services have allowed spouses to reach agreements for child support, alimony, and parental time with children. Each of these factors could create hostilities between spouses, so ODR's value has come from incentivizing cooperation and allowing for more efficient agreements to be reached, as opposed to adverse litigation.¹²⁶ In recognizing these benefits, there has been a proliferation of private actors providing ODR services, often working in collaboration with courts. Matterhorn, for instance, operates

¹²³ See, e.g., Anne Endress Skove, *Making Room for Mediation: ADR Facilities in Court-houses*, NAT'L CTR. STATE CT. (2000), <https://cdm16501.contentdm.oclc.org/digital/collection/facilities/id/130> [<https://perma.cc/B5DV-QS9G>].

¹²⁴ *Id.*

¹²⁵ See, e.g., Sarah Krieger, *The Dangers of Mediation in Domestic Violence Cases*, 8 CARDOZO WOMEN'S L. J. 235, 245–47 (2002); see also Karla Fischer et al., *The Culture of Battering and the Role of Mediation in Domestic Violence Cases*, 46 SMU L. REV. 2117, 2165–70 (1993).

¹²⁶ Rebecca Aviel, *Family Law and the New Access to Justice*, 86 FORDHAM L. REV. 2279, 2282 (2018) (“A sophisticated system will help divorcing spouses see and avoid [the] costs [of hostilities], offering them the infrastructure to recognize the shared gains to be had from cooperation.”).

in sixteen states, with multiple different courts throughout the country. A compliance report with the Twentieth Circuit Court of Michigan found that Matterhorn had an annual increase of 22% in child support collected, 29% fewer hearings per month, and 35% fewer warrants issued per month.¹²⁷ Although this is only one company operating in one court, these results illustrate how increased flexibility provided through facilitative technology can lead to positive outcomes for disputants. Yet, intimate partner violence (“IPV”) poses a challenge for Facilitative ODR. Geographic separation can be beneficial for a harmed spouse, while also simultaneously limiting the ability for ADR practitioners to identify instances of coercion between the parties.¹²⁸ A randomized controlled study restricted to Washington, D.C., involving family law disputes where IPV was present, found that parents were equally satisfied with shuttle mediation and Facilitative ODR.¹²⁹ However, there was a statistically significant preference in favor of either shuttle mediation or Facilitative ODR, compared to litigation.¹³⁰ The use of Facilitative ODR in family law is also important as a tool to prevent future disputes from occurring. Within these platforms, spouses can agree to make changes to parental schedules for children in response to both unexpected and expected circumstances. Such changes can be made simply through a smartphone application or a web browser associated with the ODR platform, thus providing geographic and time flexibility for spouses—so long as adequate notice is provided to their counterparts. In the absence of this flexibility, sudden schedule changes can escalate hostilities between parents where court intervention becomes necessary.

Facilitative ODR also has an important use when mediating international disputes, as illustrated during the Sudanese Peace Talks, where video conferencing became the predominant method of communication due to the coronavirus pandemic.¹³¹ Technology

¹²⁷ *Family Court Results*, MATTERHORN, <https://getmatterhorn.com/get-results/family-court/> [<https://perma.cc/AD6U-LG7N>] (last visited Nov. 29, 2021).

¹²⁸ See generally *Online Dispute Resolution and Domestic Violence*, BATTERED WOMEN’S JUST. PROJECT (Sept. 3, 2020), <https://www.bwjp.org/news/online-dispute-mediation-tipsheet.html> [<https://perma.cc/GF37-H3H3>].

¹²⁹ Amy Holtzworth-Munroe et al., *Intimate Partner Violence (IPV) and Family Dispute Resolution: A Randomized Controlled Trial Comparing Shuttle Mediation, Videoconferencing Mediation, and Litigation*, 27 *PSYCH. PUB. POL’Y & L.* 45, 56 (2021).

¹³⁰ *Id.*

¹³¹ See Lisa K. Dicker & C. Danae Paterson, *COVID-19 and Conflicts: The Health of Peace Processes During a Pandemic*, 25 *HARV. NEGOT. L. REV.* 213, 236 (2020).

has an important role in promoting greater transparency.¹³² In the absence of Facilitative ODR, a large group of stakeholders and disputing parties converge on one physical location, typically requiring safety and security expenditures for involved parties. This leads to increased financial costs for peaceful negotiations.¹³³ This is especially harmful to those stakeholders and groups that have limited financial resources to send their representatives. Moreover, security concerns have already been used to delay important stakeholders from partaking in mediating peace processes.¹³⁴ With Facilitative ODR, the financial costs of promoting peace are greatly reduced, as the primary expense becomes ICT. As is often the case, using facilitative technologies to resolve international disputes provides greater geographic and temporal flexibility for various stakeholders to engage with one another. The leading consideration for broader use of Facilitative ODR in mediating international disputes is whether the monetary savings are greater than the non-monetary cost¹³⁵ of a loss of interpersonal communication.¹³⁶ As entrepreneurial stakeholders involved in transitional justice continue to experiment with Facilitative ODR, only time will tell how entrenched these practices will be in the future.¹³⁷

i. Facilitative ODR Trade-Offs & Complications

In assessing the risks of using this form of ODR, it is useful to consider what is being excluded. With Facilitative ODR, disputants are not exposed to the benefits of AI and blockchains as with the other branches of ODR. Facilitative ODR does not allow parties to benefit from the comparative advantage of AI as a fourth party in analyzing large swaths of data, or allow for the fourth party to be used as a conduit for crowdsourcing, as seen in blockchains. Rather, a third-party neutral will, at times, play a cen-

¹³² *Id.* at 244 (“Broadened access to the negotiating room may also hold negotiators accountable for representing their delegations accurately and effectively and provide a measure of inclusion to diverse stakeholders by allowing them to observe and be seen during the negotiations.”).

¹³³ See, e.g., Faten Ghosn & Joanna Jandali, *The Price of Prosecution: The Reality for Syrian Transitional Justice*, 8 PENN ST. J. L. & INT’L AFF. 1, 27–28 (2020).

¹³⁴ See Dicker & Paterson, *supra* note 131, at 243 (discussing how Yemeni opposition leader Ansar Allah refused to travel to Geneva for peace negotiations unless security guarantees for the flight were provided).

¹³⁵ *Id.* (discussing potential non-monetary tradeoffs with having Facilitative ODR as part of an international peace process).

¹³⁶ *Id.* at 243–44 (“Interpersonal dynamics should not be underestimated, and they can be more consciously developed by mediators when negotiators are engaged directly with one another in the same physical space.”).

¹³⁷ See *id.* at 239.

tral role in accurately analyzing shared information, as with ADR. In addition, Facilitative ODR excludes the crowdsourced nature of blockchains, thus allowing multiple third parties to provide input on what should be the ideal outcome. Instead, the fourth party is the technology platform facilitating communication between disputants and ADR practitioners. Because of Facilitative ODR's relatively reduced reliance on technology to promote efficiency, a resolution is likely to take a longer period of time. As a result, Facilitative ODR could be best situated for use with higher-value disputes, where quick outcomes are less critical. Facilitative ODR's capacity to promote flexible communications between parties also means that those disputes requiring extended interpersonal communication would derive much value from this process.

While Zoom, Skype, and similar online platforms play an important role during the pandemic, recent innovations in hologram technology raise the possibility for a more holistic technology to be incorporated into ODR systems. A common ADR critique of Facilitative ODR is that this form of ODR manages disputes that were previously handled exclusively in-person. As such, the trade-off is that valuable non-verbal communication would be unidentified in Facilitative ODR proceedings, while ADR practitioners would have greater recognition of this phenomenon in-person. In his seminal book, Albert Mehrabian developed what has become one of the leading frameworks on the importance of nonverbal communication through an equation: "Total feeling = 7% verbal feeling + 38% vocal feeling + 55% facial feeling."¹³⁸

As such, the tone with which words are communicated, non-verbal body cues accompanying the message, and the actual words expressed each play a role in understanding a message. Particularly relevant to ADR, Mehrabian posits that when the nonverbal communication expressed is inconsistent with the verbal expression, typically, the nonverbal communication will be persuasive.¹³⁹ Though nascent, incorporating hologram technology may serve to provide the complete breadth of communication that facilitative technologies, like Zoom, may not provide, while still preserving the benefits of Facilitative ODR through greater flexibility for dispu-

¹³⁸ ALBERT MEHRABIAN, *SILENT MESSAGES* 44 (Wadsworth Publishing, 1971).

¹³⁹ This can be seen with sarcasm, where nonverbal communication and the vocal tone determines how a listener should interpret the message more than the actual words expressed. Mehrabian uses the example of messaging based on dominance-submissiveness, where domineering nonverbal communication will hold sway, even when using submissive words. *Id.* at 45–46.

tants. While Google's Project Starline, Microsoft Mesh, and WeWork have been at the forefront of experimenting with hologram technology, it is easy to see a world where holograms become as vital as Zoom is with Facilitative ODR.¹⁴⁰

IV. DETERMINING THE CONTOURS OF ODR'S SOUL

In analyzing the soul of ODR, it is important to assess and identify the specific contours of ODR. ODR's orthodox definition has focused on the broad application of information and communication technology to prevent, manage, and resolve disputes.¹⁴¹ However, the pandemic's influence has blurred the lines between this orthodox conception of ODR and other dispute resolution systems, as will be discussed in Section VII. As a result, a new conception of ODR will be needed in the future—one that focuses on a dispute resolution mechanism with the **ability to resolve online-exclusive disputes**, while also incorporating ICT tools into the system design. Without reassessing ODR's contours, there may be inadequate distinctions between ODR and other dispute resolution systems, as the latter are increasingly incorporating ICT in the system design. As technology always evolves¹⁴² and the preferences of disputants on online platforms never stagnate, the scope of what ODR was needed for and capable of achieving have also drastically expanded, compared with ODR's origin.

A. ODR's Ability to Resolve Online-Exclusive Disputes

From the dawn of the Internet, there has been a need to resolve disputes in a manner consistent with how individuals use the Internet. The Internet facilitates cross-jurisdictional interactions that are conducted in a matter of seconds on a pseudonymous ba-

¹⁴⁰ See Ann-Marie Alcántara, *Tech Companies Want to Make Holograms Part of Routine Office Life*, WALL ST. J. (June 9, 2021, 6:00 AM), <https://www.wsj.com/articles/tech-companies-want-to-make-holograms-part-of-routine-office-life-11623232800> [https://perma.cc/VW9C-L76M].

¹⁴¹ See Katsh & Rule, *supra* note 32, at 329.

¹⁴² Indeed, following Moore's law, microprocessors underpinning the capabilities for technological innovation are ever-increasing. *Moore's Law*, MOORE'S LAW 1, <https://www.kth.se/social/upload/507d1d3af276540519000002/Moore's%20law.pdf> [https://perma.cc/9NDY-7DPK] (last visited Nov. 29, 2021).

sis.¹⁴³ In seeking to fit the forum to the fuss,¹⁴⁴ there are complications with using an in-person dispute resolution mechanism to resolve disputes that develop online. ODR can be seen as a response to the unique complexities presented by an online environment. The Internet is diffuse, and it lacks geographic constraints. ODR platforms have consequently required a comparably diffuse capability, allowing online parties to resolve their disputes regardless of their geographic location. As will be discussed in Section V, the variety of different ways individuals use the Internet requires flexibility in ethical standards, so that there can be a broader range of system designs to respond to the various ways individuals transact and communicate on the Internet. Additionally, the Internet allows users to interact on a pseudonym, either through IP addresses or fictitious monikers, which do not necessarily equate with their physical identity. For instance, Amazon and eBay, among the two largest global e-commerce platforms, allow transacting parties to present themselves using monikers.¹⁴⁵ Parties seeking to resolve their disputes online can substantially benefit from ODR platforms that allow for a comparable level of pseudonymity in their system design. In many online circumstances, a lack of pseudonymity would mean that disputing parties would be unable or uninterested in engaging with the ODR platform. This is seen most clearly with permissionless blockchains, where asymmetric cryptography¹⁴⁶ imposes a system design requirement for parties to be pseudonymous. Without a comparable pseudonymous feature, users could be less

¹⁴³ Though it may be easy to overlook just how revolutionary the Internet has been, these features of the Internet have been critical for promoting democratic movements—such as with the Arab Spring. The features are also critical in altering our sense of community, as this internationalizing technology allows for interest-based group formation that can be limited when relying on physical proximity.

¹⁴⁴ Frank Sander developed this concept to recognize that different types of disputes are best suited for different dispute resolution systems. The design and process of a given dispute resolution mechanism influences which type of dispute accesses a given mechanism. Frank E. A. Sander & Stephen B. Goldberg, *Fitting the Forum to the Fuss: A User-Friendly Guide to Selecting an ADR Procedure*, 10 NEGOT. J. 49 (1994).

¹⁴⁵ Social media platforms like Instagram and Reddit—among many others—allow users to use monikers. In the online gaming industry, users have a near total expectation of being pseudonymous. With permissionless blockchains, asymmetric cryptography imposes a system design requirement for parties to be pseudonymous.

¹⁴⁶ Asymmetric cryptography creates public and private alpha-numeric characters to enhance security for nodes in a system. See generally Ralph C. Merkle, *Protocols for Public Key Cryptosystems*, ELXS1 INT'L 122 (1980), <http://www.merkle.com/papers/Protocols.pdf> [<https://perma.cc/K95K-MJ8X>].

inclined¹⁴⁷ to engage with ODR platforms or experience challenges in synchronizing their identity with an ODR platform. This all suggests that ODR systems will increasingly need to have the capacity to resolve online-exclusive disputes in a geographically flexible manner and incorporate pseudonymity in the system design.

i. ODR Incorporating Technological Tools in the System Design

In seeking to resolve disputes online, ODR platforms benefit from sharing a certain amount of technological consistency with the platform from where the underlying dispute originates. This component of ODR is the category that has changed the most, as platforms from where disputes occur have evolved significantly since the Internet's emergence.¹⁴⁸ For instance, among the earliest use cases for ODR came in the early 2000s, with e-commerce.¹⁴⁹ Today, e-commerce has experienced exponential growth, reaching much of the world with access to the Internet while increasing the demand for ODR. Early thinkers and practitioners of ODR were comfortable conceiving ODR as merely ADR in an online format that used information communication technology.¹⁵⁰ Due to changes in how users interact online and because of recent technological developments, ODR has since grown beyond merely replicating ADR approaches in an online environment.¹⁵¹ This transformation has been important in creating technologically integrated ODR systems that could be more responsive to the preferences of disputants. Today, different technological tools, including advances in ICT, provide ODR practitioners with a wider array of options that can be used to resolve a broader breadth of disputes. Indeed, the use of more tools highlights the fact that ODR entrepreneurs are seeking differentiating technological features that at-

¹⁴⁷ There is also a feasibility consideration, as users on a permissionless blockchain would struggle to know the physical identity of a counterparty.

¹⁴⁸ See, e.g., Fareeha Ali & Jessica Young, *US Ecommerce Grows 32.4% in 2020*, DIGIT. COM. 360 (Jan. 29, 2021), <https://www.digitalcommerce360.com/article/us-ecommerce-sales/> [<https://perma.cc/X4YT-EXNF>]; see also Michelle Evans, *Global E-Commerce Market to Expand By \$1 Trillion By 2025*, FORBES (Mar. 25, 2021, 9:10 AM), <https://www.forbes.com/sites/michelleevans1/2021/03/25/global-e-commerce-market-to-expand-by-us1-trillion-by-2025/?sh=3d5aad596cc0> [<https://perma.cc/6RF8-45CY>].

¹⁴⁹ SCHMITZ & RULE, *supra* note 22, at 35.

¹⁵⁰ See, e.g., Ethan Katsh, *Online Dispute Resolution: Some Implications for the Emergence of Law in Cyberspace*, 21 INT'L REV. L. COMPUT. & TECH. 97, 99 (2007) (Early ODR efforts "copied offline models of mediation and arbitration and, as a result, were inevitably labor intensive processes.").

¹⁵¹ Indeed, ODR practitioners and scholars have recognized that "the goal of ODR is not simply to digitize inefficient offline processes." Katsh & Rule, *supra* note 32, at 330.

tract different types of disputes to their platforms. Additionally, ADR practitioners have become increasingly receptive to incorporating different tools in the dispute resolution process, both because of the ways technology simplifies their responsibilities and because of the increasing pressure from disputing parties.¹⁵²

Early in the Internet age, resolving disputes remotely was rare. During these early days, few disputes requiring a formal dispute resolution system¹⁵³ occurred on the Internet, and access to the Internet was not sufficiently distributed for ODR to reach scale. The NSF's ban on the Internet's use in commerce further limited the public's ability to interact with the technology, until the ban was eventually lifted in 1992.¹⁵⁴ Additionally, the general public and ADR professionals lacked a sufficient degree of comfort with different technological tools, stifling greater adoption of ODR. There were also concerns that a virtual environment would diminish the ability for parties to communicate with each other and that parties would be less content with a dispute resolution process that was situated online.¹⁵⁵ ADR practitioners would slowly incorporate more ICT tools, even as the underlying method of resolving disputes remained unchanged.¹⁵⁶ That is, ADR professionals maintained the same or analogous customary practices for resolving disputes, such as the technological-equivalent of opening statements and private caucusing. This has gradually changed over the years: Internet accessibility has grown exponentially, leading to the scalability of ODR and the creation of a plethora of different ODR platforms. Equally important, the needs and preferences of Internet users have quickly evolved to seek out ODR platforms that are comparably agile for the Internet age. This user demand has

¹⁵² For instance, eBay discovered that its ODR platform increased user loyalty. See SCHMITZ & RULE, *supra* note 22, at 37.

¹⁵³ As one scholar recognized, the Internet was invented in 1969 with few disputes for the next two decades, as early users were predominantly academics or members of the military. See ETHAN KATSH, *ODR: A LOOK AT HISTORY—A FEW THOUGHTS ABOUT THE PRESENT AND SOME SPECULATION ABOUT THE FUTURE*, in *ONLINE DISPUTE RESOLUTION: THEORY AND PRACTICE—A TREATISE ON TECHNOLOGY AND DISPUTE RESOLUTION* 21 (Mohamed S. Abdel Wahab, Ethan Katsh & Daniel Rainy eds., 2011).

¹⁵⁴ See Jay P. Kesan & Rajiv C. Shah, *Fool Us Once Shame on You—Fool Us Twice Shame on Us: What We Can Learn from the Privatizations of the Internet Backbone Network and the Domain Name System*, 79 WASH. UNIV. L. Q. 89, 113 (2001).

¹⁵⁵ See, e.g., David Allen Larson, *Technology Mediated Dispute Resolution (TMDR): Opportunities and Dangers*, 38 UNIV. TOL. L. REV. 213, 226 (2006).

¹⁵⁶ See, e.g., Katsh & Rule, *supra* note 32, at 330 (“[W]hen a new online technology is created for any process, the initial impulse is to create online mirror images of the ‘live’ or offline process.”).

incentivized considerable entrepreneurial innovation in online platforms and software capability, to support resolution of online disputes. For instance, the novel branch of Blockchain ODR circumvents approaches taken in ADR by de-prioritizing interest-based resolution¹⁵⁷ and eliminating the need for orthodox ADR tools, such as private caucusing. One scholar has recognized interest-based dispute resolution as an outgrowth of the early 1980s, where “general concerns with efficiency overshadowed communitarian efforts” seen in colonial America’s use of peer-based dispute resolution.¹⁵⁸ Rather, blockchain technology has allowed one branch of ODR to prioritize the perspective of a disputant’s peers that draws upon a communitarian ethos akin to ADR in colonial America yet situated in cyberspace.

As will be discussed in Section VII, the coronavirus pandemic has also served as a catalyst for Facilitative ODR, as ADR practitioners and parties in offline disputes have been required to operate in a remote environment that relied primarily on ICT.¹⁵⁹ While some ADR practitioners were historically doubtful of the role ODR could play in resolving disputes, many have since been converted, due to factors that promote efficiency and flexibility for involved parties.¹⁶⁰ The pandemic’s catalyst effect also extended to courts throughout the U.S.—including the Supreme Court—all of which were forced to adopt ICT in resolving disputes remotely.¹⁶¹ In short, what has become known as Facilitative ODR¹⁶² has had unprecedented adoption due to the pandemic.

¹⁵⁷ Interest-based resolution emphasizes identifying disputants’ interests and identifying options that can create value for the parties involved. *See, e.g.*, Mamo, *supra* note 29, at 1420 (addressing the interests of the parties and following a principled procedure to identify interests and design options for mutual gain, and to select among those options on the basis of objective criteria).

¹⁵⁸ *Id.* at 1403.

¹⁵⁹ *See, e.g.*, R. Thomas Dunn, *Virtual Mediations Are Zooming Forward . . . Jump on Board*, NAT’L L. REV. (Apr. 10, 2020), <https://www.natlawreview.com/article/virtual-mediations-are-zooming-forward-jump-board> [<https://perma.cc/NL9S-ALF8>].

¹⁶⁰ *See, e.g.*, Hon. Diane Welsh, *Why Virtual Mediation Is Here to Stay*, LEGAL INTELLIGENCER (Feb. 3, 2021, 11:15 AM), <https://www.law.com/thelegalintelligencer/2021/02/03/why-virtual-mediation-is-here-to-stay/?slreturn=20210424123722> [<https://perma.cc/7NU4-M8YT>] (discussing how virtual mediation affords greater participation, more civility, and more efficient negotiations).

¹⁶¹ *See, e.g.*, Amy Howe, *Courtroom Access: Faced with a Pandemic, the Supreme Court Pivots*, SCOTUSBLOG (Apr. 16, 2020, 2:58 PM), <https://www.scotusblog.com/2020/04/courtroom-access-faced-with-a-pandemic-the-supreme-court-pivots/> [<https://perma.cc/AVD8-SGQC>].

¹⁶² *See National Center for State Courts, supra* note 122.

V. THE UNIQUENESS OF THE SOUL: WHERE ETHICAL
CONFORMITY TO ORTHODOX DISPUTE RESOLUTION
CAN BE PROBLEMATIC

“[T]he time has come for us to realize that by defining ourselves as an alternative to judicial processes we have an almost infinite palette of resolution options from which to choose. Our position enables us to be endlessly inventive in experimenting with new approaches and creatively responding to the needs and expectations of our customers.”¹⁶³

—Colin Rule & Chittu Nagarajan, *Co-Founders of Modria.com*

Although ADR has served as a point of departure for conceptualizing ODR’s ethical commitments,¹⁶⁴ there are certain characteristics that make the soul of ODR entirely unique from ADR. Expecting uniformity in ethical commitments for a physical, as opposed to, digital environment would complicate the value and usability of different branches of ODR. Core tenets of ADR include confidentiality, impartiality, and third parties avoiding conflicts of interest.¹⁶⁵ These factors have been critical in promoting the effectiveness of ADR proceedings. For instance, confidentiality promotes candor and understanding of the totality of experiences present between mediating parties.¹⁶⁶ Although valuable within the context of in-person disputes, a variety of factors justify some amount of deviation from certain core ethical commitments of ADR. The need for deviation from historical ADR ethics is most pronounced when considering the evolving nature of online disputes, the increased opportunity for peer-to-peer online interactions, and ODR’s use of novel technologies. This all suggests that the use cases between ADR and ODR are diverging, leading to, or perhaps because of, ethical divergence.

¹⁶³ Colin Rule & Chittu Nagarajan, *Leveraging the Wisdom of Crowds: The eBay Community Court and the Future of Online Dispute Resolution*, ACRESOLUTION 7 (Winter 2010), <http://colinrule.com/writing/acr2010.pdf>. [<https://perma.cc/PJ4K-CBT2>].

¹⁶⁴ Cf. Leah Wing, *Ethical Principles for Online Dispute Resolution: A GPS Device for the Field*, 3 INT’L J. ON ONLINE DISP. RES. 12, 16 (arguing that the ethical foundation for ODR should be much broader than ADR since ODR has a broader use-case).

¹⁶⁵ See generally *Model Standards of Conduct for Mediators*, *supra* note 31; *The Code of Ethics for Arbitrators in Commercial Disputes*, *supra* note 31. The listed ethical tenets illustrate why there should be a flexible ethical framework based on the type of technology being used and user preferences. There should be constant vigilance for the extent future ethical frameworks adopt a flexible approach.

¹⁶⁶ See generally Lawrence R. Freedman & Michael L. Prigoff, *Confidentiality in Mediation: The Need for Protection*, 2 OHIO STATE J. DISP. RESOL. 37 (1986).

Currently, the International Council for Online Dispute Resolution (“ICODR”) has shared guiding ethical standards for ODR systems. These standards are “intended to provide a touchstone for best practices, rules, qualifications, and certification efforts” in ODR.¹⁶⁷ ICODR draws on ethical frameworks from ADR, primarily through expectations for confidentiality and impartiality. Absent from ICODR’s approach, however, is any mention of flexible ethical standards. Such flexibility will be vital for ODR to better respond to the needs and interests of disputants. Additionally, flexible ethical tenets that focus on context-specific circumstances will allow for a greater breadth of technological tools to be incorporated into ODR platforms.

A. *Challenges to Confidentiality in ODR*

Critical for a victorious outcome in the battle for the soul of ODR will be a recognition of the primacy of the needs and interests of disputants, so that untethering confidentiality from the system design, depending on the context, can be used to benefit these disputants. A common feature of ADR systems is confidentiality, which protects information disclosed during the proceedings. Confidentiality is critical, because if parties do not reach an agreement, they might be worried that any information shared will be used adversely against them in subsequent litigation.¹⁶⁸ Ombuds also illustrate the value of confidentiality in ADR, as individuals using an ombuds may fear repercussion in the relevant community for sharing this information in the absence of confidentiality.¹⁶⁹ However, such categorical commitment to confidentiality can prove damaging for an ODR platform.¹⁷⁰ Consider, for instance, that AI ODR

¹⁶⁷ *ICODR Standards*, INT’L COUNCIL ONLINE DISP. RESOL., <https://icodr.org/standards/> [https://perma.cc/3J75-6MTQ] (last visited Oct. 3, 2021).

¹⁶⁸ Freedman & Prigoff, *supra* note 166, at 44 (“Without confidentiality, the mediation process becomes a house of cards subject to complete disarray by a variety of potential disruptions.”).

¹⁶⁹ The primacy of confidentiality is especially strong for organizational ombuds. *See, e.g.*, Kendall D. Isaac, *The Organizational Ombudsman’s Quest for Privileged Communications*, 32 HOFSTRA LAB. & EMP. L. J. 31, 34 (2014) (Parties can “vent in a more informal manner and venue without having definitive action immediately taken relative to the concern.”).

¹⁷⁰ *See, e.g.*, KATSH, *supra* note 39, at 46–47 (Oxford Scholarship Online, 2017) (“Expanding access to justice through ODR involves . . . the shift from an emphasis on the value of confidentiality to an emphasis on collecting, using, and reusing data in order to prevent disputes.”); *see also* Orna Rabinovich-Einy & Ethan Katsh, *Digital Justice: Reshaping Boundaries in an Online Dispute Resolution Environment*, 1 INT’L J. ONLINE DISP. RESOL. 26 (2014) (“The decrease in pri-

requires the aggregation of large amounts of data for AI, in order to provide reliable support to the ADR practitioner. These platforms can use the data as part of a pattern recognition exercise, where comparable information from prior disputes can be used in assessing—as seen with family law ODR platforms—the language that should be interpreted as hostile, or in determining a fair outcome in a particular dispute. In using data and technology, ODR has the capability to spot trends and engage in pattern recognition, which can identify circumstances that could lead to a dispute. With this information, platforms can notify users to take action in order to prevent a given dispute from occurring.¹⁷¹ By limiting the amount of data AI can assess, confidentiality can undermine the accuracy and reliability of support AI provides, as generated outputs are using limited or incomplete inputs.¹⁷² Broad confidentiality would limit the effectiveness of AI—or worse, distort the algorithm’s analysis—so as to produce an unjust outcome. The considerable value of increasing access to large data sets and shifting away from stringent confidentiality expectations has also led to the U.S. government’s creation of a task force, through the National Artificial Intelligence Act of 2020,¹⁷³ to “coordinate ongoing artificial intelligence research, development, and demonstration activities,” in order to “lead the world in the development and use of trustworthy [AI] systems in the public and private sectors,” allowing for greater research into AI use-cases.¹⁷⁴ Officials have expressed interest in using anonymized census and medical data, while protecting privacy in order to promote the effectiveness of AI, signaling the balancing act many ODR platforms could mimic.¹⁷⁵ Even with Blockchain ODR platforms, third-party nodes have tremendous value in understanding whether a given user has previously been involved in a dispute and in understanding the

vacy due to documentation and record preservation can assist in quality control, dispute prevention and monitoring performance.”).

¹⁷¹ See Katsh & Rule, *supra* note 32, at 330 (“Most communications exchanged online are automatically recorded, thus leaving a ‘digital trail,’ which presents opportunities to collect and use data in novel ways.”).

¹⁷² See Hillary Sanders & Joshua Saxe, *Garbage In, Garbage Out: How Purportedly Great ML Models Can Be Screwed Up by Bad Data*, PROC. BLACKHAT (2017) (discussing how privacy can worsen the accuracy of AI).

¹⁷³ 15 U.S.C. § 9411 (2021).

¹⁷⁴ *Id.*

¹⁷⁵ See, e.g., Ryan Tracy, *U.S. Launches Task Force to Study Opening Government Data for AI Research*, WALL ST. J. (June 10, 2021, 7:36 PM), <https://www.wsj.com/articles/u-s-launches-task-force-to-open-government-data-for-ai-research-11623344400> [<https://perma.cc/6EPT-DMZS>].

substance of the dispute. As permissionless blockchains already operate under pseudonymous conditions, less historical information regarding disputing parties or how similar disputes in the past have been treated would prove detrimental to the process and outcome. This is not to say that a complete absence of confidentiality would be appropriate either. For instance, ODR platforms may not need to know the names of parties or other identifying information; however, the content of a dispute would be valuable for AI systems and blockchains seeking to identify trends and assessing how similar cases have previously been treated.

As discussed in Section II, ODR has a history of taking a bottom-up approach for system design considerations, where the needs and interests of stakeholders are prioritized. This is because ODR has been at the forefront of innovative practices, so stakeholder trust in the system is particularly important. Fostering greater trust, therefore, is one of ODR's principal priorities—not confidentiality for its own sake. As such, ODR platforms can benefit from using a less restrictive confidentiality standard if doing so would promote greater trust in, and effectiveness of, the platform. Rather than relying on surveys that may not be the most accurate representation of user preferences, reduced confidentiality allows ODR platforms to use aggregated data to identify user-based outcomes and potential disparities between groups. Considering how dispute resolution systems have struggled to address inequities between groups of disputants,¹⁷⁶ this information could be used in creative ways across different platforms to address the inequities that disputants face. Revealed preferences, and a focus on what people do rather than what they say in surveys, will play a critical role for increasing the effectiveness of ODR platforms.¹⁷⁷ Reduced confidentiality would allow for a robust use of digital footprints, to focus on actual, rather than stated, preferences.

The use of AI in medicine can inform how AI ODR considers confidentiality. Hospitals' access to large data sets offers the promise of helping doctors improve their responsiveness to patients' needs, similar to how AI with access to large data sets can help an

¹⁷⁶ See MATTHEW CLAIR, *PRIVILEGE AND PUNISHMENT: HOW RACE AND CLASS MATTER IN CRIMINAL COURT* 65–69 (Princeton University Press 2020) (describing how disadvantaged defendants can experience alienation from their court-appointed lawyers, leading to legal officials silencing, coercing, and punishing them in a manner that advantaged defendants do not experience).

¹⁷⁷ NASSIM NICHOLAS TALEB, *SKIN IN THE GAME: HIDDEN ASYMMETRIES IN DAILY LIFE* 231 (Random House 2018) (“[Y]ou will not have an idea about what people *really* think . . . merely by asking them—they themselves don't necessarily know.”).

ADR practitioner resolve disputes between parties. While raising privacy concerns, a recently created joint venture that includes the largest national hospital operators is seeking to use algorithms and large data sets from patients to improve healthcare outcomes, particularly for preventative healthcare treatment, akin to the hopes of big data providing preventative dispute resolution.¹⁷⁸ Yet, the use of AI in medicine raises significant privacy concerns over how patient data would be stored and used. Indeed, there is even concern over whether anonymized data can remain truly anonymous when hospitals collaborate with big technology companies.¹⁷⁹ This has important legal implications, as the Health Insurance Portability and Accountability Act (“HIPAA”) places restrictions on the extent that patient data can be shared.¹⁸⁰ Moreover, individual patients are unlikely to have the requisite knowledge and ability to ask questions in order to fully understand the subject of their consent. Given the complexities in ensuring that individual patients all have informed consent over how their data is used, one recommended approach has been to have a group-based approach, with ongoing consent from patients.¹⁸¹ When the data in question is de-anonymized, a committee composed of, and/or representing, patients would have to provide input.¹⁸² As such, AI ODR may benefit from a framework that still incorporates big data, while also having group-based authorization from disputants. Particularly for de-anonymized data, this framework would need to create a healthy equilibrium with effective AI while recognizing the primacy of user consent in how data is used.

Because ADR has had a strong influence on ODR, it is also important to note that there are increasing critiques of the inflexible adherence to confidentiality in certain ADR processes. For in-

¹⁷⁸ See Anna Wilde Mathews, *Major Hospitals Form Company to Capitalize on Their Troves of Health Data*, WALL ST. J. (Feb. 11, 2021, 9:00 AM), https://www.wsj.com/articles/major-hospitals-form-company-to-capitalize-on-their-troves-of-health-data-11613052000?mod=article_inline [<https://perma.cc/L2BK-XZEP>].

¹⁷⁹ See, e.g., Glenn Cohen & Michelle Mello, *Big Data, Big Tech, and Protecting Patient Privacy*, JAMA (2019) (discussing how anonymized health records shared by the University of Chicago could be de-anonymized when partnering with Google’s access to user geolocation and smartphone data).

¹⁸⁰ Truveta’s CEO, Terry Myerson, has argued that the company’s use of anonymized patient data satisfies a HIPAA safe harbor method. See Charlotte Schubert, *Seattle Startup Truveta Raises \$95M for Ambitious Vision to Aggregate Data Across Healthcare Systems*, GEEKWIRE (July 13, 2021, 5:00 AM), <https://www.geekwire.com/2021/seattle-startup-truveta-raises-95m-ambitious-vision-aggregate-data-across-healthcare-systems/> [<https://perma.cc/4UC8-DDBB>].

¹⁸¹ Cohen & Mello, *supra* note 179.

¹⁸² *Id.*

stance, mandatory arbitration in employment contracts often imposes confidentiality in a manner that restricts the self-determination of a party, too often negatively impacting those with fewer resources and/or reduced access to information. Though within the ADR nexus, mandatory arbitration has highlighted the tension between ADR's aspiration of autonomy and self-determination for disputants, with a dogged commitment to confidentiality. ODR need not become trapped in the quicksand of this tension and should instead identify ways that privacy-preserving approaches with reduced confidentiality—such as through the use of anonymized data-sharing—can be used to promote more effective technology-integrated dispute systems. Uncritical enforcement of mandatory arbitration has led to a legal regime that deprives classes of individuals of substantive rights and compromises access to justice for vulnerable groups.¹⁸³ It is this inflexible commitment to confidentiality that has led to the blossoming in legal academia of Critical Arbitration Theory¹⁸⁴ and public outcry¹⁸⁵ from civil society. ODR must be attentive to these movements and recognize the pitfalls of taking comparably inflexible approaches.

Underlying confidentiality considerations for ODR is whether individuals, especially digital natives,¹⁸⁶ place value in confidentiality and privacy. As a group of scholars recognized, the digital era is filled with a privacy paradox, where individuals' stated preferences emphasizing the value of privacy conflicts with their own actions.¹⁸⁷ The proliferation of cookies¹⁸⁸ and invasive social media platforms has also left many pondering whether the Internet era is one where

¹⁸³ See Cynthia Estlund, *The Black Hole of Mandatory Arbitration*, 96 N.C. L. REV. 679, 703 (2018) (discussing how mandatory arbitration “virtually amounts to an ex ante exculpatory clause, and an ex ante waiver of substantive rights that the law declares non-waivable.”).

¹⁸⁴ Jill I. Gross, *Arbitration Archetypes for Enhancing Access to Justice*, 88 FORDHAM L. REV. 2319, 2321 (2020).

¹⁸⁵ Stephanie Russell-Kraft, *Meet the Four Harvard Law Grads Taking on the Entire Legal System*, N.Y. TIMES (Feb. 12, 2021), <https://www.nytimes.com/2021/02/10/us/peoples-parity-project-founders.html> [<https://perma.cc/SX5H-P25F>].

¹⁸⁶ This term was popularized by Marc Prensky, in discussing how students who grew up with the Internet process information differently than preceding generations. Marc Prensky, *Digital Natives, Digital Immigrants*, 9 GIFTED 1, 1 (2001).

¹⁸⁷ Susan Athey et al., *The Digital Privacy Paradox: Small Money, Small Costs, Small Talk*, NAT'L BUREAU ECON. RSCH. 1 (June 2017), <https://www.nber.org/papers/w23488> [<https://perma.cc/6WJS-55MB>].

¹⁸⁸ Daniel Palmer, *Pop-Ups, Cookies, and Spam: Toward a Deeper Analysis of the Ethical Significance of Internet Marketing Practices*, 58 J. BUS. ETHICS 271, 273 (2005) (“Cookies are small files placed on a user's computer by a third party entity when that person is browsing web sites. [Cookies] record various information about the user that is later retrieved by the computer that placed them on the user's site.”).

users place less value on privacy. There should be a distinction between the Internet era—where privacy is based on pseudonymity—in comparison to the pre-Internet era—which emphasized physical control over personal information. While digital natives value pseudonymity, digital immigrants can extend the same notion of physical privacy to digital privacy in a manner inconsistent with digital natives.¹⁸⁹ Rather than viewing digital natives as uninterested in confidentiality and digital privacy, increased use of cookies¹⁹⁰ and invasive social media platforms suggests that digital natives are operating in a moment where privacy is difficult to achieve. This is consistent with Pew Research showing that, at least in America, more than 80% of adults believe they have little-to-no control over the data that either the private or public sector collects about them, while the vast majority of adults are concerned over how their digital footprint is being used.¹⁹¹ In short, there is a feeling of powerlessness. Despite this, there are a host of increasingly popular technology tools being used to combat privacy-diminishing technology, and digital natives are at the forefront of adopting these tools.¹⁹² As web browsers and search engines are at the forefront of privacy considerations in the digital era, it is especially noteworthy that these are the two industries being disrupted by privacy-focused companies.¹⁹³ In addition, research also suggests that small incentives from a third party can lead to groups with and without a stated privacy preference to act in a similarly care-free manner about privacy.¹⁹⁴ The same research also found

¹⁸⁹ Patricia Sanchez Abril, *A (My)Space of One's Own: On Privacy and Online Social Networks*, 6 NW. J. TECH. & INTELL. PROP. 73, 77 (2007) (contrasting competing notions of privacy between digital natives and digital immigrants).

¹⁹⁰ *But see* Janice C. Sipiior, Burke T. Ward, & Ruben A. Mendoza, *Online Privacy Concerns Associated with Cookies, Flash Cookies, and Web Beacons*, 10 J. INTERNET COM. 1, 3 (2011) (Finding that “39 percent of users may be deleting cookies monthly” and if anti-spyware software is included, “the cookie deletion rate might be as high as 58 percent of users.”).

¹⁹¹ Brooke Auxier et al., *Americans and Privacy: Concerned, Confused and Feeling Lack of Control Over Their Personal Information*, PEW RSCH. CTR. (Nov. 15, 2019), <https://www.pewresearch.org/internet/2019/11/15/americans-and-privacy-concerned-confused-and-feeling-lack-of-control-over-their-personal-information/> [<https://perma.cc/4KUH-XU2Q>].

¹⁹² *See, e.g.*, Peter Snyder & Brendan Eich, *Why Brave Disables FLoC*, BRAVE (Apr. 12, 2021), <https://brave.com/why-brave-disables-floc/> [<https://perma.cc/TZ4H-JEGV>]; *see also* Coral Murphy Marcos, *DuckDuckGo Search Engine Increased its Traffic by 62% in 2020 as Users Seek Privacy*, USA TODAY (Jan. 18, 2021, 2:09 PM), <https://www.usatoday.com/story/tech/2021/01/18/search-engine-duckduckgo-increases-traffic-google-competitor/4202556001/> [<https://perma.cc/QQW2-4BU8>].

¹⁹³ Snyder & Eich, *supra* note 192; *see also* Marcos, *supra* note 192.

¹⁹⁴ Athey et al., *supra* note 187, at 8–9 (discussing how the promise of pizza led to both groups sharing sensitive information).

that groups with and without a privacy preference acted in a similar care-free manner when encryption, a privacy-enhancing communication method, was slightly more complicated to use.¹⁹⁵ Both of these findings imply that having small incentives for individuals to act in a privacy-conscious manner, or simplifying the use of privacy enhancing tools, would lead to greater adoption. Indeed, the European Union's General Data Protection Regulation ("GDPR")¹⁹⁶ is a recognition that simplifying settings on devices to promote privacy would lead to increased user adoption in favor of privacy.¹⁹⁷

This signifies that ODR will have to grapple with confidentiality, yet not in the same sense as ADR has done for digital migrants within the context of physical disputes. Rather, effective ODR will need to balance incorporating data collected from users with anonymizing or pseudonymizing features. Blockchain ODR already incorporates asymmetric cryptography to promote pseudonymity, while AI ODR can, as previously mentioned, collect privacy-preserving data that would not undermine the accuracy of AI analysis. Moreover, although not presently used in Blockchain ODR,¹⁹⁸ the incorporation of zero-knowledge proof cryptography would allow a node on the platform to prove that certain information an ODR platform has access to is true or false, without revealing the substance of the information.¹⁹⁹ This has considerable privacy-enhancing implications, as secondary parties, if hacked, would not have sensitive information provided from the originator of the data. In e-commerce disputes, for instance, disputants would not need to disclose financial information or sensitive personal in-

¹⁹⁵ *Id.* at 14–15. This can also be seen with Apple's IDFA system, where allowing iOS users the ability to reduce apps from tracking activity was infrequently used when users had to go through a series of steps to activate the privacy enhancing tool. This is in contrast to early results of broad adoption, with reduced friction. *See, e.g.,* Alexandra Bannerman, *A History of IDFA—Apple's Privacy U-turn*, PERMUTIVE (Sept. 3, 2020), <https://permutive.com/2020/09/03/a-history-of-idfa-apples-privacy-u-turn/> [<https://perma.cc/S3Y2-KXYB>]; Samuel Axon, *96% of US Users Opt Out of App Tracking in iOS 14.5*, *Analytics Find*, ARS TECHNICA (May 7, 2021, 2:59 PM), <https://arstechnica.com/gadgets/2021/05/96-of-us-users-opt-out-of-app-tracking-in-ios-14-5-analytics-find/> [<https://perma.cc/5YQJ-8LHB>].

¹⁹⁶ 2016 O.J. (L 119) 679.

¹⁹⁷ Though there are exceptions, GDPR creates a presumption that companies need the consent of users before processing their data. *See, e.g.,* *Data Protection Under GDPR*, EUR. UNION (Mar. 26, 2021), https://europa.eu/youreurope/business/dealing-with-customers/data-protection/data-protection-gdpr/index_en.htm [<https://perma.cc/ZSJ5-TVQ4>].

¹⁹⁸ *See, e.g.,* Federico Ast et al., *supra* note 100, at 80 (discussing how zero-knowledge proof systems have not been incorporated in the platform, though there has been experimentation).

¹⁹⁹ *See generally* Shafi Goldwasser et al., *The Knowledge Complexity of Interactive Proof-Systems*, 18 SIAM J. ON COMPUTING 186, 186–208 (1989).

formation, such as street addresses, when showing that a product was correctly shipped.

B. *Challenges to Impartiality and Conflicts-of-Interest in ODR*

A second core ADR tenet that will need to be re-oriented for ODR is impartiality.²⁰⁰ Impartiality²⁰¹ is defined as “freedom from favoritism, bias, or prejudice.”²⁰² Different ODR platforms have benefited from some degree of partiality in the system design. For instance, eBay’s Community Court sought out eBay merchants to assess whether a party is at fault in a dispute, particularly for their partiality based on experiences as a merchant, since this category has preferences and biases that would benefit the dispute resolution process.²⁰³ With the incorporation of cryptoeconomics in blockchain-based ODR, nodes in a system are also not impartial, as financial incentives give them a direct stake in the outcome of a decision.²⁰⁴ Rather than partiality in ADR serving as a hindrance in reaching a fair outcome, some ODR platforms use partiality to motivate parties to reach a fair outcome. These ODR platforms recognize partiality as a means to reach a fair outcome, rather than as a flaw that should be suppressed.²⁰⁵

This marks a sharp, revolutionary deviation from traditional dispute resolution systems that actively avoid circumstances where decision-makers are not considered impartial. This is not to necessarily contest that the aspiration of impartiality in ADR has been a noble goal; instead, impartiality’s value depends on the context in which it is situated. There are dispute resolution systems where limited impartiality serves a beneficial role to promote equitable

²⁰⁰ Though this has been a bedrock principle of ADR, impartiality has come under scrutiny in an environment of power imbalances and bias between, and within, mediators and mediating parties. See Audrey J. Lee, *Implicit Bias in Mediation: Strategies for Mediators to Engage Constructively with “Incoming” Implicit Bias*, 25 HARV. NEGOT. L. REV. 167, 168 (2020) (reflecting on ways mediators can approach implicit biases affecting the mediation experience); see also Izumi, *supra* note 65, at 102.

²⁰¹ Impartiality has a rich history, valued in different cultures. See, e.g., LAO TZU, TAO TE CHING (1868) (“Knowing the constant gives perspective. This perspective is impartial. Impartiality is the highest nobility; the highest nobility is Divine.”).

²⁰² *Model Standards of Conduct for Mediators*, American Bar Association, *supra* note 31.

²⁰³ Rule & Nagarajan, *supra* note 163 (The platform benefited from having merchants participate in resolving disputes, as they were often stricter on other merchants in a dispute and because they understood their circumstances and obligations.).

²⁰⁴ See, e.g., Federico Ast et al., *supra* note 100, at 21.

²⁰⁵ See *id.* at 108.

outcomes and fairness in the process. As such, ADR's filtering process of removing those third parties that are deemed partial or incapable of being impartial does not extend to the same degree with ODR. There has also been a robust historical critique against imposing impartiality as a core tenet of ADR. One scholar identified ways that a mediator aspiring to be neutral actually creates a paradoxical dilemma, notably when a mediator states their neutral position while later inquiring into the disputant's experience in a manner that creates the illusion of an alliance between the mediator and disputant.²⁰⁶ More recent scholarship has shown that ADR practitioners express both explicit and implicit biases that significantly undermine the expectation for impartiality.²⁰⁷ This illustrates that impartiality may not be a practical expectation for many dispute systems, while having systems to promote partiality may serve benefits in ODR on a context-specific basis, so long as disputants are cognizant of the incentives employed.

ODR platforms seeking to untether from ADR's impartiality commitment should also consider what is sacrificed when operating within a context of strict impartiality. One such potential trade-off can be seen with ombuds. In seeking to be impartial, ombuds often sacrifice their ability to address systemic change within the organization. Addressing systemic change, by definition, requires being somewhat partial through a recognition that current power dynamics between different groups are no longer tenable. In focusing on individualized problems and weighing the interests and needs of both disputants equally, an ombuds risks the dangerous situation of merely facilitating the preservation of the status quo. However, impartiality is encoded within the ethical standards of an ombuds.²⁰⁸ This creates greater pressures on an ombuds to address disputes on a case-by-case basis, where the broader context within which an ombuds operates can be de-prioritized. Just as reduced impartiality can create beneficial incentives for ODR practitioners in certain contexts, as seen in Blockchain ODR, so too can reduced impartiality for ombuds in certain situations allow for the growth of a "*Systemic Ombuds*," capable of addressing systemic institutional challenges in an ethical manner.

Related to impartiality is avoidance of conflicts of interest, a principle that is fundamental to a range of dispute resolution sys-

²⁰⁶ Janet Rifkin et al., *Toward a New Discourse for Mediation: A Critique of Neutrality*, 9 MEDIATION Q. 151, 154 (Winter 1991).

²⁰⁷ See generally Izumi, *supra* note 65.

²⁰⁸ IOA Code of Ethics, *supra* note 31.

tems, including litigation, mediation, and beyond. The use of cryptoeconomics in Blockchain ODR calls for a re-adjustment from the traditional conflict-of-interest analysis in ADR. For mediators, a conflict of interest is defined as “involvement . . . with the subject matter of the dispute or from any relationship between a mediator and any mediation participant, whether past or present, personal or professional, that reasonably raises a question of a mediator’s impartiality.”²⁰⁹ In litigation, judges are required to recuse themselves when they have “a financial interest in the subject matter in controversy . . . or any other interest that could be substantially affected by the outcome of the proceeding.”²¹⁰ As seen with Operation Greylord,²¹¹ where seventeen judges were indicted under bribery charges, providing a judge with monetary incentives based on the outcome of a case can have unspeakably harmful consequences for parties subject to judicial decision-making.²¹² However, cryptoeconomics provides a sharp contrast to the concern of monetary incentives undermining the decision-making of an adjudicator. Cryptoeconomics, as a system design tool, combines the use of cryptography and monetary incentives to promote cooperation between nodes in the absence of trust, so that a conflict of interest does not undermine the ability for third-party nodes to reach a fair assessment. The value of this system exists so long as the individual incentive to reach a fair outcome is greater than the incentive to be influenced by the conflict of interest. Because Blockchain ODR is currently focused on low value disputes,²¹³ it is unlikely that the incentive to be influenced by the conflict of interest would be greater than the individual incentive to reach a fair outcome. Even for higher value disputes, the conflict-of-interest analysis should remain focused on whether the benefit of the conflict is greater than the benefit created from the cryptoeconomic

²⁰⁹ *Model Standards of Conduct for Mediators*, American Bar Association, *supra* note 31, at 4.

²¹⁰ 28 U.S.C. § 455(b)(4); *see also* *Tramonte v. Chrysler Corp.*, 136 F.3d 1025, 1029 (5th Cir. 1998) (“[I]t seems fairly obvious that where a judge . . . is a member of a class seeking monetary relief, § 455(b)(4) requires recusal because of the judge’s financial interest in the case.”).

²¹¹ *See generally* TERRENCE HACK & WAYNE KLATT, *OPERATION GREYLORD: THE TRUE STORY OF AN UNTRAINED UNDERCOVER AGENT AND AMERICA’S BIGGEST CORRUPTION BUST* (American Bar Association, 2015); *see also* Maurice Possley, *Archives: Operation Greylord: A Federal Probe of Court Corruption Sets the Standard for Future Investigations*, CHI. TRIB. (Jan. 19, 2017, 4:41 PM), <https://www.chicagotribune.com/nation-world/chi-chicagodays-greylord-story-story.html> [<https://perma.cc/LPT3-Z7TG>].

²¹² *See generally* Ian Ayres, *The Twin Faces of Judicial Corruption: Extortion and Bribery*, 74 DENV. UNIV. L. REV. 1231 (1997).

²¹³ *See* Federico Ast et al., *supra* note 100, at 139.

incentives; when the incentives from acting adversely on the conflict is greater, then, and only then, should a node be prevented from partaking in the dispute resolution. Similar to AI ODR, Blockchain ODR is focused on generating fast resolutions, so extended conflict-of-interest inquiries, especially for low-value disputes, would likely make the system less appealing for disputing parties.

ODR is still young enough to not have a fixed soul, as the ethical considerations are less fixed than other dispute resolution systems. In seeking to promote greater legitimacy, ODR has prioritized the experience of disputants through systems that are responsive to their needs and interests. As illustrated in this section, for an industry integrating a wide range of different technological tools, inflexible ethical principles can serve as an impediment to innovation and more effective ODR systems. Under limited conditions, there is also an open debate in the related ADR field about whether some ethical principles are practical or beneficial. With new technologies being integrated into ODR, promoting greater trust and effectiveness will increasingly come into conflict with certain antiquated ethical factors that do not, when fully scrutinized, favor disputant experiences. Flexible and fluid ethical considerations should play a greater role for ODR system designers, while continuing the historical prioritization on trust and convenience for disputants.²¹⁴

VI. THE SOUL IN ACTION: ODR'S ROLE IN PROMOTING TRUST AND ACCESS TO JUSTICE

Even as ODR can benefit from greater ethical flexibility with core dispute resolution tenets, there must be consideration for how ODR's implementation impacts the disputants using these systems. It is becoming increasingly apparent that those systems that insufficiently promote trust with core stakeholders or, worse, exclude stakeholders from participating in the process, are less likely to experience longevity. Though ODR remains youthful, its emerging and somewhat connected branches raise distinct considerations for stakeholder trust. The parties seeking out these systems also have different levels of confidence in allocating decision-making authority, regardless of the scope, to crowds, algorithms, and experts.

²¹⁴ Katsh, *supra* note 21, at 25 (“[T]he new challenge is finding tools that can deliver trust, convenience, and expertise for many different kinds of conflicts.”).

Moreover, in recognizing that disputants have varying interests and needs, these branches introduce a greater degree of optionality for resolving disputes. Despite this, ODR's increased reliance on the Internet and technology reasonably raises considerations about who is being excluded from the process. Creating a dichotomy between disputes that arise online or in-person can be valuable for the legal community's assessment of whether ODR promotes access to justice for a variety of disputes. Observing the soul in action—with all the related nuances—will be critical in assessing whether ODR's soul is compromised or whether it is a living, breathing instrument of change.

A. *Nuances in Trust Between the Three Branches*

Trust is critical to the soul of ODR. While all dispute resolution systems seek to promote trust with potential disputants, ODR has had to place a particularly significant priority on promoting trust since technological tools are novel and disputants may not have substantial exposure to such new systems. The standard definition of *trust* as “[something] in which confidence is placed” may seem straightforward. However, each of the branches of ODR works within a specific context and addresses different classes of disputants.²¹⁵ As such, there are variations in how *trust* is conceptualized. Despite these variations, no approach should be considered the “right” method for fostering trust. Rather, these differences are important for different classes of disputants and the preferences that they seek in a given platform.

Distrust about the centralization of power in the judicial system is not new. Indeed, the 1970s is particularly informative as a period where distrust of State actors increased and, simultaneously, ADR experimentation increased.²¹⁶ In the context of legal and societal history, this phenomenon came from the aftermath of the Civil Rights movement, where groups sought to both question judicial decision-making and re-envision a new relationship with State

²¹⁵ *Trust*, MERRIAM-WEBSTER, <https://www.merriam-webster.com/dictionary/trust> [https://perma.cc/ED42-ZY97] (last visited Nov. 28, 2021).

²¹⁶ As one scholar identified, the 1970s was a moment in American legal history with a growth of “institutional mechanisms to resolve individual disputes [through] alternatives to the direct application of state law.” Amy J. Cohen, *Dispute Systems Design, Neoliberalism, and the Problem of Scale*, 14 HARV. NEGOT. L. REV. 51, 53 (2009).

institutions.²¹⁷ Expressed societal distrust and critiques would be met with a severe State crackdown on communities championing change, well-illustrated through the rise of mass incarceration that targeted Black communities.²¹⁸ In building off societal distrust of legal institutions, the Critical Legal Studies movement would emerge in the 1970s and channel distrust towards the ability of contemporary jurisprudence to advance justice for non-elites. In recent years, illustrated through the Black Lives Matter movement, the killing of unarmed minorities by State actors has continued the thread of distrust towards the judiciary and other State actors.²¹⁹ There is also the consideration of *mistrust*: when expecting State actors to address systemic social issues, there is mistrust about whether government constraints will produce appropriate outcomes. This was seen in the aftermath of the 2008–2009 financial crisis, as both the Tea Party and Occupy Wall Street movements expressed mistrust in the ongoing governmental operations. Indeed, in the financial crisis’s aftermath, 81% of cases brought against ten of the largest U.S. banks resulted in individual employees not being identified or charged.²²⁰ Underlying this notion would be a disturbing trend at the Department of Justice, where prosecutors avoided bringing claims against high-ranking employees. This was driven by the fear of reducing their highly regarded conviction rate and recognition of the substantial resources it would take to successfully convict such well-resourced individuals.²²¹ ODR and ADR operate within this context of both historical and ongoing trust complications with State institutions.

Though each branch of ODR conceives of trust in a different manner, Blockchain ODR, in particular, has a close relationship

²¹⁷ See, e.g., Cass R. Sunstein, *What the Civil Rights Movement Was and Wasn't (With Notes on Martin Luther King, Jr. and Malcolm X)*, 1995 UNIV. ILL. L. REV. 191, 198 (1995) (“[T]he civil rights movement was hardly focussed (*sic*) on courts, and in fact the notion of ‘participatory democracy’ enjoyed a large-scale revival.”).

²¹⁸ See, e.g., MICHELLE ALEXANDER, *THE NEW JIM CROW* 22 (New Press, 2012).

²¹⁹ See, e.g., NPR/PBS *NewsHour/Marist Poll*, MARIST POLL (June 2020), http://maristpoll.marist.edu/wp-content/uploads/2020/06/NPR_PBS-NewsHour_Marist-Poll_USA-NOS-and-Tables_2006041039.pdf#page=3 [<https://perma.cc/8C5Z-L2QG>] (finding that roughly two-thirds of surveyed African Americans are either not confident or somewhat not confident that police would treat African Americans equally to Whites).

²²⁰ Jean Eaglesham & Anupreeta Das, *Wall Street Crime: 7 Years, 156 Cases and Few Convictions*, WALL ST. J. (May 27, 2016, 4:37 PM), <https://www.wsj.com/articles/wall-street-crime-7-years-156-cases-and-few-convictions-1464217378> [<https://perma.cc/79Z2-JFNL>].

²²¹ JESSE EISINGER, *THE CHICKENSHIT CLUB: WHY THE JUSTICE DEPARTMENT FAILS TO PROSECUTE EXECUTIVES 196–97* (2017) (discussing prosecutorial recognition of “big cases, big problems” leading to a preference for settlements).

with distrust of State actors, or at least the centralized decision-making that is typical of State institutions. Blockchain ODR has arisen out of a context where centralized intermediaries are viewed with deep distrust. Although this branch does not seek to resolve core disputes that the judiciary resolves, such as criminal cases, the context-influencing conceptions of trust is important as a motivating factor creating demand from various stakeholders. The related decentralized finance sub-industry of the blockchain field has focused on decreasing reliance on third parties in finance. Blockchain ODR has been significantly influenced by the Nakamoto Consensus, where parties in the blockchain system rely more on “cryptographic proof instead of trust.”²²² As such, many disputants seeking Blockchain ODR systems prefer the disintermediation of decision-making through, for instance, crowd-sourcing. The 2021 British lawsuit involving Cøbra, the pseudonymous creator of Bitcoin.org, is particularly illustrative. Craig Wright claimed to have created Bitcoin and sued Cøbra for copyright infringement, because Bitcoin.org previously published the Bitcoin whitepaper.²²³ Based solely off the fact that Cøbra was committed to preserving their pseudonymous identity and not appearing in court, the presiding judge issued a default judgment in Wright’s favor. Continuing the mantra of some in the Blockchain ODR industry, Cøbra would state:

All your fiat based assets are ultimately secured by the same legal system that today made it illegal for me to host the Bitcoin whitepaper because a notorious liar swore before a judge that he’s Satoshi. A system where “justice” depends on who’s got the bigger wallet. . . . Rules enforced through cryptography are far more superior than rules based on whoever can spend hundreds of thousands of dollars in court.²²⁴

The orthodox judicial system is not suited to handle cases involving pseudonymous identities, even as the growth of e-commerce and Internet communication has provided ample opportunities for individuals to transact and communicate safely with pseudonyms. Stakeholders involved in the blockchain indus-

²²² Nakamoto, *supra* note 86, at 1.

²²³ See generally Sebastian Sinclair, *UK Court Orders Bitcoin.org to Remove White Paper Following Craig Wright Lawsuit*, COINDESK (June 29, 2021, 3:10 AM), <https://www.coindesk.com/bitcoin-white-paper-craig-wright-cobra-copyright> [<https://perma.cc/DT5S-9ZPX>].

²²⁴ CobraBitcoin, TWITTER (June 28, 2021, 4:11 PM), https://twitter.com/CobraBitcoin/status/1409605494629613571?ref_src=twsrc%5Etfw%7Ctwcamp%5Etweetembed%7Ctwterm%5E1409605496080904195%7Ctwgr%5E%7Ctwcon%5Es2_&ref_url=https%3A%2F%2Fwww.coindesk.com%2Fbitcoin-white-paper-craig-wright-cobra-copyright [<https://perma.cc/7MXK-LX5M>].

try have deep distrust over procedural inequities embedded within traditional dispute systems. The implication of this has been a greater propensity to use the blockchain system as a tool to crowd-source decision-making, so that a single third party is not dispositive in the dispute resolution process. While many dispute resolution systems use a single central authority—for example, judges and mediators—a preference amongst many involved in blockchains has been for cryptographic proofs and crowdsourced adjudication. The absence of Blockchain ODR would be a denial of access to justice—as seen with Cøbra—for many stakeholders who place their trust in cryptography and the wisdom of the crowds.

Trust in AI ODR comes with unique considerations. Rather than relying on cryptographic proofs and crowdsourcing, AI ODR places a great deal of trust in the algorithms driving AI. ADR practitioners receiving support from AI and the disputants involved in the process are trusting the accuracy and reliability of this system. AI technologists are increasingly recognizing the role of AI governance practices that can better promote trust in this technology.²²⁵ As such, trust is being allocated to the programmers developing the AI and to the system designers, in the belief that they will implement systems that effectively balance AI's efficiency with an inclusive and accountable system. Yet, as the use of AI increases, especially in connection with dispute resolution, AI governance will need to consider the role of the programmers and system designers—particularly the ways that these stakeholders can act²²⁶ to promote greater trust in their actions. Without proper AI governance, AI can be disempowering to both disputants and ADR practitioners who have to abdicate some amount of decision-making, in the hopes that AI's capability to analyze large data sets will be accurate.

A question with AI ODR, as one experienced arbitrator has previously written, is whether the underlying algorithms result in “decision-making processes that will constrain and limit opportunities for human participation.”²²⁷ Algocracy, or governance by al-

²²⁵ See, e.g., Jessica Fjeld et al., *supra* note 63, at 2 (identifying eight key themes important to AI governance).

²²⁶ System designers can use whitepapers to describe their use of AI, in order to provide critical transparency and promote stakeholder trust.

²²⁷ Sophie Nappert, *Arbitration in the Age of Algocracy: Who Do You Trust?*, KLEROS (Nov. 11, 2019), <https://blog.kleros.io/sophie-nappert-kleros-arbitration-in-the-age-of-algocracy/> [<https://perma.cc/S7WG-36TS>] (quoting John Danaher, *The Threat of Algocracy: Reality, Resistance and Accommodation*, 29 PHIL. & TECH. 245 (2016)).

gorithms, has an important role to play where disputants have a sufficient level of trust in the underlying code.²²⁸ As Lessig aptly identified, code is “a tool of control . . . to the end of whatever sovereign does the coding,” and therefore can inspire or diminish the extent stakeholders trust a given AI ODR platform.²²⁹ A platform using open-source code, or sharing the code with potential disputants, can be critical for both increasing transparency and allowing for informed consent, in order to promote greater trust. Trust is inextricably linked to disputants’ perceptions of the process’s fairness, while fairness is linked to the extent a dispute system can foster either neutrality or consistency.²³⁰ What algocracy illustrates is that trust in dispute systems goes beyond the centrality of the third-party neutral, as seen with ADR, and also extends to the algorithms computer programmers create, and system designers implement, in an AI system.

Given the parallels between Facilitative ODR and traditional dispute resolution, much of the conceptions of trust are shared between the two systems. Trust is placed in the third party to use orthodox ADR approaches, in order to identify disputants’ interests in a way that can reduce tensions, reach a mutually beneficial agreement, and avoid adverse litigation. Moreover, disputing parties have some degree of trust that a third party’s biases will not adversely impact the process, a presupposition that has been under scrutiny in the ADR field.²³¹ Where Facilitative ODR deviates from traditional dispute resolution systems is through trust in the underlying technology. Disputants engage in Facilitative ODR based on trust that Internet usage during the process will be reliable and will not disrupt the process. Both distrust in one’s Internet speed and a lack of knowledge in operating the Internet, as will be discussed in Part B of this section, can serve as a significant impediment to access to justice. This is particularly concerning when there is no effective alternative to Facilitative ODR if the dispute arose in-person. Lastly, disputants and practitioners involved in the process also trust that the absence of non-verbal communication will not interfere with the resolution process.

²²⁸ See *id.*

²²⁹ LESSIG, *supra* note 10, at 114.

²³⁰ See, e.g., Noam Ebner & John Zeleznikow, *Fairness, Trust and Security in Online Dispute Resolution*, 36 *HAMLIN UNIV. J. PUB. L. & POL’Y* 143, 149–54 (2015) (discussing how insufficient trust and fairness will reduce adoption of ODR).

²³¹ See, e.g., Laura Athens, *Top Ten Cognitive Biases and Distortions in Mediation*, *MEDIATE.COM* (Mar. 2021), <https://www.mediate.com/articles/athens-cognitive-biases.cfm> [<https://perma.cc/D59Q-JEE3>] (discussing common biases impacting ADR practitioners).

B. *An Access to Justice Framework*

Access to justice has long been an issue for the judicial system, both domestically and internationally. The United Nations defines access to justice as “[t]he ability of people to seek and obtain a remedy through formal or informal institutions of justice.”²³² Access to justice has historically been focused on ensuring marginalized communities are not excluded from the process, as these communities have been the most vulnerable to exploitation by State and non-State actors. Far from being resolved through litigation, evidence suggests that access to justice for low-income communities is only worsening.²³³ Increased use of ADR is closely connected with a backlog of cases—leading to a justice deficit—making it more difficult for individuals to resolve disputes.²³⁴ Underlying both ADR and ODR is a recognition that justice can be advanced without using adversarial litigation and that there are disputes ill-suited for the confines of litigation. Without an alternative to litigation, there would be disputes that are overlooked, further accentuating the access to justice problem. Frank Sanders’ aspiration of “fitting the forum to the fuss” cannot be disentangled from access to justice: if dispute systems are not in place to address a variety of disputes, there will be disputants unable to obtain a remedy or have their voices heard. It is within this context that access to justice concerns for ODR should be analyzed.

As ODR has gained greater prominence, increased scrutiny has been placed on the field, to the extent it actually promotes access to justice. Critical to the use of ODR is access to the Internet, something that Barlow described as a tool where “all may enter without privilege or prejudice accorded by race, economic power, military force, or station of birth.”²³⁵ This highlights an aspiration

²³² UNITED NATIONS DEVELOPMENT PROGRAMME, PROGRAMMING FOR JUSTICE: ACCESS FOR ALL 1, 5 (2005), https://www.un.org/ruleoflaw/files/Justice_Guides_ProgrammingForJustice-AccessForAll.pdf [<https://perma.cc/P8RZ-XLDL>].

²³³ See, e.g., Myriam Gilles, *Class Warfare: The Disappearance of Low-Income Litigants from the Civil Docket*, 65 EMORY L. J. 1531, 1537 (2016) (discussing “near-impossible obstacles in the path to the courthouse for economically disadvantaged groups”).

²³⁴ Similar trends of using ADR to reduce case backlogs can be seen internationally. See, e.g., Justice Markandey Katju, *Backlog of Cases Crippling Judiciary*, TRIB. INDIA (May 22, 2019, 6:42 AM), <https://www.tribuneindia.com/news/archive/comment/backlog-of-cases-crippling-judiciary-776503> [<https://perma.cc/D8V4-L566>]; see also Jerusha Gichohi, *Judiciary Counts Gains of Court Annexed Mediation*, BUS. DAILY AFR. (June 1, 2021), <https://www.businessdailyafrica.com/bd/opinion-analysis/columnists/judiciary-counts-gains-of-court-annexed-mediation-3420850> [<https://perma.cc/6QB2-HT96>].

²³⁵ Barlow, *supra* note 11.

in the early period of the Internet, in that it was to serve as an equitable and accessible tool. There is less concern about where individuals are accessing the ODR platform, given the high ownership rates of computers.²³⁶ To understand the extent that ODR promotes or restricts access to justice, focus should be placed on what the threshold question is to judge the commitment to access to justice. To access the benefits of ODR, individuals must still be able to use, and understand how to, the technology associated with an ODR platform. The unshakeable fear is that by incorporating technology in the system design, demographics with limited access to the Internet or knowledge on how to use the Internet would be deprived of the benefits ODR presents.²³⁷ While the access to justice threshold question in litigation is typically whether individuals have access to effective legal representation, a tempting yet unsatisfactory threshold question for ODR is whether individuals have access to, and an understanding of, how to operate the technology that relies on the Internet. This is particularly relevant for older digital migrants, the urban poor, and rural communities. For instance, only 68% of baby boomers and 40% of the silent generation have a smartphone, an instrument many ODR platforms use.²³⁸ Meanwhile, although rural communities are narrowing the historical gap they have had with urban communities in having access to important technologies, the gap continues to be statistically significant: rural communities are 12% less likely to have access to home broadband and are 12% less likely to own a smartphone.²³⁹ There is also the question of the quality of Internet speed, as slow Internet connections reduce the ability of individuals to use ODR systems.²⁴⁰ Another Pew study noted that 24% of rural residents viewed Internet speed as a major problem, while another 34%

²³⁶ See, e.g., American Bar Association, *supra* note 120, at 11.

²³⁷ Amy J. Schmitz, *Measuring "Access to Justice" in the Rush to Digitize*, 88 FORDHAM L. REV. 2381, 2384 (2020).

²³⁸ Emily A. Vogels, *Millennials Stand Out for their Technology Use, But Older Generations Also Embrace Digital Life*, PEW RSCH. CTR. (Sept. 9, 2019), <https://www.pewresearch.org/fact-tank/2019/09/09/us-generations-technology-use/> [<https://perma.cc/88Z7-DDXF>].

²³⁹ Andrew Perrin, *Digital Gap Between Rural and Nonrural America Persists*, PEW RSCH. CTR. (May 31, 2019), <http://web.archive.org/web/20190613141154/https://www.pewresearch.org/fact-tank/2019/05/31/digital-gap-between-rural-and-nonrural-america-persists/> [<https://perma.cc/6L4P-C6L4>]; see also Andrew Perrin, *Digital Gap Between Rural and Nonrural America Persists*, PEW RSCH. CTR. (May 19, 2017), <https://medium.com/@pewresearch/digital-gap-between-rural-and-nonrural-america-persists-53bec5ebc6de> [<https://perma.cc/22Q4-NY4P>].

²⁴⁰ See, e.g., Harvey Skinner et al., *Quality of Internet Access: Barrier Behind Internet Use Statistics*, 57 SOC. SCI. & MED. 875 (2003) (describing how Internet quality has impacted how a sample group interacts with health information).

found this to be a minor problem.²⁴¹ Yet the threshold question focusing on access to the technology would be inadequate, because communities with limited access to the Internet are also unlikely to have an online-based dispute in the first place—as they are unlikely to be transacting or communicating over the Internet.

Distinct threshold questions for access to justice must be posed, depending on whether the dispute initially arose online or in-person. To have a dispute online, parties would already have requisite understanding of the Internet, while ODR managing in-person disputes raises the thorny question of whether the individuals have access to, and can operate, the Internet. Thus, the proper threshold question for in-person disputes is whether individuals have an effective alternative to ODR in managing their disputes, in the absence of knowledge and familiarity with the Internet. Meanwhile, for situations where the underlying dispute originated online—for instance with e-commerce—the threshold questions for access to justice should be the extent to which there are barriers to access the ODR platform and whether the platform allows for ease of operation. An effective alternative to ODR for digital disputes would be unnecessary, as the concern of access to the Internet has already been established. Moreover, digital disputes are often ill-suited for in-person resolution, given the tendency to be cross-jurisdictional, which often involves pseudonymous identification. E-commerce and smart contracts disputes, for instance, should have different criteria for analyzing access to justice concerns than family law disputes, because the latter type of dispute arises out of an in-person context.

So long as there is an effective alternative to ODR for in-person disputes, those willing to interact with ODR should have access to the benefits. ODR does not exist in a vacuum: in many situations, disputants have alternatives to participating in an ODR process. As such, the extent that there are effective alternatives to ODR should be a leading consideration when assessing access to justice issues in the industry. The benefits of ODR are inextricably tied to promoting access to justice for those with access to the technology, as seen with early pilot projects. Indeed, the collaboration between Tyler Technologies and Travis County in civil claims led to the County recognizing that “providing [ODR] is another way . . .

²⁴¹ Monica Anderson, *About a Quarter of Rural Americans Say Access to High-Speed Internet is a Major Problem*, PEW RSCH. CTR. (Sept. 10, 2018), <https://www.pewresearch.org/fact-tank/2018/09/10/about-a-quarter-of-rural-americans-say-access-to-high-speed-internet-is-a-major-problem/> [<https://perma.cc/B7LJ-N7B9>].

to help ensure all members of our community have access to a court system that will provide them fairness and justice.”²⁴² When Franklin County in Ohio implemented one of the first U.S.-based ODR platforms for small claims court—using Facilitative ODR—they found that 94% of surveyed users preferred ODR and 85% felt that they gained control in resolving their case.²⁴³ Most important to access to justice, 90% of users felt that their voices were respected through the process.²⁴⁴ Further illustrating the access to justice benefits of ODR, the Franklin County court recognized that parties using ODR have greater autonomy “to select their own process at their own convenience,” in contrast with the “strict schedules and procedural rules” seen in the court system.²⁴⁵ This would explain why there are more case dismissals favoring disputants than default judgments, which typically occur because a party did not follow procedural rules or the party failed to appear in court.²⁴⁶ An ODR pilot in Utah also saw benefits for access to justice: parties had greater variation in the time of day the ODR platform was accessed and greater variation in the geographic location that the platform was used, revealing increased flexibility for parties.²⁴⁷ Users also experienced faster resolutions to their cases as a result of the pilot, with settlements occurring at a three times faster rate than non-ODR alternatives.²⁴⁸ However, the Utah pilot did not result in a statistically significant change in outcomes, including with default judgments or settlements.²⁴⁹ Problematically, “more than one-third of related study participants did not understand the summons and affidavit information directing them to register on the ODR platform.”²⁵⁰ Moreover, participants “experienced difficulty entering the URL for the platform on their phones, and registering and logging onto the platform,” potentially

²⁴² *Travis County JP 2 First in the Country to Use Online Dispute Resolution Technology*, TRAVIS CNTY. TEX. (2018), <https://www.traviscountytx.gov/news/2018/1644-travis-county-jp-2-first-in-the-country-to-use-online-dispute-resolution-technology> [https://perma.cc/963V-MKLH].

²⁴³ Alex Sanchez & Paul Embley, *Access Empowers: How ODR Increased Participation and Positive Outcomes in Ohio*, NAT’L CTR. STATE CTS. 14, 17 (2020), https://www.ncsc.org/__data/assets/pdf_file/0019/42166/access_empowers_Sanchez-Embley.pdf [https://perma.cc/KQ5U-L49K].

²⁴⁴ *Id.*

²⁴⁵ *Id.* at 19.

²⁴⁶ *Id.* at 18.

²⁴⁷ Paula Hannaford-Agor et al., *Impact of the Utah Online Dispute Resolution (ODR) Pilot Program: Final Report*, NAT’L CTR. STATE CTS. 1, 2–4 (Dec. 10, 2020), https://www.ncsc.org/__data/assets/pdf_file/0025/57823/NCSC-UT-final-2020.pdf [https://perma.cc/4NV8-LMQ6].

²⁴⁸ *Id.* at 11.

²⁴⁹ *Id.* at 10.

²⁵⁰ *Id.*

leading to harmful dispositions for users.²⁵¹ This highlights that improperly-designed ODR platforms can increase the concerns relating to access to justice for users. Having an effective alternative to ODR also protects against the ODR risks, as disputants would not be exclusively beholden to the ODR process.

The ongoing e-commerce revolution can also help in contextualizing the access to justice threshold question for in-person and online-based disputes. The past two decades have produced an e-commerce revolution that has provided benefits to those with Internet access—and this phenomenon has especially been heightened during the pandemic. E-commerce users now have access to a broader breadth of consumer options, lower prices, and, for some, one-day delivery. The fact that communities exist without access to e-commerce does not mean that e-commerce should not be used, so long as there is an effective alternative for individuals to make purchases. One effective alternative for e-commerce would be the physical store. Although individuals are relying less on physical stores,²⁵² the presence of physical stores still allows for those with limited access to the Internet to transact. The same applies to ODR: access to justice would be threatened if, and only if, disputants did not have access to an effective alternative to ODR to manage in-person disputes. Indeed, ADR and ODR system designers have placed an emphasis on recognizing the needs and preferences of all stakeholders. The preference for parties to use ODR is merely a continuation of the broader preference individuals have in using smartphones and the Internet to manage the most intimate²⁵³ parts of their lives.

In family law, there has been a proliferation of private actors and courts seeking to implement ODR processes, as previously discussed in Section III(C). This builds on family law's transition towards promoting collaboration in managing family disputes, as opposed to the historical use of adversarial litigation.²⁵⁴ Prior to the latter half of the 20th century, spouses were prohibited from collaborating with one another while the innocent spouse standard allowed divorce to occur only under exceptional circumstances.²⁵⁵ This meant that access to dispute resolution systems was incredibly

²⁵¹ *Id.*

²⁵² See generally Ali & Young, *supra* note 148.

²⁵³ From increased use of dating apps to find love, or telehealth to save lives, smartphones and Internet use has migrated our lives more and more into cyberspace.

²⁵⁴ Aviel, *supra* note 126, at 2280.

²⁵⁵ *Id.*

limited and, even when narrow exceptions were satisfied, the psychological fears of adverse litigation meant that potential disputants would be less willing to resolve their disputes. When the innocent spouse standard was eventually abandoned, the continued use of litigation entrenched fears that parties could have about increasing hostilities, should they seek justice through courts.²⁵⁶ As with the aforementioned ODR pilot projects in small claims courts, having fewer barriers along with greater disputant comfort in engaging with dispute resolution systems has proven important for promoting access to justice in family law disputes. Indeed, the use of ODR in family law is inseparable from broader reforms in family court “[in] design[ing] systems and processes that do not exacerbate family conflict but do not ignore it, either.”²⁵⁷ Thus, so long as parties continue to have an effective alternative to ODR, these new technology-integrated systems for in-person disputes promote access to justice, primarily by reducing barriers and allowing for a system that better suits the preferences of disputants.

ODR’s existence for digital disputes is critical because, in ODR’s absence, many of these disputes would not be resolved. This is well illustrated with the Cøbra dispute in the UK, where a defendant was forced to take a default judgment because the individual did not want to sacrifice their pseudonymous identity (as discussed in Section VI[A]). As such, for digital disputes, the key questions for assessing ODR’s ability to promote access to justice is whether there are barriers to access the ODR platform and whether users can easily operate the platform. The Internet and e-commerce have contributed to the rise of cross-jurisdictional, low-value disputes. Individuals involved in digital disputes, where transactions and communication happen quickly, would be less willing to engage with slow judicial proceedings. Both courts and ADR systems would also be unwilling or incapable of dealing with the expectations of pseudonymous identification that is seen in cyberspace. The reality is that ODR serves an indispensable role in promoting access to justice for digital disputes. However, poorly designed systems can prevent disputants from having their voices heard and resolving their disputes. As seen with the Utah ODR pilot program, problems with inputting URLs and accessing the platform led to harmful case rulings.²⁵⁸ The aggregate of these disputes reveals how vital ODR’s existence is for access to justice.

²⁵⁶ *Id.* at 2281.

²⁵⁷ *Id.* at 2282.

²⁵⁸ See Hannaford-Agor et al., *supra* note 247, at 10.

In ODR's absence, parties would have less trust in using e-commerce, given the challenges in resolving these disputes within in-person dispute systems.²⁵⁹

ODR system designers for digital disputes should be preoccupied with ensuring that users can easily operate the platform, especially when considering that there is likely to be no effective in-person alternative for managing these digital disputes. Regardless of whether ODR is addressing in-person or online exclusive disputes, a poorly designed platform that overlooks the needs of important stakeholders serves as an impediment to access to justice. A well-designed system that considers the needs and interests of disputants will prove beneficial for access to justice. Yet, the pandemic has—perhaps more than at any other moment in ODR's history—shown how critical these ODR processes are for access to justice when health and safety concerns are present with in-person interactions. The pandemic era may also broadly influence expectations the legal industry's next generation has for technology and dispute resolution. Rather than raising barriers, ODR can have an important role in ensuring that the courthouse doors, whether physical or digital, are more open to a broader group of disputants.

VII. TECTONIC SHIFTS: THE PANDEMIC'S EFFECT IN INCREASING ODR ADOPTION

“This pandemic was not the disruption any of us wanted, but it might be the disruption we needed to transform the judiciary into a more accessible, transparent, efficient and customer-friendly branch of government.”²⁶⁰

—*The Honorable Bridget Mary McCormack, Michigan Supreme Court Chief Justice*

The pandemic has resulted in tectonic plates shifting in the dispute resolution field, as in-person interactions have been significantly restricted, thus increasing the urgency to consider ODR

²⁵⁹ SCHMITZ & RULE, *supra* note 22, at 97 (“Large internet intermediaries, like online marketplaces (eBay), large merchants (Amazon) and payment processors (PayPal), realized very early on that the consumer trust problem was creating friction on the internet and that solving it could provide a valuable market advantage.”).

²⁶⁰ See Justin Hicks, *Technology Brought ‘Much-Needed Change’ to Judicial System, Michigan Supreme Court Chief Justice Tells Congress*, MLive (June 25, 2020, 2:33 PM) <https://www.mlive.com/public-interest/2020/06/technology-brought-much-needed-change-to-judicial-system-michigan-supreme-court-chief-justice-tells-congress.html> [<https://perma.cc/R8FP-JP8U>].

ethics. As a result of the lockdown measures taken shortly after the start of the pandemic, the Supreme Court closed to the public on March 12, 2020,²⁶¹ and within a few days, the Court postponed a series of upcoming hearings.²⁶² By March 19, 2020, California became the first state to issue a stay-at-home order for all non-essential activities, starting a trend²⁶³ that would extend throughout much of the country.²⁶⁴ The judiciary and ADR practitioners would face the dilemma of either indefinitely postponing dispute resolution processes or increasing their adoption of ODR processes. The ensuing months would be a seismic shift in how disputes were managed. The Supreme Court would soon adopt Facilitative ODR tools and stream a live audio feed of oral arguments, an unprecedented level of transparency provided to the general public.²⁶⁵

The pandemic has created blurred lines between what is considered an ODR and a non-ODR system. These blurred lines have validated the arguments that early ODR professionals posited, that technology could be used to effectively respond to the needs and interests of disputants and various stakeholders. With the level of convenience these technological tools provide, it is increasingly difficult to imagine a reversion to the pre-pandemic era. All dispute systems operate within a particular context, and the inescapable reality has been that technology has an important role to play in managing and resolving disputes. The value of ODR in streamlining processes will be particularly valuable as a result of the rise of case backlogs brought on by the pandemic, which has potentially deprived a substantial number of people of access to justice. As mentioned in Section II, case backlogs have played an important role in causing courts and disputants to seek non-judicial processes

²⁶¹ See Amy Howe, *Court to Close to Public in Pandemic*, SCOTUSBLOG (Mar. 12, 2020, 3:40 PM), <https://www.scotusblog.com/2020/03/court-to-close-to-public-in-pandemic/> [<https://perma.cc/8H4U-BMSW>].

²⁶² Press Release, For Immediate Release, Sup. Ct. U.S. (Mar. 16, 2020), https://www.supremecourt.gov/publicinfo/press/pressreleases/pr_03-16-20 [<https://perma.cc/XE6F-AUS7>].

²⁶³ There were 42 states and territories that issued stay-at-home orders. See Amanda Moreland et al., *Timing of State and Territorial COVID-19 Stay-at-Home Orders and Changes in Population Movement—United States, March 1–May 31, 2020*, CTR. DISEASE CONTROL & PREVENTION (Sept. 4, 2020), <https://www.cdc.gov/mmwr/volumes/69/wr/mm6935a2.htm> [<https://perma.cc/56UR-6PSQ>].

²⁶⁴ Gavin Newsom, *Executive Order N-33-20*, EXEC. DEP'T STATE CAL. (Mar. 19, 2020), <https://www.gov.ca.gov/wp-content/uploads/2020/03/3.19.20-attested-EO-N-33-20-COVID-19-HEALTH-ORDER.pdf> [<https://perma.cc/SE2Z-Y46Q>].

²⁶⁵ Press Release, For Immediate Release, Sup. Ct. U.S. (Apr. 13, 2020), https://www.supremecourt.gov/publicinfo/press/pressreleases/pr_04-13-20 [<https://perma.cc/K5KE-SKG9>].

to resolve disputes.²⁶⁶ While the pandemic era promoted ODR out of necessity to protect health and safety, the next moment of ODR's evolution may be to increase the efficiency of the judicial system—even as health and safety concerns recede.

In preparing for a post-pandemic era, housing disputes may be the legal area most ripe for ODR's intervention. Section 4024 of the Coronavirus Aid, Relief, and Economic Security Act ("CARES Act")²⁶⁷ placed a temporary moratorium on evictions, and many jurisdictions extended additional tenant protections. However, legitimate concerns²⁶⁸ remain about what will happen after these moratoriums are lifted, particularly for the most vulnerable. As of April 2021, there were nearly six million renters nationwide who missed rent payments.²⁶⁹ More troubling is the geographical disparities in late rent payments: Alabama has roughly 30% and New Jersey has 20% of renters owing rent, compared with Utah, which only has 5% of renters owing rent.²⁷⁰ Large cities have a disturbingly high percentage of renters with missed rent: Atlanta is at 24% of renters with missed rent payments, while San Francisco's figure stands at 19%.²⁷¹ Will all of these jurisdictions rely on pre-pandemic processes for managing an eviction crisis? Access to justice and equity should be a concern if these jurisdictions were to rely exclusively on pre-pandemic processes: From the surveyed population, African-Americans, Asians, and Latinx renters have been two times more likely to be behind on rent, when compared with their White counterparts.²⁷² In recognizing that maintaining the pre-pandemic posture is untenable, the Illinois Supreme Court issued a directive to promote "alternative dispute resolution [in] eviction cases, including but not limited to mediation and online dispute resolution."²⁷³ So long as an effective alterna-

²⁶⁶ Sander, *supra* note 33, 111–13.

²⁶⁷ Coronavirus Aid, Relief, and Economic Security Act, Pub. L. No. 116–136, § 4024, 134 Stat. 281 (2020).

²⁶⁸ See, e.g., Ken Sweet & Michael Casey, *Millions Fear Eviction as US Housing Crisis Worsens*, ASSOC. PRESS (June 16, 2021), <https://apnews.com/article/race-and-ethnicity-health-coronavirus-pandemic-lifestyle-business-cdce22f5ae976032e9e6fa89831c0a93> [<https://perma.cc/G8XK-NQBW>].

²⁶⁹ Sarah Treuhaft et al., *Rent Debt in America: Stabilizing Renters is Key to Equitable Recovery*, NAT'L EQUITY ATLAS (May 25, 2021), <https://web.archive.org/web/20210626090616/https://nationalequityatlas.org/rent-debt-in-america>.

²⁷⁰ *Id.*

²⁷¹ *Id.*

²⁷² *Id.*

²⁷³ *M.R. 30370 - In re: Illinois Courts Response to COVID-19 Emergency/ Eviction Early Resolution Programs*, ILL. SUP. CT. (Feb. 23, 2021), <https://ilcourtsaudio.blob.core.windows.net/an->

tive to these ODR procedures is provided, the streamlined process for those who self-select into ODR processes may result in greater stakeholder demand for ODR into the future.

The post-pandemic era will also raise questions about what should be considered ODR for the future. If, in fact, the pandemic's tectonic shifts are *permanent*, there will be a need to reassess the contours of precisely what is considered ODR and what, specifically, makes ODR unique from other dispute systems. If judges are using Facilitative ODR to manage disputes, then what makes ODR distinct from litigation? Recall that ODR is the use of information communication technology in resolving, managing, and preventing disputes. If a significant percentage of ADR practitioners adopt Facilitative ODR, to the extent that this is ADR's new norm, then what, specifically, makes ADR distinct from ODR? If the blurred lines between ODR and other dispute resolution systems were to become entrenched permanently, then paradoxically, ODR would revert to its origin moments, where ODR was merely "an online mirror image of the . . . offline process."²⁷⁴ Yet, ADR subsuming its younger sibling, ODR, would be especially damaging when considering the need for greater flexibility in ODR's ethical tenets as discussed in Section V. Facilitative ODR is most likely to have the most integration with traditional dispute systems, as the gap between facilitative technologies and in-person communication is slim, relative to the other branches of ODR.

The Hangzhou Internet Court in China is an exception, which supports the rule that AI ODR and Blockchain ODR are more likely to be siloed from other dispute systems, considering that there are few comparable examples internationally. Established in August 2017, the Court's jurisdiction focuses mostly on online-exclusive disputes, including disputes with copyright infringement, domain names, and e-commerce.²⁷⁵ By September 2019, the Court accepted over 14,000 disputes, resolving 60% with an average resolution time period of 28 minutes, thus highlighting the efficiencies in integrating more technology within dispute systems.²⁷⁶ Using cryptographic hash functions, online evidence stored on the Court's blockchain has increased security and cannot be manipu-

tiles-resources/resources/c3b0acd5-1ebe-4d59-af7f-079f43814e8c/022321-2.pdf [https://perma.cc/K636-WU7S].

²⁷⁴ Katsh & Rule, *supra* note 32, at 330 (citing ONLINE DISPUTE RESOLUTION: THEORY AND PRACTICE 260 (Ethan Katsh et al. eds., 2012)).

²⁷⁵ See Huang-Chih Sung, *Can Online Courts Promote Access to Justice? A Case Study of the Internet Courts in China*, 39 COMPUT. L. & SEC. REV. 1, 6 (2020).

²⁷⁶ *Id.*

lated, as the evidence's corresponding hash function can be tracked into the future to promote evidentiary integrity. If the stored evidence were to be manipulated, the evidence would have a distinct hash function and would signal that the evidence has been manipulated. As these are online-exclusive disputes, and there has been a proliferation of ransomware attacks corrupting data during the pandemic,²⁷⁷ the Hangzhou Court has aspired to provide a heightened level of data security, compared with non-blockchain court systems. It is possible, yet perhaps improbable, that courts in other jurisdictions will experiment with similar Blockchain ODR tools in their system design, in order to promote evidentiary security. This would likely depend on the extent that courts continue using Facilitative ODR tools, because more digital data is used when technology facilitates interact between parties. The pandemic has overlapped with, or perhaps been the cause of,²⁷⁸ increased ransomware attacks, so more jurisdictions may benefit from greater data security initiatives—as seen with the Hangzhou Court.

The pandemic has also seen an unprecedented growth of e-commerce, one of the leading historical use cases for ODR. As people avoided in-person transactions due to health and safety considerations, e-commerce sales from the first quarter of 2021 increased 39%, when compared to a year earlier.²⁷⁹ In China, the pandemic has contributed to increased demand for live-streaming products in e-commerce transactions, perhaps reducing the level of uncertainty that buyers have when transacting with merchants.²⁸⁰ Given the close connection between ODR and e-commerce, greater reliance on e-commerce will promote the need for more robust ODR processes to manage related disputes. Yet, there remains the question of whether transacting parties in a post-pandemic world will maintain their interest in online exclusive interactions, once health and safety concerns recede. A potential

²⁷⁷ In 2020, ransomware attacks increased by 150%, compared to the prior year. See Brenda R. Sharton, *Ransomware Attacks Are Spiking. Is Your Company Prepared?*, HARV. BUS. REV. (May 20, 2021), <https://hbr.org/2021/05/ransomware-attacks-are-spiking-is-your-company-prepared> [<https://perma.cc/S5YA-32S9>].

²⁷⁸ The pandemic has increased reliance on digital interactions, introducing more ways for individuals to be financially exploited.

²⁷⁹ *Quarterly Retail E-Commerce Sales 3rd Quarter 2021*, U.S. CENSUS BUREAU NEWS 2 (Nov. 18, 2021, 10:00 AM), https://www.census.gov/retail/mrts/www/data/pdf/ec_current.pdf [<https://perma.cc/QY5S-NL3Z>].

²⁸⁰ See Michelle Greenwald, *Live Streaming E-Commerce is the Rage in China. Is the U.S. Next?*, FORBES (Dec. 10, 2020, 8:49 AM), <https://www.forbes.com/sites/michellegreenwald/2020/12/10/live-streaming-e-commerce-is-the-rage-in-china-is-the-us-next/> [<https://perma.cc/UBD9-7MUE>].

heuristic is whether the work-from-home experience will be sustained, as this was among the pandemic's leading transformation towards an online existence. A current trend in the labor market has been that employers who do not provide work-from-home flexibility are seeing higher rates of employee resignations,²⁸¹ while credentialed employees are seeking out those employers providing work-from-home options.²⁸² While future data will provide more clarity, the trend currently is a preference for online interactions. If this preference were to become more entrenched over the long term, ODR might see sustained growth—even as health and safety concerns recede.

The pandemic may very well prove to be the catalyst that was needed for a wider range of stakeholders to understand the importance and value of ODR systems. In the absence of ODR, there would have been considerable structural challenges in the dispute resolution process. The innovations that led to the Internet and ODR's creation have proved instrumental throughout the pandemic. However, only through the passage of time will we have greater clarity on whether the seismic shifts were merely transitory or rather a catalyst for a structural change in the relationship between technology and dispute resolution systems.

VIII. CONCLUSION

Online dispute resolution now finds itself in the midst of an impending battle for its soul, one that will have ripple effects into the entire dispute resolution industry. Technological innovation, unavoidable health and safety interventions, and social changes have contributed to this impending battle. New technologies have been championed by a variety of different stakeholders—leading to new possibilities in how disputes can be managed, and, importantly, how responsive dispute resolution can be to the needs and interests of disputants. These new technologies have introduced unprecedented optionality to disputants, while also introducing unique ethical considerations for how these systems should be de-

²⁸¹ See, e.g., Lauren Weber, *Forget Going Back to the Office— People Are Just Quitting Instead*, WALL ST. J. (June 13, 2021, 5:30 AM), https://www.wsj.com/articles/forget-going-back-to-the-office-people-are-just-quitting-instead-11623576602?mod=article_inline [<https://perma.cc/8RHY-7V98>].

²⁸² See, e.g., Chip Cutter & Kathryn Dill, *Remote Work is the New Signing Bonus*, WALL ST. J. (June 26, 2021), <https://www.wsj.com/articles/remote-work-is-the-new-signing-bonus-11624680029> [<https://perma.cc/XU2F-JXSJ>].

signed. These ethical considerations will continue to be debated, precisely because they are essential to a vibrant soul. As each branch of ODR uses different technologies, flexibility must be prioritized in how ethical factors are conceptualized. The absence of ethical flexibility will promote uniformity and stymie innovation in ODR, even as innovation is what has made ODR so unique when compared with other dispute systems.

Historically, traditional court systems have experienced challenges in resolving novel disputes, while operating in the backdrop of international technological innovation. The emergence of e-commerce in the 1990s and the resulting birth of cross-jurisdictional, low-value disputes have also created a new class of disputants who were under-justiced. The financial costs of using courts to manage these disputes outweighed the courts' benefits. As such, e-commerce platforms constructed ODR platforms to promote ease and certainty for managing these disputes. Due to judicial backlogs, other disputants sought to evade courts out of preference. The new era of ODR builds on aversion to dispute systems, where the financial and temporal costs are significant. Unifying the three branches of ODR is a capability to streamline processes.

Meanwhile, more recent technological innovation has created disputes ill-suited for traditional dispute systems. While the Internet allowed for pseudonymous transactions, new technologies have made pseudonymous identities the default and some stakeholders are seeking out these systems, particularly through blockchain technology's use of asymmetric cryptography. As illustrated with Cøbra, when the judiciary's requirement for in-person identification conflicts with disputants' preference for pseudonymity, these individuals are willing to sacrifice winning a case in order to avoid engaging with courts. The judiciary operates with top-down system design frameworks, where disputants are required to conform to a specific procedural approach. The outcome is a class of disputants with restricted access to justice. In contrast, ODR has been focused on engaging with those disputants with limited access to justice, driven by bottom-up system design frameworks. It is within this context, one where parties are transacting with increasing technological sophistication, that the impending battle for the soul of ODR is situated. As the pandemic has propelled greater reliance on ODR processes, this impending battle becomes all the more critical for the future of dispute resolution.

The Internet has allowed, and the pandemic has catalyzed, the possibility for an untethering of dispute resolution from physical

locations. Enabling technological tools will allow for a broader breadth of disputes to be resolved in a seamless fashion. Competition to attract disputes to a specific resolution platform, using a specific type of technology, will only increase the optionality for disputants, while promoting fairness and access to justice by being more responsive to the needs and interests of different classes of disputants. As we witness the inescapable reality of technological innovation, the soul of ODR will continue to evolve. The outcome of this impending battle should be the prevalence of dispute systems with greater responsiveness to the particular circumstances of disputants.