Online Dispute Resolution and Autism Spectrum Disorder: Levelling the Playing Field in Disputes Involving Autistic Parties

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Online Dispute Resolution and Autism Spectrum Disorder: Levelling the Playing Field in Disputes Involving Autistic Parties

Abstract
Often, the overall success of an Alternative Dispute Resolution (ADR) process hinges on the ability of a neutral third party to establish a level playing field supported by a sense of equal bargaining power between disputants. Most forms of ADR, including traditional approaches to mediation and arbitration, are characterized by in-person interactions, where disputants and third parties communicate through a combination of verbal and nonverbal cues. Though many believe that this form of interaction is crucial for effective communication, it may result in significant disadvantages for autistic parties who face difficulties properly discerning the intentions or meaning of these cues.

This work examines the potential benefits of implementing Online Dispute Resolution (ODR) tools and platforms in dispute resolution processes involving autistic parties. It explores the inherent disadvantages presented by traditional forms of ADR and proposes an alternative approach geared toward the individual needs of parties and the accommodation of cognitive difference. Given the high potential for eased communication presented by computer and internet technologies for autistic disputants, this work posits that an ideal process would be one that effectively incorporates ODR tools and that provides a structured and stable environment for dispute resolution.

Keywords
Online Dispute Resolution, Autism, Autism Spectrum Disorder, Alternative Dispute Resolution, ASD, ODR, ADR, Internet

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INTRODUCTION

Online Dispute Resolution (ODR) is the focus of an expanding field of study that has made substantial advancements in recent years. New ODR systems incorporate rapidly evolving technologies, including automatic translation software and video conferencing. The implementation of these new ODR systems has allowed disputants to overcome traditional litigation obstacles, such as cost and distance, and to employ creative solutions in order to facilitate communication in situations where it may have otherwise been impossible.1

This paper examines the benefits of the implementation of ODR tools and platforms in dispute resolution processes involving autistic parties.2 It also identifies common issues resulting from Autism Spectrum Disorder (ASD). The benefits and inherent disadvantages presented by traditional forms of Alternative Dispute Resolution (ADR) are analyzed to determine their suitability for autistic parties. This paper argues that any process designed for autistic disputants should incorporate ODR tools in an online space. The use of online technologies is examined as a potential tool for empowering autistic parties and facilitating communication between autistic and non-autistic disputants.

I. UNDERSTANDING ASD: CONDITION, CULTURE, AND CONFLICT

In order to adequately assess and meet the needs of autistic persons when it comes to resolving disputes, it is essential to understand the nature of ASD and its impact on the lives of autistic persons.

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1 Roland Troke-Barriault (JD candidate, University of Ottawa, Programme de Common Law). The author wishes to express his gratitude to Bevin Worton, Emilia Péch, and Garrick Apollon for their advice and encouragement, and to thank his family and friends for all of their support.
2 Note: The decision to use the term “autistic party” or “autistic person” rather than “person or party with autism” will be touched upon in the section entitled “Autism as Identity.”
Defining and Identifying ASD

There is no single definition of ASD. The disorder itself varies highly among autistic persons. As a result, most legal definitions of ASD tend to be written broadly. Clinical definitions of ASD generally include, but are not limited to, the following: (1) compulsive behaviour; (2) self-isolation; (3) communication difficulties; (4) disturbances in social and language skills; (5) compulsive engagement in repetitive activities and stereotyped movements; (6) unusual responses to sensory experiences; and (7) resistance to changes in environment or routine.

The intricacies of social interaction often pose problems for autistic persons. They may experience difficulty determining when to initiate, maintain, and end conversations; when to make eye contact; and how close to stand in relation to others when interacting. These aspects of day-to-day communication may not be evident to autistic persons. Other problematic behaviours linked to ASD include continuous staring, unintended violations of personal space, and asking for or offering out of context information.

Autistic persons vary in their abilities with respect to communication, mobility, and self-care. Individuals on the lower end of the autism spectrum may require extraordinary levels of support and are therefore unlikely to participate in the ADR process as disputants. Individuals on the higher end of the spectrum are considered to have “high-functioning autism” (HFA). While these individuals may be perceived as neurologically typical (neurotypical), they may be prone to seemingly odd or bizarre behaviours. These individuals may be more prone to experience social anxiety, although their social and emotional functions may be only slightly impaired, and these difficulties are often counterbalanced with higher-than-average intellectual

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4 Ibid at 204; Sheila Jennings, “Autism in Children and Parents: Unique Considerations for Family Court Professionals” (2005) 43:4 Family Court Review 582 at 582 [Jennings].
7 Ibid.
8 Note: Asperger’s Syndrome is commonly accepted to be a form of high-functioning ASD. It is typically distinguished from other forms of HFA by the absence of language delays. For more information, please consult Tony Attwood, Complete Guide to Asperger’s Syndrome (London: Jessica Kingsley Publishers, 2007) [Attwood].
9 Woodbury-Smith, supra note 6 at 269.
functioning. Individuals along the entire spectrum may have difficulty recognizing and interpreting facial expressions and, ultimately, empathizing with others. This paper will focus on the application of ODR to higher functioning individuals, given that lower functioning individuals tend to be the focus of the disputes, rather than parties to the dispute.

**Prevalence of ASD**

ASD is neither a mental illness nor a form of intellectual disability. Instead, it is better understood as a complex neurodevelopmental condition characterized by a wide array of underlying genetic and neurological differences. The rate of observed autism is increasing. As a result of this growth, media and governments have increased their focus on the disorder. One should nonetheless be cautious in concluding that this increased prevalence is solely rooted in an actual increase in the rate of autism, because a number of relevant factors could contribute to such an observed increase in rates. These include: (1) changes in diagnostic practices; (2) increased awareness of autism among parents, professionals, and the public; (3) increased development of specialized services; (4) evolution of study methodologies; and (5) historical under-diagnosis of autistic females. Taking these factors into account, the rapid increase in diagnoses of autism appears to be indicative of a better understanding of ASD, and will likely foster greater recognition of the need for accessibility and accommodation. In a legal context, it will be important to address this need through the incorporation of alternatives to traditional court processes, taking into account the needs of autistic disputants.

**Autism as Identity**

Many self-advocates with ASD have embraced the idea of neurodiversity, a term used to denote diversity rooted in neurological differences. This notion has been used to

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10 Robel, supra note 5; Jennings, supra note 4 at 583.
13 In 2012, the American Centers for Disease Control and Prevention issued a report claiming that occurrence of autism has risen to 1 in 88 births in the United States, and among almost 1 in every 54 boys, across all racial, ethnic, and socioeconomic groups. For more information, see Doris Adams Hill & Regina Kearley, “Autism litigation: Outcomes for 2010, trends in decision-making and changes in diagnostic criteria” (2013) 34 Research in Developmental Disabilities 1843 [Hill].
14 Kientz, supra note 12 at 13.
15 Ibid at 3; Jennings, supra note 4 at 586.
encourage both society and the state to focus on accommodating cognitive differences rather than trying to cure or treat "symptoms" of ASD.\textsuperscript{17} As a result, advocates of neurodiversity tend to prefer the term “autistic person” rather than “person with autism.” The former is thought to imply that, when it comes to identity, ASD is a fundamental aspect of personhood, whereas the latter implies an illness-based identity.\textsuperscript{18} As such, this paper will use the term “autistic person” throughout. However, it is important to recognize that not all advocates view the neurodiversity movement as the appropriate way to address autism in society.\textsuperscript{19} There is no single autistic identity, and intersectional factors—including race, religion, ethnicity, sexuality, and other forms of disability—may be of equal, concurrent, or greater importance to an autistic person’s perception of self.\textsuperscript{20}

**Autism and Conflict**

Characteristic behaviours of ASD can be easily misinterpreted in legal proceedings. Facilitating communication between autistic and neurotypical disputants could benefit both parties.\textsuperscript{21} The following sections outline some common situations in which autistic persons come into contact with the law.

**Criminal Law**

Generally, high-functioning autistic persons are more likely to come into contact with the criminal justice system than lower functioning autistic persons.\textsuperscript{22} This is because characteristic features of high-functioning autism, such as obsessions or the inability to read social cues, may create impressions of harmful intent where none actually exist.\textsuperscript{23} Additionally, misunderstandings may arise from a high-functioning autistic individual's compulsions for repetitive or ritualistic behaviours. It is more likely that an autistic person will be involved in a minor transgression as a direct result of a

\textsuperscript{18}Hanna Bertilsdotter Rosqvist et al, “Mapping the social geographies of autism- online and off-line narratives of neuro-shared and separate spaces” (2013) 28:3 Disability & Society 367 at 369 [Rosqvist]; Orsini, \textit{supra} note 17 at 823.
\textsuperscript{20}Rosqvist, \textit{supra} note 4 at 369-370.
\textsuperscript{22}Woodbury-Smith, \textit{supra} note 9 at 269-270.
\textsuperscript{23}\textit{Ibid} at 276.
social misunderstanding or because of obsessive pursuits or behaviours. In some situations, these difficulties or behaviours may create a sense of discomfort in neurotypical individuals leading to criminal complaints against autistic persons. Additionally, neurotypical individuals may interpret inappropriate or persistent attempts at social interaction by low- to mid-functioning individuals as stalking.

Family Law

Autistic persons are typically involved in divorce proceedings as well as custody and access disputes as either children or parents. This issue is becoming increasingly relevant, since the rising rates of divorce and separation are leading to more family law proceedings.

Employment Law

Disputes can arise between autistic persons and their employers, particularly in matters pertaining to workplace discipline. Although there is debate as to whether autism veritably constitutes a form of disability, it is treated as such for the purposes of employment law statutes. As noted by the Asperger/Autism Network, autistic employees may not be aware of the unwritten social rules and behaviours that are expected in a largely neurotypical workspace. Misunderstandings resulting from atypical behaviours can ultimately result in disciplinary action or termination.

II. ADDRESSING THE NEED FOR ASD-ACCESSIBLE DISPUTE RESOLUTION

ASD and ADR

Access-to-justice barriers remain a reality for most Canadians. This is especially true for those facing the additional costs and obstacles associated with ASD. Canadians from low-income households, or who are members of a vulnerable social group, are more likely to encounter legal issues than Canadians from high-income households or less vulnerable groups. As a result, an increasing number of Canadians

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24 *Ibid* at 273.
are opting for more cost-effective, rapid, and tailored methods of dispute resolution. ADR covers various forms of dispute resolution that allow parties to resolve their issues outside of traditional litigation. A noted benefit of ADR is the ability to create a flexible and context-specific process of dispute resolution.\(^{30}\)

Given the wide range of processes and options available within the scope of ADR, there has been some debate amongst advocates about whether the concept of ADR could be better described as “appropriate dispute resolution.”\(^{31}\) This interpretation of ADR emphasizes the importance of ensuring that the models and processes selected can adequately accommodate the needs of both parties, whether they are financial, cultural, or rooted in differences in abilities. This approach is crucial in levelling the playing field for disputants with cognitive differences.

Mediation and arbitration are two forms of ADR that can be especially beneficial for autistic parties.\(^{32}\) Both processes allow for assistance from a neutral third party in resolving legal disputes, but they differ substantially in structure and degree of formality. The appropriateness of each method is context-dependent. As a result, factors such as the desires of the parties and the nature of the dispute should be taken into account.

**Mediation and Arbitration**

Mediation is a flexible, adaptable, and non-binding form of ADR that is particularly well suited for settling minor and low-cost disputes.\(^{33}\) With the assistance of a neutral third party, known as the mediator, individuals identify potential solutions and seek to achieve a settlement that adequately accommodates the needs of all parties.\(^{34}\)

Arbitration is an adversarial process where a neutral third party, known as the arbitrator, hears submissions from the parties and makes a binding award. Compared to mediation, arbitration is a rigidly structured form of ADR that is similar to the traditional judicial process in the court system. Arbitrations can provide faster and more cost-effective dispute resolution than litigating through courts, with the additional

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\(^{31}\) Ibid.

\(^{32}\) Note: Although negotiation may also provide certain benefits, forms of ADR incorporating a neutral third party are generally preferable for autistic disputants. Some of the principal reasons for this will be explained in Part IV of this paper (ASD and ODR Process Design), in the section entitled “ASD-Related Considerations.”


\(^{34}\) Arno R Lodder & John Zeleznikow, *Enhanced Dispute Resolution Through the Use of Information Technology* (New York: Cambridge University Press, 2010) at 3-4 [Lodder].
benefit of confidentiality. Arbitration also allows the disputants to appoint an arbitrator who is an expert in the appropriate field.\textsuperscript{35} This flexibility allows the procedure to cater to the technical details of the dispute, while still providing the benefit of a binding decision.

\textbf{Obstacles to ADR}

\textit{Obstacles Rooted in ASD}

Most forms of ADR, including traditional approaches to mediation and arbitration, are characterized by in-person interactions where disputants and third parties communicate through verbal and non-verbal cues.\textsuperscript{36} Many believe that this form of interaction is crucial to the ADR process, since the opportunity to observe the body language of others offers opportunities for communication and effective interaction.\textsuperscript{37} However, this aspect of ADR may result in significant disadvantages for autistic parties because they may have difficulty properly discerning the intentions or meaning of these cues.\textsuperscript{38}

Because many autistic persons experience obstacles in social functioning,\textsuperscript{39} they are more likely to experience social anxiety in new situations.\textsuperscript{40} In severe cases, this anxiety can take the form of a social phobia, where a fear of humiliation or embarrassment may lead to social withdrawal and self-imposed isolation.\textsuperscript{41} This poses significant difficulties for the in-person aspects of ADR when autistic persons are involved in resolving legal disputes in this manner.

\textit{Biases in ADR that Favour Neurotypical Individuals}

Successful ADR processes require the parties to engage with each other from equal positions of power. In ADR processes, power may be rooted in the economic, intellectual, physical, or emotional state of a disputant, as well as the procedural or legal

\textsuperscript{35} Ibid at 4-5.
\textsuperscript{36} Larson, \textit{supra} note 33 at 200-201.
\textsuperscript{38} Jennings, \textit{supra} note 4 at 582; Woodbury-Smith, \textit{supra} note 6 at 274.
\textsuperscript{39} Jennings, \textit{supra} note 4 at 586.
\textsuperscript{40} Sanna Kuusikko et al, “Social Anxiety in High-functioning Children and Adolescents with Autism and Asperger Syndrome” (2008) 38 J Autism Dev Disord 1697 at 1706-1707 [Kuusikko].
\textsuperscript{41} Ibid at 1706; Note: It is important to recognize that ASD and Social Anxiety Disorder (SAD) are two distinct conditions that may or may not overlap. An individual may be autistic without experiencing SAD or experience SAD without exhibiting characteristics associated with ASD.
aspects of the dispute. Often, the comfort levels of the parties and the overall success of an ADR process hinge on the ability of a mediator or arbitrator to level the playing field by establishing a sense of equal bargaining power between the parties.

Mediations that occur in person tend to provide an advantage to individuals who are articulate, physically attractive, well-educated, socially adept, or who are members of a dominant ethnic or racial group. This can be problematic for autistic disputants. Autistic adolescents, in particular, may have difficulty understanding and using humour, often telling jokes or making out-of-place statements without regard for the reactions of others. Autistic persons are also prone to odd vocalizations, tics, and compulsive head banging. They may also come across as simple-minded or intentionally combative during discussions. During discussions, some individuals may freeze, avoid eye contact, or not understand when a conversation is over. Mid- to high-functioning autistic persons may have trouble with prosody, which governs the natural rhythm of voice pitch, inflection, and intonation during speech. Issues of this nature in autistic persons can result in the appearance of robotic and emotionless speech patterns that create an additional deficit in communication.

These barriers to communication put autistic disputants at a disadvantage because they make it challenging for autistic parties to effectively convey their desires, intentions, and interests. In order to mitigate the impact of these obstacles, it is essential that the process accommodate cognitive differences.

III. ODR AS A MEANS OF LEVELLING THE PLAYING FIELD

Online Mediation and Arbitration

One possible method for tackling these bias issues is through the implementation of ODR technologies. This involves incorporating Internet tools, services, platforms, and online spaces. These technologies are often seen as constituting

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43 Ibid at 25.
45 Laugeson, supra note 11 at 63-64.
46 Jennings, supra note 4 at 583; Laugeson, supra note 11 at 63.
47 Laugeson, supra note 11 at 63.
an additional presence and input into the traditional three-party dynamic of ADR. When used to alter an ADR process, either through automation or as a supplement to the role a neutral third party, the incorporated technology is often referred to as the “fourth party” to the dispute. The fourth party increases the effectiveness of the third party and provides additional support to the disputants.

There are two forces credited with driving the development of ODR. The first arose in the early 2000s from the difficulties in resolving low-value, cross-border disputes using traditional dispute resolution methods after the increase in popularity and accessibility of the Internet. The second and most pertinent was the recognized potential of online forums as a way to provide faster and more cost-effective methods for resolving issues that arise both online and offline. Conducting mediations and arbitrations online allows for the use of e-mail correspondence, instant messaging, online bulletin boards, and a variety of other tools that can reduce or eliminate the need for in-person interaction and its associated obstacles. More importantly, these tools present the possibility of increasing access to justice and the likelihood of a just and equitable settlement for the parties.

**ODR as a Means of Easing Communication**

*Autistic Persons and the Use of Computer and Internet Technologies*

The use of computer and Internet technologies among autistic persons has increased dramatically over the past two decades. In assessing the appropriateness of using ODR processes for disputes involving autistic parties, it is crucial to understand the relationship between technology and ASD.

The adoption and effective use of computing applications for education and communication has been largely successful among autistic persons. A number of studies have indicated that, among autistic children and adolescents, the use of computers can produce marked increases in rates of learning, attention to detail, and ability to work independently. In 2001, the National Autistic Society of the United Kingdom identified five key characteristics of computer technologies that make them well suited to the needs of autistic persons: (1) computers allow for information to be

48 Rifkin, supra note 37 at 425.
49 Ibid at 424; Tyler, supra note 1 at 167-168.
50 Kientz, supra note 13 at 1.
51 Ibid at 8.
52 Ibid.
53 Despite the rapid advance of computer technologies since 2001, these five characteristics, as well as the study from which they were derived, continue to inform modern studies on computer use amongst autistic persons. For a more recent version of these characteristics, please consult Julie A Kientz et al, *Interactive*
abstracted or limited to its most relevant components, assisting individuals in
overcoming difficulties related to filtering sensory information; (2) computers allow for
the exchange of information without the unpredictable and nuanced nature of in-person
conversations; (3) tailored programs allow for the creation of routines and processes
that are explicit and methodical, with clear expectations and consistent consequences
for actions and responses; (4) audio and visual aids can be used and selected to match
the cognitive abilities and personal circumstances of an individual; and (5) computer
and Internet technologies can be structured to allow learning and acclimatization in
small logical steps, which may be important for individuals who find it difficult to
modify their routines. More recently, in 2010, the University of Pittsburgh conducted
a study on the use of computer-mediated communication tools by persons on the autism
spectrum and found that most subjects were able to use tools such as instant messaging,
social networking, online dating websites, and discussion forums to connect with others
and develop successful relationships.

The variability and adaptability of computer and Internet technologies allows for
the creation of tools and processes that can be tailored to the needs of autistic persons,
and can take into account the diverse manifestations of ASD. Although the majority of
research on the relationship between ASD and technology focuses on its implications
with respect to education and early childhood development, computer and Internet
technologies can have a positive effect on other aspects of the lives of autistic persons.
Since the early 2000s, increasing numbers of autistic persons have participated in online
community forums and discussion boards. These Internet spaces have grown rapidly
and offer a means through which individuals can express their needs and identities, in
contrast to the challenging and often exclusionary experiences in the offline world. These
spaces have allowed autistic persons to interact with like-minded people, discuss
issues of empowerment and adversity, and develop new advocacy narratives.

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technologies for autism (San Rafael: Morgan & Claypool Publishers, 2014). For more information on the
ongoing influence of the root study, which examined the effectiveness of computer programs designed to
help autistic children better recognize emotional responses, please consult Paul Lacave et al, “Using
Assistive Technology to Teach Emotion Recognition to Students With Asperger Syndrome: A Pilot
54 Miriam Silver & Peter Oakes, “Evaluation of a New Computer Intervention to Teach People with
Autism or Asperger Syndrome to Recognize and Predict Emotions in Others” (2001) 5 Autism 299 at 302.
55 Kientz, supra note 13 at 26.
56 Ibid at 9.
57 Rosqvist, supra note 18 at 370-373; Kientz, supra note 13 at 28.
58 Rosqvist, supra note 18 at 373-375.
General Criticisms of ODR

Communication Barriers

Despite significant advances in recent years, many ADR practitioners still consider the role of computer and Internet technologies in dispute resolution as a novelty or fringe issue. A recurring critique of ODR is that eliminating the in-person element of ADR removes the opportunity for nuanced communication and emotional engagement. This critique posits that parties cannot form adequate impressions of each other in the absence of non-verbal cues such as body language and facial expressions. Furthermore, critics contend that physical absence may produce a negative dissociative effect, which may affect the parties’ abilities to empathize with each other. As a result, many critics view the lack of in-person contact as an insurmountable obstacle that can only be mitigated by the use of video conferencing or other tools designed to simulate an in-person experience. It is debatable whether or not online environments should strive to mimic offline conditions. However, when considering disputes involving autistic parties, ODR may be the most effective option in navigating the potential barriers to communication posed by the traditional ADR process. There is little evidence outside of academic speculation to indicate that the use of ODR negatively impacts dispute resolution or settlement.

A Canadian study found that 80 per cent of disputants exposed to ODR reported that they experienced no difficulties expressing their ideas and concerns online and felt that the other disputants were able to understand them. Additionally, 82 per cent of disputants indicated that they had no trouble expressing their emotions in an online environment, despite the absence of visual cues. Of the 79 per cent of disputants who had also participated in in-person mediations, the majority found that their ODR experience compared favourably to traditional face-to-face interaction and, in some instances, offered greater efficiency and clarity.

59 Tyler, supra note 1 at 177.
60 Larson, supra note 33 at 201; Rifkin, supra note 37.
61 Larson, supra note 33 at 200-201.
62 Lodder, supra note 34 at 78-79.
63 Ibid at 78.
64 Tyler, supra note 1 at 167-168; Anne-Marie G Hammond, “How Do You Write ‘Yes’? A Study on the Effectiveness of Online Dispute Resolution” 261 (2003) 20:3 Conflict Resolution Quarterly 261 [Hammond].
65 Hammond, supra note 64 at 274.
66 Ibid at 277; Tyler, supra note 1 at 168.
67 Hammond, supra note 64 at 275.
Studies have shown that, even without non-verbal cues, parties communicating electronically can form effective relational behaviours by relying on cues that exist in online environments.68 These can include typographic cues (such as underlining or bolding text),69 the use of adapted linguistic strategies to indicate favourable responses to humour (including acronyms such as “lol” or “rofl”),70 or the use of symbols to indicate an emotional response (such as smiley faces or other emoticons). Where non-verbal cues are lacking, parties to online-mediated communications are likely to narrow the scope of their conversations to only the relevant issues. Additionally, parties may use strategies that reduce uncertainty, without first relying on prompting from third parties, such as the voluntary disclosure of relevant information and direct questioning.71 As a result, many parties reported feeling that they were engaged in more focused or intimate exchanges.72

Online communication offers the potential benefit of generating more meaningful interactions between parties.73 ODR allows parties to adopt new approaches and strategies that not only compensate for a lack of non-verbal cues but also create opportunities for autistic parties to meaningfully engage in dispute resolution. The use of clear and consistent visual cues, when combined with focused and explicit exchanges, create an environment where both autistic and neurotypical persons can engage in dispute resolution on equal footing.

Other General Concerns

Although the use of ODR presents many benefits, it is not without disadvantages. This section will touch upon the following concerns: (1) the use of text-based communication in ODR processes can lead to misinterpretations of meaning or intent when parties fail to employ medium-appropriate cues; (2) the asynchronous nature of ODR may cause frustration due to delays in response time; (3) some ODR processes may be culturally inappropriate for some groups or inaccessible to certain

69 Larson, supra note 33 at 200-201.
70 Note: “lol” is an acronym for “laughing out loud” and “rofl” is an acronym for “rolling on the floor laughing.”
71 Tidwell, supra note 68.
73 Larson, supra note 33 at 201.
demographics due to a lack of familiarity with the technology used;\textsuperscript{74} and (4) communication via e-mail or other Internet platforms may make information exchanged during ODR inherently less secure than in traditional forms of ADR.\textsuperscript{75}

\textit{Misinterpretations and Frustrations in Communication}

The use of ODR processes can raise issues of misinterpretation and frustration. When designing ODR processes, it is important to incorporate tools and services that facilitate communication and avoid ambiguity. A neutral third party may become involved to moderate interactions between the parties, clarify misunderstandings, and maintain decorum in dispute resolution. The fourth party—the online tools and platforms—must be selected or tailored to accommodate the needs and technological competencies of each party.\textsuperscript{76} Communications may take place in real time if the parties desire quick resolution, or asynchronously if the parties require additional time for reflection in order to hone in on certain issues or accommodate the schedules of the parties.\textsuperscript{77}

\textit{Individuals Lacking Technological Competencies}

The critique concerning accessibility for individuals lacking technological competencies poses a greater challenge. When selecting an appropriate process, it is counterproductive to select a platform that eliminates disadvantages for one party, only to create disadvantages for another. Nevertheless, this should not discourage or prevent the development of tailored ODR processes to accommodate for ASD. This technological barrier is likely to diminish in scale over time with the rise of computer literacy and the increasing prevalence of computer and Internet technologies. In a North American context, most children are introduced to computers and books simultaneously, and exhibit a comfort with online communication tools that can surpass that of experienced dispute-resolution practitioners.\textsuperscript{78} Even with the reduced impact of this barrier, some ODR tools may remain inappropriate for certain parties.\textsuperscript{79} Therefore, sensitivity to the needs of the particular parties is essential when determining whether or not to make use of ODR processes.

\textsuperscript{74} Tyler, \textit{supra} note 1 at 169.
\textsuperscript{76} Gibbons, \textit{supra} note 44.
\textsuperscript{77} Hammond, \textit{supra} note 64 at 275.
\textsuperscript{78} Larson, \textit{supra} note 33 at 203.
\textsuperscript{79} Note: For example, individuals belonging to communities with reduced or restricted access to technology, such as those belonging to Amish communities in Canada and the United States, may lack the technological knowledge necessary for ODR tools and platforms to be effective in resolving their disputes.
Privacy Concerns

Given that ODR processes take place either partially or entirely online, there is a general concern for privacy due to the perceived danger of unauthorized interception of communications, hacking of information, and identity fraud. It is therefore important that (in consultation with the neutral third and fourth parties) the disputants involved in an ODR process (1) come to a consensus regarding the storage, retention, and destruction of documents, communication logs, and other information; (2) ensure that communications are transmitted between secure and pre-identified computer bases; and (3) implement suitable protections such as encrypted messaging, digital signatures, and passphrase-protected services. For autistic disputants communicating with the aid of a facilitator, additional measures such as video-conferencing may be necessary to ensure that information is not communicated falsely on their behalf.

IV. ASD AND ODR PROCESS DESIGN

There are several important considerations when it comes to designing ODR processes for individuals with ASD, including those relating to software, hardware, and third parties.

Software Considerations

General Considerations

When designing an appropriate ODR process, the following factors should be considered: (1) the extent of incorporation of the fourth party; (2) the structure of the form selected; (3) the appropriate levels of automation and third-party involvement; and (4) the selection of specific tools to accommodate the special needs of parties. Overall, it is important to remember that the weight of each consideration is context-dependent and, will therefore vary based on the particular parties involved.

The extent of incorporation of the fourth party in the dispute resolution process must be determined. This will be based on the needs of the parties and the nature of the dispute. The process may take place entirely online, or it may occur in person with the use of ODR platforms and tools to supplement a traditional ADR model. When the use of ODR technology is meant to mirror or strengthen traditional ADR processes, the process should be tailored to the structure of the method selected. Negotiation and

80 Note: For additional information on steps that can be taken to ensure the security of ODR processes from a privacy perspective see Hörnle, supra note 75 at 32.
81 Ibid at 31-32.
mediation software should focus on communication, whereas arbitration software should focus on managing documents and structuring issues.\textsuperscript{82} The incorporation of online tools and platforms should be determined based on context.\textsuperscript{83}

Determining the appropriate levels of automation and third-party involvement depends on the circumstances of the dispute and the technology involved. For example, software used to flag correspondence containing volatile or inappropriate messages may reduce the need for a mediator to read through and filter communications between parties. It is important to identify tools that could help to accommodate the special needs of individual disputants. For example, translation and spell-check software can ease interaction for parties communicating in a language other than their primary language.

\textit{ASD-Related Considerations}

Given the barriers that autistic persons face when participating in traditional in-person ADR processes, as well as the significant potential for empowerment that the use of ODR can give these individuals, it may be ideal to adopt a process that occurs either entirely or mostly online.

Although studies have indicated that autistic persons tend to respond more effectively to computer-based processes than to the physical presence of an individual,\textsuperscript{84} the importance of in-person, third party involvement should not immediately be dismissed because of the presence of autistic disputants. A neutral third party’s participation may be highly desirable when the mechanics and usage of a platform or tool are not clear to all parties. This is especially important when disputes involve low to mid-functioning autistic persons, and where reduced mental or physical faculties may necessitate additional assistance. Similar to traditional ADR processes, neutral third parties facilitating an ODR process can also assist parties in dealing with miscommunications or other unexpected problems. As such, online mediation and arbitration models incorporating a neutral third party are generally preferable to those that are completely automated.\textsuperscript{85}

As with any form of ADR, when selecting or designing an ODR process, one must consider the nature of the dispute, the relationship between the parties, and any relevant legislative provisions pertaining to the conflict. The selected process should

\textsuperscript{82} Lodder, \textit{supra} note 34 at 84.
\textsuperscript{83} Tyler, \textit{supra} note 1 at 168.
\textsuperscript{84} Kientz, \textit{supra} note 13 at 29-30.
\textsuperscript{85} Note: For this same reason, online mediation and arbitration are generally preferable to online negotiation for autistic parties.
allow for a clearly structured presentation of issues and statements that permits parties to quickly and easily identify points of friction as well as mutual interests.\textsuperscript{86} The process should also incorporate a variety of tools, including typographic cues, emoticons or other image cues, as well as flow-charts, tables, and other tools to facilitate communication.

The use of collaboration software (typically involving editable calendars, message centres, and task lists) may be beneficial in order to facilitate scheduling and communication between disputants.\textsuperscript{87} The use of such software allows information to be logically organized, searched, and sorted,\textsuperscript{88} and could serve as an effective tool in maintaining routine and structured communication. This is vital to ensure the continued and active engagement of the autistic parties—a prerequisite for achieving a mutually beneficial outcome.

**Hardware Considerations**

Processes designed for desktop computers present particular disadvantages. These processes incorporate the use of traditional keyboard, mouse, and monitor set-ups. The popularity and affordability of desktop computers ensure familiarity among the general population and diminish the likelihood of technological barriers arising. Desktop computers tend to be placed in fixed locations and are less likely to be lost or broken, creating a stable and consistent space for autistic persons to engage in ODR.\textsuperscript{89} However, the fixed nature of a desktop computer necessarily limits flexibility with respect to mobility and scheduling.\textsuperscript{90}

It should be noted that mobile devices, such as smartphones and tablets, are becoming more powerful, less expensive, and increasingly accessible. A 2013 study conducted by the Pew Research Center indicated that over 90 per cent of American adults own some form of mobile device. Furthermore, in low-income households, mobile technology is often the preferred means of accessing the Internet.\textsuperscript{91} Additionally, unlike many traditional assistive technologies, smartphones and tablets are non-stigmatizing for autistic persons because they do not look out of place and are already used to accommodate ASD in several contexts.\textsuperscript{92} It may be beneficial to design the

\begin{footnotesize}
\begin{enumerate}
\item[86] Lodder, supra note 34 at 78-79.
\item[87] Tyler, supra note 1 at 174.
\item[88] Ibid.
\item[89] Kientz, supra note 13 at 21.
\item[90] Ibid at 22.
\item[91] Ibid at 56; Aaron Smith, “Smartphone Ownership 2013” (5 June 2013), The Pew Research Center, online: <www.pewinternet.org/2013/06/05/smartphone-ownership-2013/>.
\item[92] Kientz, supra note 13 at 47.
\end{enumerate}
\end{footnotesize}
ODR process to allow mobile access to some or all of its components, while also keeping in mind the issues of privacy and security that arise in ODR.

**Third-Party Considerations**

The neutral third party should have some degree of knowledge or familiarity with ASD. Since mediators and arbitrators usually specialize in a given field, finding an individual who is both well informed on the challenges presented by ASD and who is suitably qualified to deal with the substance of the dispute will likely be a difficult task. One possible solution is to incorporate expert facilitators such as teachers or behavioural therapists who have substantial knowledge of the challenges that ASD presents. Where an autistic party relies on a specialist’s services in his or her daily life, it is advisable to incorporate that specialist's knowledge and experience into the dispute resolution process. If the specialist cannot be physically present for the resolution of the dispute, ODR processes would allow the specialist to be involved in an online capacity. The level of this party's involvement depends on the nature of the particular dispute as well as the unique design of the ODR process. Ideally, the specialist would assume an advisory or consultative role, providing insight, guidance, and support to the autistic party.

**CONCLUSION**

ASD is a complex and highly individualized condition that poses unique challenges when it comes to dispute resolution. The use of ODR is highly recommended when dispute resolution involves autistic parties because it can help to alleviate the barriers of traditional litigation or ADR. As well, computer and Internet technologies can help to empower autistic persons involved who may be at a disadvantage in traditional dispute resolution processes.

In order to level the playing field between autistic and neurotypical parties, ODR processes that are tailored towards these types of disputes should incorporate software and hardware that take into account the individual needs of the disputants. The selected platform should provide a structured and stable environment for dispute resolution and emphasize communication and understanding between disputants. The use of visual cues, such as bolded text and emoticons, and of skilled facilitators, such as behavioural therapists, may be beneficial to all parties. Finally, in order ensure respect and equality of bargaining power for autistic parties, it is important that individual ODR processes incorporate a perspective of accommodating difference, rather than offsetting impairment.