The Rise of Machine Learning in Dispute Resolution

By Colin Rule

As someone who has worked in the online dispute resolution (ODR) field for more than two decades, I can't count the number of times someone has asked me if I was working on the creation of a robot mediator or arbitrator. Ninety-nine percent of my time in ODR has focused on how to use technology to better facilitate human-to-human communication, but whenever the Q&A session starts after one of my presentations on ODR, it becomes clear once again that the possibility of robot arbitrators is far more compelling to the average person than discussing more effective online meeting rooms or blind bidding algorithms.

Maybe the fascination stems from all the science fiction movies and TV shows we had in the '70s and '80s where robots would become commonplace and do whatever humans told them to do. I think back to those episodes of "Lost in Space" where Robby the Robot would carry around firewood and indicate when danger was approaching, even though it was clearly just a clunky metal costume with a person inside. The robots got a little more believable with R2D2 and C3PO in Star Wars, but they still felt like George Lucas' fantasy more than reality.

But as the years have gone by, we've seen technology deliver on many imagined possibilities from our childhoods, from Dick Tracy's wrist radio (the iWatch gets pretty close) to "Knight Rider"'s talking car (now named Siri or Alexa). As the saying goes, most advanced technologies are indistinguishable from magic, and we've gotten inured to the release of seemingly magical new technologies on a regular basis.

There was a series of commercials from AT&T in the early 1990s entitled "You Will," narrated by Tom Selleck. In each installment he would show mock-ups of people in the future doing incredible things, like sending a fax off a tablet while sitting on the beach, or putting your kids to bed from the other side of the world via videoconference on a pay phone. Now some of the projections were a little off (no more faxes or

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payphones) but most of the predictions were on the money, and those futuristic commercials would now be viewed by Gen Z as unremarkable.

What is slightly different from those AT&T commercials is the edge of potential malice that now comes hand in glove with technological innovation. The fear in the '70s and '80s was that technology would dehumanize us, and maybe turn us into unemotional robots (see the movie "2001")—but that hasn't really come to pass. In fact, the most dominant dynamic is the opposite: we have humanized technology, and it has magnified many of our all-too-human weaknesses. Now social media pushes conspiracy theories and hateful sentiments around the world at the speed of light over fiber optic cables at the bottom of the sea before (as Jonathan Swift put it) the truth comes limping after.

That might be another reason why the robot mediator and arbitrator idea has gotten so much traction: we're worried about the ramifications for us. If the robots do a better job than we can do, does that mean we will become useless? Will we be obsolete relics, just waiting to be upgraded to a better model? This concern isn't unique to dispute resolvers, of course; similar fears are being expressed by others in well paid professions like finance, medicine, and law.

And the logical next question: if the robots do in fact replace us, who is going to ensure that the people programming the robots aren't putting their fingers on the scales? We've put a lot of time and energy into developing ethical rules for dispute resolution practice, and we have systems to ensure that human mediators and arbitrators are playing by those rules. It is much harder to look into the "eyes" of a robot (webcams?) to see whether it's planning to respect rules around confidentiality, neutrality, and privacy.

Artificial Intelligence (or AI) has become something of a Rorschach test: what you see when you look at it says more about you than about what you're looking at. Some people think of the "Terminator" movies when AI is brought up, with the rogue SKYNET AI deciding humans are the problem and starting a process of eradication. Others think more of the movie "WALL-E", where the AI runs everything and just keeps the useless humans happy in their floating chairs by playing them silly videos and bringing them milkshakes. But in the process the specifics of AI are being overshadowed

by all the paranoia and hagiography. AI is seen as either a savior or a catastrophe, with little possibility in between.

This may be why we in the ODR field we have largely eschewed the language of AI to describe the roles technology can play in a dispute resolution process. We have instead opted for the concept of the "fourth party." In this paradigm the disputants are party one and party two, the human neutral (the mediator or arbitrator) is party three, and technology (in all of its forms) is party four. This conceptualization emphasizes the collaboration between human neutrals and the technology because there are some tasks the third party can do better and some tasks the fourth party can do better. The primary question instead becomes how to optimize the partnership to achieve our shared objective, which is finding a fast and fair resolution to the dispute at hand.

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We already rely on the fourth party's help in myriad ways. Maybe it's providing an intake form on our website, or scheduling a conference call, or processing payments, or collecting and organizing documents, or sending calendar reminders. Many of these more mundane administrative tasks were human jobs before, but now we give them over to the fourth party without a moment's hesitation. In fact, we'd be annoyed if we had to go back to handling them manually.

But the rise of machine learning is making the fourth party smarter every day, and that is expanding the capabilities of our technological partner. Now the fourth party can read and understand natural language, making it newly relevant in other parts of the dispute resolution process, from coaching to research and evaluating BATNAs and WATNAs. And as computer processors get more powerful and we are able to store more and more information, the power of machine learning will continue to grow.

You might have heard of the Turing Test, devised by Alan Turing in 1950, which focuses on "a machine's ability to exhibit intelligent behavior equivalent to, or indistinguishable from, that of a human." If you sit down at a computer and communicate with a machine learning algorithm through text message, and you can't tell whether you're speaking to a machine or a person, then that machine learning algorithm has passed the Turing Test. Expanding computing power has made it much harder tell what is generated by a fourth party and what is generated by a third party.

But the real question is, what do these improvements in machine learning mean for the future practice of dispute resolution? Several opportunities jump to mind.

1. Predictive analytics: Machine learning algorithms can analyze data from past disputes to identify patterns and predict the likelihood of future disputes. This can help mediators, arbitrators, and other dispute resolution professionals anticipate and prevent disputes before they arise.

2. Decision support: Machine learning algorithms can help dispute resolution professionals make more informed decisions by providing them with insights and recommendations based on data analysis. For example, an algorithm could analyze data from past disputes to identify common factors that led to successful resolutions and suggest strategies for resolving similar disputes in the future.

3. Automated dispute resolution: Machine learning algorithms can be used to automate certain aspects of the dispute resolution process, such as document analysis and contract interpretation. This can help to speed up the process and reduce the workload for dispute resolution professionals.

4. Enhanced collaboration: Machine learning algorithms can facilitate collaboration between dispute resolution professionals by providing them with real-time data and analytics that can help them make more informed decisions.

Overall, the use of machine learning in dispute resolution has the potential to improve the efficiency and effectiveness of the process, helping to resolve disputes more quickly and accurately.

If you'd like an example of how an algorithm can pass the Turing Test, consider that I didn't write the points above. Starting with "Predictive analytics…" and ending with "…resolve disputes more quickly and accurately," that passage was written by a new algorithm called GPTchat in response to my question, "how will machine learning change the practice of dispute resolution?"

There are a few indications in the GPTchat passage that it's not me generating the content. In point four, saying that machine learning can "facilitate collaboration between dispute resolution professionals" to "help them make better decisions" represents a slight misunderstanding of the role of mediators, for instance. The sentiments expressed, and the language used, is a little insipid and devoid of voice. But that is probably by design—quirky results would undermine the circumspect tone the programmers aimed to integrate into GPTchat's "voice." But it is clearly within the bounds of the

kind of writing we see every day on the internet, in blogs, in student papers, and even in newspapers.

It is not a stretch to contemplate the creation of similar machine-learning powered tools that are trained to help parties find a solution by mutual agreement, or trained to listen to the arguments of both parties and render a decision. They can provide responses 24x7, only asking for a penny's worth of energy, and they never take a break. Such tools will likely be imperfect and inaccurate at the beginning, but with each case they will learn more, and they will improve over time as the technologies they leverage underneath the hood become more powerful.

From my perspective, those of us in the dispute resolution field should not fear these developments. Yes, there are risks in the disruptions they will introduce, but there are many opportunities as well. AI and machine learning are just tools, and as with all tools, we need to set rules and guidelines to minimize the risk of harm. We must always ensure that the fourth parties we work with are under human control, that they are constantly reviewed and reviewable, and that they are monitored in a transparent way to ensure their compliance with the ethical guidelines that govern our field.

Used correctly, these tools will expand the reach of our field into dispute types and geographies that we were previously unable to service. They could result in a major expansion in access to justice around the world, with more peaceful resolutions and more fairness and justice. Yes, many questions still need to be answered, and many best practices and ethical rules are yet to be devised. But from my perspective the promise outweighs the pitfalls, and we should work together to build and refine these machine learning mechanisms to devise the optimal fourth party partner that can best assist us in helping our parties find resolution.