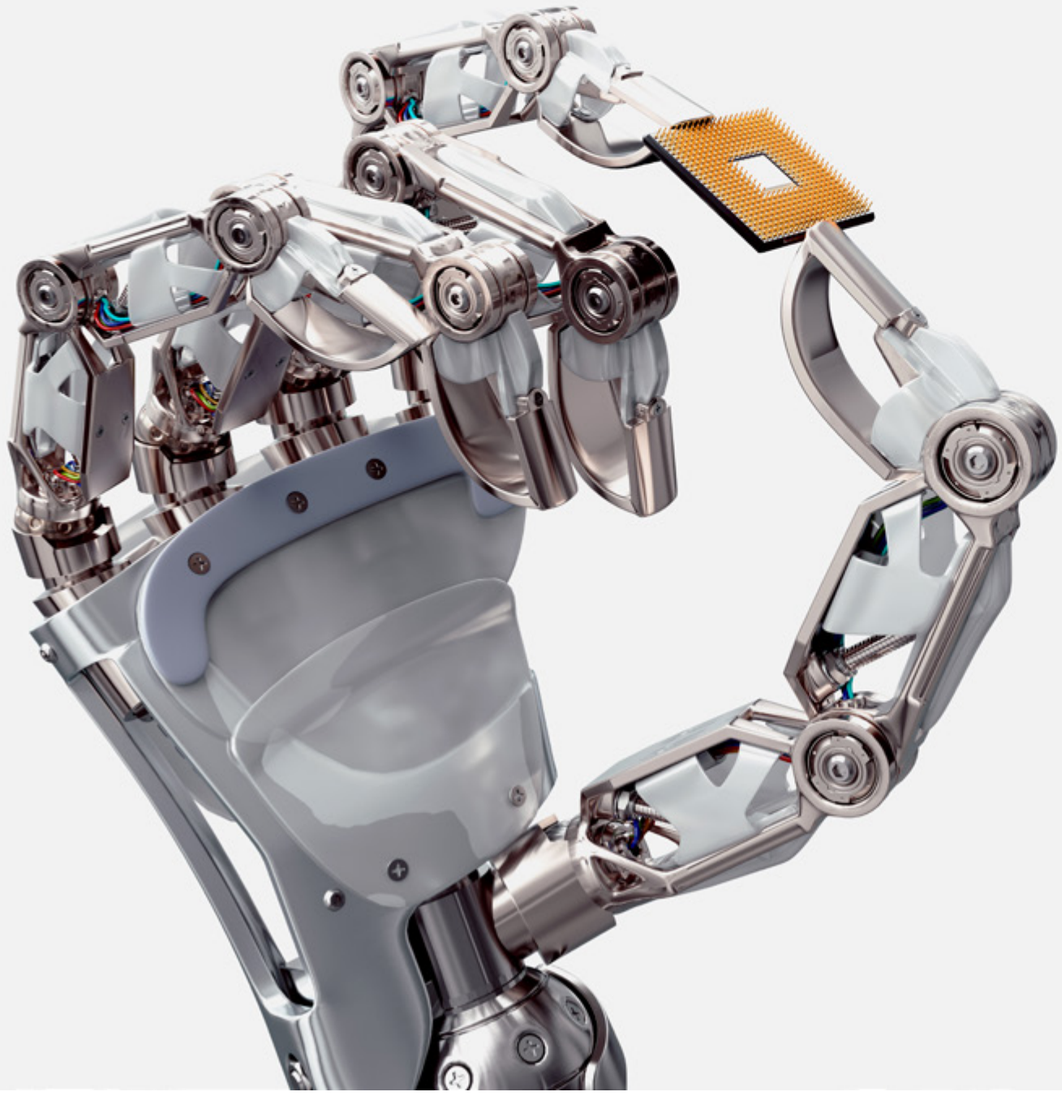
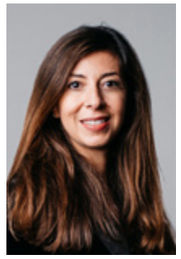




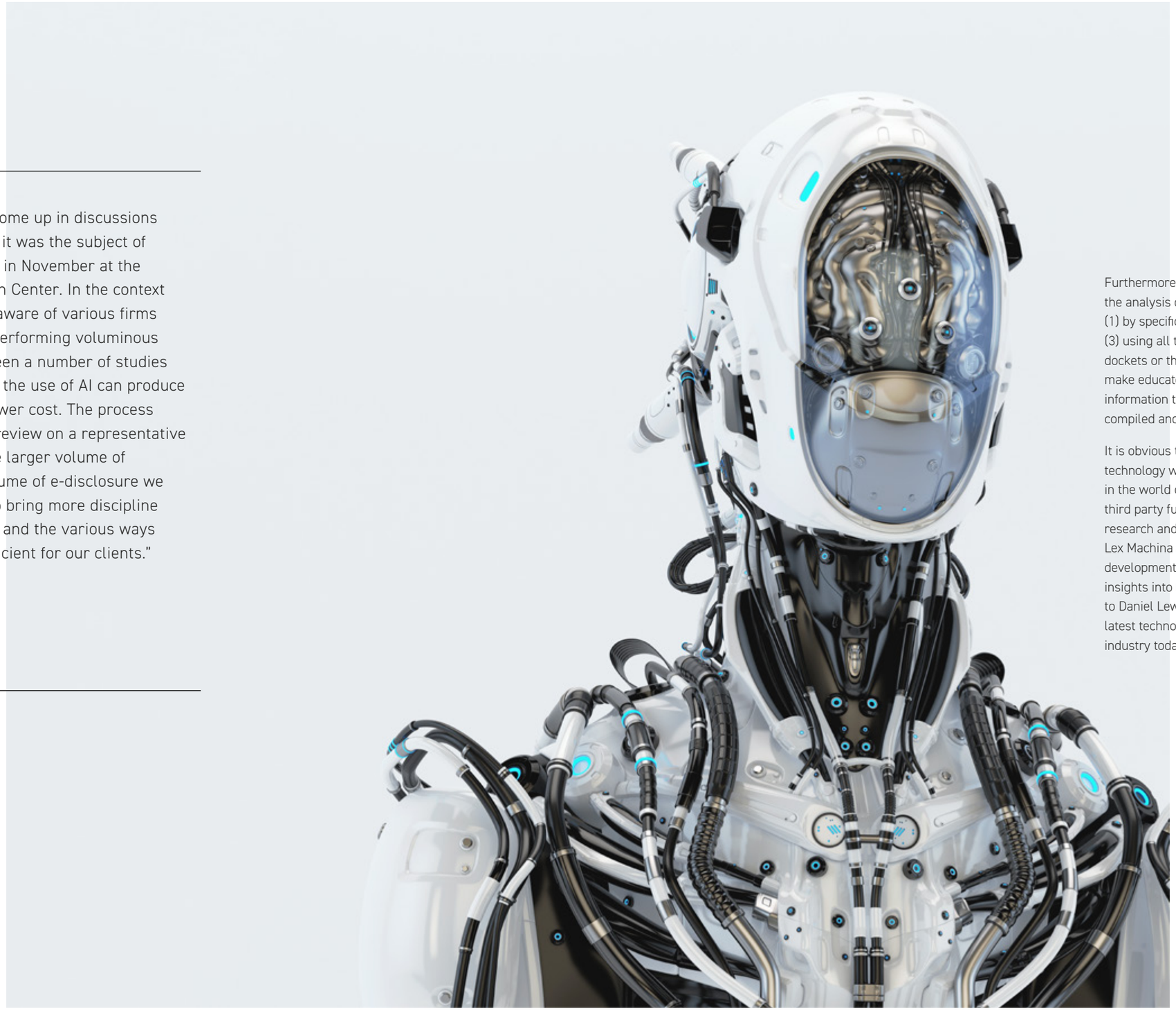
Yasmin Mohammad
Managing Director
VANNIN CAPITAL

WILL ARTIFICIAL INTELLIGENCE REPLACE LAWYERS?

There is not a legal conference these days that does not address in one way or another the development of legal technology and how it is impacting the industry. First and foremost, legal technology has transformed the way document management is performed and the benefits derived from it. We can now digest and analyse thousands of documents in a fraction of the time and largely prevent the inevitable human errors in reviewing them.

"The topic of AI has increasingly come up in discussions here in the United States. In fact, it was the subject of an international arbitration event in November at the New York International Arbitration Center. In the context of international arbitration, I am aware of various firms that have used AI technology in performing voluminous document reviews. There have been a number of studies on this and the results show that the use of AI can produce reliable results for clients at a lower cost. The process involves some level of "manual" review on a representative sample, which then feeds into the larger volume of documents. The reality of the volume of e-disclosure we are now faced with requires us to bring more discipline into the document review system and the various ways in which we can make it more efficient for our clients."

Sammaa A.F. Haridi
Patner
HOGAN LOVELLS US LLP



Furthermore, legal technology is now permitting the analysis of previous decisions in various forums (1) by specific judges, (2) on particular motions and (3) using all the information contained either in the dockets or the decisions rendered themselves to make educated decisions on case strategy, using information that was always available but never compiled and analysed as one data set.

It is obvious that the notion of "predictive" legal technology would be a considerable game changer in the world of litigation, arbitration and naturally, third party funding. In the United States, legal research and analytics firms, Ravel Law and Lex Machina are spearheading research and developments into this new era and developing insights into this truly predictive technology. I spoke to Daniel Lewis, co-founder of Ravel Law, on the latest technological developments shaping the legal industry today and this is what he had to say...

Daniel Lewis
Co-founder

RAVEL LAW

How are lawyers using platforms like Ravel Law to facilitate their role in litigation and arbitration proceedings? People turn to Ravel to search caselaw more quickly and to discover analytical insights about judges, courts, cases, and firms. For example, a litigator can see what percentage of the time a judge grants a motion to dismiss in a particular type of case (e.g. product liability), and discover the language and cases that the judge commonly uses and is influenced by in such decisions. This enables lawyers to make data-driven decision about what is likely to happen in the case and how to make their desired outcome more likely.

How do we bridge the gap between analysing the past and predicting the future? This is a question we are actively working to answer to develop more prediction capabilities. Tabulating past examples of grants and denials, and carefully inspecting the individual circumstances of those outcomes, can be extremely useful. A formal predictive model, though, is more robust: because it has been trained on thousands of examples, it can generalise more confidently about the relative influences of dozens of factors.

Suppose you are interested in a motion's odds of success given a particular set of circumstances—a specific court, judge, motion type, topic—for which there are very few direct examples. It would be difficult to reliably estimate a motion's grant probability given just these examples, and even more difficult to know which factors most influenced the observed outcomes. Our predictive model is less brittle than simple tabulation, since it learns from all motion outcomes handed down from the particular court, all motion outcomes decided by the particular judge, and so on—and it learns to generalise about the average impact of each of those factors, bringing this generalised knowledge from thousands of observations to bear even when predicting outcomes of cases with few direct observations.

Can we talk about Artificial Intelligence or is that two/three steps removed from the existing technology? AI is perhaps best thought of in two different ways, specific vs. general. Specific AI is already taking place extensively; machine learning is being used to accomplish specific tasks. For example, we use machine learning throughout our systems to extract and classify information from legal documents (e.g. an algorithm that has been trained to identify any motions involved in the case). In contrast, general AI, which people think of as a self-functioning robot that acts like a human, is far off.

It is clear from our discussions with Daniel that the development of predictive technology is gaining pace and having a huge impact on the legal world as a result. This development is however in its infancy and there is some work to be done before law firms can fully embrace AI as an effective case management and business tool.

THE RAW DATA SET NECESSARY FOR EFFECTIVE ANALYSIS AND INTERPRETATION MUST BE EXTENSIVE TO ALLOW FOR PATTERNS TO BE IDENTIFIED AND ANALYSED EFFECTIVELY. CLEARLY, THE LARGER THE DATA SET, THE MORE EDUCATED THE TECHNOLOGY AND THE MORE ACCURATE THE EDUCATED GUESSES BECOME

The devil is in the data

The raw data set necessary for effective analysis and interpretation must be extensive to allow for patterns to be identified and analysed effectively. Clearly, the larger the data set, the more educated the technology and the more accurate the educated guesses become. If a judge has only handed down a handful of decisions on a particular type of motion, the analysis would remain inconclusive presumably. With the current technology, lawyers can learn from the past and make more informed strategic decisions. According to Daniel, for the analysis to become predictive, the data set would need to be substantially increased.

What we did not discuss with Daniel but which is clear, is that the system of stare decisis in the United States and most common law countries which binds lower courts to the decisions of higher courts is conducive to more foreseeability. This calls into question the possibility of using predictive technology in the context of civil law jurisdictions and arbitration.

Analytical technology takes into account that a same judge is likely to react similarly in similar situations. Presumably, predictive technology will also take comfort in the fact that that subsequent courts of the same jurisdiction will follow the decisions of the higher courts before them.

That being said, it is not a huge stretch of one's mind to consider that well educated analytical technology is in fact more refined and weighted than any use of the stare decisis principle.

Several academics have proposed algorithms for predicting case outcomes based on information such as the composition of an appellate panel and the ideology, gender and background of the judges, and these algorithms have generally performed better than law professors' predictions based on the legal issues involved.

In fact, the use of much broader information and publicly available data concerning any single potential dispute and specific judge or arbitrator has significantly changed the matrix of predictive technology. One can only imagine the impact of other data sets that could be used: social backgrounds, political affiliations, sexual orientations, family situations, financial situations etc. Should these "human factors" that lead to unconscious biases not also be taken into consideration? Would in fact Big Data also not become a very important parameter to consult?

Required Interpretation

For the analytical technology to become properly predictive, interpretation of the information is required. How does one teach a machine to go from highlighting patterns and correlations between facts and events to proposing causation and conclusions?

Saying two variables are highly correlated does not mean one is causing the other; both could be caused by a third, unidentified variable, or it could be a random correlation, or the dataset could be biased or simply too small. Dispute resolution analytical technology currently consists of identifying correlations. It takes an experienced lawyer to review the data and understand the valuable, actionable insights and random patterns that are irrelevant.

International Arbitration?

In the context of international arbitration, the hurdles are two-fold: (1) awards are not public information for the most part in commercial arbitration and only partially in investment treaty arbitration and (2) tribunals do look to certain decisions for guidance but only in an informative manner except for a dozen truly authoritative decisions most often quoted. Clearly, the fact that there is not a substantial amount of recorded precedents that can be used to educate the technology is a significant hurdle.

However, the amount of academic writing from individual arbitrators is on the other hand substantial. Moreover, arbitrators express their opinions about various legal or factual topics very regularly, whether directly online in forums or during conferences, and those opinions are recorded. What if all of those expressions of opinion and views could be also captured and analysed when determining how a particular three-person Tribunal is most likely to decide on a dispute?

Another tool that could greatly aid parties' views of settlement discussions post hearing is to use analytical and statistical technology to analyse the questions of the arbitrators during a hearing. Several studies in the United States have shown a correlation between the number of questions asked to each party and the overall result of a case. The more questions were asked of a party the more they were likely to lose and to lose more severely.

The possibilities to increase the data set seem endless but the interpretation will presumably always be required.

Lawyers can be reassured; their counsel will continue to be needed but their decision-making processes will be better informed.