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Arbitration 2.0: Integration of Artificial Intelligence and other technologies to enhance the efficiency of Arbitration

Practical Possibilities: 'Blue sky' thinking meets the real world of Arbitration – a discussion paper by Tim Lord KC and Amanda Lord

The bigger picture

Across the world, there is already a huge unmet need for legal services. With economic growth and development and the attendant increase in business activity, that need will only increase. Yet there remains an unfortunate public perception of law and lawyers as expensive and uncommercial: over-complicating and obscuring rather than clarifying and facilitating dispute resolution between businesspeople.

As our use of technology in our own daily lives, from the apps on our phones to the ability to find out the answers to the most obscure question in a heartbeat, increases our own sense of control, it seems inevitable for clients to expect a greater sense of control over the process by which their legal disputes are resolved. As they read in the press that AI can now beat human candidates and pass the US Bar exam, as well as resolving small scale disputes where the desire of both parties to get a decision and move on outweighs any appetite for a 'proper' assessment of the matter in all its complexity, they will increasingly expect the legal sector to figure out where and how AI can, as well as cannot, add value higher up the legal food chain.

As we lawyers know, and as more sophisticated clients will acknowledge, legal excellence is hard won and justifiably expensive. It has a human quality that, like an elephant, is hard to define but easy to recognise. It is by no means synonymous with human intelligence and cannot be replicated on a like-for-like basis by artificial intelligence or machine learning. Nevertheless, for the commercial value of the legal excellence so prized within the profession to remain a commodity valued by business clients, they must be able to see it at work and understand the value added by lawyers above what can be plausibly generated by AI.

What might enhanced efficiency in Arbitration look like?

In any discussion of how to enhance the efficiency of what is in effect a client-facing alternative to litigation, it is worth digging a little deeper to consider what 'enhanced efficiency' would look like to clients, and which aspects could genuinely benefit from a technological boost.

Arbitration is often thought to be quicker and cheaper than litigation. Although it is not always so in practice, speed and cost-containment remain important to every client, and anything that really does enable lawyers to do their job quicker, better and cheaper is deserving of our attention. Certainly, the client perception that the AI-driven cost and time savings they are seeing in their own business spheres ought to translate into savings in their legal affairs requires consideration.

Whilst not allowing the AI tail to wag the legal dog…

Spaniels can have a sense of smell up to 100,000 x more powerful than that of a human; but however well trained, their abilities massively outweigh their judgment and the responsible handler will keep them under close control!

No paper on AI integration would be complete without restating its potential pitfalls. To repeat a distinction drawn by Dan Hunter, the Executive Dean of The Dickson Poon School of Law at King's College London, whose excellent explanations always add light to the heat of AI innovation, Generative AI is still best kept for 'word games' rather than for thinking or true analysis because, however plausible its answers, it is predicting patterns rather than applying rules. Indeed famously, when it first emerged and before a calculator function was added back in under the hood, it delivered hilariously wrong answers to simple sums because it predicted rather than calculated: a cautionary tale to remind lawyers to ensure they understand which tasks Gen AI can, and cannot, be relied upon to undertake reliably.

Of course, the body of legal precedent and learning that lawyers spend years studying, rather like its medical equivalent, is intrinsically complex and multi-faceted. Whilst technology can already help us store and search it, this paper argues that applying it to a factual matrix is the ultimate legal skill, trained and honed by all the years of study and experience. It requires such a human combination of nuance, judgment, empathy and discernment that, at least for as long as judges and arbitrators remain human, it must not be handed off to technology. But that is far from the whole story.

Speed and cost efficiency

Speed is undoubtedly the lowest hanging fruit. Recent benchmarking research such as the Vals AI Report2 showed that AI tools consistently outperform human lawyers in areas such as document Q&A, document summarisation, data extraction, and transcript analysis. Whilst some of the tested GenAI tools responded much quicker than others, all of them performed exponentially faster than the human lawyer control group; six times faster at their slowest and 80 times faster at their fastest. Therefore, even where tool performance is not at its highest, these GenAI tools can be a significant time-saver for lawyers if used as a starting point for more efficient work.

Well before Generative AI became widely used, machine learning in eDiscovery had become established: in 2012 in the US and recognised by the UK courts in 2016 and formalised by a Practice Direction in 2022. Relativity and now RelativityOne are well-known in this space, although competitors like Everlaw and DISCO are also making inroads, and smaller eDiscovery partners like Sandline Global, who work with more than one eDiscovery platform, can advise on the pros and cons of different platforms for different use cases. Whilst there remains a risk that, however well trained, an eDiscovery model can miss documents which might have been relevant had they ever seen the light of day, as datasets get larger and larger, cost considerations have required a pragmatic approach and that risk has been largely accepted as a reasonable trade off.

There is thus no longer any real doubt that AI can sift, cluster, deduplicate, and highlight relevant documents much faster than human review teams, generating summaries of long witness statements and expert reports that flag up the differences potentially helping arbitrators and counsel grasp material quickly. Organisations that own databases of case law and awards as well as procedural guidance, such as Jus Mundi, are perfecting AI's ability to work within them to deliver reliable legal and procedural research. AI could assist tribunals with first-draft structures, formatting, and boilerplate language, and assist parties to assemble procedural or topic chronologies, extract key dates, and identify dependencies. Once confidentiality is assured, it could even act as a sounding board to test out the coherence of a legal argument or a line of questioning. In the future, it may be trained on historical data to forecast likely timelines, expenses or even awards.

What else matters to clients?

However, cost and time savings are not the whole story. Neutrality, confidentiality, finality and enforceability are also important to clients, although the application of technology to those areas is more esoteric. The area that may be of most interest to legal practitioners, and the focus for this paper, is the possibility that arbitration could offer commercial clients greater involvement with, and therefore control over, the process leading to the final decision. There is much talk of lawyers being 'freed up' by AI to do the higher value work. What that higher value work looks like in the context of Arbitration is arguably the most interesting question of all.

A big perceived advantage of arbitration over litigation for business-people who know their own industry is that, whilst they cannot control the outcome, they can at least follow, and play a meaningful role in, the arbitral process itself. They are able to choose arbitrators (often with sector-specific expertise) whom they consider not only legally able but also practically-minded, and those arbitrators are generally minded to seek party input in order to arrive at the best way of approaching an issue on which a decision has to be reached. How can AI help arbitration enhance these advantages?

Taking it in stages

So far, at least in dispute resolution, AI has largely been deployed by lawyers behind the scenes, to help with case preparation and the preparatory tasks they already know how to do. There is obvious value in parties using AI like a well-trained associate to deliver up summaries and extracts reliably and in a consistent format to minimise the time that expensive legal brains spend on more mechanical tasks that do not require their expertise and do not justify their fees.

Less attention has been paid to the use of AI at the sharp end: when the time for preparation is over and decisions need to be made. As long ago as 27th April 2022, in a speech to the British and Irish Commercial Bar Association, Sir Geoffrey Vos (Master of the Rolls and the Head of Civil Justice for England and Wales as well as President of the Civil Division of the Court of Appeal) predicted a future in which, once the issues on which the parties are divided have been identified, decision trees could usefully replace lengthy pleadings and witness statements, expert reports and even lists of issues.

Step 1 – What are the issues?

Disaggregation, by which for this purpose we mean the ability to break down a factual narrative into a set of legal issues and sub-issues, is a core legal skill, taught from the start of an academic law course and honed through long experience. It is also Step1 for any lawyer when first confronted by a set of facts. Although extracting legal issues from a factual narrative might appear to be the sort of 'word game' task for which AI would be well suited, a little experimentation quickly shows that the beguilingly plausible results are usually either incomplete or far too superficial: human intelligence and engineering remain as essential here as elsewhere.

However, as illustrated by the rarity of lists of issues being agreed between the parties to an Arbitration, there is ample scope for dispute even at this first stage. Given the lightning speed with which AI can generate responses to almost any question, is there scope for the issues to be discussed, and AI deployed, with the real time involvement of all parties to nail down the areas of genuine dispute?

Although lawyers are generally more comfortable with words and narrative than visualisation tools like decision trees and mind maps, businesspeople are far more used to pictures: spreadsheets with graphs and pie charts are routinely used in the business world to enable humans quickly to digest and make decisions on the basis of complex information. Requiring each issue to be capable of being displayed on one large screen (or printable onto 1 sheet of A4) might strip away verbal sophistry and help to concentrate minds in a way that many business clients, and many Arbitrators frustrated by the difficulty of finding the nub of difference between competing arguments, would welcome.

Step 2 – What does the evidence say about the issues?

If Step 1 is the identification of legal issues and sub issues, Step 2 is the search for evidence relevant to each of those issues, and the Step with which AI and machine learning through eDiscovery already has the most well-established involvement.

The final Step, at least in the common law adversarial process, may be said to be the selection and presentation of the most compelling, or damning pieces, of evidence on each issue to the decision maker: for this purpose, the arbitrator or arbitral panel. In the UK at least, this has in the past often be the stage at which the advocate counsel are brought in for the first time. Whether the documents are presented digitally or on paper, for newcomers to get on top of the evidence at this stage can be a cumbersome, and occasionally fraught, business.

Enter the AI spaniel

Accordingly, understanding all the potential pitfalls of deploying AI inappropriately, where in this process is there genuine scope for AI to help drive efficiency?

Search and Retrieve

A spaniel will cheerfully blast through what looks to humans to be impossibly tangled and spiky undergrowth, and can usually (although not always) be trusted to emerge triumphantly with whatever it was sent in there to find held proudly in its mouth. In a very similar way, properly deployed AI has the potential to enable human lawyers to cut through large volumes of documentary evidence to find the most relevant on any given issue.

Delivering up what AI considers the most relevant evidence on a given issue

Of course, lawyers should not rely on something AI has produced without specific and careful human checking and review. That is not only to ensure that the eager-to-please AI has not 'hallucinated' fake case citations, as in the notorious recent UK and the US situations, but also to be able to be confident that nothing important has been missed. One of the established truisms of the AI world is 'garbage in, garbage out': in other words, the results of an AI search are only as good as the prompt, or the framing of the task that AI was used to tackle.

So, a dispute-specific word of caution here. For now at least, compound prompts, rather like compound cross-examination questions, generally produce worse results than those that have been carefully thought through and cut into bite-sized chunks, and it is always worth coming at an important question from more than one angle and asking AI to do a final check on what it has produced before the human settles down to do just that. Negative responses such as "nothing relevant found" need very thorough double-checking before they are accepted as accurate. Of course, as with eDiscovery, there may come a point at which the cost of human review vs machine review is no longer

commercially justifiable, but any sensible lawyer should interrogate the operator of any 'chat with your documents' tool to understand the questions asked and the precautions taken to minimise the risk that an important document has been missed.

It follows that how a particular AI-driven tool delivers up its results really matters. In order to avoid so-called "black box" uncertainty, a lawyer must be able to answer the 'and how do you get there?' question: in other words, to explain the basis for any argument or proposition that they are putting forward. We are a long way from "because AI says so" being an acceptable answer! It is therefore essential that the tool makes it possible for a human lawyer to interrogate the results of any AI-assisted search; a well-designed tool will make it easy to do so, for example by extracting the relevant part of any document that is said to support any given proposition and setting it out alongside commentary and deep links.

Finally, it is of course not only what you get but what you do with it that matters. How AI-generated responses are integrated into the case-team's analysis to ensure efficiency at a straightforward case management level (ie to ensure that no work is duplicated, or useful insights lost or misfiled so as to be later overlooked) remains essential and deserving of careful thought at the earliest stage. Otherwise, AI simply produces yet more data to add to the volumes of data that made AI involvement a worthwhile approach in the first place.

Presenting the finished product

Spaniels are not about to be entrusted with the task of extracting the choicest cuts from the pheasants they retrieve and serving the finished dish up to honoured dinner guests. That, and its advocacy equivalent, remain quintessentially a job for humans.

In between, however, is a fertile area for technology and humans to work together in efficient harmony: first, to reach a place of clarity in the analysis of a complex matter, then to present it so as to preserve and communicate that clarity. The human lawyer's ability to distil complexity to find clarity is often the reason that an individual, team or firm was retained by non-lawyers in the first place and the importance for human lawyers both of retaining, and of being able to demonstrate, that ability cannot be overstated.

That clarity is easily lost, both in the preparation of a large matter and also in its presentation; particularly if the results are only set out in the lengthy narrative documents traditionally found in the legal world (but notably less beloved of the business world with its executive summaries, graphs and one-pagers). AI's other proven skill, already much better understood in the creative sphere of text to image, podcast or video and back again but also beginning to be used by lawyers in eg speech-to-text AI note-takers, is its impressive ability to translate information not only from one language to another but also from one format into another, ie from text into a graph or a decision

tree and back again. It is therefore ideally placed to help lawyers to develop a skill that our business equivalents have long learnt to love: the visual representation of complex information.

Closing thoughts……

Once human lawyers have used carefully curated AI and other technology to help them identify the issues and present the evidence on each in a way that allows the results to be displayed either at high level for overview purposes, or at the granular level of a particular part of a document that supports or undermines a proposition, both clients and arbitrators have a much better chance of truly understanding the issues at stake.

One example of what might be described as a carefully curated technological solution is a barrister-developed platform called *Associo* that has applied KC logic and experience to the efficient preparation and presentation of complex disputes. The platform enables a team or individual to build up a case issue by issue, attaching all relevant evidence that either supports or undermines it. That stage-by-stage approach can be accessed by anyone on the team at any point as the case is prepared, whether to sense check or update a new team member or the client. Once the most relevant documents have been identified on an eDiscovery platform, they can be uploaded and 'processed' by AI within carefully thought-through guardrails. Rather like a magic larder of pre-prepped and ready to use ingredients, once processed in this way evidence can be viewed in any combination: not only by issue but also by topic or progress, chronologically by date, by individual, just the supportive or damning evidence on any point or just the section of the case that one team member has been working on and now wants to share. Once that approach to digital information processing is fully understood, dispute teams can start to get sensibly creative. Beyond its obvious use by a party with its own advisers, which could in itself be part of a more technological arbitral process, could such technology be the basis for an even more innovative way of undertaking dispute resolution in arbitration…?

A forward-looking Arbitration Centre might even pioneer a new more interactive process, using a platform that allows the parties to follow the reasoning of each side and even that of the Arbitrator or panel, live on the screen as the case/hearing unfolds. This could chime with what Sir Geoffrey Vos MR had in mind. Rather than a wordy narrative transcript, the analysis and relevant evidence could be followed in real time, issue by issue, ensuring that the arguments on one side deal squarely with the arguments on the other, never passing like ships in the night or leaving business clients in the dark to rely on their lawyers to 'translate' what is happening. Such an approach might result in a transparency and accessibility that all parties would find both refreshing and efficient. In some cases, the Arbitrator(s) might even find it useful to indicate to the parties how they are seeing each issue and where they would welcome

further clarification or assistance as part of the adjudication process rather than leaving parties on tenterhooks until the final award is delivered.

Arbitration is very well placed to lead the way in the use of legal tech and AI as its procedures are intrinsically flexible and expressly permit of adaptation to the requirements of the dispute in hand. There are many challenges with the use of AI in the legal sphere, and this paper makes no claim to have the answers. That said, skilled lawyers with their hands very firmly on the collar of any technological "spaniel", could reap significant dividends both in terms of the quality of the legal dispute resolution product on offer and client satisfaction: a prize surely worth pursuing.

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Pip is their much loved and highly talented (but somewhat wilful and headstrong) working cocker spaniel, who has in his own way contributed significantly to this paper: