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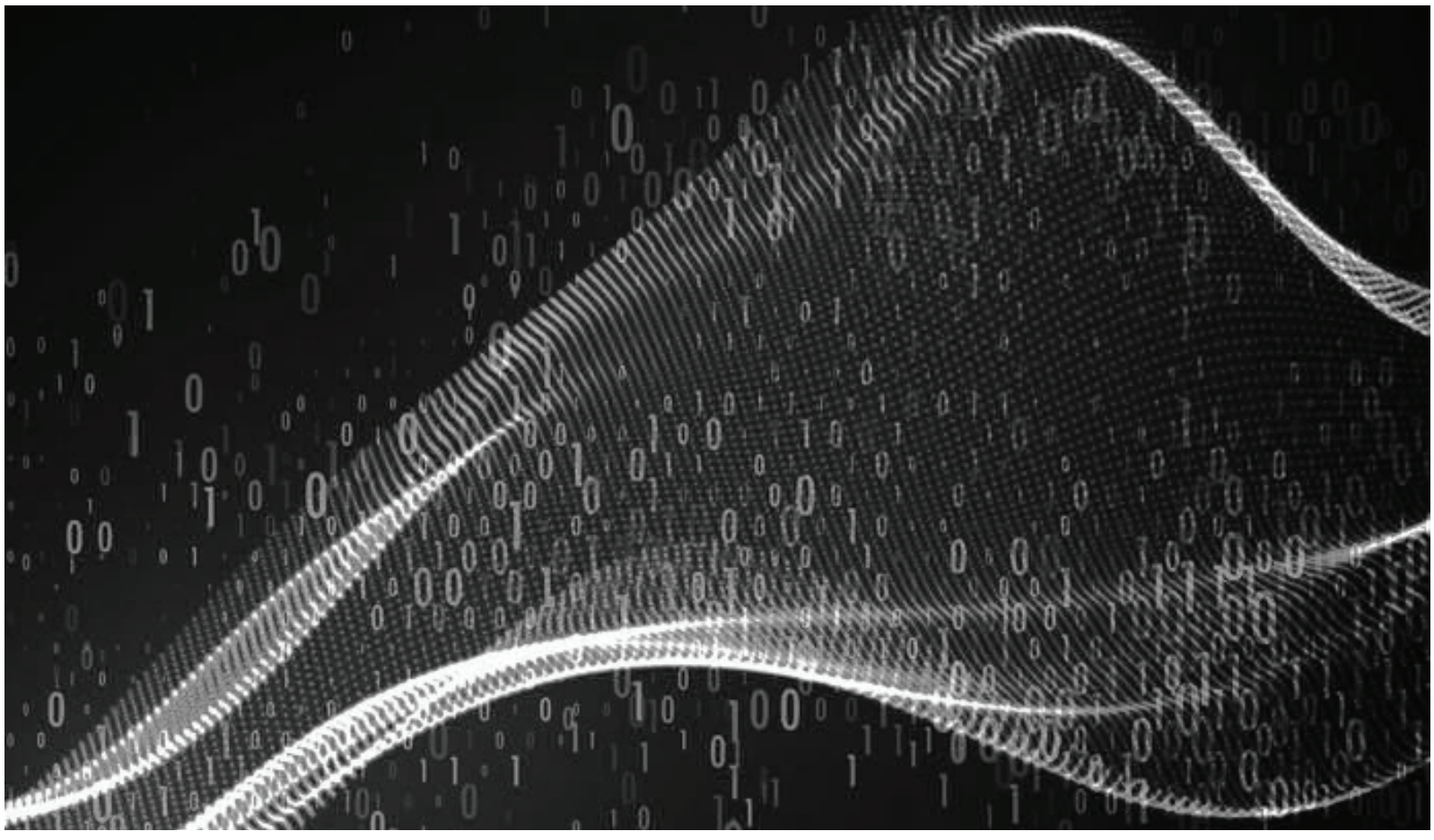

THE INEVITABILITY OF PREDICTIVE CODING IN INTERNATIONAL ARBITRATION

By Paul Kinninmont

1. INTRODUCTION[1]

International arbitration cannot withstand the inexorable march of technological progress any more than the national courts with which it competes for jurisdiction.[2] As recently as this month, Clifford Chance – a leading law firm – announced a comprehensive training programme for its lawyers that covers cybersecurity, block chain technology and predictive coding.[3]

In this article, I will argue that predictive coding can, and should, bring efficiency gains and costs savings to the document production phase, and thus the arbitration process overall.[4] Given the flexibility already inherent within the arbitral process, predictive coding can, and should, fit into proceedings without any need for changes to arbitration laws or institutional rules.[5] In all likelihood, it is already doing so. Examples of quick adoption in other jurisdictions indicate that predictive coding is likely to become commonplace sooner than many practitioners expect.

2. WHAT IS PREDICTIVE CODING?

2.1 Summary

Predictive coding is a software algorithm that can be 'taught' how to interrogate a set of electronic data in order to identify documents possessing certain characteristics with a high degree of accuracy. There are three main ways in which it can be used:

1. It can replace extensive human review. Initially, a senior lawyer with proper knowledge of the issues in a given case reviews a stratified sample of documents and codes them. The software 'learns' from this coding, then replicates that coding across most of the remaining data set.

2. It can make human review more efficient. As all document reviewers progress through search results, the software continually 'learns' from their cumulative coding and 'promotes' un-reviewed documents to ensure that the next documents to be reviewed by humans are more likely to be relevant.

3. It can 'quality control' human review. As all document reviewers progress through search results, the software 'learns' from

their actual coding but simultaneously in the background records the coding it thinks should be applied in light of the actual coding cumulatively applied so far. At the end of the review, the two sets of results can be juxtaposed and the differences between them reviewed to ensure nothing has been missed or coded in error.

While useful, the second and third ways are a matter of internal case management, which need not involve the other party to proceedings. Although both yield efficiency and risk mitigation benefits, they still involve extensive human review and so do not bring the huge advantages described below. This article therefore focuses only on the first way, which, as studies show,[6] can produce superior, more consistent results than manual document review.

2.2 Commentary

Perhaps unsurprisingly given the relative novelty of predictive coding, there are no publicly available awards that mention it, though it may already have featured in some procedural orders.[7] In addition, predictive coding is not yet mentioned in the document production chapters of several leading practitioner texts. Given its swift adoption in several jurisdictions, however (on which see below), it soon should be.

In the meantime, these same practitioner texts all emphasise:

1. The unwieldy nature of the vast numbers of electronic documents that often need to be searched during disputes;[8]

2. The different expectations in respect of the approach to evidence gathering of arbitration practitioners from different jurisdictions;[9]

3. The flexibility available to parties in their approach to evidence and document production;[10] and

4. The extensive discretion tribunals possess in this regard.[11]

These factors, on which there is academic (and practitioner) agreement, suggest that widespread usage of predictive coding should be a possible and welcome development in international arbitration.

3. HOW DOES PREDICTIVE CODING WORK?

Predictive coding software combines computer intelligence and filtering techniques with human decisions to automate a large part of a given document review. The goal is to reduce the number of irrelevant documents for manual review, and to identify quickly the most relevant documents in large data sets.

There are different predictive coding software options on the market, but all go through slight variations of the stages described below. Usually, these stages will be agreed (at least to an extent) between the parties and memorialised in a protocol, and can be re-worked if further data comes to light, or is generated, between the document production phase and trial:

1. Definition of the data set to which predictive coding will eventually be applied, including custodians whose documents will be searched, a date range and, in most instances, the application of keyword searches and document management techniques (such as de-duplication);

2. Definition of which types of document will fall within this data set (some documents are not conducive to predictive coding, on which please see below);

3. Population of a statistical sample of documents, which the software will use as a reference point (the "**Reference Set**"). This must contain good examples of both relevant and irrelevant documents – that is, documents that are descriptive of the concepts of interest, ideally with several developed paragraphs of text. A senior lawyer familiar with the issues in the case will code these documents;

4. Appropriate management of disruptive and/or repeated text, such as headers, footers and disclaimers, the repetition of which could skew the way in which the software interrogates the data set; and

5. Agreement in respect of confidence level and/or margin of error. This will dictate the precision the software is required to exercise when it eventually replicates the decisions of the senior reviewer across the data set. The more precision the parties require, the longer it will take to 'train' the software, though even achieving great precision invariably involves a manual review of only a relatively small selection of documents in the whole data set.

With these parameters in place, the senior lawyer can begin to train the software. Importantly, the software does not learn from the coding decisions applied to the Reference Set. Instead, once the Reference Set is finalised, the software generates sample batches of documents for the senior lawyer to review. As the senior lawyer reviews these documents, the software iteratively learns by comparing the new coding decisions against those already applied in the Reference Set, becoming progressively more accurate.

This process finishes once the coding applied by the software replicates that applied by the senior lawyer to the pre-agreed level of accuracy, as confirmed by the senior lawyer. The software's understanding of what constitutes a relevant document is a mathematical model, which defines relationships between words, and which can be audited.

The software's learning is then replicated across the whole data set. A good way to think of the results of this replication is in terms of a 'U' shaped graph:

1. On the left hand side of the 'U' are documents the software is sufficiently certain are irrelevant. These documents are deprioritised and randomly sampled for quality control, but otherwise removed from further consideration.

2. On the right hand side of the 'U' are documents the software is sufficiently certain are relevant. These are prioritised and promoted for careful manual review.

3. In the middle of the 'U' are a minority of documents about which the software remains uncertain, which will require manual review after the promoted documents the software believes to be relevant.

Following these manual reviews and quality control, a party will prepare relevant documents for production in the usual way. Any issues as to whether the predictive coding was applied correctly can be audited by reference to the mathematical model mentioned earlier, the history of the coding of the Reference Set, the other sample batches, the promoted documents and those documents about which the software was uncertain.

4. WHY IS PREDICTIVE CODING SO BENEFICIAL?

Some benefits are immediately apparent from the summary above, others less so:

1. Greater efficiency is achievable. Assuming the above process is performed properly, far less manual review will be required, meaning greater speed.

2. Bespoke deployment always occurs. As the software is trained and re-trained differently for each dispute, its use is very specific.

3. Any difficulties are usually discovered quickly. Either the senior lawyer or the manual reviewers are likely to detect any inconsistencies or problems. These can be addressed between the parties during the document production phase.

4. The results can be audited relatively easily, meaning any criticisms or necessary adjustments can usually be quickly addressed in good time before trial.

5. There is an element of certainty. The replication of a senior lawyer's decisions by impartial software can be superior to those of more junior reviewers, whose knowledge of the dispute is usually less complete and whose decisions can diverge considerably.

6. All of this means significant costs savings overall. Indeed the more documents the software can review, the greater the saving.

5. ARE THERE ANY LIMITATIONS, DISADVANTAGES OR RISKS?

Similarly, some limitations are more apparent than others:

1. A lot of work is front loaded. The issues in dispute therefore need to justify the extensive involvement of a senior lawyer from an early stage. Consequently, predictive coding is not usually suited to smaller cases (absent further technological advances).

2. Consistency is key. Although it will not always be possible, ideally the same one (or two) senior lawyer(s) should review both the Reference Set and all of the subsequent sample batches of documents. The ultimate results can only be as good as the senior lawyer undertaking these initial reviews.

3. The accuracy level is important. The parties must buy into the percentage accuracy level, but it must also meaningfully reduce the data set so that only minimal manual review is necessary.

4. Certain documents cannot qualify. Given its nature, predictive coding works best on text rich documents with relatively consistent wording. Consequently:

a. The paucity of text in text messages and chat messages, along with frequent colloquialisms, abbreviations and misspellings means such documents must usually be reviewed manually.

b. At present, predictive coding does not work on audio data.

c. Although predictive coding can work across multiple languages, it will need to be trained to do so. If there are only a minority of foreign language documents, it will likely be more efficient to review these manually.

6. CAN PREDICTIVE CODING OPERATE IN INTERNATIONAL ARBITRATIONS?

6.1 The New York Convention[12]

Given its age, unsurprisingly there is no express mention of predictive coding here. However, Article V.1(d) stipulates in relevant part that "*Recognition and enforcement of the award may be refused…if …the arbitral procedure was not in accordance with the agreement of the parties, or, failing such agreement, was not in accordance with the law of the country where the arbitration took place*."

Three conclusions can be drawn from this:

1. If the parties agree to use predictive coding as a procedure in the arbitration, there should be no difficulties arising from its use at the enforcement stage in signatory countries. This accords with the designation of primacy to party autonomy in arbitration, which is now widely regarded as trite law.[13]

2. Party agreement in this regard should override any contravening procedural laws in the seat of the arbitration or the jurisdiction in which enforcement is sought (the latter of which is irrelevant for the purposes of Article V.1(d)). Again, this is trite law.[14]

3. If the parties do not agree to use predictive coding (perhaps if the Tribunal orders it instead), there will still be no problem at the enforcement stage unless the jurisdiction of the seat of the arbitration – not the seat in which enforcement is sought – prohibits it. As will be shown below, that appears unlikely.

6.2 The UNCITRAL Model Law[15]

An analysis of individual domestic arbitration statutes is beyond the scope of this article. However, given the third conclusion immediately above, it is worth briefly considering the

UNCITRAL Model Law, upon which the majority of domestic arbitration statutes are extensively based.

Again, there is no express mention of predictive coding. The relevant Articles are 19.1, which grants the parties freedom to agree upon procedure, and 19.2, which grants to the Tribunal broad discretion in this regard.[16] As to whether this freedom and breadth could permit predictive coding, the commentary that accompanies the UNCITRAL Model Law is so encouraging that it is worth quoting the relevant sections. Article 19 "*guarantees the parties' freedom to agree on the procedure to be followed by the arbitral tribunal in conducting the proceedings, subject to a few mandatory provisions on procedure, and empowers the arbitral tribunal, failing agreement by the parties, to conduct the arbitration in such a manner as it considers appropriate*" (my underlining).[17] Moreover, the "*autonomy of the parties in determining the rules of procedure is of special importance in international cases since it allows the parties to select or tailor the rules according to their specific wishes and needs, unimpeded by traditional and possibly conflicting domestic concepts… The supplementary discretion of the arbitral tribunal is equally important in that it allows the tribunal to tailor the conduct of the proceedings to the specific features of the case without being hindered by any restraint that may stem from traditional local law, including any domestic rule on evidence. Moreover, it provides grounds for displaying initiative in solving any procedural question not regulated in the arbitration agreement or the Model Law*" (my underlining).[18]

Thus, not only is the intention of Article 19 to enshrine party autonomy, Tribunal discretion and procedural flexibility into domestic arbitration statutes around the world, but it is also designed to encourage innovative approaches to procedural issues not expressly covered. The sheer volume of electronic documents now invariably involved in international arbitration proceedings is, I submit, one such procedural issue, to which predictive coding is the "*initiative*" that can best mitigate the difficulties arising.

Also, absent what would be surprisingly specific amendments in domestic arbitration statutes, it seems unlikely that awards rendered in proceedings seated in jurisdictions that have mostly adopted the UNCITRAL Model Law would encounter difficulty during enforcement proceedings in countries that are signatories to the New York Convention.

6.3 Institutional rules: three examples

Detailed analysis of all the major institutional rules is also beyond the scope of this article. Here I therefore briefly consider by way of illustration only the relevant provisions of the ICC Rules,[19] the LCIA Rules[20] and CAM/CCBC Rules,[21] which are all quite different. As will be seen, although none expressly mentions predictive coding, none prevents predictive coding either, and all are conducive to its usage:[22]

1. The relevant ICC Rules are 19, 22(4), 25(1) and 25(5), along with Appendix IV(d). Article 19 permits the parties to agree on procedure or, absent such agreement, empowers the Tribunal with broad discretion to decide the procedure. Article 22(4) obliges the Tribunal to act impartially and allow each party to present its case. Articles 25(1) and 25(5) oblige the Tribunal to establish the facts of the case as quickly as possible, but also allow the Tribunal to order a party to produce additional evidence, if necessary. Appendix IV(d) contains suggestions designed to control the time and cost associated with document production. Moreover, the ICC has already sought to encourage parties to use whatever tools possible to reduce the scope of document production, subject to the needs of each case.[23] More specifically, the ICC has considered and encouraged the deployment of new technology in this regard, subject to continuing and proper human involvement and the needs of each case.[24]

It follows that the parties are free to agree to use predictive coding under the ICC Rules, or the Tribunal can order its use, as long as this is fair as between the parties. Predictive coding, if properly used, should always facilitate swift establishment of the facts of the case, while decreasing the time and cost necessary to do so. In the unlikely event that it does not, the Tribunal has express powers to make further orders. Accordingly, nothing

in the ICC Rules discourages the usage of predictive coding, and the ICC has already been encouraging sensible deployment of technology to reduce unnecessarily protracted document productions. It seems that the trend is only moving one way.

2. The position is similar under the LCIA Rules. Article 14.2 encourages party agreement in general, including regarding procedure. Article 14.5 emphasises the broad discretion of the Tribunal, while 14.4(i) and (ii), respectively, oblige the Tribunal to ensure fairness as between the parties and adopt procedures best suited to each dispute, avoiding unnecessary delay and expense. Although there are no specific document production procedures (enclosure of relevant documents with statements of case is encouraged, at least initially), Article 22.1(v) enables the Tribunal to order a party to produce documents it adjudges to be relevant. (In any event, as readers will know, in reality there are often document production phases in LCIA arbitrations.) Although the non-exhaustive LCIA guidelines for arbitrators and parties do not explore the potential applications of technology (unlike the ICC), they do stress the need to manage the time and cost of proceedings.[25]

Again, therefore, subject to general principles the parties can agree to use predictive coding or the Tribunal can order its use under the LCIA Rules. There is nothing to suggest that such usage would not be welcomed.

3. The CAM/CCBC Rules recognise the primacy of party autonomy in Article 1.2. Per Article 7.4, the Tribunal has discretion as to whether to order document production. Per Article 7.8, the Tribunal is obliged to adopt "*necessary and convenient measures for the appropriate conduct of the proceedings*", bearing in mind equal treatment of the parties.

So, yet again, and subject to general principles, nothing prevents the use of predictive coding under the CAM/CCBC Rules. Indeed, where document production is agreed or ordered, its usage would surely constitute a "*convenient measure*" to promote "*appropriate conduct of the proceedings*."

6.3 **The IBA Rules**[26]

Finally, given its prevalent usage in international arbitration practice, it is worth considering the IBA Rules. As its preamble makes clear, the purpose of the IBA Rules is to ensure "*efficient, economical and fair process for the taking of evidence in international arbitrations*". A key part of this is, of course, the taking of evidence, and the same "*efficient, economical and fair*" wording reoccurs in Article 2.1, which obliges the Tribunal to consult the parties as soon as possible in this regard. Pursuant to Article 2.2, this consultation "*on evidentiary issues may address the scope, timing and manner of the taking of evidence*". This includes, per Article 2.2(c), "*the requirements, procedure and format applicable to the production of Documents*", which, per 2.2(e), should be subject to "*the promotion of efficiency, economy and conservation of resources in connection with the taking of evidence*". Meanwhile, Article 3.3(a)(ii) specifically mentions that "*in the case of Documents maintained in electronic form, the requesting Party may, or the Arbitral Tribunal may order that it shall be required to, identify specific files, search terms, individuals or other means of searching for such Documents in an efficient and economical manner*", which could certainly encompass predictive coding.

The commentary on the latest version of the IBA Rules, written by those who drafted them, is instructive.[27] It makes clear that the collection of evidence must be approached in a proportionate manner, bearing in mind the complexity and value of the dispute.[28] It also stresses that the IBA Rules are geared towards saving time and cost, and encourages the use of efficient and economical means of searching for documents.[29]

Even in terms of 'soft law', therefore, the direction of travel indicates that predictive coding could soon become a staple consideration at the document production stage of international arbitration proceedings.

7. AN EXAMPLE OF SWIFT ADOPTION: THE ENGLISH COURTS.

Courts in countries such as the USA[30] and Ireland[31] were quicker than the English Courts to analyse, and permit the usage of, predictive coding.[32] Until 2016, the only mention of predictive coding by an English Court – and even then not even by name – came in 2009.[33]

The first judgment to endorse predictive coding came on 2 February 2016 in the ***Pyrrho*** case.[34] In *Pyrrho*, the parties agreed that predictive coding was a good idea, but, given its novelty, requested permission from the Court to use it. The judge acknowledged the novelty of predictive coding in the jurisdiction,[35] the continuing difficulties surrounding efficient electronic disclosure,[36] the flexibility of the existing procedural rules,[37] the Court's extensive discretion in respect of procedural matters[38] and the agreement of the parties.[39] His reasons for endorsing predictive coding can be summarised as follows:[40] positive experience in other jurisdictions, evidence that predictive coding produces good results, the greater consistency offered by the replication of the decisions of a skilled senior reviewer (versus the combined efforts of many less experienced reviewers), the lack of any law preventing it, the high number of documents in the case, the high cost of manual review (versus the lower cost of using software), the high value of the sum in dispute, the length of time before trial (to consider any subsequent document production applications), the agreement of the parties and the lack of evidence against its usage.

In other words, the judge expressly enshrined into English case law the obvious benefits of predictive coding. After *Pyrrho*, any party arguing for the usage of predictive coding will, realistically, need to address these factors in submissions, as will any party arguing against.

This is exactly what happened only a few months later, on 17 May 2016, when the first judgment of a contested application over predictive coding was handed down. In the ***BCA*** case,[41] the vast majority of evidence was held by one party, which wanted to use predictive coding for cost and efficiency reasons, while its opponents preferred manual review (perhaps, a cynic might suggest, for purely tactical reasons). Approaching the issues in a similar way to *Pyrrho*,[42] and drawing on the factors considered in *Pyrrho*,[43] the

judge ruled in favour of predictive coding mainly due to the costs benefits offered and the lack of evidence against its usage.[44]

Interestingly, the judge also discussed trust issues that might arise between the parties regarding predictive coding.[45] He emphasised that it is in the parties' own interests to achieve "*reasonable and proportionate results*", that his Order would force the parties into direct discussions, and that, in any event, "*those discussions will be between experienced solicitors who can be relied upon to hold the reins within the context of them owing their duties as officers of the court, as well as their duties to their cli*ents". There is no reason to think that this reasoning should not apply equally in the mind of a Tribunal, and to international arbitration clients and practitioners.

During October 2017, the *BCA* case came to trial, and documents located and produced following predictive coding were used during a trial for the first time in an English Court.[46] The trial judgment, which was released during early 2018, is not (or not yet) publicly available. However, it is significant that predictive coding proved effective enough to survive challenges from an opposing party and provide most of the evidence that underpinned a substantial trial (lasting 12 days).[47]

In the relatively short two year period between the *Pyrrho* judgment and the *BCA* trial, the narrative pertaining to predictive coding in English litigation has already changed. These cases constitute formal Court endorsement of predictive coding in suitable cases (which, I submit, will in reality be most cases of reasonable value or complexity). Consequently, instead of deliberating the merits of whether to use predictive coding, the current focus is on how best to use it, and to what extent. One Court division even includes predictive coding in its standard protocol as a staple consideration for the parties' attention during the document production phase.[48] This protocol was in place before *Pyrrho* or *BCA*, but is now likely to be used more.

This brief chronology demonstrates how quickly and extensively a new technology such as predictive coding can find favour in a jurisdiction. If this can happen in the English Courts, it will surely happen in international arbitration, if it is not happening already.

Moreover, we are past the early adoption stage for predictive coding, which is already well established in many Court jurisdictions around the world. Query whether, given the benefits set out above, and the consequent pressure from clients, international arbitration can afford to ignore predictive coding for much longer.

8. CONCLUSION

The efficiencies, costs benefits, consistency and certainty offered by predictive coding all indicate that its usage in international arbitration is likely to increase. Given the inherent flexibility within international arbitration and its accommodating approach to innovation, along with the lack of any authority preventing the usage of predictive coding and its swift adoption in several jurisdictions, this usage may increase exponentially sooner than many practitioners expect. In light of the analysis above, it is hard to see how predictive coding will not have become a common feature of the international arbitration landscape in a few years' time.

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1 This material is the author's own and does not purport to represent the positions, strategies or opinions of Milbank Tweed Hadley & McCloy LLP.
2 A good introductory summary of technologies that could become more prevalent in disputes is: Lucas Bento, 'International Arbitration and Artificial Intelligence: Time to Tango?', *Kluwer Arbitration Blog*, February 23 2018.
3 M. Munro, 'Clifford Chance offers coding training to all lawyers', *The Lawyer*, 5 April 2018.
4 See e.g. B. Kru□ewski and R. Moj, 'Documents in Construction Disputes', *The Guide to Construction Arbitration* (eds. S. Brekoulakis D. Brynmor Thomas), *Global Arbitration Review*, 2017
5 See e.g. D. Kiefer and A. Cole, 'Suitability of Arbitration Rules for Construction Disputes', *The Guide to Construction Arbitration* (eds. S. Brekoulakis D. Brynmor Thomas), *Global Arbitration Review*, 2017
6 See e.g. M. Grossman and G. Cormack, 'Technology assisted review in e-discovery can be more effective and more efficient than exhaustive manual review', *Richmond Journal of Law and Technology*, Volume 17, Issue 3, 2011, 1-48.
7 This is to the best of my knowledge, but if any readers know differently it would be interesting to hear from you! For an understanding on how predictive coding has been applied in English litigation, see the recent decision in *Pyrrho Investments Limited & Anr v MWB Property Limited and Others* [2016] EWHC 256 (Ch). This represents the first time an English court has provided a detailed judgment closely examining and approving the use of predictive coding, as explained further on in this article.
8 N. Blackaby and C. Partasides, *Redfern and Hunter on International Arbitration*, Oxford University Press, 2015 ("**Redfern and Hunter**"): 6.104-110; D. Sutton, J. Gill and M. Gearing, *Russell on Arbitration*, Sweet & Maxwell, 2015 ("**Russell**"): 5.108, 5.142-144; G. Born, *International Commercial Arbitration*, Wolters Kluwer, 2014 ("**Born**"): 16.02[E][5].
9 Redfern and Hunter at 6.77-79, 6.92-94; Russell at 5.109-110; Born at 16.02[E][1].
10 Redfern and Hunter at 6.01-06; Russell at 5.100, 5.144-145, 5.147; Born at 16.02.
11 Redfern and Hunter at 3.229; Russell at 5.105, 5.144-145, 5.147; Born at 16.02.
12 *Convention on the Recognition and Enforcement of Foreign Arbitral Awards* (New York, 1958)
13 See e.g. Born at 15.02[A]
14 See e.g. Born at 11.03[C][1][c][ii]
15 *United Nations Commission on Trade Law Model Law 1985* (as revised in 2006), Vienna, 2008
16 It is worth noting that similar provisions exist in the *UNCITRAL Arbitration Rules* (New York, 2010). Article 1.1 recognises party autonomy, while Articles 17.1 and 27.3 bestow broad discretion upon the Tribunal.
17 Paragraph 34
18 Paragraph 35
19 *International Chamber of Commerce Arbitration Rules*, Paris, 2017
20 *London Court of International Arbitration Rules*, London, 2014
21 *Center for Arbitration and Mediation of the Chamber of Commerce Brazil-Canada Arbitration Rules*, Sao Paulo, 2011
22 If any readers know of arbitral rules (or indeed other legal authority), under which predictive coding or other, similar innovation may be problematic, I would be interested to hear from you.
23 ICC Commission Report, *Controlling Time and Costs in* Arbitration, Paris, 2012, at 27, 51, 52.
24 ICC Commission Report, *Managing E-Document Production*, Paris, 2012, at 4.11-12, 5.13-17
25 *LCIA Notes for Arbitrators*, 2017 at 52; *LCIA Notes for Parties*, 2017 at 98
26 *The IBA Rules on the Taking of Evidence in International Arbitration*, London, 2010
27 Various, *Commentary on the revised text of the 2010 IBA Rules on the Taking of Evidence in International Arbitration*
28 At 3, 5-6
29 At 8-9
30 See e.g. *Moore v Publicis Groupe*, 11 Civ 1279 (ALC)(AJP) (24 February, 2012)
31 See e.g. *Irish Bank Resolution Corporation Ltd v Quinn* [2015] IEHC 175 (3 March, 2015)
32 That said, there is anecdotal evidence that predictive coding was used in several unreported English cases before its mention in reported judgments: see e.g. https://chrisdale.wordpress.com/2016/02/23/reacting-to-the-reactions-to-the-pyrrho-predictive-coding-judgment/.
33 Per Senior Master Whittaker in *Gavin Goodale and Others v The Ministry of Justice and Others* [2009] EWHC B41 (QB) at 27.
34 *Pyrrho Investments Ltd v MWB Property Ltd* [2016] EWHC 256 (Ch)
35 At 1
36 At 5
37 At 8-10
38 At 12
39 At 15
40 At 33
41 *Brown v BCA Trading Ltd & Ors* [2016] EWHC 1464 (Ch)
42 At 4-7
43 At 10-11
44 At 9
45 At 12-14
46 https://www.blplaw.com/expert-legal-insights/articles/blp-wins-case-for-bca-using-predictive-coding-in-disclosure
47 https://chrisdale.wordpress.com/2018/03/14/blp-claims-a-win-for-predictive-coding-after-the-bca-trading-trial/
48 See paragraph 5.4 of the *TeCSA / SCL / TECBAR eDISCLOSURE PROTOCOL* (Version 0.2, 9 January 2015), which is incorporated into the latest edition of T*he Technology and Construction Court Guide* at paragraph 11.2.3 (and the content of which is normally ordered by the Court unless the parties agree otherwise).