Artificial Intelligence:
Change before you have to

Jane Colston and Louise Verrill report on the use of Artificial Intelligence in the insolvency profession

Artificial intelligence (AI) is prevalent in the news, billed as a super intelligence. As the quip goes: it is hard to make predictions especially about the future but the predictions are that we may get to Artificial Super Intelligence (i.e. when they are way smarter than us) by 2045-2060.

AI is often met by fear. We all know the story of Frankenstein, written 200 years ago: an AI creature turns on his creator. Concerns abound e.g. about ethical/privacy/social and economic considerations. The founder of Microsoft and one of the world's richest men, Bill Gates, suggested that robots that take human jobs should be taxed.

The other view is wonder. Professor Stephen Hawking said: "*The potential benefits of creating intelligence are huge, we cannot predict what we might achieve when our own minds are amplified by AI. Every aspect of our lives will be transformed. In short, success in creating AI could be the biggest event in the history of our civilisation.*"

AI is not be feared but has to be understood. There's a need, for example, for further transparency from those who have created the algorithms behind the AI, so there is clarity as to how they have been developed and what biases have been factored in thereby allowing the results to be understood as much as possible.

AI is a catch-all term, covering a range of underlying technologies in the sphere of:
- cognitive/thinking computing;
- machine learning; and
- robotics

Machine learning is a type of AI that provides computers with the ability to learn and keep learning without being explicitly programmed with set rules. The computer programme teaches itself when exposed to new data. It ferrets out correlations including hidden or not obvious relationships and is intelligent in the sense that it makes decisions based on the data's analysis. We have increasingly capable technology not least because of the investment being ploughed in, for instance:
- In the last three years Google is reported to have invested $1 billion into AI focussed businesses.
- In 2016 The United Arab Emirates are reported to have approved a $67 billion budget to fund innovation.

AI in the legal/insolvency, business reconstruction and recovery space is making haste, slowly. A common refrain: "*But you cannot replace what I do with a computer. As well as skill and learning, I bring judgment, creativity and ethics.*"
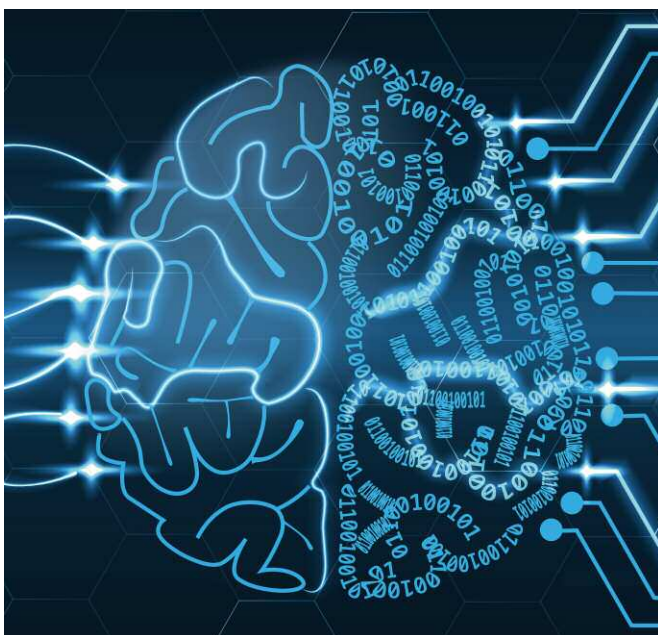
Reflect on this: IBM's ground breaking Watson computer is being used to diagnose cancers
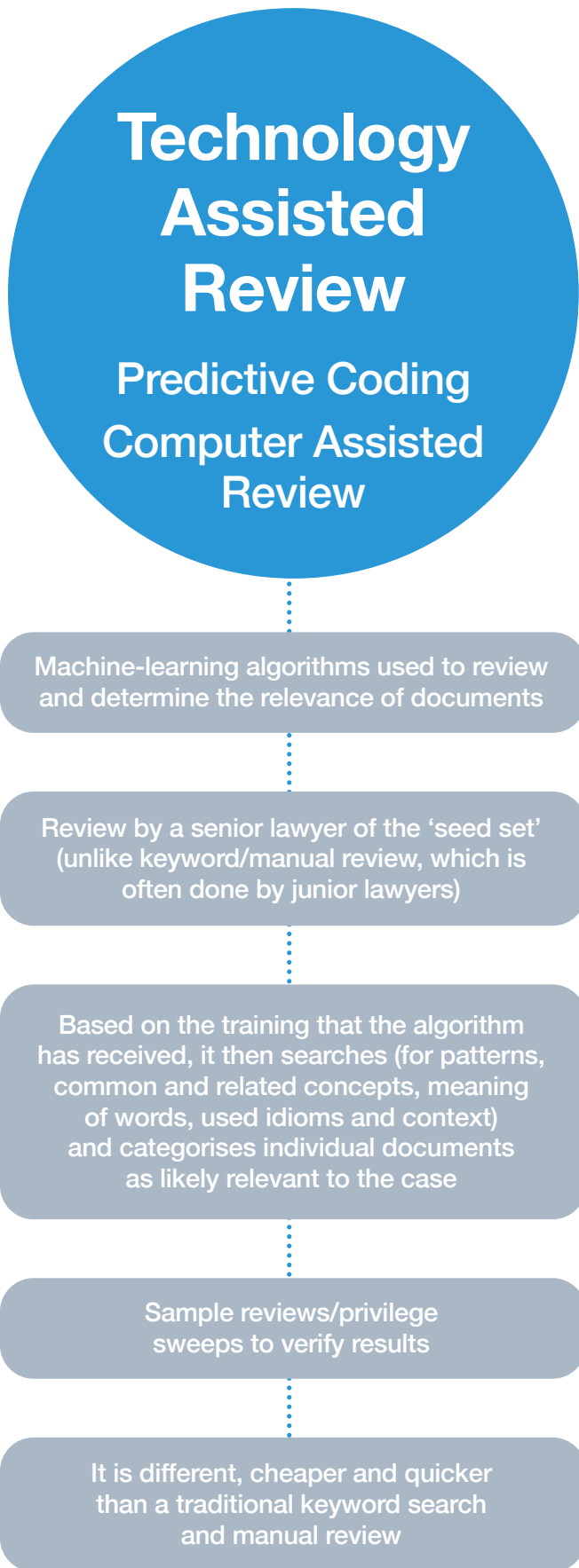

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Technology Assisted Review

Predictive Coding
Computer Assisted Review

Machine-learning algorithms used to review and determine the relevance of documents

Review by a senior lawyer of the 'seed set' (unlike keyword/manual review, which is often done by junior lawyers)

Based on the training that the algorithm has received, it then searches (for patterns, common and related concepts, meaning of words, used idioms and context) and categorises individual documents as likely relevant to the case

Sample reviews/privilege sweeps to verify results

It is different, cheaper and quicker than a traditional keyword search and manual review

with an accuracy rate of about 90%. The implications for lawyers and insolvency practitioners are obvious.

The Lord Chief Justice of England and Wales agreed and said in October 2016: "*It is probably correct to say that as soon as we have better statistical information, artificial intelligence using that statistical information will be better at predicting the outcome of cases than the most learned Queen's Counsel.*"

Lawyers and insolvency practitioners have to confront the fact that legal and insolvency services will soon be organised and delivered differently. The data explosion means the use of technology has to be embraced in order to ensure that data does not overwhelm but is exploited.

While law enforcement agencies and some courts have embraced the use of capable technology, lawyers/insolvency practitioners in many jurisdictions are interested, but in a disinterested way. Some believe that technology is not relevant to them as it is not often used or are wary of it but, given the international nature of business and litigation, adoption rates will accelerate quickly. The drivers are mostly clients and businesses demanding commoditisation and criticising lawyers/insolvency practitioners for being too slow and expensive when technology could be used to make them faster and cheaper. Many courts, especially in jurisdictions like England and Wales, are also driving the change so as to ensure efficient access to justice and a break from the "tyranny of paper".

Those who are reluctant to embrace technology will find clients and many courts saying their reluctance should not cause extra costs for them or their opponents. It is, therefore, key that lawyers and insolvency practitioners skill up and understand the available technology rather than perhaps leaving it to the youngest person on the team to grapple with.

Technology Assisted Review

There are a lot of analytics out there to aid processing data quickly. For example, in a few short years the use of Technology Assisted Review (TAR) or predictive coding has increased (*see diagram left*).

Public regulators and law enforcement authorities in a number of jurisdictions are cooperating and investigating exponentially quicker using this kind of technology.

In February 2017 the Financial Times reported that David Green, UK SFO Director General, said that the robot technology the SFO had used in the Rolls Royce bribery investigation was able to "*learn… and bolster its own knowledge base to help identify relevant material…*" It was "*more effective, more efficient and more accurate than human intervention.*" Quite an endorsement.

The courts in the U.S., Ireland and England and Wales have begun to bless the use of predictive coding, as well as seeking to become more techie themselves.[*]

Court approval of TAR

Courts have been dismissive of two myths:

- Keyword searches and human review are accurate and are the golden standard.
- TAR has to be held to a higher standard than keywords or manual review.

In the U.S. in *Da Silva Moore v. Publicis Groupe*, 287 F.R.D. 182, 183 (S.D.N.Y. 2012) the court said:

- "While this Court recognises that [TAR] is not perfect, the Federal Rules of Civil Procedure do not require perfection."
- "Statistics clearly show that [TAR] searches are at least as accurate, if not more so, than manual [keyword] review."

In *Hyles v New York*, Judge Peck said: TAR is "cheaper, more efficient and superior to keyword searching."

Jurisdictions where Courts have approved the use of TAR	Comment
Australia	Supreme Court of Victoria Practice Direction 2017, Practice Note SC Gen 5: Technology in Civil Litigation – TAR accepted. May be compelled.
Ireland	*Irish Bank Resolution Corporation Ltd and others v Quinn and others* [2015] IEHC 175.
UK	Parties agree: *Pyrrho Investments Ltd v MWB Property Ltd & Or* [2016] EWHC 256 (Ch) Court imposed: *Brown v BCA Trading* [2016] EWHC 1464 (Ch).
US	*Da Silva Moore v Publicis Groupe*, 287 F.R.D. 182, 193 (S.D.N.Y. 2012) The Courts have not compelled parties.

Best practice when using TAR

Best practice when using TAR includes the following considerations.

- Decide to use it early.
- Commit to it as there is a substantial front-loading of time and costs involved in uploading the data and training the system to determine relevance.
- Have a senior person, knowledgeable about the matter, review a seed set of documents to "teach" the algorithm what documents are relevant/"Hot".
- Cooperate with your opponents or the law enforcement agency as to a protocol of use consisting of:
  - the identification of the TAR system to be used;
  - the definition of the data sources and size;
  - the documents to be included (such as custodians' information, date range) or excluded (e.g. insufficient text for analysis);
  - the need for culling (best practice is not to cull the data set e.g. by first running key word searches); and
  - seed size and identification of the reviewers.
- Work in close partnership with the person who knows how the "black box" algorithm works. It is essential to work closely with the technology service provider in order to identify where the mismatches may be with your opponent, to make sure the technology is explained in the right way to the clients and the court and lastly, to learn what is the best training the algorithm should receive. ■

> ## IT IS KEY THAT LAWYERS AND INSOLVENCY PRACTITIONERS SKILL UP AND UNDERSTAND THE AVAILABLE TECHNOLOGY RATHER THAN PERHAPS LEAVING IT TO THE YOUNGEST PERSON ON THE TEAM

Footnote:
From April 2017 many sections of the High Court of England and Wales require electronic filing (which means litigants are required to issue claims, file documents and pay court fees online). There are several benefits including the electronic case file being available online to the parties and the judge 24/7.

When is TAR useable?	Yes	No
Relevant to:	Criminal investigations Review of voluminous data to get to the "hot" documents efficiently Disclosure in common law jurisdictions	
Volume of Dataset		Less than 100,000
Nature of documents	Language based data including foreign languages	Images, numbered based documents, short text documents
Minimum sample set to be reviewed in order to train the algorithm	1600 – 1800 documents	
Set up Time	6 weeks (estimate)	
Cost (approx.)	The overall costs of TAR should be considerably lower because the number of documents that have to be manually reviewed will represent just a small proportion of the data set. In *Pyrrho Investments Ltd v MWB Property Ltd & Or* [2016] EWHC 256 (Ch) the cost estimate for the use of TAR was between approx. £182k to £469k. In *Brown v BCA Trading* [2016] EWHC 1464 (Ch) the cost estimate was approx. £140k	