Judges, AI and Technology
Dystopia or Opportunity?

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Change

Three Levels of Change

Mainly lower levels of change for the next 5-10 years

Supportive Technology
Technology is assisting to inform, support and advise people involved in justice activities. Remote conferences, vid hearings, apps, websites, info, e-forms, justice café.

Replacement Technology
Technology is replacing functions and activities that were previously carried out by humans. Case management, letters, listing, sharing, TDRS, ODR, Modria add ons. See BC. Apps again! Platforms and supportive apps.

Disruptive Technology
Technology is changing the way that determinative, advisory and facilitative processes work and informing system reform through the use of big data sets and more complex knowledge generation. AI replacing some decision making. AI and analytics. Apps again!
What is Driving Change?

The Digital Age

We are more connected than ever before...

Rapid changes in service delivery (e.g. Uber) gives rise to unexpected results

UK reforms, BC reforms, EU reforms

Significant obstacles in justice reform

What happens when judicial reform ‘clashes’ with disruptive technology?

EDR and ODR are being used in a wider range of disputes – convenience and user comfort

Large percentage of population are online – all the time – COVID shifts

Scope and potential for EDR and related ODR in modern online environment – cost and time

Need for Reform

How will judicial processes change in the era of technological disruption?
iPhones – smart tech

Modem - https://www.youtube.com/watch?v=gsNaR6FRuO0

COURT TECHNOLOGY

SUPPORTIVE

Textual Analysis

AI USING BRANCHING TECH

SOPHISTICATED AI

WEARABLE TECH

NEXT DECADE?
Microsoft makes a $40 Billion offer to buy Yahoo and Yahoo declines.

Realises their mistake and offers $3 Billion. Does not acquire for $5 Billion (Google now worth $927 Billion)

Chooses not to acquire Google for $1 million.

Yahoo accepts a $4.48 Billion purchase from Verizon.

Not so good Technology Decisions – Yahoo!

1998

2002

2008

2016
In 2008, entrepreneur Charley Moore founded online legal services provider Rocket Lawyer. It now boasts 30 million users. Subscribers pay a monthly fee for instant access to pre-prepared documents and tutorials, as well as online legal advice from experts at participating firms.

In 2020 a number of regulatory sandbox programs set up.

“Justice delayed is justice denied”
No need to travel
Large Scale ODR
Modria – More than a billion disputes (Tyler – Modria). Chatbot plus systems. Virtual assistant to bot.

E-Courts & E-Arbitration
US, Canada and UK. Sometimes linked with the big providers. HMOC. E Discovery

Boutique Providers
Guided Resolution – Adieu. Apps, apps and more apps – Over 280 justice / ADR apps

Govt Initiatives
Administrative decision making, Robodebt, visa plus policy eg, EU changes rolled out from the beginning of 2016
Reduce Costs and time

Geographic Consumer Support

Limited AI

Simple decision making - Case management

To understand alternatives, define issues and assist with data mining

Well developed in the on line consumer area and developing in the administrative area

BATNA/WATNA Shift from expert systems

Capable of bridging large distances and power/violence issues

Some court developments support replacement Technologies – online courts, e-discovery

Why?

Second Level of Change
Disruptive Technology
Disruptive Technologies can help, hinder and will change

**Possible Benefits**
Technological change was intended to provide many benefits. More access, ease of management but stress, disconnection issues and increased hostility issues.

**Job Loss**
Many jobs will not exist in the same way in 10 – 20 years. Although the jobs may exist they will be ‘altered.’ Significant social disruption and changes in courts.

**Threats to Privacy**
Significant threats to privacy. Justice systems have not yet grappled with this (social credit scores). How are litigants behaving? Use of recordings now common in family disputes.

**Loss of Social Interaction**
What do the new ways of communication mean for social interaction? What does happen when rapport is created? Apology by text? Alexa or Siri?
What will a judge look like in 10, 20 or 30 years' time?

- Role of AI in judging – to support, replace or disrupt judicial processes?
- What impact will AI have on adjudicative processes?

Recent developments indicate that there is a change in how lawyers, courts and others use technology, shifting to enhance and make processes more time efficient and predict the outcome of litigation.
At the Simple Level

- Retribution / Just punishment
  - Deter individual
  - Deter others
  - Rehabilitation
  - Protect community
  - Deterence
  - Promote public awareness of sentencing

- Serving the purposes of sentencing
  - Served not at all
  - Slightly served
  - Significantly served
  - Highly served

- Serving the purposes of sentencing
  - Not at all
  - Slightly
  - Significantly
  - Highly

- Ensuring sentencing consistency

- Impact of the offence

- The offender

- The offence

- Sentencing Environment

- Auxiliary orders which have been made

-- Active immediate imprisonment with conviction
  - Young offender
    - YTC - youth training centre 15-18
    - YRC - youth residential centre 10-18
  - Time of imprisonment
  - Indeterminate sentence Part 2 / Div 2.1
  - Medical necessity
  - Drug treatment order

-- Partial imprisonment with conviction
  - CTO - civil custody treatment order
  - Partially suspended sentence
  - Time of prison sentence with CPO

-- Non-immediate imprisonment with conviction
  - WHS - wholly suspended sentence of imprisonment
  - ICC - Intermediate Correctional order issued in 1993

-- Non-delinquent with or without conviction
  - CBO - Community Based order
  - Bonds
  - Discharges
  - Judicial undertaking
  - Dismissal
What Makes a Machine Intelligent?
While AI is the headliner, there are actually subsets of the technology that can be applied to solving human problems in different ways.

Artificial Intelligence (AI)
A process where a computer solves a task in a way that mimics human behavior. Today, narrow AI – when a machine is trained to do one particular task – is becoming more widely used, from virtual assistants to self-driving cars to automatically tagging your friends in your photos on Facebook.

Machine Learning (ML)
Algorithms that allow computers to learn from examples without being explicitly programmed.

Deep Learning (DL)
A subset of ML that uses deep artificial neural networks as models and does not require feature engineering.
Role of Judges in the Era of Technology

The increasing use and development of AI leads to the question: Will some judges be ‘phased out’ by AI?

Role of a Judge
It is not just ‘supporting decision making’- multi tasking – democratic realities

Complex
Interactions
with people

Case management

Interaction
with experts
and lay people

Communications and
skills growth

The importance of
responsiveness

Judges use empathy and intuition, taking into account the social factors in decision making.

These are important functions For which AI may be both rigid and inflexible
As society moves into the era of technology, how will the role and nature of the Judge change? How independent is a judge? What data (decisions and other file material) can be used to train Judge AI? Who drives reform?

**Displacement**
Technology will develop to a point where AI will replace some simple adjudicatory functions.

**Control**
The impact of displacement will vary. Judges are likely to stay in control in most democratic countries.

**Issues Remain**
- Legality of decisions made by ‘AI’
- Translating law into code
- Discretionary judgments

**Review**
Will review of AI decisions by human decision makers be necessary?

**Role of a Judge in the era of technology**
As society moves into the era of technology, how will the role and nature of the Judge change? How independent is a judge? What data (decisions and other file material) can be used to train Judge AI? Who drives reform?
1. **Legal Authority**

Can a computer program or automated process possess legal authority to make decisions?

2. **Translating Law into Code**

Computer programmers and IT professionals lack knowledge of the law and legal qualifications yet they are tasked with translating law into code. Significant Law as Code movement.

3. **Discretionary Judgment**

Lack of discretion may lead to unfair or arbitrary decisions with a lack of individualism, consideration of the circumstances or a lack of understanding of nuance in law (‘weak’ and ‘strong’ discretion).

Law is complex, includes statutory presumptions and discretion – with coding these intricacies may prove to be a challenge.

The ever changing nature of law as a result of enactments, interpretation and amendments means constant updates.

Discretionary decisions need to take into consideration:

- Community values
- Subjective features of the parties
- Other surrounding circumstances

Three key questions:

1. Who is the decision maker?
2. Who possesses the legal authority to make such a decision?
3. How is the decision explained (explainability)?
Developments in some jurisdictions may not be appropriate in others:

‘On the one hand, many local courts in China are developing a “similar cases pushing” system based on this database, which can push the judgments of similar cases to judges for reference. On the other hand, some courts have tried to develop an “abnormal judgment warning” function based on this database — that is, if a judgment significantly differs from the judgments of similar cases, the system will automatically send a warning to the judge’s superiors, prompting them to initiate a supervision mechanism on the judge concerned. At present, this function is mainly used in criminal cases to monitor whether the judge’s sentencing is reasonable’.

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<tr>
<th>Judge AI Triage</th>
<th>Judge AI factors to consider</th>
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<td>Has a form of AI already resulted in decision making taking place before a case has been filed with a court (or at some stage in a lower court)?</td>
<td>Where a form of AI has already made a decision that impacts on the human, there may be benefits in retaining human rather than AI review mechanisms. For example, in insurance and workers compensation matters, AI may already be ‘making decisions’ and determining liability. Any pre action AI decision making is an important factor in determining whether human judge referral is more appropriate.</td>
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<td>Could one or more of the parties be regarded as vulnerable?</td>
<td>This is a multidimensional concept that may include the individual characteristics of the parties as well as external factors that may impact on vulnerability. For example, a person may be vulnerable for short periods of time and ill health, job loss, grief and other factors (including high levels of stress and a lack of technological ‘know how’, digital literacy and capacity) may impact on vulnerability and mean that Judge AI is not appropriate.</td>
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<td>Is there a continuing relationship between the disputants?</td>
<td>This factor has often been considered as relevant when recommending referral to facilitative forms of ADR. This is in part because there may be additional and creative options that can be generated to resolve a dispute where a continuing relationship is present (for example, a new contract could be developed). Human judges may be better able to promote more creative outcomes under such circumstances and may be able to better foster communication that will be necessary to support the continuing relationship.</td>
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<td>Is the human judge bound by ‘weak’ or ‘strong’ discretionary arrangements?</td>
<td>Where human judges have more discretion (strong discretion), there is arguably less capacity for Judge AI to replicate more creative human judging and the development of the law might be impeded should Judge AI be used.</td>
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<td>Are there high levels of complexity or novelty?</td>
<td>Judge AI, at least in terms of its early developmental iterations, may not be able to adequately deal with complex multiparty issues and, as discussed in Chapter Eight and Chapter Four, may be unable to effectively deal with ‘novel’ situations.</td>
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<td>To what extent are there high levels of emotion?</td>
<td>The author notes that in the early iterations of CRT intake questionnaires, this was suggested as a relevant factor that might lead to referral to a human. High levels of disputant emotion may not mean that Judge AI should not be used. However, this factor together with those noted above may suggest that until Judge AI becomes more ‘human like’ there are benefits in ensuring that human judges continue to deal with behaviourally complex cases.</td>
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<td>To what extent are litigants comfortable with an AI Judge process?</td>
<td>There may be many reasons why litigants may not be comfortable with a Judge AI process that can be linked to concerns in relation to confidentiality and commercial sensitivity. This concern may arise throughout an AI hearing process (which can involve documents be exchanged via cloud based services) and may also be related to a distrust of technology. The author notes that the CEPEJ principles provide for a right of access to a human judge.</td>
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<td><strong>Levels of Abstraction</strong></td>
<td><strong>Individual</strong></td>
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<td><strong>Technical Concerns</strong></td>
<td>Erroneous or inappropriate judgment (or other legal decision, such as an administrative decision) could take place.</td>
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<td><strong>Process, Outcome and Purpose Concerns</strong></td>
<td>Individuals may be unable to access or assess the information used by an AI Judge to make a decision, and their ability to appeal a decision could be lost or made more difficult.</td>
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<td><strong>Human-Centred Concerns</strong></td>
<td>The design and implementation of AI tools and Judge AI could be fundamentally incompatible with human rights (such as due process rights or the right to appeal a decision). In addition, the tools may not support human wellbeing and dignity.</td>
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See also ‘Sectoral’. See also ‘Interpersonal’. See also ‘Interpersonal’. See also ‘Interpersonal’.
Using technology as a medium to ‘support’ or supplant processes – e.g. Apps, user friendly referral systems with automation.

Use of ‘advisory’ AI to reshape new alternative understandings and potentially replace some advisory and determinative practitioners.

Collaborative techniques and predictive technology to provide more support and referral avenues for disputants. AI replacing some decision making.

Use of disputant-focused inputs and tracking technologies – rise of trip advisor style inputs (mapped with data preferences).

Use of ‘big data’ to link dispute criteria and data fields or to map and promote transparency or comparability.

Conclusion
Micro expression tracking.... Video analytics can be achieved based on data curation, sentiment analysis, and other advanced solutions. Expressions like “happy”, “sad”, “angry”, “scared”, “surprised” or “neutral” form the basis of video analytics.
Questions?

Thank you.
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