New Legal Technologies: Pivot or Perish

The Honourable Mr. Justice Winston Anderson, Judge of the Caribbean Court

The Guyana Bar Association's Law Week Symposium

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Lecture by
The Honourable Mr Justice Winston Anderson,
Judge of the Caribbean Court of Justice
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Introduction

Upon receipt of the invitation to speak about "New Legal Frontiers – Preparing for the Future", my first thought was that there were secret "Trekkers" in the Bar Association of Guyana. The notion of exploring new frontiers and civilizations, of, "boldly going where no man had gone before" was Captain Kirk's introduction to each episode of the 1960s *Star Trek* science fiction series. Of course, 60 years later, this opening motif may no longer be appropriate for gender sensitivity reasons.

The term "New Frontier" was popularized by U.S. President John F. Kennedy to describe the serious challenges facing The United States in the 1960s. New *legal* frontiers could then be taken to reference the challenges facing the legal profession as we move forward into the future. I think there are at least two types of such challenges: (1) changes in substantive law brought about by changes in social attitudes and values; (2) technological advances. I will examine each in turn.

Changes in substantive law

There are important challenges presented by recent changes in substantive law. Many of our constitutions have undergone significant reform to move from the monarchical system of governance to Republicanism (Guyana being the first in 1970, Barbados the most recent in 2021); to recognize the jurisdiction of the Caribbean Court of Justice ('CCJ'); and to expand on guarantees in our bill of rights. For example, the Charter of Rights in Jamaica[1] includes 'new' rights - sourced in international norms - such as: the entitlement of children to publicly funded education; the right to enjoy a healthy and productive environment; and the right to

[1] The Charter of Fundamental Rights and Freedoms (Constitutional Amendment) Act, 2011. Similar provisions were included in the Amendments to the Guyana Constitution.

bring legal proceedings against public bodies for infringement of rights. Recent CCJ judgments in *Nervais*[2] and *McEwan*[3] assert that the constitutional bills of rights override colonial laws previously thought immune by virtue of the savings law clause; and *Nervais*[4] declares that a monopoly over sentencing is reserved to the judiciary (rather than the legislature). These precedents present new and exciting opportunities for lawyers to protect the rights of their clients.

Current challenges have also emerged touching on how to reconcile constitutional guarantees against deprivation of property with the forfeiture of private property. The forfeiture of assets upon criminal conviction is well established; however, civil asset forfeiture poses new questions that will probably persist even after the 2020 Privy Council decision in *Williams v The Supervisory Authority of Antigua and Barbuda*[5] which confirmed that a defendant, accused, but not charged for or convicted of, money laundering, may have his or her assets forfeited in civil proceedings.[6] Related is the decision in February of this year by the Board in *The Attorney General v The Jamaican Bar Association et al*[7] that the statutory regime requiring attorneys to report certain suspected money-laundering activities by their clients did not breach attorney-client confidentiality; although the regime infringed the constitutional right to privacy, it was excusable on the constitutional ground of demonstrable justification. Obviously, this is of clear and present interest (and perhaps danger) to lawyers.[8]

Even legislation concerned with social and family matters can throw up challenges from left field. Modern Domestic Violence statutes, now commonplace throughout the region (including Guyana)[9], allow for the granting of a "protection order", *ex parte,* on the civil standard of a balance of probabilities, where there has been physical or emotional abuse (the latter includes persistent "following" or "watching"). This provides very welcome protection for many women who have suffered actual or threatened domestic violence by their partners or ex-

[2] *Nervais v The Queen* [2018] CCJ 19 (AJ).
[3] *McEwan and Others v. Attorney General of Guyana*, [2018] CCJ 30 (AJ).
[4] *Nervais v The Queen* [2018] CCJ 19 (AJ).
[5] *Williams v The Supervisory Authority of Antigua and Barbuda* (2020) UKPC 15. Constitution of Antigua and Barbuda, s 9 (1), (4). See also the Constitution of Barbados (s. 16 (20 (ii); Guyana Article 142; Jamaica s. 15 (2) (b) Trinidad & Tobago s. 4 (a).
[6] Civil forfeiture of assets is well developed in the United States, see most recently, *State vs Birk Hillman Consultants, Inc, et al* (Circuit Court in and for the 11th Judicial Circuit Case No 04-11813 CA 30 ("Piarco Miami Civil Lawsuit") where a $900m judgment was entered in favour of the State. *Daily Express*, 12 April 2023, p. 3.
[7] *The Attorney General v The Jamaican Bar Association; The General Legal Council v the Jamaican Bar Association* (2023) UKPC 6 on appeal from the Court of Appeal of Jamaica at 29 -30, 92-97. 9 February 2023.
[8] The case is well worth reading as it appears to attempt to preserve the traditional legal privilege between attorneys and clients while requiring attorneys to make the reports/disclosures to the regulatory authority to the extent that their activities on behalf of any client fall within the following six categories of professional services: (a) purchasing or selling real estate; (b) managing money, securities or other assets; (c) managing bank accounts or savings accounts of any kind, or securities accounts; (d) organizing contributions for the creation, operation or management of companies; (e) creating, operating or managing a legal person or legal arrangement (such as a trust or settlement); or (f) purchasing or selling a business entity.
[9] Domestic Violence Act 1996 (cap. 11:09).

partners, whether to a marriage or cohabitational relationship. The 1999 Trinidad and Tobago legislation was amended in 2020,[10] *inter alia*, to extend this protection to "dating relationships" defined to include relationships in which the parties "may be engaged in romantic, intimate or sexual relations". Evidently, these terms are disjunctive. A further amendment covers a person who is or ***was*** in a dating relationship. On one interpretation recently offered by counsel to the CCJ in *Goddard v Akojee,*[11] this statutory wording covers a single date which begins and ends with 2 drinks. It is therefore not inconceivable that each time you enter a bar with a new date, you may be entering a new legal frontier.

These examples of new challenges – of new frontiers if you will - could be multiplied many times over. But I do not propose to detain you here. These challenges cover familiar terrain: upholding constitutional standards (whether for or against the State); ensuring that legislation achieves its governance, social, and economic objectives; and in relation to laws implementing the Revised Treaty of Chaguaramas, facilitating the legal integrity of the integration project. They present changes from previous laws in degree but not in kind. They require that attorneys keep current with legislation and case law, master the new legal materials, and sharpen their forensic skills. Orthodox legal reasoning and traditional legal tools are relevant and available, and are, likely, sufficient.

In my view, there is a far greater test facing us, which is not just more disruptive of the current legal order; but which poses an existential challenge to the legal profession as we know it. I refer to the advances being made in technology. And it is at the intersection of law and technology that I propose to locate the gravamen of this address.

Intersectionality of law and technology.

We are surrounded by technologies. We wear them on our wrists; to tell time, and to keep fit. Most probably every person in this room has a minicomputer in the form of a cell phone, likely an Apple iPhone or Samsung. Technological advances continue to intensify in all aspects of our lives. We bank online, shop online, take educational classes online, receive health advice online. Machines perform operations on our eyes, fly our planes, and drive our cars.

Technology is the single most important driver of economic development and societal advancement. It has been thus ever since the Industrial Revolution. I hardly need to belabour

[10] Act No. 18 of 2020, amending the Domestic Violence Act No. 27 of 1999.
[11] BBCV 2022/001.

this point in the country where advances in deep sea mining technology have meant, in the words of your featured speaker last year that, "Guyana is on the cusp of unimaginable economic transformation."[12] Increasing numbers of our countries are embracing artificial intelligence (AI). Jamaica was the first to establish a national AI policy, and Barbados has been working on an AI strategy for some time now. Trinidad and Tobago is also exploring ways to use AI in its public sector, while Guyana has launched an AI lab with the help of IBM.[13] AI has potential to boost economic growth by increasing efficiency and productivity in several industries; to help us solve challenges that we face as a region, such as crime, climate change, and healthcare.

Drivers of intersectionality between law and technology.

The reference to the possibility that AI could help with the problem of crime provides a neat segway into a discussion of the relationship between law and technology. Like technology, law is omnipresent in our lives. The legal profession, which has never been the most innovative, has, in recent times undergone seismic technology-induced changes. A key driver is government regulation. These regulations range from the seemingly innocuous requirement to wear a seat belt in motor vehicles to requiring electronic recording of confessions to secure the integrity of the criminal justice system.

Another key driver is client expectation. Clients now expect to speak with their lawyers through e-mail and e-portals, not having to make an appointment and wait days to be seen in legal offices. Take the example of conveyancing. For most people, the most important purchase they will ever make in their lifetime is the purchase of a house. But most of our law firms & law chambers still work on the old fashioned 9-5, closed at weekends type approach. This means clients are not continuously updated on the status or stages in the purchase of the house. But those very clients click the "accept" button on their computers or cell phones to make a purchase online. The item appears in their shopping carts, and they track the progress from the online store to their door (or their virtual post box in Miami). The law firms and law chambers that are starting to break away from the traditional approach by offering online portals and online updates, have a decisive competitive edge.

A third critical driver is access to justice. Large portions of our populations simply do not have meaningful access to lawyers and/or to the courts. Presumably innocent people often have

[12] The Honourable Mr Justice Adrian Saunders, President of the Caribbean Court of Justice, "Advancing Caribbean Jurisprudence: Sustainable Development" The Bar Association of Guyana's Inaugural Law Week, 9 April 2022, at p. 10.
[13] Artificial Intelligence in the Caribbean: The Rise of A New Era (08 March 2023).

lengthy remands before trial. Empirical research published in 2020 states that in Trinidad and Tobago, inordinate trial delays have caused numerous individuals to remain remanded in custody, without trial, for five to ten years and in some instances, upwards of fifteen years.[14] Recent newspaper headlines in Trinidad and Tobago and Guyana, respectively have quoted the DPP and a senior judge as stating that the criminal justice system "could collapse";[15] and acknowledging that the criminal justice system is "broken".[16]

This problem is not confined to criminal justice. In some of our jurisdictions, getting a court date for civil trials is harder than getting into Fort Knox. At a recent Webinar co-sponsored by the CCJ Academy for Law, a prominent Jamaican attorney[17] represented that it was a well-accepted fact in 2022, that even if all the procedural requirements were satisfied and the matter was ripe for trial there was no hope of getting a trial date before 2027. I'm advised that since then the situation has become even more dire.

But the problem may even broader and deeper than that. It has been estimated that in the United States, one of the countries with the highest ratios of lawyers per capita (there are some 1.8 million lawyers, not counting paralegals), around 80% of the population does not have access to legal services.[18] And the United Nations has assessed that 4 billion people around the world are excluded from the rule of law.[19]

Two Types of technologies

For present purposes it may be useful to distinguish between two different types of technologies and discuss how the law reacts to the challenge posed by each, though, inevitably, there is overlap between the two. These are (a) general purpose technologies and (b) legal technologies.

General purpose technologies

The first category of 'general purpose technologies' ("GPTs") are technologies that have application across wide variety of industries. Although not specific to law, GPTs can have significant impact on the legal industry. Originally, legal documents were handwritten, which was a time-consuming and labour-intensive process. Invention of the printing press in the 15th

[14] Wendell C. Wallace, Burton Hill, and Anthony R. Rosales, "Remanded in custody and punished without trial: The Criminal Justice System and Remand Populations in Trinidad and Tobago" *Justice Policy Journal* Volume 17, Number 1 (Spring 2020), 1-28.
[15] Daily Express Newspaper, March 9, 2023.
[16] Daily Stabroek Newspaper, May 28, 2010.
[17] Dr Christopher Malcolm, CarIPI/WIPO/CCJ Academy for Law, held 29 March 2023 (virtual).
[18] Henri Arslani, "RegTech, LawTech and the Future of Lawyers" TEDx Talks.
[19] ibid.

century revolutionized the way legal documents were produced and distributed. In the 19th century, the telegraph and telephone became critical tools for the legal profession, making it possible for lawyers to communicate with clients and other lawyers across long distances. In the 20th century, the advent of computers and the internet have had a profound impact on the legal profession.

I think it safe to say that the law has responded to GPTs in at least three ways: (1) limited or banned certain technologies or technological applications; (2) compel the use of certain technologies; (3) made decisions on whether existing law applied to the new technologies.

1. Banning of technology or technological applications

Societal attitudes and values may result in the banning of certain technologies or technological applications. These regulatory interventions vary across time and across cultures and jurisdictions and changing societal perspectives. There was a time when the birth control pill was illegal; it was not until 1965 that the US Supreme Court ruled that birth control was legal, though, then, only for married women.[20] Abortions remain illegal in many Caribbean jurisdictions. In *McEwan*,[21] the CCJ affirmed that cross-dressing is not a crime; however, sex change operations are probably banned in many countries. And most societies would likely agree that cloning of human beings ought to be banned; as should "gain-of-function" technology. The latter refers to the human modification of viruses found in nature to make the viruses more lethal and infectious, usually for warfare; possibly the origin of the Covid-19 pandemic.

2. Compelling the use of Technologies

Law may require implementation of technological standards relating to such issues as mineral extractions, environmental impact assessments, building codes, motor vehicle emissions, telecommunications, and evidence-gathering, among many others.

As regards evidence-gathering, for example, the CCJ has faced the problem of how to treat with oral confessions which have not been audio or video recorded. A primary advantage of electronically recorded confessions is that it enables factfinders to make accurate assessments of the voluntariness of the confession. In some Caribbean jurisdictions, such as St. Kitts and

[20] Griswold v Connecticut (1965).
[21] *McEwan and Others v. Attorney General of Guyana*, [2018] CCJ 30 (AJ).

Nevis,[22] and St. Vincent and the Grenadines,[23] electronic recording of confessions is mandated by legislation. In *Sealy v The Queen*[24] (2016), the CCJ learnt that section 72 of the Evidence Act of Barbados (as amended) introduced mandatory electronic recording of police interviews but that the section had not yet been brought into force. Bemoaning the lack of proclamation of the section, I wrote the following in a concurring judgment (with which the Court agreed):

"[109] Science and technology have given society the most accurate and the most reliable means of discovering facts in and about our world. The judicial function is obliged to make use of these means, whenever reasonably practicable, so as to ensure that findings of fact in the judicial process accord as closely as possible with reality. Where scientific and technological methods are reasonably available but not used, constitutional questions could arise concerning the integrity of the system of justice."

The practical implications of these sentiments were soon put to the test. The following year, 2017, in *Edwards and Haynes v The Queen,*[25] the two appellants had been convicted of murder and sentenced to the mandatory death penalty. The only evidence against them was their alleged oral confessions made separately to the police, which the men disputed having made. There was no audio or video recording of the alleged confessions. I was promoted to write the judgment of the Court and held that the quality of the evidence was not sufficient to send the men to the gallows. The judgment linked the constitutional right to a fair trial with technological advances; "… it was time to replace the policeman's notebook with electronic recording devices."[26]

Where the regulatory requirements are not clear, the Court may be forced to resort to traditional legal presumptions as we did in the Belize case of *Speednet Communications Ltd v Public Utilities Commission.*[27] Unable to decide between the conflicting and highly technical definitions of "radio frequency channel" offered by the Commission and the appellant, the Court held that the ambiguity should be resolved in favour of the appellant on the principle against ambiguous governmental imposition. Writing for the Court, Justice Wit and I made clear that the Court did "not assert that this is the technologically necessary meaning but rather that it is the meaning to be derived from the application of the relevant legal criteria."[28]

[22] Evidence Act, 2011 (No. 30 of 2011).
[23]Interviewing of Suspects for Serious Crimes Act 2012 (Act No. 4 of 2012).
[24] [2016] CCJ 1 (AJ).
[25] [2017] CCJ 10 (AJ).
[26] Ibid., at para 31.
[27] [2016] CCJ 23 (AJ).
[28] Ibid. at para 47.

3. Application of existing legal rules to new technologies

In many cases, courts have had to decide on the scope of existing rules, that is, whether the existing rules apply to new technologies. Seamless integration may lead to talk of technology-neutral rules, i.e., rules that are seen to be resistant to problems generated by technological change. For example, in a 1921 decision, the Dutch Supreme Court held[29] that the Criminal Code of 1881 prohibiting the theft of "goods" included the theft of the then novel "electricity", which is hardly a "good" in the traditional sense.

An example more familiar to the common lawyer concerns contract formation. A contract is made when contracting parties reach agreement. The first contracts were negotiated and made in person; solemnized by the apocryphal "handshake". With the organization of the postal system, the High Court of England decided in 1818,[30] that the contract was concluded when the letter of acceptance was posted. In 1955,[31] the Court of Appeal decided that the postal rule did not apply to modern instantaneous means of communication such as the telephone or the telex. Denning LJ (as he then was) hypothesized that if the phoneline "went dead" just before the offeree said "yes", it would be absurd to assume that the contract was formed - the parties would have to call each other back. A landmark decision of the House of Lords in 1983,[32] largely accepted the 1955 decision on contract formation using modern communication, though Lord Wilberforce could not resist stating that he would accept the 1955 decision only as "a general rule … but not necessarily a universal rule". [33] It is now commonplace that we make contracts online by the clicking the "accept" button on our computer or cellphone (recently reaffirmed by the Supreme Court of Canada in *Douez v Facebook*[34]).

My point is that there has been no need to fundamentally transform the law of contract formation. The original condition of *inter praesentes* was essentially concerned with simultaneity; ensuring that there was a simultaneous meeting of the minds. Modern technology has simply (if radically) reduced the distance between the parties by bringing them into a common space. That space is now virtual rather than physical, but the essential condition of simultaneity has been preserved. Similarly, we have not had to change the law of defamation in the electronic age. Endorsing or "liking" a libelous statement on Facebook or other social

[29] Het Elektriciteitsarrest (HR 23 mei 1921, *NJ* 1921/564) .
[30] Adams v Lindsell (1818) 1 B & Ald 681.
[31] Entores v Miles Far East Co. [1955] 2 QB 327.
[32] Brinkibon v Stahag Stahl GmbH [1983] 2 AC 34.
[33] ibid.
[34] [2017] S.C.J. No. 33. See also *Chwee Kin Keong and Others v Digilandmall.com Pte Ltd* [2005] 2 LRC 28 (Singapore).

media platform may sound to your disadvantage in damages for defamation and may thus be just as harmful as showing too much skin on those platforms.

Law Technologies

I want now to look more particularly at technology that is directly and causally redefining the legal landscape. Legal technologies (Lawtech) refer to specific technologies that transform the traditional methods for delivering legal services or that improve delivery of justice. Lawtech covers a wide range of tools and processes, such as:

- document automation
- predictive artificial intelligence
- chatbots
- smart legal contracts
- blockchain

Artificial Intelligence

AI - the automating of decision-making processes using algorithms, which learn from data and get smarter over time - has its most obvious application in the field of legal research and the metronomic review of contracts. In preparation for litigation, it is common practice to go through many, sometimes hundreds of past cases, to find the specific cases that are helpful to legal submissions. This can be like searching for the proverbial needle in a haystack. Lawyers spend up to 1/3 of their time doing this kind of research. However, technologies powered by AI can now go through all the data bases and intelligently flag the cases that are most relevant. Work that would take hours now takes minutes thus reducing the cost of legal services and making these services more accessible.

Current technologies allow us to now programme basic legal propositions into decision trees and deliver legal answers to the public through tools that people use every day such as Facebook, Messenger, and We chat. These messaging Apps allow a person to speak to a computer programme as if speaking to a human lawyer. A person with a legal problem may now take out his/her smart phone and ask his/her robot lawyer for advice on contracts, divorce, custody, hire purchase, home rentals, conveyancing; you name it. Already, there are anecdotal stories of persons in the United States contesting traffic tickets on the basis of legal advice

received from Chatbots, though in a reputed case, a dissatisfied plaintiff is suing his robot lawyer ("DoNotPay") for practising without a licence.[35]

Predictive artificial intelligence has powerful potential for increasing access to legal services for persons traditionally excluded because of costs. All that is required is a smartphone. Advances in voice recognition technology and voice as user interface, allow the offering of legal services to thousands of persons in the Caribbean and to the 750 million people worldwide who are illiterate, i.e., cannot read and write, many of whom are women.

Automation of contract review, legal research, and predictive analytics are just some examples of how AI is being used to transform the legal landscape. Even more profound is AI's intrusion into the process of judicial adjudication itself. It is now becoming commonplace for judges to employ AI to help in determining the mean (average) sentences.[36] Using AI here is somewhat understandable since some sentencing guidelines are so complex that only calculators can properly make the calculations!

Judges have also used AI to determine other legal questions. On the 30th of January this year,[37] Judge Juan Manuel Padilla, in the Circuit Court of Cartagena, Colombia, caused a stir by admitting in his judgment that he used the artificial intelligence tool ChatGPT when deciding an autistic child's rights to insurance benefits. He asked the ChatGPT the precise legal question at hand: "Is an autistic minor exonerated from paying fees for his therapies?" ChatGPT responded: "Yes, this is correct. According to the regulations in Colombia, minors diagnosed with autism are exempt from paying fees for their therapies." Having received this affirmative answer, the judge also used precedent from previous rulings to support his decision that the entirety of the child's medical expenses and transport costs should be paid by his medical plan as the parents could not afford them. Judge Padilla defended his use of the technology, suggesting it could make Colombia's bloated legal system more efficient, but his detractors expressed the fear that robots would replace judges.

The laboratory for the experiment of replacing judges by machines is China which boasts the most aggressive use of AI in judicial decision-making. China has been working to build a "smart court" system since at least 2016. The new system requires judges to consult AI on each

[35] Lawsuit pits class action firm against 'robot lawyer' DoNotPay | Reuters.
[36] AI in the court: When algorithms rule on jail time (phys.org).
[37] File No. 13001410500420220045901 Plaintiff: SALVADOR ESPITIA CHÁVEZ Action: SALUD TOTAL EPS Judgment No. 032 Date of Ruling:01-30-2023.

case, and if they reject the AI's recommendation, they must provide a written explanation.[38] The system automatically screens court cases for references, recommends laws and regulations, drafts legal documents and alters perceived human errors, if any, in a verdict.[39] China's Supreme People's Court in Beijing, reports that AI had cut a judge's average workload by over a third, and saved Chinese citizens 1.7 billion working hours from 2019 to 2021, and its legal system $45 billion dollars.[40] AI systems were working through the entire justice procedure, from investigations to prosecution to adjudication;[41] in one instance, the AI program Xiao Zhi 3.0, or "little wisdom" assisted in a trial of 10 people who had failed to repay bank loans. Previously, it would have taken 10 separate trials to settle the issue, but the AI resolved all the case in one hearing with one judge, and a decision was made available in just 30 minutes[42].

Blockchain

Blockchain technology - technology that is decentralized (not located in one place), irreversible (once transactions are recorded the data in any given block cannot be altered retroactively) and consensual (must be agreed by all the parties involved) - is transforming how legal services are delivered. Let's return to the example of purchasing a house. Traditionally, this entails (1) going to a lawyer; (2) the lawyer makes searches to ensure that (3) house belongs to the person who is selling it; and that (4) the title is clear of mortgages, & other liens. This process is costly and not always efficient; consider the many land titles cases appealed from Guyana to the CCJ. Putting land titles on the blockchain makes it cheaper to buy and sell houses – there is no need for lawyers to act as trusted intermediaries between the seller and the buyer. Blockchain does that work.

Or take the example of contracts. Where there is a breach of obligation, enforcement of rights may be difficult and costly. If the contract is transnational, you must first (1) find the defendant; (2) hire a lawyer; (3) go to court – hoping to get a court date this century; (4) comply with complex procedural rules, including rules of evidence; then (5) consider injunctive relief and attachment of assets to recover on any judgment in your favour.

[38] China's AI-Enabled 'Smart Courts' To Recommend Laws & Draft Legal Docs; Judges To Take Consult AI Before Verdict (eurasiantimes.com).
[39] China's court AI reaches every corner of justice system, advising judges and streamlining punishment | South China Morning Post (scmp.com).
[40] AI helps judges decide court cases in China | AI Business.
[41] AI-aided justice: How technology is changing Chinese courts - CGTN.
[42] How China's AI is automating the legal system – DW – 01/20/2023.

By contrast, Blockchain facilitates "smart contracts". Like traditional contracts "smart contracts" set the rules, specify the rights and obligations of the parties but the "smart contract" automatically execute the agreed terms upon the occurrence of certain events, at present, certain public verifiable events. For example, a person can recover under his/her travel insurance policy as soon as publicly available information shows the insured flight has not landed on time i.e., that it has been delayed. The sources of payment in blockchain-based smart contracts are many. In e-commerce smart contracts, buyers may pay for a product using their credit cards; payment is automatically processed by the smart contract once the product is delivered. As another source of payment, the contract debt can be automatically extracted from cryptocurrency wallets.

The transformational potential of blockchain has been recognized by judges for at least 6 years. The 2017 decision in *R3 v. Ripple*[43] concerned a contract related to the use of Ripple's XRP cryptocurrency. In highlighting the potential of blockchain technology to simplify legal transactions Judge Analisa Torres stated:

> "By providing a secure, decentralized, and immutable ledger, blockchain technology can make legal transactions more efficient and transparent. This transformative potential is precisely why so many companies are eager to develop practical applications for this technology."[44]

Five years on, this statement stands as the sentinel, beckoning the potential benefits of blockchain technology to transform legal transactions. In an August 2021 opinion, U.S. Magistrate Judge, Zia Faruqui partially quoted "*Star Trek: First Contact*" to praise cryptocurrency tools. The Judge is reported to have stated that "Humans are 'Flawed. Weak. Organic,' whereas clustering software strives for perfection."[45]

Robots as persons

This comparison of humans to AI, and the earlier references to robot judges and robot lawyers, raises the tantalizing question of whether AI could be recognized as having legal rights. **On the one hand**, from as early as 1985, Christopher Stone argued that electronic devices such as

[43] 17-CV-03276 (AT) (S.D.N.Y. Sept. 28, 2017). https://www.nysd.uscourts.gov/sites/default/files/2017-09/R3%20v.%20Ripple%20Opinion.pdf
[44] Ibid., at p. 5.
[45] Federal Judge Praises Crypto Analytics Tools in $3.6B Bitcoin Seizure Case (coindesk.com)

computers should have legal autonomy.[46] In October 2021, in the world's first, the South African Patent Office granted a patent to DABUS, an AI.[47] Also in 2021, Australia became the first country to judicially rule in favour of AI inventorship;[48] however, this was overruled the following year, 2022, when five judges in the Federal Court held that an inventor must be human.[49] Courts in Europe have also ruled that inventors must be human.[50] In August 2022, the US Federal Circuit Court decided that the term "individual" in the Patent Act refers only to humans but the US Supreme Court has agreed to take up the question and there, of course, anything could happen. **On the other hand**, scientific and technological experiments have demonstrated that humans may not have the free will and therefore the personal autonomy that we once thought we did.[51] But this is a complex matrix of ideas, entry into which involves a scary discussion best postponed for another lecture.

Impact on Bench and Bar

Legal technologies have quite profound implications for both the Bench and the Bar. As far as the Bench is concerned, the Chinese judiciary's use of AI is a possible harbinger of things to come. Caribbean courts have already taken the first primitive steps. Judges and lawyers now routinely work on their laptop or iPad in Court. Several courts have migrated from book to electronic research, from paper to online filings, from physical to virtual hearings. There is hardly the need for law textbooks and law reports unless they are used for decorating the walls in the Judges' chambers or conference rooms.

In February 2022, the CCJ was inducted into the International Consortium for Court Excellence (ICCE) only partly but still importantly because of the heavy reliance placed by the Court on using modern technology. The CCJ has implemented a *Curia* electronic court management software suite which has three modules: *Folio*, *Attaché*, and *Sightlines*. The CCJ was among the first courts to implement virtual hearings; we did so before the Judicial Committee of the Privy Council. Virtual hearings are now the norm; our last physical sitting was on 3rd March 2020, over 3 years ago, although Covid-19 was clearly an initial contributing factor. The

[46] Christopher Stone, *Should Trees Have Standing? Revisited: How Far Will Law and Morals Reach? A Pluralist Perspective.* 59 S. Cal. L. Rev. 1 (1985).
[47] See Utkarsh Patil, https: //www.mondaq.com/india/patent/1122790/south-africa-grants-a-patent-with-an-artificial-intelligence-ai-system-as-the-inventor-world39s-first#:~:text=Two%20days%20after%20the%20South%20African%20patent%20grant%2C,can%20be%20an%20artificial%20intelligence%20system%20or%20device.
[48] Thaler v Commissioner of Patents [2021] FCA 879 – Law Case Summaries.
[49] *Commissioner of Patents v Thaler* [2022] FCAFC 62.
[50]Samantha Handler, "Inventors Must be Human, Federal Circuit Rules in Blow to AI (1). See: https://news.bloomberglaw.com/ip-law/only-humans-not-ai-qualify-as-inventors-federal-circuit-rules;
[51] See e.g., Sam Harris, Free Will. Overcoming the myth of free will in criminal: the true impact of the genetic revolution by Matthew Jones at 1031 [Vol. 52:1031]; Criminal Law and Sentencing: What goes with Free Will? By R. George Wright at 2 [Vol. 5.1].

potential of the JURIST supported and now CCJ managed the knowledge management system known as the Caribbean Judicial Information System ("CJIS") as a possible first step towards automated decision-making is as significant as it is exciting.

As regards the Bar, Lawtech is a key driver in law firm modernization and is rapidly transforming the way attorneys deliver legal services to their clients. Law firms simply must invest in new technologies if they are to be fit for purpose - if they are to survive. There is, of course, concern that the new technologies pose a mortal threat to lawyers. In prescient remarks delivered in Antigua in 2017 to mark the 50th Anniversary of the establishment of the Eastern Caribbean Supreme Court,[52] Justice Don Mitchell (Ret) painted a picture of an electronic justice system where most lawyers' routine legal work, such as writing opinions and lawyers' letters, and drafting contracts and wills, will be handled by software; where bot-lawyers like "ROSS" and "DoNotPay" largely replace interface with human lawyers; and where witnesses do not attend trial in person but via holograms from which truth is elicited by sensors monitored by judges assisted by lay persons. Researchers have suggested that 25-40% of legal jobs will disappear when the new legal technologies take full effect; others predict the structural collapse of law firms and law chambers.

As always, the truth is more nuanced. Firstly, several of these developments are still somewhat futuristic, especially in relation to our Caribbean societies. Secondly, yes, many legal jobs will be lost but new jobs will also appear, for example, as legal coders for smart contracts; and as legal data scientists for a new regulatory system that allows the new technologies to emerge and flourish. And there are some human characteristics that AI will not easily imitate anytime soon: the ability to strategize, negotiate, reason, make common sense judgments, visit clients in jail. And the ability to empathize.

How to prepare

So how do we prepare for the new frontiers? One word: "Pivot!" In my former life as a lecturer at the University, I lived by the creed indelibly etched into the minds of all academics: "Publish or Perish!". In facing the new frontiers of electronic justice, the legal profession must Pivot or Perish.

1. We must pivot from the old ways of doing things and embrace the new ways of delivering legal services. Bar Associations and law firms and law chambers may be

[52]Celebrating the Past, Embracing the future: The Eastern Caribbean Supreme Court at Fifty, 1967-2017 by Justice Don Mitchell (Ret), P. 26 50-Years-of-the-ECSC.pdf (eccourts.org).

tempted to fight the change and we should certainly seek to secure a soft landing. But as the Taxi Drivers Associations discovered with the arrival of Uber and other share-riding services, "resistance is futile". Given the reasons driving the inexorable rise of Lawtech, we must buy into the new electronic justice system and encourage our colleagues and key stakeholders: judges, lawyers, litigants, and the public, to do the same.

2. Lawyers and judges must acquire digital literacy. Consider attending every course that you can on the new legal technologies. If you are over 50 and you have grandchildren stay close to them. These little people seem to have been born with the electronic gene in their DNA. If you have no grandchildren but have adult children threaten to write them out of your will unless they do their genealogical duty.

3. We must pivot to cooperating with the regulatory agencies, as appropriate, to facilitate the rise of a regulatory framework that creates the right ecosystem for the new technologies to flourish but also to operate within constitutional norms and standards. However, we must be cognizant that, unlike traditional treaties, there is no need or requirement for legislation to domesticate legal technologies before they become effective. Motorists stopped for speeding in Georgetown can as easily seek legal advice from their smart phones as motorists in New York city. What legislation ***can*** do is to enable incorporation of the new technologies into the legal process to make the system more efficient. We earlier touched on this when we discussed the use of electronic recordings and (by extension) DNA evidence.

4. And finally, we must pivot to appropriately educating the new generation of legal talent for what's coming down the pike. The course "**Law and Technology**" must be introduced into the curriculum of every Caribbean university; it is presently taught in none. Our young lawyers must be prepared for the jobs of the future (smart contracts coding; regulation data scientists); not exclusively the jobs of the past (drafting of wills and conveyances, court room advocacy).

5. Above all we, the over 50s, must help to sensitize our successors in the legal profession to the new forensic reality and culture that they will face; for they will inhabit a legal world bordered by new frontiers that we can never enter; not even in our imagination.

Thank you for your attention.