



JUDICIARY OF  
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**The Challenges and Opportunities Created by Digital  
Evidence in Criminal Cases**

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I am delighted to be here in Manchester and thank you very much for inviting me to speak. I was first invited to speak to you at your conference in March 2020. It seemed to me then that the topic of digitisation, and the challenges and the opportunities it presented was one of increasing importance to every part of the criminal justice system. And even more so now, may I say, post pandemic.

The first framework for our discussion is technology. Most of the world depends on computers, mobile phones, the internet and technology. These are not simply aids to communication nor even useful tools in managing tasks in our everyday and business lives. The proliferation of technology has transformed society and has led to distinct changes in how individuals behave and engage with the world around them. The scale of all this is hard to comprehend. It is remarkable to note that four of the Tech giants, Apple, Microsoft, Amazon and Google have reached market capitalisations of well above \$1.5 trillion, which if that number was translated into GDP, the value of all goods and services produced by a country in an entire year, would put Apple into the G7, and all of those companies in the top 10 economies in the world. The figures are equally striking for social media. Our world has 7.9 billion souls in it. Facebook's

own information tells us that there are now over 2.91 billion users who are active on Facebook, to name but one of the most important current media platforms.<sup>1</sup> Most of the world's population own smart phones. In the United Kingdom, the use of YouTube, Snapchat, TikTok and WhatsApp verges on the ubiquitous in the age cohort of those who are most likely to commit serious crime.

The unprecedented level of technological innovation over the last few years, and its incursion into our lives has provided an equally unprecedented opportunity for crime, deviance and misuse. In short, the proliferation of crime, including new types of crime with a digital aspect has matched the extent to which we all lead digital lives.

It is statement of the obvious to all of you that this in its turn has provided governments and legal systems across the world, with extraordinary challenges.

To name but three:

- adapting existing legal frameworks to new types of crime;
- developing the expertise to combat such criminal activity, including internationally in this technologically connected world;
- and last but by no means least, providing the resources in terms of (and for) the expertise and manpower to do all this.

These challenges and others, have to be grappled with by many people who were born before the internet existed (its official birthday is 1 January 1983) and who may be less technologically savvy than those whose activities they have to understand, in order to combat them. In our domestic lives we may ask our children to set up our smart phones; but in the criminal justice system at least, there must be a high degree of technological literacy amongst professionals who operate within it if they are to be in a position to tackle offending in the twenty first century.

The second framing issue is this. As has been said on many occasions, there is no criminal justice system, but a series of criminal justice systems, starting with the police and the investigation of a crime. But they are all connected and interdependent. What happens at each stage of that system, affects every other part of the system. That

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<sup>1</sup> Facebook's official investor relations information. This information is officially updated once per quarter. Worldwide, there are over **2.91 billion** monthly active users (MAU) as of November 1, 2021.

is true whether we are talking about demand and supply to put it crudely, or the facilitative effect of technology, or the resources that available, technological or otherwise. It is in everyone's interests therefore, that we get all this right at every stage.

This brings me to my third framing issue – the overarching interests of justice. There are different philosophical views about what this entails, but for present purposes this rests on the fair and efficient resolution of a case, and, if there is a charge, on the conviction of the guilty and the acquittal of the innocent.

There are now very few crime scenes that might not be better described as digital crime scenes. And where a case involves digital evidence, just as for traditional evidence, the quality of it, and its integrity in legal terms may be key to the fair resolution of the case. But there is more to it than that. If a case is contested and goes to trial, the evidence has first to pass through any statutory or judicial filter of admissibility, and then be comprehensible and credible to the decision-makers in our system, who are for the most part, ordinary members of the public sitting as lay magistrates or as jurors. And this ultimate use of digital evidence, and its preparation and presentation, therefore, always has to be borne in mind

So, against that background, let me now touch on some of the opportunities and challenges.

Volume. The issues that surround this topic will be well-known to everyone in this audience. There are two sides to this (digital) coin. On the positive side, the amount of data or digital evidence (by which I mean information transferred or stored in a binary form) is a vast and potentially precious resource for investigators. Very few cases that are heard in the Crown Court do not include digital evidence of one sort or another – emails, information stored on computers, mobile phones, social messaging, GPS, cell site evidence, CCTV footage and even data from what is now called the internet of things (everyday objects which connect with the internet and each other). The deferred prosecution agreement that I dealt with in January of last year, in a case

brought by the SFO against Airbus SE, generated over 30 million documents all of which were marshalled digitally across a number of different jurisdictions.<sup>2</sup>

Such digital evidence may also prove more reliable than traditional evidence, and thus, further the interests of justice. If someone is caught on camera for example, there may be scope for arguing about who is captured visually; but the footage may prove a sounder foundation for a fair outcome than identification evidence from a witness who caught a fleeting glance of the events in question.<sup>3</sup>

But this vast amount of data brings with it difficulties. Some are obvious, some less so. The Barn Door or Warehouse problem of disclosure that existed in the paper world is a well-known phenomenon. But it is put into the shade by its digital equivalent given the amount of data we generate and the extent to which we now create a digital fingerprint in every aspect of our lives.

When a crime is committed, this data must be collected, retrieved or recovered, if it has been deleted in a manner that preserves its integrity and is forensically sound and it must be examined and analysed. There must be data reduction and filtering. Account must be taken at every stage of legal obligations, including the requirements of data protection legislation and the need that might arise for redaction. There are particular sensitivities now about privacy. In another forum, the Civil Division of the Court of Appeal, I was part of the constitution of the court that considered privacy in the context of the lawfulness of trials being conducted into the use of facial recognition technology, something which will no doubt be an issue for the future.<sup>4</sup>

For the present we know that privacy concerns in the context of sexual offending have led to certain amendments relating to Digital extraction and third-party materials in the Police, Crime, Sentencing & Courts Bill, currently before Parliament.<sup>5</sup>

So, relevance must be determined, and disclosure must then take place.

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<sup>2</sup> <https://www.judiciary.uk/wp-content/uploads/2020/01/Director-of-the-Serious-Fraud-Office-v-Airbus-SE-1.pdf>

<sup>3</sup> The kind of evidence that gave rise to the Turnbull Guidelines, which warned juries of the risks of convicting on such evidence. See *R v Turnbull* [1977] QB 224

<sup>4</sup> <https://www.judiciary.uk/wp-content/uploads/2020/08/R-Bridges-v-CC-South-Wales-ors-Judgment.pdf>

<sup>5</sup> [Police, Crime, Sentencing and Courts Bill](#)

Expert reports may be needed; and if they are, they have to be prepared in accordance with the requirements of the Criminal Procedure Rules.

Each of these steps requires resources, technical and otherwise. A misstep may result in the failure of a prosecution at one end of the spectrum, or delay, possibly extensive, between arrest and charge or in the preparation of the trial. This can undermine efficient case progression and affect the interests of justice more generally (matters which every part of the criminal justice system has been trying to address for many years, and which were dealt with recently in the joint report from the National Police Chief's Council, the CPS, and others in a report published in July of this year).

Returning to disclosure for a moment, the disclosure process is often the mechanism through which digital evidence becomes a live issue between the police and prosecutors on the one hand and defendants and their lawyers on the other. One of the other speakers this morning will be addressing this, I see under the interesting heading "The Dragon under the Bed". It is sufficient for me to say that it is to be hoped and anticipated that the recent Attorney General Guidelines 2020,<sup>6</sup> and the system-wide approach introduced through the Disclosure Management Document<sup>7</sup> will achieve their worthy objectives of compliance, transparency and the early definition of the real issues in the case by both sides. These things have always been critical but are especially so now given the volumes of digital evidence that is generated and the problems of marshalling and management this engenders.

The way in which the self-same challenges are being addressed in civil litigation may be able to help. The problems posed by the volume of data, in particular in commercial litigation, has led to new disclosure regimes.<sup>8</sup> The context is obviously different, not least because of the resources available. Having said that however, as a House of Lords committee pointed out a few years ago,<sup>9</sup> there is scope for cross-fertilisation, and it is to be hoped that in the future, if it is not doing so already, the public sector might use technology which has been developed in the private sector. This includes sophisticated document management capabilities; software that can

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<sup>6</sup> Attorney General's Guidelines on Disclosure for investigators, prosecutors and defence practitioners (2020)

<sup>7</sup> Supported by an updated version of the Criminal Procedure and Investigations Act 1996 Code.

<sup>8</sup> See Civil Procedure Rules, PD 51U.

<sup>9</sup> House of Lords Science and Technology Committee, Forensic Science and the Criminal Justice System: a Blueprint for Change (2019)

search across millions of documents, locate duplicates, categorise, flag anomalies and facilitate faster manual review where it is required.

As for expert evidence, in the context of what we are talking about now, legitimate concerns have been raised about the paucity of digital forensic science specialists available in crime, a fact not unrelated to the differential levels of remuneration between the private and public sectors; and about the low numbers of providers more generally.<sup>10</sup>

But there is another feature which we all need to consider. To put it at its simplest, jurors – and indeed judges dare I say it – have to understand the evidence that is put before them. And whilst digital evidence can enhance the prospect of justice being done the scope for evidence that deals with the new technologies to obscure, rather than illuminate, must also be faced. “With increasingly complex or novel science there comes the risk of testing the science, rather than the evidence, in front of the jury.”<sup>11</sup>

As I have said on other occasions, to state the obvious, people live in an increasingly sophisticated world, without understanding some of the most basic scientific concepts which are integral to the way in which they live their lives. And there is an increasing reliance on experts to fill the gap. And it would not be surprising if jurors (or judges for that matter) find it difficult to understand certain expert evidence or to follow cross-examination which is aimed at revealing flaws in scientific methodology, or then to determine how much weight to attach to it. This in turn gives rise to an obvious risk that the resolution of an issue in dispute will simply involve deference to the opinion of a convincing expert.

And whilst the Forensic Science Regulator’s powers have been enhanced and placed on a statutory footing<sup>12</sup> and this topic is under the spotlight of the Criminal Justice Board, amongst others, when things go wrong this is not only a matter of concern to

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<sup>10</sup> Evidence to the House of Lords Science and Technology Committee for its 3<sup>rd</sup> Report of Session 2017-2019 and House of Lords Science and Technology Committee, Forensic Science and the Criminal Justice System: a Blueprint for Change (2019)

<sup>11</sup> <https://www.judiciary.uk/wp-content/uploads/2014/10/kalisher-lecture-expert-evidence-oct-14.pdf>

<sup>12</sup> See the Forensic Science Regulator Act which came into force on 29 April 2021

the defendant but to all those involved in the criminal justice system, and to society more generally, as the recent Post Office litigation has demonstrated.<sup>13</sup>

You may know about the judicial primers project. This is a collaboration between members of the judiciary and the Royal Society designed to assist the judiciary when handling scientific evidence in the courtroom with peer reviewed primers written by leading scientists.

Their purpose is to provide an easily understood and accurate position on the scientific topic in question, as well as considering the limitations of the science, challenges associated with its application and an explanation of how the scientific area is used within the judicial system.

There have been primers on forensic DNA analysis, forensic gait analysis, and the use of statistics in legal proceedings and ballistic forensics. Perhaps computer science, and the basics of digitisation, might be one for the future.

Let me turn finally, to the prosaic present day, and the streamlining of processes that are being introduced as part of the reform programme in the courts. In today's world, people expect to shop online, communicate online and do their business online. In moving to digital processes, the courts need to keep pace with the societies they are designed to serve. Whilst this presents us with opportunities to do things better, we shouldn't throw the baby out with the bath water. Remote hearings have been invaluable in keeping the courts running throughout the pandemic and will continue to play their part when this is in the interests of justice, but there is no prospect for the present of criminal cases in the Crown Court being decided by jurors in the virtual space, rather than a real one.

Nonetheless the reforms in the processing of data and digital evidence, that have been introduced by HMCTS have proved to be invaluable. The Digital Case System is a case in point; it has been described by many as a "game changer", and it is.

Common Platform which is intended to enable the secure digital access to case information and materials and indeed the digital management of cases from charge to disposal – is work in progress. One element already in use however is the Single

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<sup>13</sup> <https://www.judiciary.uk/wp-content/uploads/2021/04/Hamilton-Others-v-Post-Office-judgment-230421.pdf>

Justice Procedure, which uses an online system, and automated processes so that limited types of offences involving adults that are summary-only and non-imprisonable, can be decided by a single magistrate sitting with a legal adviser and processed digitally.

Digitisation therefore presents us with many opportunities, and it has many virtues, not least in assisting in the process of recovery.

Can I finish by saying, not inappropriately I hope, what a pleasure it has been to address this conference, and an audience which I can see in front of me and in person.

Thank you.