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## THE RIGHT HON. SIR GEOFFREY VOS

### How will the digitisation of the justice system and new technologies affect factual and expert evidence?

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#### Introduction

1. The blurb announcing this speech explains to those of you that don't know me that at last year's annual bar conference, I vowed to "radically rethink" civil justice, saying the UK legal system needed "to be ambitious in terms of digitalisation if it is to retain and enhance its status".
2. I cannot recall that vow, but whether or not I made it, I have indeed been radically rethinking the way we deliver civil justice, since I took over as Head of Civil Justice in England and Wales in January this year.
3. To summarise a number of speeches and articles I have made, I see the civil justice system (including, for these purposes, family and tribunals) as operating like an online funnel. There would be three layers: a first layer comprising a website and associated app which directs any would-be

litigant to the appropriate pre-action portal, whether publicly or privately funded. A second layer comprising a whole range of pre-action portals or ombuds processes, and a third layer comprising online court platforms for money claims, damages claims, possession claims, public and private family claims, and employment and immigration tribunals to name but a few. A single data-set is created for every case either when the proceedings are commenced or at the pre-action stage when the case is brought to a pre-action dispute resolution portal, such as the existing personal injury portal or whiplash portal. If needs be, the pre-action portal will transmit the single data set by API to the online damages platform. The online programmes will suggest to the parties, whether manually or by the use of artificial intelligence out-of-court solutions, so that the parties have multiple opportunities to reach a compromise. Insofar as cases do not respond to attempts at resolution, they would be determined by judges either in remote or face-to-face hearings, but the documentation would be entirely digital.

4. None of this is cloud cuckoo land. The HMCTS Reform Project has already produced Online Civil Money Claims and Damages Claims Online. Public and private law family claims are brought online and employment tribunals claims, possession claims and enforcement will shortly be added

to the list. The Government is legislating in this session for an online rules committee to govern the online dispute resolution space, and I am optimistic that that legislation may also allow for the accreditation of pre-action portals in the way I have explained to allow many more disputes to be resolved without the need for proceedings to be commenced.

5. The overwhelming benefit of the smart online pre-action portals and the smart online court systems is that they will substantially ease the current administrative burdens of an analogue system. Once a court order is made online, the digital system reminds the parties about its requirement by texts, emails and other communications – automatically. It is just the same as happens with your online Tesco order, when you are texted on multiple occasions to be informed that Kevin in the blue van will arrive at your door shortly, and that the leeks you ordered will be large carrots instead of the small one you wanted. If a smart online judge drawn directions order is not complied with, even after multiple, reminders, the system itself will take the appropriate consequential steps.
6. So, in this context, what I want to talk about today, bearing in mind that I am speaking at an expert witness conference, is how the digitisation of the

courts and the new technologies will affect the evidence that courts receive and, the evidence of expert witnesses in particular.

7. I note that the rest of your programme today focuses on expert evidence in the family, medical and commercial fields, and on relationships between lawyers and experts. I want to take a step back from the nitty gritty of day-to-day preparation of expert reports, and ask some more fundamental questions about evidence in a digital world.
8. Those questions are: first, how will the new technologies affect the kinds of dispute for which expert evidence will be required? Secondly, once the justice system operates online, will expert's reports also need to be provided online? Thirdly, how will the use of blockchain, smart contracts and cryptoassets affect expert evidence?

How will the new technologies affect the kinds of dispute for which expert evidence will be required?

9. Before one considers the evidence that will be needed in disputes of the future, one needs to think more about the nature of the disputes themselves.

10. In the commercial and financial services field, most trades and contracts will be smart or digital and much will be immutably recorded on the blockchain. There will undoubtedly be digital transferrable documentation for bills of lading, bills of exchange and every other commercial instrument. All that means that the room for factual dispute will be limited, because it will be hard, if not impossible, to question the electronic record. This approach does not necessarily read across to issues concerning medical or family matters, since physical and psychological injuries will obviously still occur, however much digitisation occurs in financial transactions. I will return to these questions.
11. Nonetheless, I do not think we should assume that the disputes we see within the court system today will continue to be the kinds of dispute we will see in 5, 10 or 20 years' time.
12. First, the online tools I have spoken briefly about will lead to much bulk litigation being more efficiently and quickly compromised. That does not mean that no expert input will be required – for example, an expert report is a pre-requisite before a claim on the whiplash portal can be settled. But it does mean that the expert input will be required in a different –

electronic – format – and may be more a question of answering questions online than writing a traditional medico-legal report.

13. Secondly, the evidence base upon which experts will be required to opine in the future is likely to be almost entirely digital. Almost every aspect of our lives is undertaken through our smart devices, using apps and artificial intelligence. As I have explained, the court process will not be an exception to this trend. Ultimately, it is therefore inevitable that all evidence will be electronic. As we have seen through Covid, even physical medical examinations have dramatically reduced in frequency. Much of the work that was done in person can now be done remotely.
  
14. Thirdly, the Government is considering numerous initiatives that will reduce the number of contested cases in bulk areas such as personal injury, medical negligence, family and employment disputes. There is an overwhelming case for improving the mediated interventions about which I have spoken, since it is really only a very small percentage of disputes that cannot be settled if mediated interventions are applied at the right time and in the right way. As I so often say, every dispute has a sweet spot at which it is amenable to settlement. It is just that the right moment for settlement is not the same in every dispute.

15. All this means that the number of disputes and the kinds of dispute for which expert evidence will be needed is changing. The “radical rethink” of the way we do civil justice will have a significant effect on the foundations of the expert evidence of the past.
16. Let me start then with how expert evidence is likely to be produced in future.

Once the justice system operates online, will expert’s reports also need to be provided online?

17. It goes without saying that an online justice system will require evidence to be provided online. The simplest way of doing this is to upload a traditional report as we upload so many other documents to online programmes.
18. I doubt, however, that that will be the way evidence is ultimately provided in the online space.
19. As you all know, analogue civil proceedings require quite complex documents called “Particulars of Claim” to initiate them. Such documents are generally drafted at a cost by lawyers acting for the claimant. The cost

of them acts, in some if not many cases, as an impediment to access to justice. The online dispute resolution that is now being put in place will eventually include decision trees so that most cases can be 'pleaded' without the need for formal court documents. Instead, the programme will ask questions designed to identify the issue or issues that divide the parties. In its simplest form – if we are talking about a road traffic accident, the decision tree might ask the claimant: (i) who do you think was responsible for the injury you sustained? Answer: the defendant. (ii) What conduct of the defendant do you say caused your injury? Answer: He was driving too fast, and could not stop, so his car hit mine in the rear. (iii) How fast do you say the defendant was going when his car hit your car? The defendant would then be asked if he accepted what the claimant had said, and might defend on the basis that the claimant had braked suddenly in a stream of traffic causing the defendant to run into the back of him. The issues would then be identified as, for example: Was the defendant driving too fast before the collision? And: Did the claimant brake suddenly?

20. The question then arises as to how evidence and expert evidence can or should be provided in this environment. Of course, it can be drafted in a word document and uploaded to the online dispute resolution platform. This happens at the moment, but cannot be more than an interim solution.

21. Ultimately, most evidence will need to be presented in a smart or intelligent format. One only needs to think for a moment about the vast amount of time and money that is wasted in preparing lengthy witness statements, large tranches of which do not really address any issue that is actually in contention between the parties, to realise that there must be a better way.
  
22. Again, one can take the example of a simple case – one can use the road traffic accident I mentioned earlier. Once it appears that the main issue that is contested is how fast the defendant's car was travelling, evidence is only needed about anything that is relevant to that issue. Of course, that does not mean that the only relevant evidence is as to the speed of the car. For example, if there is no quantitative evidence of speed, qualitative or circumstantial evidence may be relevant. But a smart programme could move from the quantitative to the qualitative to the circumstantial, by asking the claimant relevant questions. For example: (i) Do you the have any quantitative evidence of how fast the defendant's car was travelling (ii) if so, what is it (e.g. a speed camera or a dash camera) (iii) if not, do you have any qualitative evidence that the defendant was driving too fast? (iv) if so, what is it? (e.g. the evidence of an onlooker) (v) if not, do you

have any circumstantial evidence that the defendant was driving too fast?

(vi) if so, what is it? (e.g. the defendant was late for an appointment).

23. Logic and decision trees allow questions to be asked that can avoid the need for complex and lengthy narrative statements and reports. I am not suggesting that complex cases with multiple issues will be able to be treated in this way – anyway in the immediate future. But the point is that most cases are not complex and many do not even have a large number of issues that need to be resolved.
  
24. Expert evidence in this simple road traffic accident case can be dealt with in the same way. Assume, for example, that the evidence of speed comes from an expert in road traffic accidents, who has measured the tyre marks on the road. That evidence can be provided in answer to the questions I have mentioned for factual evidence rather than necessitating a lengthy report, at least in the first instance. If the expert's view were contested by another expert, there would be time for them to explain their professional opinions in more detail if that were necessary before the judge decided the issue of speed. Indeed, in rare cases, no doubt, the experts could be asked to give oral evidence, probably remotely, on the point before the judge made the decision. All this would streamline the evidential process

and mean that most cases would be resolved once an expert had stated online their opinion that the defendant's car was travelling too fast.

25. Moving away from the simple cases to the more complex ones obviously changes some of the simple parameters I have been exploring. I have not overlooked the nuances that sometimes make the difference between one outcome and another. But, in my view, expert opinions in court proceedings have, in general terms, become too lengthy, too costly and too elaborate. There is also a tendency for experts to descend into the arena and argue the facts of the case rather than sticking carefully to the issue on which their expert opinion has been sought.
  
26. As I see it, the legal system should be using smart technology and artificial intelligence to bring about the consensual resolution of disputes wherever possible, and to obtain specific and relevant evidence where that is not possible. This process would be no less just than what happens at the moment, but it would be far quicker and less costly. It would allow lawyers and experts to spend more time concentrating on the difficult cases, where their sophisticated knowledge and experience was truly needed.

How will the use of blockchain, smart contracts and cryptoassets affect expert evidence?

27. Thus far, I have only mentioned in passing the more innovative technologies that are probably more important to the future conduct of litigation than even online justice. Those are, of course, smart contracts, cryptoassets and the blockchain. The blockchain allows for transactional data to be immutably recorded. Cryptoassets will eventually allow transactions to be undertaken instantly and electronically, negating the need for extrinsic evidence as to what has occurred. Likewise, on-chain smart contracts will transform engagements and cut the likelihood of dispute in the contractual field.

28. It is, I think, inevitable that central bank digital currencies will eventually emerge. When they do, the reputation of cryptoassets will be improved. The volatility and unreliability of Bitcoin now blights the use of cryptoassets in mainstream financial markets. Ethereum, the blockchain network created in 2015, upon which most DeFi or decentralised finance applications are built, has a better reputation, but cryptoassets are unlikely entirely to emerge from the shadows until they are backed by central banks.

29. Once that happens, however, whether the first central bank digital currencies are wholesale or retail – and on that the jury is still out - financial trading and transactional operations in many sectors will rapidly change.
30. More importantly, however, for the purposes of my talk today, the evidence of these transactions will change, because they will all be recorded on the blockchain making further proof of them unnecessary and argument about what occurred, when and in what order impossible.
31. It is sometimes suggested that these developments will only affect banking and financial transactions and that consumer sectors will carry on as they always have. I beg to differ. Whilst the blockchain may take longer to affect some sectors than others, its effect is likely ultimately to be far-reaching.
32. This is precisely because of the evidential value that transactions on the blockchain provide. Land registration, intellectual property registries and company registrations are early use cases. Moreover, the blockchain is already being trialled to record transactions and keep records in both the energy and health sectors. Distributed Ledger Technology is driving

innovation and improving supply chains in the mining industry and elsewhere. Even in art, non-fungible tokens are recorded on-chain and can sell for startling sums of money. The masked alien punk sold by Christie's at the first curated NFT (non-fungible token) sale reached \$11.75 million.

33. Obviously, the turning point will come, as I have said, with reliable central bank digital currencies. China is trialling a retail digital currency right now. Once ordinary people are buying their coffee with a cryptoasset, evidence of anything and everything will be immutably recorded on-chain. Disputed transactions may become a thing of the past, except where there are unrecorded conversations between the parties. Remember, though, how frequently the younger ones amongst us photograph and audio record everything that happens in their lives on their mobile phones. So-called "swearing matches" in court proceedings may become vanishingly rare.
34. So, I come to the question of how all this will affect expert evidence. Obviously, opinions are not the same as facts. But I have no doubt that the extensive use of the blockchain and smart contracts will mean that there are less disputes about which a relevant opinion can differ. Even cases about road accidents will look different when everything that a vehicle has done is digitally recorded, as in some cases it is already. Medical opinions

as to future prognoses will obviously still be needed, but seem likely to be more narrowly focused in an era of on-chain medical records.

35. One might legitimately ask whether there can really be a factual accounting dispute if the distributed ledger immutably and indisputably records every detail of every transaction.

## Conclusions

36. I hope I have not alarmed you thus far. I do not think alarm is called for. In fact, I think expert witnesses will continue to assist the courts of England and Wales long after these new technologies have become an accepted fact of consumer and business life.
37. There is an old saying: as one door closes, another door opens. As I talk a lot about new technologies, I have been surprised by the number of times I have been asked by lawyers what the future holds for their practices. I think that is (a) the wrong question, and (b) unhelpfully negative. The same very much applies to expert witnesses.
38. The new technologies I have been talking about are here to stay. It is only a matter of time before industrial sector after industrial sector embrace

them, and before the court system becomes entirely digitised. Anyone imagining that the waves of technological change can be held back is deluding themselves. But as I always tell the lawyers who ask me that question, lawyers will be as much, if not more, in demand, in the new technologically enabled world, because individuals and businesses will always need advice, and there will always be disputes that are intractable and complex, and there will always be others that raise novel and complex legal issues that require determination. That is how the common law develops, and none of these technologies will replace or eviscerate the common law.

39. The point about lawyers and indeed expert witnesses are that they are there to add value. They will still be able to do so, but maybe not in exactly the same fields as they were able to do so in the past. We will all need to learn more about the tech, and that is undoubtedly a good thing. Moreover, the development and use cases of the blockchain, smart contracts and artificial intelligence will open new areas for much needed legal advice and occasionally different kinds of legal dispute.
40. These are exciting times. Lawyers, judges and expert witnesses should be in the vanguard of the changes.

41. I look forward to answering any questions you may have.