A sustainable competitive market for NHS AIs

Akin to a patient seeking a second opinion, any clinical support offered via an AI must be the outcome of three different AIs – each independently trained on different datasets, and each provided by different providers – such that the clinician receives a consolidated output of the three opinions (including outliers). This will ensure that there is always a competitive market, and the requirement of multiple providers will ensure there can be no monopoly, while disproportionately benefiting UK businesses. While the NHS guarantees a competitive market worldwide, it also prefers dealing with local suppliers. Once those suppliers have received an NHS blessing, they can then export the same tools worldwide (replicating the Google approach to health AIs).

It is clear that diagnosis AIs will eventually become effectively free; the replicability costs are low. The NHS pioneering such work not only minimises costs to the NHS, it makes such developments freely available – published alongside other, more traditional NHS processes – as a gift to those areas of the world where diagnoses are not currently available.

When Jeremy Hunt was Secretary of State, NHS England was tasked with tweaking NHS procurement rules such that if an organisation wishes to procure one decision support service using AI, it must use multiple. While existing IT systems must support this, it is the case that if a system can support using one such service, it already supports using multiple. Placing this requirement in procurement means that internal NHS innovations are (correctly) not restricted. This work was being led by the CCIO, and seems to have got stuck in post-reshuffle reappraisals.

As an NHS procurement change, this wasn't really shared around Whitehall. It was due to be announced in August so should be ready; the question is whether changes have broken what NHS England was originally asked to do – a poison pill may have been inserted somewhere, e.g. by special interests wanting data rules loosened.

AI for the public sector - compliant with the rule of law

In an international world, especially given current political events, Britain remains committed to a world order built on rules. Domestically, public bodies must show how their decisions comply with the rule of law – and are subject to Judicial review where these are unclear. This is a global standard in explaining decision-making, fundamental to the UK, which has been exported, localised, and is understood in every area of the economy that touches government or that is regulated in any way.

The rule of law is not about answering any particular question, but the framework by which you *test* answers to any question. The UK therefore has swathes of lawyers, judges, experts, institutions and organisational structures which understand that standard; and they can work with AI and other technology specialists to design much-needed 'explainability tools' to the standards which public bodies are already required to meet. Once developed for public bodies, those tools should be reusable across AI applications – both in the UK and across the world.

The UK will lose a 'race to the bottom' in AI; we don't have the sociopathy of the Americans, nor the hierarchy of the Chinese. What we do have is the traditional British approach that has worked very well in other areas – smart people doing smart things with 'finite' resources. The UK can lead where it takes the high road of ethics and the rule of law, because those are areas where we have an entrenched and fundamental advantage in the culture and institutions that our competitors lack.

Compliance of new technologies with the rule of law is a field which will exist for as long as these new technologies exist, and future developments needs interdisciplinary teams working together. Specialists in artificial intelligence, data science, law, judicial review, statistics, and policy, working together to [answer the question](): 'What do AI tools look like that satisfy the Bingham Principles on the Rule of Law?' This question is both a research question, and an intensely practical question as new technologies evolve.

The Law Gazette [summarised a recent speech]() by Dominic Grieve QC MP saying:
> "Another concern arises from the arrival of automated decision-making. 'How are we going to operate these systems in a way where they can be challenged if the decisions they make are unfair?' Grieve asked. He noted that the Windrush scandal illustrated the risk of bureaucratic mistakes. 'If on top we are now going to factor in algorithms we are going to have to ask ourselves questions about what information are citizens going to be given, on data accuracy,' he said. While automation has the potential to transform government for the better 'it is also possible to see how it has the capacity to act very badly indeed'."

Just as we require existing actions from public bodies to demonstrate they are non-discriminatory, at a minimum around the use of algorithms and AI, a Principal Component Analysis should demonstrate that the primary characteristics an algorithm uses are not protected characteristics.

Reflecting paragraph 3 of the preamble to the Universal Declaration of Human Rights, the fundamentals are clear, whether from the [call from](#) the EU DG JUSTICE (in detail in [Philosophical Transactions A](#)), or a UN Special Rapporteur who raised concerns about the implications for human rights and the rule of law from increasing uses of algorithms and digital tools ([pages 7-12](#)). Those questions can be addressed, if there is a will to do so - new technology is not above existing law, and there are benefits and opportunities of complying with it.

Within the realm of health and safety law, the UK [has stated](#) that the use of automated decision making, or otherwise, does not change existing obligations. The same principle should extend to other decisions. The [recent US case](#) shows how existing rules around decision making can easily apply. The market for tools to do that remains wide open.

Ensuring the highest standards are always required by, and of, the public sector both creates a market for HMG to use, and maximises the chances of British commercial success by those who wish to provide those services.