1. I have been researching and writing on issues relating to forensic science, expert witness testimony and criminal justice for over 25 years, having initially worked on a project commissioned by the Runciman Royal Commission on Criminal Justice. This submission briefly summarises key points, more fully developed elsewhere, which I believe are particularly important for any would-be law reformer or parliamentary or other official scrutiny process to bear firmly in mind when considering the institutional practices, objectives and value, and regulation of forensic science in England and Wales (and in the UK more generally).

2. Forensic science serves justice (not the other way around). Whilst it is right to say that forensic science represents a partnership between science and law, it is not a partnership of equality. Unless forensic science is valid and produces reliable evidence, it is worse than useless for the administration of justice, and can sometimes be a major contributor to miscarriages of justice. It is powerful machinery, which can do marvellous work but must always be operated with skill and circumspection, because it can also do great damage if misapplied or allowed to get out of hand. Moreover, forensic science must comply with legal standards of due process and institutional safeguards for generating, testing and evaluating evidence, even where these might be regarded as conflicting with aspects of scientific methodology.

It is sometimes said that the point of criminal adjudication is to convict the guilty and acquit the innocent. On this view, the value of forensic science is simply a function of its evidential (or epistemic) contribution towards reliably convicting the guilty and acquitting the innocent. But this is an over-simplification. In reality, the point of criminal adjudication is: (1) to convict the guilty; (2) and only the guilty; (3) of the right charge(s); (4) on well-warranted (epistemic/evidential) grounds; and (5) by due process of law. This more complex objective is reflected in the ‘overriding objective’ specified by the Criminal Procedure Rules. Forensic science must operate within the constraints of this more fully-specified conception of the administration of justice, not simply as a tool with instrumental value for convicting the guilty ‘any which way’.

3. The institutional and regulatory environments of forensic science are extraordinarily complex and dynamic; and the disciplines and techniques

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loosely grouped together, largely by convention, under the umbrella of ‘forensic science’ are themselves very diverse. They have different methodologies, degrees of professionalism and institutionalisation, and regulatory frameworks, and produce evidence with a range of applications and a spectrum of probative value.

These generalisations have important practical implications. Firstly, there are no generic regulatory ‘silver bullets’, since interventions need to be flexible and adapted contextually to particular types of evidence and circumstances. Secondly, solutions to some problems may create difficulties for other kinds of evidence or in other parts of the investigative or judicial processes. Unforeseen consequences and negative side-effects, which are a pervasive occupational hazard of government in the broadest sense, may be especially acute – and sometimes vicious – in the area of forensic science. It is notable that several of the perceived problems and criticisms of forensic science practice are mutually contradictory (eg that rules of admissibility are both too lax and too restrictive; that the probative value of forensic science evidence is routinely overinflated and underestimated, etc). There can be no single, ‘one-size–fits-all’ solution to such concatenated problems.

Thirdly, the dynamism of forensic science (in part fuelled by continuous technological innovation) implies that the project of ‘making forensic science fit for justice’ is, literally, a never-ending task. The contribution of forensic sciences to the successful administration of criminal justice requires constant scrutiny and active curation, to keep up with the practical, technical, institutional and policy challenges of the day.

4. The longer term implications of the decision to close the Forensic Science Service (FSS) remain to be seen, especially in relation to the (largely unanticipated) impact on the broader cultural dimensions and professionalism of UK-based forensic science. There also remain unanswered questions in relation to the integrity, capacity and sustainability of market-based provision in forensic science services, and its investment in training, research and development across the sector. We are in a period of experimentation, embarked upon – it would appear – almost by default, a leap into the unknown, and without any clear conception of what would need to be replaced, and how this would be achieved, once the FSS had gone.

5. It is unclear how the logic of market-based forensics was ever supposed to work, comprehensively, in the interests of justice. Markets are machines for maximising the delivery of consumer preferences. But which actor(s) are supposed to take a holistic view of the public interest in an adversarial criminal procedure? Whilst the police and prosecutors (as well as courts, obviously) are all charged with acting in the public interest, their particular role in the process is circumscribed and inflected by organisational priorities and performance targets, occupational cultures and work-practices, resources and opportunity costs. As we see repeatedly, for example, in relation to disclosure obligations, police and prosecutors will necessarily approach

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matters from their own institutional perspectives and prioritise activities that work to their own strategic advantage (or simply make their professional lives easier). This is not an allegation of systematic malpractice (though malpractice does sometimes occur, occasionally systematically), but rather a frank acknowledgment of the realities of human nature.

Specifically regarding forensic science evidence, it is vital to appreciate that the results of forensic tests can be presented in a variety of ways, all of which are formally equally valid; but the psychological impact on the fact-finder, in terms of perceptions of probative value of the evidence, may be very different. For example, to say that scientific findings are ‘consistent with’ the prosecution’s case might tend to give the impression of providing significant evidential support, when in fact this statement is logically compatible with saying that the findings are equally consistent with the defence case – and might in fact be more probative of the defence being advanced!

The question then becomes: why wouldn’t the police commission only those scientific tests, and presents the results only in a form, that is likely to assist the prosecution case? Especially when there are financial consequences inhibiting additional expenditure? What possible motivation could they have, in a world of austerity constrained budgets, for going the extra mile to produce more evidence likely only to assist the defence? And to repeat, this can all be done simply by not asking the wrong (right) question or not commissioning additional scientific work, perfectly consistently with scientific methodology.

Potential over-extension of Streamlined Forensic Reporting (SFR) is an obvious risk, and possible contributory factor, in this regard.

6. Adequate funding and opportunity for defence testing, challenge and contextualisation of forensic science evidence adduced by the prosecution are essential, both in terms of traditional adversarial theory and also because of the serious potential for – in effect – biased presentation of forensic findings. This is a major concern in light of diminishing legal aid provision.

Criminal adjudication can be legitimate only if it lives up to its own advertised normative standards of evidential scrutiny and procedural due process. If adequate resources cannot be found to facilitate the proper role of the defence in an adversarial system, there is a danger that a system of justice will forfeit its integrity and turn into something else entirely, eg an efficient system of social control for disciplining the poor, dispossessed and marginalised in society.

7. International experience demonstrates that in-house police forensics are a risk factor for malpractice and miscarriages of justice. It must be emphasised,

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again, that deliberate official wrongdoing is not the major concern. Careless contamination of physical samples and slanted interpretations of forensic findings, often influenced by the well-documented phenomenon of ‘unconscious bias’, are the more prevalent sources of error.

The current trend towards county police forces, largely driven by economic imperatives, taking forensics in-house is an obvious matter of concern in the light of international experience. There is no reason in principle why police forensics should not attain the same levels of scientific validity and rigour as independent labs; it is a question of training, culture and effective supervision – and regulation. Unfortunately, practice has too often belied theory in the past, and this development in the organisation and provision of British forensic science should be closely monitored into the future.

8. The Forensic Science Regulator is clearly a pivotal figure in the current institutional architecture of forensic science. Without an ‘honest broker’ to set and monitor professional standards in all aspects of forensic science (including eg interpretational protocols and expert witness ethics, as well as primary science) it is difficult to see how a supposed ‘market’ for forensic science provision could even plausibly align with the public interest.

Given the original and still largely unremedied stress fractures in the intellectual foundations of market forensics, it must remain an open question whether the Regulator can succeed in ensuring the highest standards in the provision of forensic science services across the board. But it is undeniable that more could be done to support the Regulator’s role. The case for statutory powers has been made many times before, and seems unanswerable. It is disappointing, meanwhile, that some sectors have managed to resist or defer the application of quality standards and audit, safe in the knowledge that there are no effective enforcement mechanisms, beyond admonition and persuasion, and no real sanctions for non-compliance.

The Regulator’s insistence that quality standards should be viewed as absolutely integral to the provision of forensic science, not merely as optional add-ons which it would be desirable to have if resources permitted, should be taken to heart across the forensic sciences. And in light of what has already been said, it should be clear that this point applies with especial force to in-house police forensics.

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*1 October 2018*