



## THE FUTURE OF FORENSIC BIOINFORMATION

Seminar One, 13th January, 2009- Headlines

### Session One – Governance

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Discussion focused on an attempt to begin to address the following questions:

- a) What principles of governance give shape to the current arrangements for the governance of forensic bioinformation collections in the UK?
- b) How should we understand the relationship between bioinformation databases and wider aspects of the criminal justice process and public policy?
- c) What current challenges face forensic bioinformation policy and practice?

In particular, participants considered several recurrent 'strands' of governance in relation to the NDNAD and NAFIS:

- a) The legislative and jurisprudential framework for taking, retaining and using bioinformation;
- b) The establishment and maintenance of scientific standards;
- c) Operational accountability;
- d) The wider social and ethical landscape relating to forensic bioinformation and public policy.

- 1.1. The governance of NDNAD was in many respects possibly more transparent (e.g. with the amount of information in the annual report) and accountable (involving police authorities: the linchpin of accountability for locally organised police forces) than the arrangements for DNA databases elsewhere in the world and other forensic databases in the UK.
- 1.2. Nevertheless, NDNAD governance had grown piecemeal, forever seeking to catch up with the UK's pioneering use of forensic DNA, Such arrangements did not extend to fingerprints. The ability of Human Genetic Commission members to publicly record concerns had not worked as intended. Their informed 'lay' presence depended on the continued cooperation and, indeed, existence of the Commission.
- 1.3. The *Marper* judgment and the forthcoming 'White Paper' presented a major opportunity to address fundamental weaknesses or deficiencies in the present system, in particular by creating the need for Government and Parliament to set out 'principles of governance' for more than just DNA: possibly for all bioinformation collections or all forensic science. This requires a forward-looking perspective to provide for flexibility to deal with - as yet - either unanticipated or to be validated developments in the science and its application.

- 1.4. Instead of a legislative and jurisprudential framework that is ‘all over the place’ there was a need for a statutory basis for biometric governance within a single piece of legislation. This could take the form of primary legislation with extensive powers to modify the details of the scheme in line with the evolution of science and practice via secondary legislation. Models for this might be found in the Canadian and French DNA database legislation.
- 1.5. There is a need for fundamental ‘ethical’ approach to forensic science and ‘ethical’ forensic practitioners – this should be the starting point. An ethical framework should be in place first and the science should adhere to this as it develops (precedents in the medical sphere/UK biobank?).
- 1.6. An ethical approach within a well developed legal structure could have important and positive international implications given the interest globally in the UK’s pioneering role in the forensic use of bioinformation.<sup>1</sup>
- 1.7. ‘Principles’ need to be built into legislation (though the seminar recognized that our readiness to rhetorically evoke such principles was not matched by rigorous attempts to define them in the context of forensic science, the CJS or ECtHR). Such ‘principles’ ought to include (*inter alia*):
  - consent
  - proportionality (recognized as particularly difficult to define in legislation)
  - transparency (public confidence/ trust)
  - accountability
  - inclusiveness (including lay membership)
- 1.8. Moreover should measures for ensuring conformity of practice and governance in line with such principles only take place at a national level? One of the issues in the *Marper* judgment appears to have been ‘the blanket and indiscriminate nature’ (see paragraphs 119 and 125) of the present retention regime. This might reflect views about a procedural difference (retention in the absence of conviction only, in effect, after case by case scrutiny by a procurator fiscal<sup>2</sup>), as well as the variation between outcomes following arrest that trigger retention in England and Wales compared with Scotland. Both aspects might need to be addressed in the Government’s response to the ECtHR?
- 1.9. The Nuffield Council on Bioethics had been advised that the scrutiny of individual decisions was unaffordable. Is such a resources argument sustainable (a) generally in terms of the ethical governance of bioinformation, (b) the kind of governance framework for the CJS envisaged above and (c) the law as stated in the *Marper* judgment?

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<sup>1</sup> The seminar organizers wish to suggest that this might be of potentially wider significance. Following President Obama’s initial post-inauguration actions in ordering the Guantánamo Bay closures, the suspension of military tribunals and a revocation of the previous administration’s authorization of torture, that this would be one opportunity for the UK Government to demonstrate a reemphasized commitment to *pravovoe gosudartsvo* (the rule-of-law state) consistent with the new spirit in Washington as well as ECHR.].

<sup>2</sup> See Section 18A (1) of the Criminal Procedure (Scotland) Act 1995 (as amended): ‘that criminal proceedings ....were instituted.....’.

- 1.10. The preceding point was also related to concerns about difficulties encountered by the public in finding out their rights when having/ had DNA taken, in particular, getting data removed. Samples together with profiles and other data appeared (in contrast to the medical sphere) to be owned by chief constables. If so, this also required effective local arrangements, but is this concept of ownership appropriate?
- 1.11. Legislation should clearly delineate 'boundaries' for the use and protection of bioinformation/ forensic science e.g. if used for 'counter-terrorism' purposes – how far does this stretch? Does it encompass only serious offences (which?) or can this include minor offences? Are there to be statutory cut-off points and where should these be positioned/ defined?
- 1.12. Questions need to be addressed such as: what is the function of the data (bioinformation) and what safeguards are therefore required? What is it that makes data controversial when the state/ police hold it?
- 1.13. There is a need for a clear hierarchical framework (with some - but not all participants – suggesting a scientist as lead; Minister for Science or scientifically focused departmental minister; Chief Scientists; body of experts; judicial oversight?) for governance. The role of Forensic Regulator needs to be accounted for and clarified.
- 1.14. There is a need for public involvement/ engagement with governance process and sufficient transparency/ 'openness' for citizens to be aware of their rights etc. This could involve consideration of 'new'/ innovative processes to account for differences within the 'Facebook' generation (are there changing conceptions of issues such as 'privacy' in the 21<sup>st</sup> Century?).
- 1.15. Any governance strategy needs to address issues arising from the regulation of a mixed economy within forensic science, and avoid being undermined by false or unwarranted claims of commercial confidentiality.
- 1.16. The growth in the nineteenth century of Government consumption of GDP had resulted in an unprecedented bestowal of inceptive audit inspection powers, resources and direct accountability to the most interdependent committee of the Commons to what is now the NAO. This might be an appropriate analogy for twenty-first century acquisition of personal data by government agencies and one that might suggest options for a new governance framework?

## **Session Two - Integrity**

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Session consisted of a further and more detailed examination of how public confidence might be maintained in the integrity of the governance arrangements by creating the opportunity to address questions such as:

- a) What regimes of (effective and ethical) governance are best able to provide such confidence?
- b) Is there consistency in policy and practice in the management of different kind of forensic bioinformation databases?
- c) What mechanisms exist to assure the transparency and accountability of the uses and users of forensic bioinformation?

- d) Are new issues raised by the increasing effort to 'join-up' information databases and by the needs of counterterrorism?
- e) Are new or separate issues raised by the increasing use of such data collections for the identification of bodies, especially in DVI work?
- f) How do commercial considerations affect issues of transparency and accountability?
- g) How should research uses of forensic bioinformation collections be governed?
- h) What are the likely immediate developments in forensic bioinformation technologies and their uses

Recent developments taken into account included:

- a) Role of NPIA;
- b) Establishment of the Forensic Regulator;
- c) Establishment of NDNAD Ethics Group;
- d) NAFIS;

- 2.1. There were varying views about the envisaged operation of the Regulator role. On the one hand this was presented as a generic standard for forensic science providers in the UK – based on ISO standards and 'a light touch' in steering providers, but other participants were concerned about perceived lack of 'teeth' and 'gaps' in regulation. Some participants feared that accreditation may prove to be 'superficial'. Others expressed concern that civil remedies for breaches of regulatory standards will not be an answer to mistakes already made within the criminal process. A civil remedy will be too little, too late.
- 2.2. It was a matter of regret that the UK as a world leader in privatizing its forensic science providers within an adversarial system had not properly set-up a regulator system before the introduction of a mixed economy.
- 2.3. There is a need for proper forensic research – determination of 'error rates' etc. in addition to R & D. Establishment of 'risks' required before implementation of 'risk-based regulation'. The UK forensic field is not proactive in assessing risks and measuring 'quality'. Moreover, unlike the USA, with the National Institute of Standards and Technology, there was no longer a government/publicly funded organization to set standards.
- 2.4. The governance of fingerprints reflected its dual purpose: validation of identity (e.g. to expose alias use during police enquiries or after arrest) as well as solving crime. This was managed internally within police service. Strong link with NPIA – set operating model. The Police Database Board – covers all the police databases – major stakeholders are represented although there are no external lay members.
- 2.5. It was recognized that there was a choice of either a separate system of governance for each type of bioinformation or a single framework based on broader principles that could then be applied in a bespoke manner in detail to each discipline individually? There seemed to a possible consensus among those present in favour of the latter.

- 2.6. A further question was whether bioinformation could be regarded as ‘just’ a source of information for the police and might come to be managed under MOPI (Code of Practice on the Management of Police Information, 2005)<sup>3</sup>,? This was introduced in direct response to criticism in the Bichard Report about the handling of personal information about Ian Huntley. Whatever the answer it would clearly have an impact on the overall governance, structure, integration of different forms of information and management of MOPI, together with the ultimate scrutiny of police information by the Information Commissioner’s Office.
- 2.7. There exist questions over how to regulate the *taking* of bioinformation by the police. Who should regulate this process and how? Self-regulation is problematic and regulatory systems in general fail or may even generally implode from time to time. This pointed to a need for other safeguards in place as well with some means of stepping in during crisis.
- 2.8. Currently there are problems concerning public representations of forensic science. Media outlets not responsibly reporting what evidence forensic science can actually provide that might help in the determination of a case and how error rates should be understood – a need for a proper communications strategy to dispel myths/ properly inform/educate ministers, judges, prosecutors, lawyers and the public?
- 2.9. Key processes/ technologies etc. need clear definitions/ explanations so as to ensure clarity.– everyone must agree on what e.g. ‘consent’ is; or what is ‘familial searching’ etc. (to be understandable by public).
- 2.10. Need for engagement with statisticians to work on how forensic science may be clearly explained to juries/ legal professionals with minimum risk of confusion.
- 2.11. Similarly there needs to be clarity about the potential uses of forensic bioinformation to prevent unauthorized use or ‘mission creep’. This may require further debate, for example, should NDNA be used to find/ identify ‘missing’ persons?
- 2.12. The use of NDNAD or cellular materials retained by providers for research used to be opaque. From this point on should be more transparent. The Ethics Group had made it one of their main priorities to prepare proposals for the Strategy Board that would create a clear and effective governance framework for this.
- 2.13. Bigger political issues especially the proposed creation of the national ID card is causing a shift in opinion. The public has become less trusting because of appearance of trying to get personal information about more people on databases. Predictive profiling – being used in US – is generating the idea that certain amount of data will then be used against the provider. Series of records that could lead to refusal of rights/ surveillance etc. could make people increasingly nervous about linking up of databases and the use of databases.

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<sup>3</sup> MOPI is generally described as ‘a statutory code’. It has been promulgated by the Home Secretary under the Police Act 1996 and the Police Act 1997 (as amended by the Police Reform Act 2002). This legislation sets out the scope of such a code to promote the efficiency and effectiveness of police forces. It requires that any such code should be laid before Parliament after promulgation and may contain requirements about consultation prior to promulgation, but not that the code itself requires consent or may be annulled by Parliament as if it were secondary legislation. ‘Chief Officers [of police] are required under the Act to “have regard” to any such codes’ (Forensic Science Regulator (2008) Manual of Regulation - Part One: Policy and Principles, p19 (London, Home Office)).

- 2.14. Ultimately, perhaps governance needs to be more all-embracing? Progress might not be achieved by trying to regulate or govern forensic bioinformation separately etc to forensic science in general. Some participants considered that there was a need to formulate a fundamental ethical approach that can then be applied to all disciplines and types or uses of information.

### Session Three: Integration

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This session focused attention on the ways in which current debates on the collection and use of forensic bioinformation are informed by a variety of the uses of the term 'integration', and that each of these uses raises questions about the significance and regulation of forensic bioinformation as well as more general understandings of the standing of forensic science within contemporary science and criminal justice policy and practice. Key questions for discussion included:

- a) How is forensic science policymaking (especially that related to forensic bioinformation) integrated into criminal justice policymaking, and how is it informed by the interests of relevant stakeholders?
- b) What efforts are currently made to integrate the collection and use of forensic science into the operational practice of police investigations?
- c) What sources of information exist to contribute to our understanding of the effectiveness of operational integration?
- d) How does the governance of forensic bioinformation relate to the governance of bioinformation collected for other purposes?
- e) How is the governance of forensic bioinformation integrated with data protection policy and practice in policing and elsewhere?
- f) Who are the main actors and agencies that determine policy and practice in these various domains?
- g) What key policy documents exist and are planned in order to encourage and shape technological and operational developments in forensic bioinformation?

- 3.1. Recent changes in the organization of key government departments will impact on policy and practice in forensic science support to policing. Key to these will be the emerging role of NPIA.
- 3.2. Existing networks of influence involving Home Office, ACPO, FSS and others are likely to be modified by the presence of the NPIA as an agency with a role in both policy making and practice improvement. It will be important for NPIA to effectively integrate the work and interests of a number of scientific, operational and other communities as it seeks to deliver the several workstreams of Forensics21.
- 3.3. It may be useful to consider how civil society groups may be informed of strategic developments in forensic science in general and the uses of forensic bioinformation in particular at a relatively early stage – and whether they may have a voice in discussions surrounding these developments.
- 3.4. The role of Research Councils and major Charities in funding forensic science research remains unclear. Efforts by NPIA, ACPO and others to encourage University research should be supported in the hope that the wider scientific community becomes willing to participate in this work.

- 3.5. The bulk of NPIA budget is spent on the national delivery of services; accordingly the sum available to support the development of strategy and the assessment of potential innovations remains small. It may be useful to consider what kind of partnerships may be possible between NPIA and other actors in order to secure research and development funds.
- 3.6. Policing and priorities and developing scientific applications need to be subject to ongoing ethical scrutiny, although it is not clear what body exists – or should exist – to assist in such scrutiny.
- 3.7. Whilst forensic science applications may often be carried out ‘on the back of’ more generic scientific research conducted in Universities and elsewhere, since the changed status of the FSS, it is not clear which bodies may have a role in searching for or disseminating the results of scientific work with potential forensic applications.
- 3.8. There remain significant and distinctive problems surrounding IPR in forensic science research, and ways need to be found of balancing the need for commercial confidentiality with the interests of the court in transparent and reproducible scientific work.
- 3.9. The emerging shape of the forensic science marketplace remains difficult to discern. The work of regulating the provision of goods and services within this marketplace has recently begun and deserves careful examination.
- 3.10. There was discussion of the kind of role that NICE plays in the NHS funding of medical services, and speculation about whether and how an equivalent approach should be encouraged within forensic science.
- 3.11. The importance of previous work by PSU on the integration of forensic bioinformation into the investigation of volume crime was noted, and it was also agreed that the demise of PSU could result in a reduction of the knowledge of the comparative performance of police forces in this realm. It will be important to see what agency takes over an interest in the production of these data
- 3.12. It was also noted that there was little publicly available data on the effective integration of forensic bioinformation into the investigative process in serious and violent crime.
- 3.13. Any shortcomings of available data on the uses of forensic bioinformation in support of detections will weaken efforts to retain or restore the inclusiveness of DNA and fingerprint collections following the recent ECtHR judgement.
- 3.14. There is a necessity to consider what kind of evidence-base we want to support decision making in the field of forensic science. A discussion of what ‘evidence’ means is a necessary prologue to achieving this.
- 3.15. It is also necessary to be clear about the wide range of technologies and issues that are brought together under the heading of the forensic uses of bioinformation. Whilst much of the discussion in this and other sessions focused on ‘databases’, there are many other uses of bioinformation in the forensic domain that are not predicated on the availability of such databases.

## Session Four: *Marper* and Beyond

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The final session of the day was concerned with the effect of the recent judgement of the Court of Human Rights in the case of *S and Marper v, the United Kingdom*. Seminar participants were well acquainted with this judgement, and discussed at length the possible responses to it as well as its potential repercussions on the effectiveness of the existing way in which the police forces of England and Wales were able to use forensic bioinformation in support of criminal investigations. Key features of the judgement that were targeted for discussion included:

- a) That although the Court differentiated between the level of interference with private life associated with fingerprints, DNA profiles and DNA samples, their ruling against the UK government condemned the **blanket retention** of each of them equally.
- b) That the keeping of such data, regardless of subsequent use was still regarded as having a direct impact on the private life of individuals.
- c) The argument made by the court that any State claiming a pioneer role in the development of new technologies bears a special responsibility for striking the right balance between crime control and private-life interests.

Discussion ranged widely over these matters, and also took into account the timetable and process of the UK Government response. It was noted that outline proposals on the implementation of the Judgment are due to be provided to the Council of Europe's Committee of Ministers meeting in March 2009. It was also noted that the Home Secretary had made one major speech (to the trade association 'Intellect' on criminal justice matters which had included reference to the judgement along with a number of other issues relating to forensic science and criminal justice. A short period at the end of this session was also put aside to allow participants to raise any issues they felt to have been overlooked earlier in the day. A selection of relevant points follows:

- 4.1. The Home Secretary's speech referred to a forthcoming public consultation on 'bringing greater flexibility and fairness into the system by stepping down some individuals over time – a differentiated approach, possibly based on age, or on risk, or on the nature of the offences involved'. It will be interesting to see what proposals emerge and what kinds of data are used to support them.
- 4.2. It also seems likely that consideration of *Marper* will, along with consideration of a range of other matters, inform a forthcoming White Paper which the Home Secretary also announced in her speech to 'Intellect'.
- 4.3. Whilst it is possible that the ECtHR judgement can be answered by simply removing DNA profiles and destroying samples and fingerprint records for all of those in the same position of *S and Marper*, it seems unlikely that this will be the outcome.
- 4.4. It may be possible to develop a retention regime that is more 'privacy-friendly' than the current regime.
- 4.5. Some technological protections may afford such a 'privacy friendly' regime, and such technological supports to privacy are innovations that should be considered more generally, especially as the collection of private information becomes more intense.
- 4.6. Any changes resulting from the *Marper* judgement will impact on the private organisations that hold samples on behalf of Chief Constables and methods will have to be put in place to ensure compliance with agreed understandings.



- 4.7. The regulations and understandings regarding the uses made by private organisations of such samples, along with their holding of identifying information need to be reconsidered.
- 4.8. It is important that any revised retention regime keeps in mind the significance of DNA and fingerprint records for the successful investigation of crime, especially those crimes – like rape and other serious sexual assaults - in which biological evidence is most often central to the case
- 4.9. The international exchange of forensic intelligence is a matter of growing importance and will be the topic of a later seminar in this series.
- 4.10. Consideration should be given to collecting and retaining the best possible data on uses of the DNAD since the legislative changes which the *Marper* judgement may now sweep aside. Only in this way will it be possible to measure the effect of any proposed change.
- 4.11. A proper response to *Marper* must include an effort to define key terms ('transparency', 'accountability', 'safeguards', 'proportionality' etc) in a way that establishes clear general principles for the governance of forensic bioinformation in the UK. Innovations in current practice can then be interrogated positioned properly by reference to those principles.
- 4.12. There remain shortcomings in the ways in which all of these matters are communicated to the general public. Given the importance of public confidence to the success of policing, more work needs to be done on developing public communication and consultation.
- 4.13. We need to think more generally about 'data about individuals rather than simply 'bioinformation'. This means having to consider what kinds of forms such data can take, where such data should be stored, how they should be accessed, by whom and for what purposes. We need to recognise different levels of sensitivity and significance and not develop regimes which constrain less intrusive forms and uses simply because some other forms and uses may be especially contentious.