Discussion Outcomes

ESRC Research 'Seminar series on genetics, technology, security and justice. Crossing, contesting and comparing boundaries'

Opening seminar: Genetics and crime. Contested boundaries, benefits and risks

Wed, 2 December 2015, 12:00-18:00, Room A114, Ellison Building, Northumbria University, Northumberland Road, Newcastle upon Tyne, NE1 8ST

The talks by our six speakers covered core aspects and perspectives around the use and governance of forensic genetics in the UK criminal justice system. Rich discussion was enabled by a diverse audience which brought together representatives from UK governance, the police, commercial service providers, pathology, forensic nursing, and the social and legal disciplines, with participants coming from the UK, the Netherlands, Belgium, Portugal, and Brazil.

Several themes emerged that indicate some of the gaps in current knowledge and practice around genetics and crime. The following themes and opportunities for further research are embedded in the understanding that forensic genetics issues are subject to increasing heterogeneity and go beyond laboratory practice and databases.

1. Communication between stakeholders is vital in order to establish overlap between the requirements of police forces, border agencies, and other forensic science users and the focus (technical and legal scope), limits, and challenges of emerging technologies. How can we encourage and facilitate mutual feedback on specific security and justice related needs between potential users/commissioners of technologies and researchers? How can such information be integrated into the R&D process? How can we scope and ensure that new and emerging technologies enhance investigative strategies or transform them effectively and efficiently?
    a. What kind of technologies would be most useful and also most challenging from socio-ethico-legal perspectives?
    b. How can technologies best be integrated into basic policing practice?
    c. At the same time, how can unnecessary technology use best be identified and avoided?
2. Communication is also vital at the level of technology use and assessment: e.g. communicating the scope and limits of technologies, their imagined role in investigative strategies, and the means and meanings of using different types of data analysis and interpretation. This is of value in communication towards wider publics including those who may become subject to police investigation and those who may become members of juries; to professional groups such as legal counsel and judges; and to the police.
    a. The validation of technologies and an improved understanding of error rates is vital for introducing and using new technologies under security and justice imperatives.
3. Technology synergies – the triage of different types of intelligence, data sources, and technologies – present one way of enhancing investigations but they also pose societal challenges.
    a. Data complexity can be useful in the process of engaging with security and justice imperatives. Such complexity – and the data agglomeration that necessitates it –

comes with its own risks and opportunities. Further research on these risks and opportunities, as well as on the kinds of desirable and feasible complexity is necessary.

   b. An example of increasing diversity and complexity of data is the development of Next Generation Sequencing/Massively Parallel Sequencing. Can we generate further debate on this technology step?

4. We are witnessing an expansion of data collection and storage overall, and different sources for genetic data are now available (medical, research, and commercial databanks and criminal justice databases) that are likely to grow. We need to better understand how such different data can interact, and how they can be made useful, and what opportunities and challenges to such data use may arise.
   a. How can we usefully combine the study of genetic technologies for security and justice with the research around Big Data?
   b. Is there the danger of a Big Data 'mash-up'? What is the value of retaining sovereignty of data? How can it be achieved?
5. This concern about data mash-up links to every-day, mundane technology use, and the need to ask questions about what constitutes 'normal' outcomes, and whether the system can be too effective. Speculative searching is an issue here.
   a. Are we currently focusing too much on technologies that would only find rare criminal justice use, or might have very limited impact overall, either because they do not align with routine investigative strategies and tactical needs, or because they would be applied in special cases such as victim identification, missing persons cases, or cold cases? That way we may lose sight of the bigger picture around issues with wider bearing and greater impact.
   b. A significant aspect here is the cross-searching of data from different sources and ethical/legal/social domains. We need to better understand the considerable risks arising from cross-purpose use/cross-searching of data before different types of data outside of the forensic domain are made accessible to security and justice purposes.
6. Can we co-develop new genetic technologies and their governance to overcome the 'law lag'? How could this be achieved?
   a. Is there a role and scope for developing 'mitigation technologies' that can help address problematic aspects and outcomes of emerging and applied technology? What would such 'mitigating technologies' entail, and how could they be developed?
7. Just like different genetics-relevant domains exists, should we take a more international and comparative view to utility and governance of genetic technologies in different spaces?