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978-0-521-51943-4 - Genetic Suspects: Global Governance of Forensic DNA Profiling and Databasing

Edited by Richard Hindmarsh and Barbara Prainsack

Excerpt

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**1**

## Introducing *Genetic Suspects*

This book investigates the impacts and implications for governance of one of the most successful and yet controversial developments in recent science and technology history: the introduction of DNA profiling and databasing into the criminal justice system, which began in 1988, when English baker Colin Pitchfork was the first person convicted through the use of DNA evidence (Sanders 2000). The increasing use of DNA evidence in criminal investigations and in court soon assumed the role of a new 'language of truth', following on from traditional fingerprinting. While DNA profiling, on a case-by-case basis, had been used since the late 1980s, it was the establishment of centralised national registries of DNA profiles for police and forensic use 5 to 10 years later which made possible the wider and systematic use of DNA technologies in criminal investigation. Computerised forensic DNA databases enabled authorities to compare profiles from crime scenes and subjects against and between each other on an automated basis and on a large scale. The first national forensic DNA database of this kind was implemented in 1995 in the UK, followed by New Zealand, several European countries, and the USA and Canada (Walsh *et al.* 2004: 36). Australia and many other countries across the globe followed suit.

Despite the many declarations by proponents, especially law enforcement agencies and forensic scientists, that forensic DNA profiling and databasing play an increasingly useful part in curbing crime, and despite popular TV shows like *Crime Scene Investigation (CSI)* and *Silent Witness* and other cultural sites that show these elements almost exclusively in a favourable light, many issues have, in fact, steadily emerged and grown in connection with this relatively new practice. Such issues belie the claim that forensic DNA profiling and databasing provide simple solutions to complex problems.

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In the next decade, the use of forensic DNA databases will increase in breadth and scope at national, transnational and international levels. Moreover, the importance and use of DNA profiling and databasing will increase and broaden with the rise of security, biometrics and anti-terrorist issues on public and political agendas. Parallel to such expansion, which is also occurring in developing countries, will be an increasing need to balance the benefits of the new genetic technologies of identification, surveillance and security against civic concerns, informed by criminal, genealogical and, potentially, medical and health histories, and new shifting definitions and identities and stakes pertaining to the criminal and the suspect. One of the biggest challenges will be building and maintaining public trust, which involves the creation of arenas where multiple viewpoints, interests and values can be articulated and heard.

The many social, ethical and political (less so economic) concerns and issues pertaining to forensic DNA profiling and databasing are situated at the intersection of civil rights, science and governance. They are intimately linked to the constitution of new and wider groups of populations as 'genetic suspects'. Such concerns include, but are not limited to, privacy; (non)standardisation of jurisdictional databases; surveillance; ideological and scientific interpretation of DNA evidence; scientific reliability of DNA testing; potential misuse and abuse of databases; sample collection and analysis, security and/or contamination; database implementation and expansion; function creep; public trust and participation; and mass testing or DNA dragnets.

In addressing this profoundly rich debate, the goal of *Genetic Suspects* is to contribute to the discussion of what 'good governance' of DNA profiling and databasing is, and could be. By 'governance' here we refer to a cluster of rules for, and practices of, conduct and decision making that go beyond parliamentary legislation and governmental measures. Governance includes practices and institutional arrangements of and between both governmental and non-governmental actors. We understand as 'good governance', institutional and practical arrangements and modes of governance that enjoy high levels of public trust. However, questions about 'good governance' cannot be answered in a general way. What 'makes sense' in one national context can seem starkly different in another, as they are marked by differences in informal practices; legal, cultural and political traditions; policy narratives; and, sometimes, religious beliefs.

An international group of contributors such as those gathered in this book is thus uniquely placed to examine the differing, sometimes

partly conflicting, meanings and objectives that various stakeholders and interests attribute to the technologies, objectives and infrastructures that constitute forensic DNA profiling and databasing internationally, and their good governance. An investigation of the emergence, implications and governance of forensic DNA profiling and databasing also requires critical and comparative analysis rather than assertions as to their 'negative' or 'positive' consequences.

As such, *Genetic Suspects* explores the scientific, technical, legislative, crime management related and social and cultural contexts of forensic DNA profiling and database governance in a range of countries that display different stages of development of forensic DNA databases. Examples range from the highly developed practices of the UK and the USA to the emergent ones of Portugal and the Philippines. This variety reflects the original contextualisation of the book at a conference<sup>1</sup> organised as part of an international research collaboration on forensic DNA profiling and databasing situated within a broader project called *Genes Without Borders: Towards Global Genomic Governance*.<sup>2</sup>

A number of questions informed the writing of *Genetic Suspects*. How are individuals and populations governed through new DNA technologies of profiling and databasing and their practices? What shapes and patterns of governance and regulation, at both the global and national levels, can be discerned? What new arenas of conflict have emerged? Which actors have been central in shaping the debate, and what has been their role? What are the key ethical, legal, social and cultural implications and challenges? Are there any convergences between forensic and biomedical DNA databases and practices? What impacts did differing regulatory strategies have on scientific–technological development, society, the political system and the criminal justice system? How did they accommodate and/or act upon scientific debate

<sup>1</sup> *The Global Governance of Genomics: Testing Genes, Profiling DNA: Medicine, Forensics, Ethics*, Mendel Museum, Masaryk University, Brno, Czech Republic, 1–3 November 2007. Organisers included the editors, Ursula Naue and Anna Durnová (University of Vienna, Austria), Peter Kakuk (Central European University, Budapest, Hungary), Frank Yeruham Leavitt (Ben Gurion University of the Negev, Beer Sheva, Israel) and Josef Kure and Renata Veselská (Masaryk University, Brno, Czech Republic).

<sup>2</sup> The project (2006–2008) was led by Barbara Prainsack and funded by the GEN-AU (Genomeresearch in Austria) program of the Austrian Federal Ministry of Science and Research ([www.gen-au.at](http://www.gen-au.at)). Project team members were Herbert Gottweis, Richard Hindmarsh, Ursula Naue, Jenny Reardon, Jeantine E. Lunshof and Nikolas Rose.

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and public attitudes? How inclusive has the debate been about forensics profiling and DNA databasing? What overall implications are there for current directions of, and what are the challenges for, governance?

Our contributors' approaches and perspectives are arranged into two sections, reflecting the major areas of analysis and concerns of the contributors, which also mirror the international debate. Section 1 provides a context for examining and understanding key areas in DNA profiling and databasing, while Section 2 addresses how issues related to forensic DNA databasing emerge in national contexts.

#### THE CONTRIBUTORS' PERSPECTIVES

##### Section 1

In Chapter 2, Barbara Prainsack provides an overview of the most current issues and trends pertaining to forensic DNA profiling and databasing, and their implications for governance. Prainsack frames the discussion from the beginning with reference to two proactive developments of late. First was the recent decision of the European Court of Human Rights in the case of *S and Marper v. the United Kingdom* (2008), which upheld the argument that retention of fingerprints, DNA profiles and DNA samples represents infringements of citizen's rights to private life as provided in Article 8 of the *European Convention on Human Rights* (Council of Europe 1950). Second was the firing of the laboratory director of the Baltimore Police Department as a result of serious contamination of crime scene samples and other 'operational issues'. Key issues highlighted included securing traces at the crime scene, obtaining DNA elimination samples from suspects and volunteers, transport and storage of crime scene traces, laboratory analysis, profile matching, courtroom evidence dilemmas, profile storage in the database, sample storage and function creep. Prainsack concludes with a call for equal attention to be paid to both the potentials and the limits of DNA technologies, and in particular, to what they can and what they cannot prove.

In Chapter 3, Elazar Zadok, Gali Ben-Or and Gabriela Fisman focus on the forensic use of voluntarily collected DNA samples, which they contend disadvantages individuals while pursuing maximising law enforcement for the benefit of society. Three topics are examined. First, operational considerations in carrying out DNA dragnets or mass screenings; second, ethical and legislative considerations encountered in sample collection; and, third, ethical and legislative considerations related to the fate of these samples and the profiles derived from them.

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These topics are applied to a murder case in Israel and the possible dilemmas, particularly regarding the considerations of Israeli courts addressing claims about the presumably illegal use of such samples, which leads the authors to make recommendations for better governance of voluntarily collected DNA samples.

In Chapter 4, Harriet Washington explores how ethnic issues, and in particular how the ‘tangled calculus’ of race, inform the debate on DNA use and governance for the purposes of law enforcement. She asks: ‘Are such questions particularly relevant for the US context, or do other nations share these challenges?’ In discussing such concerns in the context of racialised DNA sweeps, Washington contributes to the important discussion about how genetic databases should be designed and governed to maximise citizens’ security while protecting privacy, autonomy and social justice. The author concludes, ‘the challenge for good governance lies in determining how best to exploit genetic power without abusing it. One place to start is to abandon racialised DNA sweeps as inefficient, expensive, scientifically inaccurate, and most of all, as dramatic violations of social justice’.

In Chapter 5, Richard Tutton and Mairi Levitt address the ‘trade’ or flow of DNA samples across the boundaries between the medical and the forensic, and set out not simply to enumerate the similarities and differences between the way police databases and medical research databases have developed but also to reflect on how we conceptualise their different sociotechnical configurations. In other words, how do we analyse the simultaneous development of forensic DNA databases and the establishment of biomedical biobanks? In addressing this question in the UK context, the authors refer to notions of ‘biolegality’ but with specific reference to the forensic as opposed to the biomedical context in order to illuminate issues posed by the parallel development of genetic databases for policing purposes.

Our final chapter in Section 1, Chapter 6, by Simon Cole and Michael Lynch, examines how other forensic systems have provided models for the organisation of DNA databases. In that context, the authors find that many, but by no means all, aspects of DNA profiling follow patterns established by earlier techniques, most prominently fingerprint identification – the technique most closely analogous to DNA profiling on several levels. Both fingerprinting and DNA profiling are used to identify particular bodies as sources of crime scene evidence, and both involve comparisons between traces found at crime scenes and reference samples taken from persons in police custody. However, even though both techniques proved useful enough from a

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social control perspective – warranting large government investments and enjoying primacy as ‘gold standards’ in an imagined hierarchy of forensic techniques – the utility of both diverged from many of the hopes put forward about the ‘sciences’ of individual identification. Both techniques require practical judgment and are subject to error and abuse when caught up in the bureaucratic prerogatives of criminal justice administration. In sum, Cole and Lynch make a powerful argument that any hopes invested in DNA databases as a means of governance needs to take account of the historical lessons afforded by examining the biometric technologies that have preceded this latest forensic technology.

## Section 2

Contributors in this second section of *Genetic Suspects* discuss the introduction of forensic DNA technologies into their countries and identify key issues that appear central to these developments and that need raising and addressing in a critical context for good governance. The contributions are organised into three geographical areas at the forefront of development and critical discourse: first, the European Union countries and Norway; second, the USA; and third, Australasia (Australia and New Zealand). In turn, we look at frontline countries adopting the technologies and others planning to do so within the above areas or close to them. This provides an interesting and representative analysis of the issues in relation to global trends in a range of countries that reflect diverse cultures and development. What are the convergences and divergences in the issues, concerns and developments of forensic DNA profiling and databasing we ask.

In Chapter 7, Robin Williams discusses the development of forensic DNA profiling as a particularly conspicuous instance of a method for observing, knowing and recording ‘individuality’ to achieve the individuation of bodies through specific techniques of bio-identification, such as those of anthropometry or fingerprinting. With a focus on England and Wales as the first criminal jurisdiction in which a national DNA database was established, Williams first outlines the historical sources of the contemporary enthusiasm for the use of DNA profiling to support the control of crime, and then the ways in which scientific advances were harnessed to legislative changes and financial support to enable the creation of a DNA database that currently holds more than five million profiles. This sets the scene for considering a range of issues as the enthusiasm for forensic DNA

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profiling and databasing as resources for governing individuals and populations has been supplemented by how such technologies should themselves be governed. In acknowledging historical trajectories taken by these innovations (similar to the discussions in Chapter 6), he focuses on significant operational, legal and ethical challenges, as well as the forms of regulation, oversight and accountability that may have to be put in place to meet these challenges.

In Chapter 8, Barbara Prainsack outlines the relevant legal provisions as well as actual practices pertaining to forensic DNA profiling and databasing in Austria, and discusses the circumstances that led to the establishment of Austria's forensic DNA database. Drawing upon empirical research carried out in 2006 and 2007, Prainsack then provides an overview of understandings and practices of forensic DNA databasing on the part of individuals in law enforcement, on the one hand, and the understandings and responses of convicted criminal offenders on the other. A final section reflects on the impact that DNA profiling and databasing has had on crime commission and crime investigation. This discussion is particularly relevant to one of the core issues of this volume, namely how new technologies reinforce and/or alter prevailing configurations of power.

In Chapter 9, Victor Toom describes how Dutch DNA profiling became governed through legal measures and the inquisitorial orientation of the Dutch legal system. Second, he describes the trajectory – the lines of development – of Dutch DNA profiling practices, outlining who and what has been involved in DNA profiling. This account provides insight into the strategies employed by various stakeholders to deploy DNA profiling extensively and routinely in volume crimes and to apply DNA profiling in the process of crime investigations. Toom's analysis contributes to the understanding of how current DNA profiling practices were realised in a country – the Netherlands – with what he refers to as an 'inquisitorial legal orientation', where judges and other involved jurists in legal cases act impartially. Finally, he highlights some implications for current directions in the governance of Dutch forensic DNA profiling practices, especially the view that broad and informed public debates need to better address and resolve the many issues arising with regard to forensic genetic bodies and the civic protection of genetic suspects.

In Chapter 10, Johanne Yttri Dahl explores the case of Norway with regard to the use of DNA databases in criminal law administration, and the issues raised by the expansion the national database, which occurred in September 2008, for example issues of sample



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storage and deletion. Such issues Dahl asserts require further attention and critical discussion as they pose important challenges for responsible and transparent governance of Norway's expanding forensic DNA database. Special attention in her analysis is paid to the fact that one governmental DNA laboratory has a monopoly on DNA analysis in Norway. This issue was prominently debated in connection with the expansion of the DNA database, which was reinforced by respondents in in-depth interviews of key stakeholders that Dahl conducted on the use of DNA evidence in courts and the expansion of the database. In this chapter, she presents her highly interesting thematic analysis and findings. Like Toom in Chapter 9, her key finding is that 'Increased transparency, use of second opinion, improved governance and increased knowledge is ... essential.'

In Chapter 11, Helena Machado and Susana Silva write in the context of the Portugal forensic DNA database that will become operational during 2010. The authors describe the legislative basis for the Portuguese forensic DNA database and address the social, ethical and practical implications of the legal framework by focusing on important concerns and issues prominent in Portugal's public debate, further informed by insights obtained from interviews carried out with law and forensic science experts on the committee drafting the law for the DNA database. As such, the authors' aim is to contribute to the debate on emerging practices related to DNA databases for crime investigation and prevention. They discuss important governance and regulatory challenges, especially in exploring loopholes in the existing legislation, amidst discussing issues around the likely public acceptance of future governmental efforts to expand the database in a society where there are low levels of trust in the criminal justice system, commonly regarded as corrupt, discriminating, slow, inefficient and protective of the more powerful social groups. They finish by arguing for appropriate participatory avenues for decision making in the interest of public confidence and good governance of the Portuguese forensic DNA database.

In Chapter 12, Jay Aronson charts the history of DNA profiling and the national DNA database within the context of the US legal system and society. The author pays particular attention to the initial introduction of DNA profiling from the late 1980s through to the mid 1990s because it was in this period that most major patterns regarding its governance and oversight were established, particularly the centrality of the Federal Bureau of Investigation. Towards the end of the chapter, Aronson then turns to recent issues that have emerged in



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the context of the expansion of the DNA database and the creation of ever more powerful technologies for recovering and analysing DNA from potential criminal suspects. An aspect that Aronson finds unique in the US context is that the introduction of the technique into the courtroom was much more contentious than in most other countries, while the expansion of the national DNA database and other associated ethical and legal issues have been significantly less controversial compared with the rest of the world. Further, the involvement of private companies in the US DNA profiling market has created significant challenges for the legal and scientific communities. In the end, the author finds the omission of voices at the policy-making table that are critical of both the presumed infallibility of DNA profiling and the unambiguous social utility of the expansion of DNA databases to be a troublesome reality of the American context. He argues that this situation is one that ought to be avoided for good governance of forensic DNA technologies in other countries.

In Chapter 13, Richard Hindmarsh finds the Australian development of forensic DNA technologies raises many ‘biocivic’ concerns, not least policy formation by a narrow policy network of proponents who present DNA profiling and databasing as a simple solution to a complex problem. Hindmarsh addresses these concerns in the context of what many have posed as an increase of biosurveillance through extended forensic DNA technologies, and the associated socio-political implications of that for good governance in a democratic society characterised by the integrity of and public trust in governance. The author explores the terrain through policy and media analysis of developments and the public debate and concludes by suggesting a transition from the notion of ‘DNA as a language of truth’ to one of ‘DNA as a language of trust’ as part of new governance strategies for addressing the tensions arising between forensic DNA-driven law enforcement and biocivic concerns.

In Chapter 14, Johanna Veth and Gerald Midgley trace the evolution of DNA profiling and review the legislative aspects of governance in New Zealand. The authors first direct their attention to forensic DNA analysis prior to legislation and consider two key judicial decisions that illustrate the legal debate surrounding this technology. Focusing on whose samples may be obtained and under what circumstances, Veth and Midgley summarise the main themes and concerns in submissions made to the Parliamentary Select Committee considering the 1994 Criminal Investigations (Blood Samples) Bill and the subsequent 2002 Amendment Bill. In their summary, the authors emphasise cultural

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and ethical concerns, as these signal possible unintended consequences that a purely technical evaluation of the technology's effectiveness would not anticipate. They find areas of both contention and acceptance. Finally, the authors review present-day operations of New Zealand's DNA Profile Databank, but, overall, find that wide public support exists for forensic DNA technologies and practices owing to successes in detecting criminals and securing convictions.

In the last chapter of this section (Chapter 15), Maria Corazon De Ungria and Jose Manguera Jose note that the Philippines does not yet have a national DNA database or any legislation to facilitate its establishment, but DNA evidence is admissible in courts and judicial guidelines exist for the collection, handling and storage of biological samples. Forensic DNA testing in criminal investigations is performed by the National Bureau of Investigation and the Philippine National Police, institutions that exist under different governmental departments. The authors provide an overview of policy developments and discuss legislative issues in the mooted establishment of a national DNA database. They discuss the implications for governance, especially resource allocations for a developing country as well as potential misuses of such a database, and they conclude with suggestions to aid in effective policing that include the minimisation of infringements of individual rights.

#### CONCLUDING REMARKS

The chapters in this book provide readers with a variety of approaches and perspectives to the important topic of DNA profiling and databasing, with, as Aronson emphasises in the closure of his chapter, 'DNA playing an increasingly important role in law enforcement around the world'. Our broad aim again is to contribute to discussions about 'good governance' pertaining to some of the most profound issues of DNA profiling and databasing yet facing societies and cultures around the globe. Perhaps most provocative are current initiatives to further expand the scopes and uses of forensic DNA databases, which stimulates the need for enhanced public engagement on the many issues raised more generally by DNA databasing and profiling, as many of our contributors highlight. We hope that it will be helpful to a range of readers, both professionals and non-professionals, to whom these issues are of interest, in theory and practice.