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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

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## Genetic Suspects

Global Governance of Forensic DNA Profiling and Databasing

As DNA forensic profiling and databasing become established as key technologies in the toolbox of the forensic sciences, their expanding use raises important issues that promise to touch everyone's lives. In an authoritative global investigation of a diversity of countries, including those at the forefront of these technologies' development and use, this book identifies and provides critical reflection upon the many issues of privacy; distributive justice; who shapes and governs DNA information systems; biosurveillance; function creep; the reliability of collection, storage and analysis of DNA profiles; the possibility of transferring medical DNA information to forensics databases; and democratic involvement and transparency in governance, an emergent key issue. This book is timely and significant in providing the essential background and discussion of the ethical, legal and societal dimensions for academics, practitioners, public interest and criminal justice organisations, and students of the life sciences, law, politics and sociology.

RICHARD HINDMARSH is Associate Professor at Griffith School of Environment, and Centre for Governance and Public Policy, Griffith University, Australia. He specialises in co-produced sociotechnical systems analysis informed by science, technology and society (STS) studies; governance and regulation studies; environmental policy; and the politics and sociology of green biotechnology and forensic DNA technologies. Professor Hindmarsh is also an international expert reviewer for both the Australian Research Council and the UK Economic and Social Research Council and invited International Consultative Group member of the (US) Council for Responsible Genetics. Currently, as its co-founder, he is further establishing the Asia-Pacific STS Network, a new regional research community spanning Australasia, East and Southeast Asia and Oceania, as its convenor for 2010–2011.

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## Genetic Suspects

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and Databasing

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## *Foreword*

Without science and its muscular twin technology, contemporary societies would be reduced to chaos. We would lose much of our ability to read, write, communicate, travel, grow crops, raise animals, cook food or find clean water to sustain our lives. Commercial transaction would stop; financial institutions be crippled; emergency services incapacitated, and hospitals no longer able to provide essential treatment. In that devastated, dying world, law and order would break down, and violence would flourish. Not insignificantly, we would lose the capacity to track and prosecute lawbreakers and criminals. Today, even law enforcement has become a 'high-tech' business, and DNA profiling, the subject of this book, is the most highly valued recent addition to the toolkit of the forensic sciences. For law enforcement agencies, it is hard to imagine life before or without it.

Technology's benefits for social order are obvious, ubiquitous and unquestionable. Yet, since long before the scientific revolution, human beings have looked upon the unchecked thirst for knowledge and its applications as dangerous things. Humanity's Faustian bargain with science set us on a path of discovering more and more about the way the world works and accomplishing more impressive feats with the results of that knowledge. But around the bends of the brightly lit corridors of enlightenment lurked unintended consequences that threatened to usurp our humanity and even annihilate us physically. Advances in the life sciences and technologies have proved particularly alarming because they destabilize the worth of life itself. Biological inventiveness calls for heightened attention to ensure that important human values are not lost because no one is watching. How to cultivate that sense of social alertness – an instinct as valuable to advanced industrial civilizations as keenness of sight, smell and hearing were to our prehistoric ancestors – remains one of modernity's most pressing problems.

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This volume provides one appealing answer: a multi-sited case study of a powerful, emerging sociotechnical system that invites readers to address its benefits, its risks and its governance. The authors follow a single new technology – DNA profiling – from the whiff of promise in a UK laboratory to the reality of institutionalized law enforcement practices around the world. It is a relatively short history, but revolutionary in its implications. In 1985, the British scientist Alec Jeffreys discovered almost by chance that random variations in the structure of genes could be used as a technique for identifying individuals from samples of their DNA. Within a bare quarter century, DNA profiling became the best known and most celebrated instrument of forensic science, a virtually failsafe tool, if properly used, for linking violent crimes to the persons who perpetrated them. To prosecutors, this was fingerprinting on steroids: a technique based on the soundest of basic science and seeming to eliminate virtually all possibility of false identifications.

But DNA profiling turned out to be less than failsafe in practice and to have troubling uses beyond the identification of guilty and violent people. Compiled into databases, DNA identifiers offer a highly efficient means of storage and retrieval of personal information that can be used to track, group and classify people with or without their acquiescence. Once a person's biological identity gets locked up in a DNA database, the profiled individual has very little say in how that information will be used and managed. If mistakes were made, or inappropriate data collected, those facts remain largely outside the individual's capacity to detect or correct. Instead, the technology seems ideally suited to feeding the appetites of the all-seeing state as conceived by Michel Foucault and other students of late modernity. In the aggregate, the DNA profiles of all those 'genetic suspects' who give this book its title provide the raw material for constructing innumerable knowable and manageable populations, whose identities and traits the state can call up whenever such groupings serve its purposes of surveillance and control.

The precision of DNA profiling, the very feature that makes it miraculous in the hands of responsible law enforcement authorities, also enables its potentially grave misuse. Consider the following description by Jeffrey Rosen (2009)

In March 2003, a drunk in southern England threw a brick off a bridge late at night, striking and killing a truck driver traveling along the freeway below. Armed with DNA from the blood on the brick, the British

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police searched the United Kingdom's national DNA database, which includes convicted felons and people who have been arrested, but failed to get a direct match. They then conducted a DNA dragnet, asking hundreds of young men in the area to donate a sample voluntarily, but still came up short. Without any other leads, the police decided to conduct what's called a 'familial search' of the national DNA database.

That search, when trimmed to two counties near the crime scene, produced 25 partial matches that were deemed close enough to warrant further follow-through. Police investigators interviewed the person with the largest number of shared alleles and discovered he had a brother, who was then asked to provide a sample of his DNA. This time, the match was perfect; confronted with the evidence, the brother confessed and was subsequently convicted of manslaughter.

The case presents all the features that have won the allegiance of police departments the world over. A seemingly random act that in the past might have entered the annals of unsolved tragedy now proves traceable. The proverbially long arm of the law catches up with a criminally irresponsible man who killed and ran. The accused is brought to justice; the victim is avenged. Neat, orderly, satisfying. Case closed. And yet the story has resonances that are not altogether pretty. There is first of all the 'voluntary' dragnet – one of those 'offers' an invitee cannot refuse. There is the question of what happens to all those samples collected from persons who had no business being swept into a suspect DNA database other than their random association with the time and place of a crime. Then there are issues of distributive justice. In chronically unequal societies, what will prevent the state's suspicious eye from landing more frequently on the poor and under-represented, thereby distorting and, almost inevitably, making mistakes in the delivery of justice? What new uses will be found as the technologies of extracting information from DNA mature, and who will participate in the design of ever-expanding information systems? Overarching all, are questions deriving from the special attributes of the DNA profile, a far more comprehensive record of a person's biological characteristics, and of familial and racial relationships, than the varied footprints, fingerprints, voiceprints, teeth marks, signatures, video images, eye-witness recollections and even blood samples left behind as possible identifiers by earlier generations of suspect individuals.

Part historical, part contemporary, part case study and part comparison, this collection of essays by a distinguished array of international experts presents DNA profiling as a technology manifestly in

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need of better governance. The editors, Richard Hindmarsh and Barbara Prainsack, have divided the collection into two richly informative sections, each of which strengthens and underlines the significance of the other. The first part introduces DNA profiling as a complex technological system, composed of heterogeneous social and material elements and practices that give rise to problems of governance at the same time that they promise to solve the ‘who dunnit’ question that is one of any law-abiding society’s prime concerns. For example, the practice of the DNA dragnet, so effectively deployed in the UK case of the bloody brick, may through its focus on specific geographical locations lead to increased surveillance of ethnic and racial minorities. Elazar Zadok, Gali Ben-Or and Gabriela Fisman explicitly note that possibility in their chapter on forensic DNA practices in Israel – a nation in which geography and ethnicity reinforce each other with toxic effects. But concern may be warranted in much tamer political settings, as Harriet Washington and Jay Aronson suggest in their studies of the entanglement of race and policing in forensic DNA practices in the USA.

Forensic DNA profiling, moreover, sits in both historical and contemporary proximity to other techniques that illuminate and help to reinforce the governance challenges that this technology presents. As Richard Tutton and Mairi Levitt point out, forensic DNA databases coexist with medical ones, and yet the implications of the two compilations differ from the standpoint of the persons profiled in each storage system. The ‘genetic suspect’ who falls within the state’s dragnet loses privacy, freedom and autonomy; for suspects, there is little prospect of the self-fashioning and group affiliation, or the exercise of active citizenship discussed in biomedical contexts by authors such as Shobita Parthasarathy (2007), Nikolas Rose (2006) and Paul Rabinow (1992). Mistakes, too, are graver when a suspect’s life and liberty may be at stake. Here, the historical gaze imparted by Simon Cole and Michael Lynch, who draw analogies between DNA profiling and other flawed biometric technologies of the past, offers a healthy antidote to unbridled enthusiasm. The juxtaposition of historical and contemporary practices adds depth to this collection, as is well illustrated by the pairing of the Cole and Lynch chapter with the chapters by Robin Williams and Jay Aronson on the origins of forensic DNA profiling in England and Wales and in the USA, respectively.

The book’s second part reviews the introduction of DNA profiling into national law enforcement systems in three largely white, industrially advanced regions of the world, the European Union, the USA and

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Australasia. These studies offer valuable insights into the conditioning of this technology by specific features of national legal culture. The contrasts reach deep down, not only into divergent histories of judging and prosecuting but also into different national expectations of how to run a responsible law enforcement system. As Victor Toom recounts in the Dutch case, for instance, a rapid and relatively uncontroversial expansion of forensic DNA tests from only violent crimes, such as murder, to routine high-volume ones, such as burglary, reflected traditions of legal centralization and the belief in the impartiality of judicially managed fact finding in the Netherlands. More generally, all of the country case authors show that prior histories of public experiences with government and law enforcement – whether relatively trusting as in Johanne Yttri Dahl's Norway or mistrustful as in the Portugal described by Helena Machado and Susana Silva – influence policies for managing DNA databases, including rules of access and accountability.

What emerges from these individual accounts is a technology in flux. DNA profiling is everywhere founded on the same secure core of biological knowledge, and it raises similar questions about human rights and liberties; however, national practices and debates differ, reflecting political tensions and concerns that vary substantially from state to state. These socially conditioned differences, emphasized in each chapter, add up to a strong argument for more explicit forms of citizen engagement in the governance of forensic DNA profiling; indeed, calls for more transparency form the book's most compelling *leitmotiv*. We are left wondering, however, about the global implications of these analyses as the technology spreads through regions with far less experience of democratic involvement.

Apart from the chapter on the Philippines by Maria Corazon De Ungria and Jose M. Jose and that on Portugal by Helena Machado and Susana Silva, describing countries that did not have operational national forensic databases as of this writing, the distribution of the country cases reflects the typical diffusion pattern of 'high-tech' innovation. Novel technologies originate where wealth and knowledge are most concentrated and are then exported to other societies and cultures with considerably different histories of technology and governance. We know from decades of work on the co-production of natural knowledge and social order that technologies are never ethically or politically neutral: they carry within them, particular, culturally conditioned imaginaries of good and evil, what (and, in the case of DNA profiles, *who*) should be encouraged and what (or who) should be suppressed (Jasanoff 2004, 2005). What moves in transfers of technology is not

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simply expertise or technique, it is an entire mode of knowledge and organization, in this case of the human subject in relation to institutions of power. The very fact of technologies of social control imagined and produced in the West for use in the rest of the world raises political and ethical dilemmas that the editors and authors invite readers to ponder for themselves.

These observations point to one caveat concerning this timely and thought-provoking compendium. Empirical richness, local specificity and breadth of coverage are gained to some extent at the expense of a unifying theoretical vision and deep, cross-national comparative insight. The authors offer a hugely intelligent examination of a technology of control that is still in the making, when handholds still exist in many places for intervening in its modes of governance. The book addresses only briefly in its conclusion how DNA profiling will fit into emerging structures of global governance, and it leaves unaddressed how the transitions and frictions discussed here relate to the broader repositioning of the human in the post-DNA analytics of law and political theory. Necessarily, then, this book will have to sit beside works that attempt a more ambitious social theorization of the genetic revolution in all its complexity. As a study of one key, technologically mediated component of that transformation, however, this book sets a high standard of scholarship and insight that will be hard to beat.

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Richard Hindmarsh and Barbara Prainsack