ISSUES ARISING FROM THE RETENTION OF DNA PERSONAL DATA

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Introduction

Before starting this article, I want to ask the reader two questions. Q1: "Do you think that the police should build a DNA database that contains details of every citizen in a country irrespective of innocence or guilt?", and Q2: "Should the police be able to retain the DNA profile of all criminals indefinitely?". If, like most people, you have answered Q1: "No" and Q2: "Yes" then this article will show that you are being totally inconsistent.

This article poses a number of issues associated with the use and retention of DNA profiles and related personal data ("DNA personal data") that should be the subject of public debate[1].

What is the role of legislation?

In most European countries, a national DNA database is likely to be subject to three pieces of legislation. The legislation that establishes the DNA database itself, the national data protection law, and provisions derived from the European Convention of Human Rights. In the context of the retention of DNA personal data, these laws interact with each other.

When a public authority considers interference with the right to respect for an individual's "private and family life, his home and his correspondence"[2], Article 8(2) states that such interference has to be "in accordance with the law" where that law is "necessary in a democratic society" for one of the following purposes: "in the interests of national security, public safety or the economic well-being of the country, for the prevention of disorder or crime, for the protection of health or morals, or for the protection of the rights and freedoms of others".

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[1] *For instance, in the context of the Crime and Security Bill before the UK Parliament*

[2] *Article 8(1) of the European Convention of Human Rights.*

These legal tests mainly apply to the question of "**whether** the retention of DNA personal data can lawfully occur?"; they are normally considered when legislation is scrutinised by a national Parliament (e.g. by ensuring that the Government has evidence that legislation is "necessary" or "proportionate").

By contrast, the main focus of the data protection principles[3] relate to **how** personal data are to be processed **after** the legislation has been enacted. In the context of a DNA database, this concerns procedures covering retention, fairness, relevance, security or accuracy[4] etc. In this way, data protection provides a means for assessing **how** human rights concepts such as "proportionality" are delivered in practice.

Finally, the role of DNA legislation is to provide a mechanism so that Parliaments can explore the lawful basis for the processing of personal data and assess whether the requirements of Article 8(2) are met. Note that once enacted, any provision in legislation that relates to the processing of personal data is likely to modify the effect of the data protection principles. For example, if legislation states that DNA personal data are to be retained for 20 years, then this is the lawful retention period – there is very little any data subject could do if he disagreed. Similarly, if the law stipulated that other organisations can have access to the DNA database, then such access is lawful – end of argument.

This means that the more detailed and wide-ranging the legislative provisions defining the processing of DNA personal data, the less data protection legislation can afford in the way of safeguards. As will be seen, if Parliamentary scrutiny of legislation is poor, so can be the resultant protection for individuals[5].

The cases that have defined the lawful retention of DNA personal data

The framework of human rights law that legitimises the retention of DNA personal data has two important precedents. The first case relates to the retention of DNA personal data on

[3] *As found in national legislation based on Council of Europe Convention No 108, Directive 95/46/EC or OECD guidelines (e.g. the UK's Data Protection Act 1998).*

[4] *Schedule 1 of the Data Protection Act 1998 or Articles 7, 10,11,16, 17,25 and 26 of Directive 95/46/EC list all the data protection principles.*

[5] *I go into great detail of this point in "**Nine principles for assessing whether privacy is protected in a surveillance society (Part 1) – 2008" on the Amberhawk website,** http://www.amberhawk.com/policydoc.asp.*

criminals (Van der Velden[6]); the second to the retention of DNA personal data on those arrested but subsequently not convicted of an offence (S and Marper[7]).

Mr. Van der Velden is a career criminal; he argued that since DNA played no part in his arrest for his most recent crime and because he had been given a 6-year custodial sentence, there was no need for the police to collect or retain his DNA. After all, he was in prison; it followed that the collection of his DNA was an unnecessary interference with his private and family life.

The ECHR Court rejected this argument concluding that "this complaint is manifestly ill-founded" as the interference was in accordance with the (Dutch) law that set out a limited range of retention criteria. As the police established that DNA retention[8] met a pressing social need in relation to crime detection, such retention was proportionate. Additionally, individual protection was also afforded by the supervisory role of the Dutch Data Protection Commissioner.

In the second case, the Court came to a different conclusion. Its judgment related to the UK practice of indefinitely retaining DNA personal data on individuals who have been arrested but not convicted. All the arguments that the police has employed in Van der Velden surfaced in Marper; however, by a 17-0 decision the Grand Chamber decided that:

> "The blanket and indiscriminate nature of the powers of retention of the fingerprints, cellular samples and DNA profiles of persons suspected but not convicted of offences, as applied in the case of the present applicants, fails to strike a fair balance between the competing public and private interests…the retention at issue constitutes a disproportionate interference with the applicants' right to respect for private life and cannot be regarded as necessary in a democratic society." (Paragraph 125).

The UK Government has responded to this judgment by introducing legislation[9] that provides for a six year retention period for adults who are arrested but not convicted, and the indefinite

[6] *Decision as to the Admissibility of Application 29514/05, Hendrick Jan Van der Velden v Netherlands*

[7] *S and Marper v United Kingdom (App. No 30562/04 and 30566/04, 4 December 2008*

8 The data of persons convicted of an offence carrying a statutory sentence of six years or more is retained for thirty years. For less serious offences carrying sentences of up to six years, DNA profiles may be retained for a maximum period of twenty years.

[9] *See reference 1*

retention on all criminals who have committed a "recordable offence" (where the definition of "recordable offence" is defined by the Home Secretary with very limited Parliamentary scrutiny.

So in 2000, the National Police Records (Recordable Offences) Regulations made cautions, reprimands and warnings "recordable offences". The Regulations were enacted without any Parliamentary debate with the result was that individuals who were arrested or convicted in relation to very minor matters had their DNA sample retained indefinitely[10].

How does unfair processing arise in the retention of DNA personal data?

DNA provides very good criminal intelligence. The fact that DNA of an individual has been deposited at a scene of a crime is an indicator that the individual is somehow connected with that crime scene. It is not a surprise that the police want to retain as much DNA personal data as they can, for as long as they can, and to facilitate DNA data sharing between Europe's police forces.

The existence of DNA at a crime scene does not indicate the presence of an individual at the crime scene at the time of the crime. However, with crimes of random violence, of a sexual nature or murder, a DNA match has often been the conclusive evidence that has secured a successful conviction. Equally important, the absence of a match has provided conclusive evidence that someone did not commit a sexual assault.

However, in the UK, it is well known from records of arrest that ethnic minorities are most likely to be arrested – and this pattern is repeated in many European Countries. The UK's Human Rights and Equality Commission has stated in relation to the DNA database[11] that:

> Black men are significantly over-represented on the database. The available information indicates that it holds about a third of all black men and about three-quarters of all young black men (aged 16 to 34) resident in the UK. Black men are four times more likely to be on the database than white men. There is some evidence to suggest that black (and also Asian) defendants are less likely to be convicted than white defendants, and therefore that

[10] *This is an example of my previous observation that "if Parliamentary scrutiny of legislation is poor, so can be the resultant protection for individuals".*

[11] *Evidence to the Home Office re the DNA database: downloadable from http://www.equalityhumanrights.com/legislative-framework/consultation-responses/response-to-consultation-on-dna-database-proposals/*

> if profiles were retained only of those **convicted**, the proportion that relate to black people would be lower.

Thus if policing policy targets particular crimes, geographical locations or communities, then the retention of DNA personal data of those who are not convicted can raise questions of unfairness. This explains why Lord Justice Sedley, a judge at the UK's Court of Appeal (and who heard the Marper case at the Court of Appeal[12]) suggested that everyone's DNA should be on the national database[13] as a universal database would avoid any unfairness.

Should DNA personal data on criminals be retained indefinitely?

It is well known that criminals often start their career with a minor crime; so if one retains DNA relating to petty crime, then the chance of catching any involvement in a future crime is much improved. That is why the police argue that DNA of those arrested should be retained indefinitely, and why those arrested in the UK have a DNA sample taken which is then matched against all previously know scenes of unsolved crimes.

However, consideration of criminal statistics reveals another story. Table 1 below is from "Time to reconviction: by gender, 1995-97"[14] and includes details of under-21 offenders who are released from prison. The important commentary accompanying the statistics adds: "Overall there was little difference in the reconviction rates for those released from prison and those who had served community sentences".

Table 1: Recidivism in young (under 21) males serving custodial sentences.

Cumulative percentage	Time to next offence
16%	3 months
35%	6 months
50%	9 months
60%	12 months
67%	15 months
71%	18 months
74%	21 months
77%	24 months

(e.g. 71% of offenders reoffend within 18 months)

12 Neutral Citation Number: [2002] EWCA Civ 1275

[13] *http://news.bbc.co.uk/1/hi/uk/4038079.stm*

[14] *There are similar cumulative statistics for women and male adult offending; the juvenile stats are at http://www.statistics.gov.uk/STATBASE/xsdataset.asp?More=Y&vlnk=405&All=Y&B2.x=16&B2.y=7.*

The cumulative figures in Table 1 can be extrapolated[15] on a forward six yearly basis.

Table 2: Extrapolated recidivism in young (under 21) males serving custodial sentences.

Cumulative percentage	Period of re-offending
60%	1 year
77%	2 years
82%	3 years
83%	4 years
84%	5 years
84.5%	6 years

(e.g. 82% of offenders reoffend within 3 years)

Table 2 shows that in relation to those with a criminal record, a three to four year retention period for DNA appears optimal in that it would allow most reoffending (83%) to be caught (assuming that the DNA was the only means of identifying the offender). The last three years' retention adds about an additional 1.5%. It follows that indefinite retention of DNA personal data on criminals cannot be justified in terms of helping the police in relation to routine crime because if recidivism does not occur within 4 years, then recidivism is unlikely to occur at all, and the retained DNA personal data are unlikely ever to be used again.

However, this raises a dilemma. If there were to be such a short retention period then any ex-offender involved in a more serious crime later after this period, could not be traced by any DNA left at a crime scene; the result is that several serious crimes would probably not be solved.

However Table 2 reveals the policy position defined by the UK Government's proposals[16] for indefinite retention of criminal DNA personal data. The police need DNA retention just in case a known criminal commits a serious crime (e.g. murder, rape) sometime in future beyond the optimal 3-4 year retention period. However, if the police are to indefinitely retain DNA personal data for these speculative but serious future crimes, they might as well use these DNA data for any future crime, irrespective of the nature of the offence.

The policy position raises two interesting questions. If DNA personal data on offenders are to be retained indefinitely, what is the argument for not indefinitely retaining a criminal's

[15] *Different extrapolation techniques will provide different final percentages (calculated around 84.5%). This figure is not the key issue; the important point is the tapering off of the estimated maximum percentage in years 3 to 6. Note there is marginal benefit for each year more than a 3-4 year retention period. Extrapolation of the similar statistics for women and male adult offending show the same trend*

[16] *See reference 1*

telephone logs, or travel details, or tax records and other financial details that could help the police? What is so special about DNA retention? Conversely, if a six year retention policy on criminals appears to be difficult to justify, what is the justification for the UK Government's proposals for a six year retention of DNA personal data of those arrested but who are not convicted?

Will a universal DNA database emerge?

Official UK statistics[17] also show that "Research recently carried out on men born in 1953 revealed that one in three had a conviction before they were 46 years old". A second statistic states that: "Across England and Wales, the rate of men aged 18 or over found guilty of offences in 2005 was four times higher than that of women aged 18 and over (55 men per 1,000 population compared with 12 for women)". So, if one in three males has committed an offence, and this is four times the women offenders' ratio, it can be roughly assumed that one in twelve women has a conviction. It can also be estimated that up to 1.6% of the UK population[18] currently have DNA personal data retained on the database because they have been arrested but not convicted.

Assume there is two decades of indefinite retention of criminal records (the policy of all the main political parties in the UK). For every group of 1000 individuals equally divided into 500 men and 500 women, there will 167 male criminals (one third of males) and 42 female criminals (one twelfth of women) and up to 16 "non criminals" (1.6% of 1000) with a DNA personal data stored on the database. This means that between 209 and 225 individuals (or 21%- 22.5% of the sample population) can be estimated to be on the DNA database.

Note that this estimate ignores the impact of UK proposals relating to the retention of DNA data of the dead[19]. One of the statutory functions of the UK's DNA database is to identify

[17] *Men http://www.statistics.gov.uk/STATBASE/ssdataset.asp?vlnk=4480&More=Y: Women http://www.statistics.gov.uk/cci/nugget.asp?id=1968.*

[18] *The ONS state that in 2008, the population in England and Wales was about 54.5 million (http://www.statistics.gov.uk/cci/nugget.asp?ID=6). A statement to Parliament in November 2008, revealed that in March 2008 there were "857,366 people on the NDNAD who had been sampled by England and Wales police forces did not have a current criminal record on PNC" (Hansard, 4 Nov 2008 : Column 358W). A simple division tells us that an upper limit of around 1.6% of a random population will have no criminal record but will be on the DNA database.*

[19] *As an aside, the UK's Information Commissioner is the regulator with respect to DNA personal data; note that if the criminal is dead, the DNA data are not effectively regulated by the Data Protection Act.*

deceased persons and, of course, DNA data are still retained if the dead individual concerned has committed a "recordable offence".

Assume in future that familial DNA techniques are improved so that it is relatively simple procedure can map "lawfully retained" DNA personal data onto a DNA profile of close relatives who are not criminals (e.g. the DNA provider's two parents, and children are the closest relatives). Assuming the norm of "2.3 children and 2 parents", a single DNA sample of a convicted person can be expected to cover 4.3 people on average. This means that a DNA database coverage of 21%-22.5% of the population could, at a theoretical maximum, map 90%-97% of the population (and this is not taking into account of the indefinite retention of DNA data of the dead). A more advanced technique would be expected to map a retained DNA data to grandparents and grandchildren; this would imply a multiplier of over 8.

Concluding comment

A DNA database, even if limited to indefinite retention of DNA personal data on "recordable offence" criminals, will eventually span most of the UK population. It is not a question of ***whether*** - it is a question of ***when*** this milestone is reached. Questions like this and others raised in this article should be at the heart of the DNA retention debate – but they aren't. In the UK, I conclude a universal DNA database could arise, by default.

Ends (2950 words)

Dr Chris Pounder is a Director or Amberhawk Training Ltd, a company that specialises in Data Protection training. He has provided evidence before Parliamentary Committees on a number of occasions and has taken a particular interest in the privacy issues surrounding the DNA database. Details of these submissions can be found on www.amberhawk.com

APPENDIX: ADVERTS