Something to Hide: DNA, Surveillance and Self-Incrimination

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Introduction

DNA technology has introduced two techniques of surveillance into modern policing. The first technique, 'DNA profile surveillance', allows the detection of links between known individuals and particular crimes by comparing DNA profiles from those individuals, permanently or temporarily stored on a database, with DNA profiles obtained from material connected with crimes. The second technique, 'DNA request surveillance', allows the observation of individuals' fear of a match between their DNA and material connected with a past (or future) crime, by assessing their response to a request to provide a DNA profile voluntarily. Such a test potentially infringes the privilege against self-incrimination because it forces criminals to reveal the incriminatory contents of either their mind or their genome. Contemporary Australian laws on the use of DNA technology by the police limit the use of DNA profile surveillance but do not limit the use of DNA request surveillance. To preserve the traditional balance between investigators' rights and individual rights, this position should be reversed, by abolishing the police's power to request consent to a DNA sampling procedure and expanding the police's power to obtain DNA profiles without consent.

DNA Profile Surveillance

Criminal investigators can establish links between particular crimes and known individuals in two ways. First, they can study material associated with the crime itself in the hope of identifying a potential suspect by inference. Alternatively, they can work in the opposite direction by 'monitoring the movements or affairs of a person or persons' (NSW Law Reform Commission 1997) in the hope of identifying what crimes those individuals may have been associated with. The second technique is termed 'surveillance' and encompasses a variety of traditional and technological methods. In the mid-1980s, a new technique of surveillance emerged from the unlikely field of genetics.

Genetic research has shown that, although much of the genome is common to all humans, certain segments vary between any pair of humans (apart from identical twins) but are invariant within each individual's body. Given a bodily sample, laboratory techniques can yield a DNA 'profile' containing sufficient information to establish the probability that two genomes are identical and, thus, that the samples from which the profiles were derived came from a single individual (or identical twins). Profiling has a particular application in

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criminal investigations because some bodily samples may be associated with a crime, either by their nature (e.g. semen on the body of a rape victim) or because of their proximity to a crime scene (e.g. a loose hair found in a getaway car). If traditional investigation has identified a possible crime suspect, then DNA identification can provide confirmation for that suspicion or the exclusion of that suspicion. Alternatively, DNA identification can be used as a technique of surveillance, by examining whether there is a match between a particular person's DNA profile and crime scene profile, even in the absence of any pre-existing suspicion of such a link. This technique can be used on large groups of individuals, by creating a database of known persons' profiles, capable of being routinely compared with profiles associated with unsolved crimes. Apart from its obvious investigative utility, DNA profile surveillance may also deter future criminal behaviour by persons whose profiles are (or could be) stored on the database.

Most modern forms of investigative surveillance are highly susceptible to 'function creep', that is a shift from investigative to non-investigative purposes, because they rely on information gathering techniques that *cannot* distinguish between criminal and non-criminal behaviour. For example, listening, optical and locational devices gather information about all detected behaviour, which must later be separated into criminal and non-criminal categories. However, DNA profile surveillance is less susceptible to function creep because it does not observe all (or, in most cases, any) of the behaviour of known individuals whose profiles are placed on the database; rather, the only behaviour that can be observed via a matching database is behaviour that is implicit in the nature, location and context of detected bodily samples. Moreover, while the selection of particular bodily samples for profiling obviously relies on human judgement, this judgement *precedes* the identification of that sample with a known person. The capacity of DNA profile surveillance to be restricted to observing only criminal behaviour can be regulated by laws restricting the use of DNA profile databases. For example, the Model Forensic Procedures Bill only permits the placement of unknown persons' profiles on an investigative database if they are obtained from 'crime scenes' (implicitly defined somewhat broadly as including persons, things and locations associated with a crime) or 'unknown deceased persons' (see cls 79 & 80). It also provides for some restrictions on how the database can be accessed and used (see cls 81 & 82). The question of whether DNA profile surveillance can be credibly portrayed as a pure crime detection technique raises many interesting issues. However, this article is concerned with one practical outcome if such portrayals gain sufficient acceptance: the facilitation and promotion of voluntary participation of known individuals in this form of surveillance.

At first blush, the notion of a *voluntary* system of surveillance is bizarre. Nonetheless, in a recent review of modern surveillance technologies, Fox (2001) noted:

> Nowadays much monitoring of citizens by the private sector occurs as the result of 'participatory surveillance'. It is 'participatory' to the extent that citizens are willing to abandon elements of their privacy in order to gain access to highly desired private sector services, or because it is otherwise in their interests to do so. To this extent surveillance must be recognised as having an enabling as well as a constraining character.

Fox's discussion is confined to surveillance by the private sector. Clearly, participatory surveillance can make sense in commercial contexts, for example when a company is keen to gather personal information for a purpose other than detecting wrongdoing. Moreover, Fox's example shows that even a participatory system for detecting wrongdoing of those under surveillance could be rational, because of the influence of surveillance on individual behaviour. It may be in a private company's commercial interest to deter persons who fear detection of personal wrongdoing from participating in a service. By contrast, a similar

scheme in the public sector, for example volunteering for telephone tapping as a condition for receiving a government service, would be dubious both legally and politically. Moreover, such a scheme would not suit the goals of criminal investigators, as it would merely restrict criminals from using a service, rather than preventing crime. Indeed, a recurrent criticism of overt forms of government surveillance, such as video cameras in public places, is that they merely relocate criminal activity. However, DNA profile surveillance differs in two crucial ways from other forms of surveillance, rendering a participatory scheme plausible.

First, DNA profile surveillance is effective even when it is overt, as it requires only a retrospective detection of the perpetrator's bodily contact with the scene of the crime. Accordingly, disclosure at the time a known individual's profile is taken will not allow detection to be avoided. Arguably, the risk that criminals will successfully avoid leaving bodily traces at the scene of the crime is balanced by the alternative, desirable possibility that some criminals will desist from crime altogether, for fear of inevitable detection.

A second, crucial difference between DNA profile surveillance and telephone taps (and, indeed, most other forms of investigatory surveillance) is that the *failure* to match a known individual with a bodily sample can itself be useful intelligence for an ongoing criminal investigation. DNA profile surveillance of non-criminals is actually of use to investigators as it allows particular individuals to be excluded as possible suspects, thus narrowing an investigation. Importantly, this means that it makes sense for innocent individuals to agree to DNA profile surveillance, either to aid an inquiry or to exclude themselves from any criminal suspicion.

The description of any criminal investigative technique as 'participatory' must be approached with caution. All categories of individuals who are 'invited' to participate in a criminal investigation will obviously be under enormous pressures to agree. Although many persons will freely agree to a police request to undergo DNA profile surveillance, there is no easy way to distinguish between consent and coercion, especially if the consent is later disputed. As a result, the existence and scope of Australia's participatory DNA profile surveillance scheme may significantly undermine the statutory limitations on the compulsory scheme. Without wishing to draw attention from this significant difficulty, the remainder of this paper is concerned with another practical issue that arises from Australia's participatory DNA profile surveillance scheme: the investigative utility of a request to undergo DNA profile surveillance.

DNA Request Surveillance

Unlike the Australian legislative schemes for the forceful gathering of DNA profiles from known individuals, the law's authorisation of voluntary schemes to gather DNA profiles has not been the subject of public debate. The origins of Australia's voluntary DNA profile surveillance system are in the common law, which has always allowed anyone (including police officers) to perform a forensic procedure on an individual with that individual's consent. The enactment of statutory powers to permit the police to perform compulsory forensic procedures did not displace the common law, either in law or in practice. Indeed, nearly all contemporary Australian statutes make explicit provision for DNA to be taken from (suitably informed) persons, whether or not compulsory powers are available. (See e.g., the Model Forensic Procedures Bill, Parts 3, 7 and 8.)

An interesting feature of DNA statutes in some Australian jurisdictions is that they mandate the participatory DNA profile surveillance system as the system of *first* resort for criminal investigators. That is, the compulsory system, authorising non-consensual procedures on certain suspects and offenders, is unavailable unless and until those suspects and offenders have refused to consent to an adequate request to cooperate. (See, e.g. Model Forensic Procedures Bill, cls 13(a-b), 17(a-b) & 58(a-b). See also *Crimes Act 1958* (Vic), s464T(1)(a) and *DPP v Morrison*, interpreting similar Victorian fingerprinting powers.) The origins of this approach are in Victoria, which, uniquely amongst Australian jurisdictions, did not provide for non-consensual forensic procedures until the late 1980s. The Coldrey Committee (Consultative Committee 1989), which recommended the introduction of compulsory powers to supplement the common law, set out a detailed procedure for obtaining compulsory orders, based on the assumption that such orders were only necessary in situations where consent was not obtained. The eventual Victorian legislation made this factual assumption a legal precondition, although it is not clear that this was the Committee's intention. The Victorian approach was transposed, without analysis, into various drafts of the Model Forensic Procedures Bill, in turn entering the statute books in additional jurisdictions.

Whatever its policy origins, the statutory procedure of initially asking for consent appears to reflect previous police practice. Before NSW adopted the Model Forensic Procedures Bill, the NSW Commissioner of Police's (1997) *Code of Practice* contained the following instruction in regards to the performance of medical examinations, including the taking of blood, saliva and hair, authorised by s353A(2) of the *Crimes Act 1900* (NSW):

> If someone in custody does not consent to a medical examination, but will not offer resistance to the examination, arrange for the attendance of the medical practitioner to take the relevant samples. If there is no consent and there will be resistance contact the medical practitioner and be guided by the advice provided as to whether samples can be taken.
>
> While section 353A gives authority to have someone in lawful custody medically examined, people may voluntarily submit to a medical examination.
>
> When you have arrested someone for an offence and you reasonably believe a medical examination might afford evidence of the offence, ask them whether they consent to an examination. Tell them they are not obliged to undergo the examination without their permission.

Although this passage begins by referring to non-consensual procedures, the final paragraph makes it clear that the starting approach is to ask for the suspect's consent. This leaves the police's statutory power to order the performance of a non-consensual medical examination as a fallback provision, arising only if the suspect does not consent. Police in England and Wales apparently follow a similar practice in relation to their *Police and Criminal Evidence Act 1984* (PACE) powers to extract DNA (see *R v Duffy*).

The police practice of first asking for consent to DNA profile surveillance is consistent with a broader pattern of policing analysed by Dixon (1997) in England in the late 1980s. Despite their powers under the PACE, the police officers interviewed in Dixon's study described most of their interactions with members of the public as occurring with those persons' consent. Dixon termed this approach an aspect of 'policing by consent', which he traced as an 'ideological practice' of historical British policing that had become part of contemporary notions of police professionalism. In contemporary investigative policing, 'policing by consent' involves 'not automatically invoking legal powers and inflexibly insisting on one's legal authority, but instead seeking co-operation and developing personal authority' (Dixon 1997:120-121). Dixon notes that obtaining consent instead of relying on legal powers has the potential to undercut the regulatory and supervisory mechanisms of PACE. Presumably, policing by consent in the context of DNA sampling brings similar

political and regulatory advantages to Australian police. However, the unique features of DNA profile surveillance provide a further incentive for the police to ask first and make orders later: the mere request for a DNA sample can yield useful information about the mind of the request recipient.

The utility of a mere DNA sampling request as an investigatory tool was demonstrated in the first use of a 'mass DNA screening.' A police request to profile 5000 men in three Leicestershire villages in 1985 ultimately led to the arrest and prosecution of Colin Pitchfork for the murder of two schoolgirls. Pitchfork was identified because police discovered that he had avoided participating in the mass screening by asking a friend to provide a sample in his place. Although a successful DNA match later secured Pitchfork's conviction, it was the initial mass request to participate in DNA surveillance that was responsible for identifying him as a potential suspect. A recent mass DNA request in Australia, directed at the adult male residents of Wee Waa in April, 2000 in relation to an unsolved rape, similarly produced useful intelligence even before any DNA profiles were matched (Kennedy 2000). When asking for a DNA sample, the police also asked all residents a variety of questions, including their views on sexual assault sentencing, indicating that they were after more than just people's DNA. Police testing Stephen Boney were alerted by the fact that his hands visibly shook during the sampling. The police noted that Boney took much longer than other residents to complete the questionnaire. Boney confessed his guilt a few days later, prior to any DNA matching.

This article terms the police's observation of individuals' responses to requests to participate in DNA profile surveillance as 'DNA request surveillance.' In the Pitchfork and Boney cases, the offenders revealed their fear of DNA profile surveillance through suspicious behaviour when ostensibly cooperating with the police[1]. Importantly, such a fear also would have been revealed, albeit somewhat more ambiguously, through a refusal to participate. Notably, neither Pitchfork nor Boney took this course. Although Boney's motives are unclear, it is clear that Pitchfork recognised that his refusal to volunteer would instantly attract police attention. Hence, his masquerade was aimed, not just at avoiding DNA profile surveillance, but also at avoiding DNA request surveillance.

The usefulness of DNA request surveillance rests on equating an individual's behaviour when asked to participate in DNA profile surveillance – including a mere refusal to consent – with that individual's consciousness of her or his own criminal guilt (or, perhaps, the guilt of her or his identical twin!). Clearly, this technique cannot boast the kind of accuracy that is claimed by DNA profile surveillance. Indeed, both 'false negatives' and 'false positives' are possible.

False negatives will occur when an undetected offender chooses to participate in DNA profile surveillance despite her or his fears of detection, perhaps in the hope that DNA profile surveillance will fail or because of the realisation that detection is inevitable. Unless the individual's agreement is tainted by outward signs of reluctance, she or he will avoid being detected by DNA request surveillance. However, in contrast to most forms of surveillance, a high number of false negatives is not fatal to the utility of DNA *request* surveillance, because all false negatives will inevitably undergo DNA *profile* surveillance, as authorised by the participant's consent. Accordingly, few, if any, false negatives will ultimately 'slip through the net' of the combined use of both forms of DNA surveillance. For example, if Stephen Boney's consciousness of guilt had not been detected by observant police officers or if he had not confessed to his crime a few days later, he would still almost certainly have been detected through subsequent DNA matching.

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1 A more extreme example is revealed in the Canadian case, R v S. (S.J).

On the other hand, too many false positives, in the form of innocent persons who refuse to consent to a DNA sampling request, will reduce the efficacy of DNA request surveillance, as false positives both increase the size of the pool of potential suspects and decrease the cogency of the resultant suspicion. Whether or not there will be too many false positives depends on the prevalence of *innocent* reasons (i.e. reasons other than fear of detection) to refuse to consent to provide DNA profile surveillance. The more credibly investigators can assert that they will respect the privacy of non-criminal behaviour, the more investigators are able to conclude that a refusal indicates a fear of the infringement of the privacy of their criminal activities. The informed consent procedures of the Model Forensic Procedures Bill require that potential consenters be told of some of the restrictions on the use of profiles that are set down in the rules regulating the DNA database, thus helping to remove ignorance of the nature of DNA profile surveillance as an innocent explanation for a refusal to consent to a DNA sampling procedure (see cls 9(k) & 65(2)(b-c)).

Of course, a number of innocent reasons still exist for rejecting a request to provide DNA for the database. First, many individuals will not accept that existing laws or practices will guarantee that the privacy of their non-criminal activities will be observed, either because of doubts about accountability or concerns about the scope of the legal restrictions. The continuing credibility of this objection will depend upon the government's ability to promote and preserve public trust in the integrity of the database. Second, some individuals may object to the procedure for obtaining samples. However, with the advent of profiling of hair samples or saliva, the latter of which can be obtained through a self-administered mouth swab with a cotton bud, few objections to the actual procedure are plausible. Third, some people will object to participating in a criminal investigation without the backing of statutory compulsion or prior evidence of suspicion. Indeed, some will simply object to aiding the police at all. Such objections may be reduced in the context of violent or sexual crimes, which are a present focus of DNA surveillance techniques. They also may be reduced by the potential of DNA matching techniques to exclude individuals from criminal suspicion.

DNA request surveillance is not a monolithic approach to investigation, but rather will vary substantially in methodology and efficacy according to context. It is useful to examine briefly a number of different contexts in turn.

The first context is the surveillance of convicted *offenders*. All Australian jurisdictions now provide for compulsory sampling of many categories of offenders. In NSW, there are virtually no legislative constraints on the subjection of serious offenders (defined as offenders who *could* have been sentenced to five years imprisonment) to compulsory DNA profile surveillance. In fact, the overwhelming majority of the 2553 NSW prisoners tested in the first three months of 2001 agreed to have their DNA extracted, as only 126 compulsory orders were used (Dugandzic 2001). Notably, NSW police kept records, not only of whether a compulsory order was required, but also of whether the offender initially objected to a forensic procedure. There are a number of reasons why DNA request surveillance of convicted offenders is useful. First, information about prisoner reluctance might guide the police on the best way of obtaining a bodily sample; it seems plausible that police would have chosen to use hair sampling, rather than buccal swabbing, on prisoners who might be classified as potential 'resisters'. Second, Strutt (2001) reports that NSW prison authorities changed the security classification of resisting prisoners, though it is open to question whether this decision had a security motive, was designed to place pressure on other prisoners facing DNA requests or was merely vindictive. Third, NSW laboratories are presently overwhelmed by the demands of the prisoner-testing program. Accordingly,

particularly in light of the imminent release of the first batch of tested prisoners, it is plausible that the police will first ask their laboratories to profile the non-consenting prisoners and then the reluctant ones, before proceeding to the remainder. Finally, if a prisoner's DNA does not match profiles on the present database, the results of DNA request surveillance may be used to indicate that the prisoner might have committed crimes for which no perpetrator profile has yet been derived.

The second context is individuals who are reasonably suspected of having committed an offence, that is *suspects*. Like offenders, suspects can be compulsorily tested in all Australian jurisdictions, but can (and, in some jurisdictions, must) be first asked whether they consent to providing a sample. English data suggest that a majority of suspects under arrest are tested consensually, rather than compulsorily (Bucke & Brown 1997). Clearly, like tested prisoners, many of these consenters will be false negatives, as suspects are under particular pressure to deflect their investigators' suspicion. Nonetheless, again, DNA request surveillance is capable of providing investigators with additional information about both consenters and non-consenters. The tactical release of information to a consenting suspect can provide investigators with intelligence that might not have been obtained if a compulsory order was used immediately. An example arises from the facts of a Tasmanian appeal case, *R v Brown*:

> ...[T]he accused had been interviewed and charged in relation to an unconnected case of rape. In connection with that offence, the accused had been introduced to Dr Carol Lance at the hospital and he had been asked by her if he consented to the taking of a blood sample. He had given consent to that procedure but whilst Dr Lance was preparing the necessary equipment, Sergeant Gray, who had remained in the cubicle in the hospital with the accused, said to him, 'have the Bellerive fellows spoken to you about Shirley Burgess' murder'. The accused replied, 'No' and then lay down upon the bed and appeared to become distressed. When Dr Lance returned to the cubicle, Brown told her that he was not going to allow a blood sample to be taken... The accused then left the hospital in the company of police officers and shortly thereafter in Liverpool Street, broke loose and escaped. He was recaptured, however, and taken to police headquarters. He was asked by Sergeant Gray, 'Why did you take off', and he replied, 'I'm guilty, what's the use.'

As this example shows, the strength of DNA request surveillance as an investigative tool will be obvious to suspects, as well as investigators, perhaps to the point of generating additional evidence of consciousness of guilt, including escape and confession.

DNA request surveillance is potentially more powerful than traditional methods of interrogation, which are largely restricted to exposing a suspect's consciousness of guilt about the offence suspected. Under many Australian statutes, all suspects who are subjected to a DNA request must be told that their cooperation will expose them to DNA profile surveillance, not just for the offence suspected, but for crimes for which profiles have been or will be obtained. Moreover, this surveillance can continue even if the individual ceases to be a suspect (see e.g. Model Forensic Procedures Bill, cls 77 & 82). Thus, DNA request surveillance may yield intelligence about uncharged and, even unsuspected crimes, in the form of a suspect's reaction to a request to undergo DNA profile surveillance for all crimes. DNA request surveillance, like DNA profile surveillance, can yield 'cold hits.'

The largest category of potential recipients of a request to participate in DNA profile surveillance is that of persons who are neither suspects nor eligible offenders, that is ordinary members of the public or, as the Model Forensic Procedures Bill dubiously terms them, *volunteers*. While mandatory DNA profile surveillance is unavailable for this category, voluntary surveillance is permitted under both common law and statute (see Model Forensic Procedures Bill, Part 8). The police do not need any statutory authority to

ask for consent to a forensic procedure. Thus, under Australian law, criminal investigators can use DNA request surveillance on anyone. The potential width of this approach in practice is revealed by a recent newspaper account of a Californian investigation:

> The body of the 26-year-old woman... was discovered the morning of Feb. 23, 1997... Detectives soon speculated that the killer either knew his victim or had watched her from afar. Using evidence at the scene – detectives won't say what – forensic scientists forged a genetic profile of the attacker. A week after the killing, a dozen detectives met to discuss what to do next. Halfway through the meeting, Smith made a bold suggestion. 'What if we swab everyone we run across who will give us a swab?' he asked... Costa Mesa police had used DNA to eliminate individual suspects in the past but never on this scale. As the discussion continued, though, support grew. The strategy, the group concluded, had its benefits. *If someone refused to provide a sample, it would raise a red flag.* A hit, on the other hand, would reveal the killer. Besides, what did they have to lose?
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> Equipped with swabs, detectives visited the places Sudweeks knew best. The Newport Beach art store where she worked part time. Her favorite bar, the Stag. Orange Coast College, where she studied to become a photographer. The neighbourhood where she was killed... Four years later, Sudweeks' murder remains unsolved *but the swabbing goes on. Detectives scour logs of newly released prisoners, searching for people they can ask for samples. Patrol officers regularly cruise the streets near Sudweeks' old apartment, seeking swabs from reported prowlers and men loitering around the area* (emphasis added, Leonard 2001).

A practical barrier to this species of mass testing is cost, though economies of scale and technological developments are likely to reduce the price of DNA profiling in the future. Moreover, DNA request surveillance can be used without actually analysing any samples obtained, although investigators would then have to bear the risk of failing to detect false negatives.

In Australia, the use of DNA request surveillance on non-suspect non-offenders has, to date, been limited to targeted requests at relatively narrow geographical or occupational groups, where a mass DNA screening of non-suspects could plausibly assist an ongoing investigation through the exclusion of particular populations from investigation. In Wee Waa, police marketed the mass DNA screening in relation to a rape investigation in this way, arguing that testing of residents would guide them on whether to focus their inquiries on Wee Waa's itinerant population at the time of the rape. Presumably, testing in Wee Waa was also facilitated by the seriousness of the crime under investigation and the close-knit, conservative characteristics of the town. These features prompted some commentators to speculate that the Wee Waa screening was designed to showcase the use of DNA in criminal investigations, ahead of the introduction of a new Bill in the NSW parliament. A successful mass screening might have facilitated the future use of this investigative method in other contexts (see Kennedy 2000).

While the risk of false positives limits the use of DNA request surveillance on non-suspects, a mass DNA screening may nonetheless be a device for confirming hunches that fall below the legal standard of reasonable suspicion. Again, the Wee Waa mass screening provides an interesting, though speculative, example. When Stephen Boney was identified as the Wee Waa rapist, it was revealed that he had previously been charged with two sexual offences (and convicted of one), each with similarities to the Wee Waa rape. Moreover, he was a sometimes employee of his victim in the months before the rape. This information suggests that Boney might have already been a key suspect prior to the mass screening. Kennedy (2000) reveals that the police were not aware of the details of Boney's priors, but had secretly 'targeted' twelve possible suspects, including Boney. Nonetheless, there would be tactical reasons to direct a request for consent at a much wider group. Arguably, if the

police had aimed a DNA request at Boney alone (or at a small group of targets), they would have alerted him to their suspicions, without necessarily acquiring either his consent or a refusal that was strong evidence of his consciousness of guilt; by contrast, a general request provided police with a perfect opportunity to place maximum pressure on their suspect. Might the mass DNA screening of 500 male Wee Waa residents actually have been a method for placing Boney (or a narrow group of twelve targets) under more effective DNA request surveillance?

As *Brown* and the Wee Waa example indicate, the efficacy of DNA request surveillance arises, in part, from the police's ability to control the flow of information to the recipient of a request. Under Australian legislation, one method of controlling the information to be given to an individual is through the choice of which of the three sets of 'informed consent' provisions (relating, respectively, to offenders, suspects and volunteers) will be used. The drafters of the Model Forensic Procedures Bill opted for what they termed a 'simple definition' of volunteers, which did not exclude either suspects or offenders, as '[t]here is no point in putting restrictions on the definition of volunteer' (Model Criminal Code Officers' Committee 1999). This approach effectively gives police officers the choice of treating any suspect or offender as a volunteer, for the purposes of the participatory DNA profile surveillance scheme. The flexibility of the Bill permits police, by treating suspects as volunteers, to avoid informing them about their susceptibility to a compulsory order (cf Model Forensic Procedures Bill, cls 9(3-6) & 65(1)(b)); thus, police could reduce the risk of a false negative for DNA request surveillance, while preserving the possibility of a later use of the compulsory provisions. Further, under the Model Forensic Procedures Bill, volunteers must be told (prior to any consent) whether the police intend to place their profile on the 'limited purposes' database or the 'unlimited purposes' database (see cl 65(2)(b-c)); however, nothing in the legislation forces the police to choose a particular option, so police may vary the type of request to increase the efficacy of DNA request surveillance. If police choose to make a 'limited purposes' request, then this will reduce the number of false positives (i.e. from innocent persons objecting to undergoing unlimited DNA profile surveillance) but will limit the offences about which consciousness of guilt may be revealed. If police choose to make an 'unlimited purposes' request, consciousness of guilt about all offences might be revealed, but at the cost of an increased number of false positives. Indeed, there is nothing to stop the police making each type of request in turn, in order to gain the benefit of both forms of request surveillance.[2]

DNA Request Self-incrimination

The recent flurry of legislative activity concerning DNA was largely prompted by the need to place compulsory sampling and a cross-jurisdictional database on a firm legal footing, as well as addressing privacy concerns about genetic information. By contrast, DNA request surveillance is not dependant on statutory authority and involves non-genetic information. Accordingly, the prospect of investigators uncovering people's consciousness of guilt simply by requesting consent to a DNA sampling has not received any explicit consideration by Australian legislators or regulators, including the drafters of the Model Forensic Procedures Bill. However, Australian common law, in accordance with the English model of criminal justice, supports overarching legal principles that set the boundaries on acceptable methods of criminal investigation. This section evaluates whether DNA request surveillance comports with one such principle: the privilege against self-incrimination.

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2 Interestingly, a provision in the Commonwealth's DNA legislation, intended to protect volunteers' rights by requiring that volunteers choose which form of surveillance they would prefer, may simply have made this more nuanced form of DNA request surveillance automatic. See *Crimes Act 1914* (Cth), s23XWR(2)(b).

The privilege against self-incrimination bars investigators from using coercive techniques to gather incriminatory information directly from the person being incriminated. Instead, investigators must either use non-coercive techniques when gathering the information from that person or must gather that information, coercively or otherwise, from another source. The principle's precise scope is a matter of considerable controversy. Nonetheless, the present judicial consensus is that the privilege only applies to the gathering of 'testimonial' evidence (e.g. a suspect's incriminating thoughts), rather than 'real' evidence (e.g. incriminating features of a suspect's body) (compare Inbau 1937; Easton 1991). On this approach, compulsory DNA profile surveillance (i.e. coercively gathering genetic information from a person's body for potential use in incriminating that person) does not infringe the privilege. Rather, it is DNA request surveillance that potentially infringes the privilege, because it forces people who are reluctant to undergo DNA profile surveillance to reveal that reluctance to investigators. The divulgence of such reluctance is self-incriminatory, because it can support an inference that such individuals are conscious of guilt of crimes that may be detectable through DNA technology[3].

It might be argued that DNA request surveillance is a technique of voluntary, not compelled, self-incrimination, as individuals are not forced to reveal that they fear DNA profile surveillance. However, all compelled self-incrimination occurs under the guise of a choice. More traditional alternative options forbidden by the privilege against self-incrimination include physical torture, criminal sanctions and adverse inference at a criminal trial. In the case of DNA request surveillance, recipients of a request must choose between undergoing DNA profile surveillance or revealing their fear of that surveillance. Requiring that a person choose between two adverse consequences is just as forceful as requiring them to take a particular one of those consequences (compare Thomas & Bilder 1991). The revelation implicit in a refusal is not voluntary, because it is the only means of preserving a legal right to avoid DNA profile surveillance (including the forensic procedure needed to extract DNA). It should be noted that this argument only applies to incriminatory behaviour that is implicit in a mere refusal to participate. Thus, positive acts, such as Colin Pitchfork's shenanigans or, arguably, even Stephen Boney's shaking hands, in response to a request to undergo a forensic procedure, do not infringe the privilege. In addition, the argument is not applicable where there is no legal right to refuse to participate, as the recipient of a 'request' in such a context will not lose anything by hiding their reluctance to participate. Presently, in those Australian jurisdictions that require a rejected request for consent before a compulsory order can be obtained, a legal right to refuse always exists at the time of the individual's choice, so that all DNA request surveillance achieved through a statutory request for consent would be compelled self-incrimination.

In practice, some forms of compelled self-incrimination occur routinely in modern policing. In the United States, numerous commentators have vigorously argued that it is contrary to both policy and logic to prohibit all techniques for compelling self-incrimination or to exclude all uses of the resultant information. In Australia, there is no constitutional requirement that the privilege be respected. Moreover, Australian courts have accepted many *de facto* limits on the scope of the privilege, in so far as they are willing to let prosecutors use confessions obtained in the coercive context of investigative detention, subject to compliance with certain procedures and a test for whether any resulting admissions are reliable. Moreover, even though silence in the face of an investigator's request for information is not usually admissible in judicial proceedings, it is obvious that police are able to utilise such silence (as well as refusals to permit searches) informally as a means of generating investigative suspicion.

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3 Bizarrely, if the reluctance was because of a fear of incriminating an identical twin, then there would be no infringement of the privilege against *self*-incrimination.

However, there is a qualitative difference between requests for a DNA sample and requests to undergo traditional investigative procedures, such as questioning and searches: the former has much greater forensic power than the latter. Traditional investigative techniques are a 'hit or miss' affair. The utility of questioning is obviously limited by the possibility that police will ask the wrong question or be given the wrong answer. Searches for real evidence, either on the body or in private property, may fail to be sufficiently thorough or may simply have targeted the wrong place at the wrong time. The consequence is that the use of requests to participate in traditional investigative procedures has a considerable risk of producing a false negative in the form of deceptive participation. As a corollary, there will also be an increased risk of a false positive, as innocent persons will have less reason to participate, on the basis that they will be revealing personal information without any guarantee that their participation will exclude them from suspicion. By contrast, as noted earlier, DNA request surveillance can effectively detect false negatives through DNA profile surveillance, in turn reducing the risk of false positives. Accordingly, while DNA request surveillance may be no more coercive than traditional techniques of self-incrimination, it is much more revealing. As a result, it is more likely both to be used by investigators and to compel self-incrimination when it is used.

The potential for DNA request surveillance to breach the privilege against self-incrimination in unprecedented ways is clearest in its unique ability to prompt self-incrimination by non-suspects. Recent historical analyses suggest that the privilege against self-incrimination's origins are in early European criminal procedure's aversion to the use of investigative compulsion on unaccused persons (Helmholz et al 1997). Traditional investigatory techniques, such as interrogation and searches cannot uncover information about all crimes committed by a person; rather, they are generally only effective when directed to a particular crime or, at least, a particular period of time, in practice limiting their use to occasions when the police have pre-existing investigatory leads. These limits provide a practical restriction on the use of requests to participate in those techniques as a method of deducing self-incriminatory inferences from refusals. By contrast, DNA profile surveillance can test a link between any individual and all crimes profiled on a database and, accordingly, DNA request surveillance can generate self-incrimination in the absence of pre-existing suspicion. In particular, it can be used both to test the criminality of non-suspects and, as noted earlier, to expose unsuspected links between existing suspects and unsolved crimes. If used routinely in this way, it will considerably undermine the accusatorial nature of self-incrimination techniques in Australia.

It is one thing to identify a serious threat to the principles of criminal procedural law; it is another to remove that threat. A recurrent difficulty throughout criminal procedural law is the absence of formal mechanisms of regulation that are effective in practice. Notably, rendering certain investigative practices illegal is often ineffectual, because of the weakness of internal police accountability procedures, the unlikelihood of any complaint by citizens (let alone a successful complaint), the difficulty of formulating worthwhile sanctions for aberrant behaviour and the absence of political willpower to regulate investigators. The problem is particularly extreme with respect to consensual interactions between police and citizens (see generally Dixon 1997). Instead, criminal procedural law is reliant on indirect techniques of regulation.

The traditional indirect approach to preserving the privilege against self-incrimination (along with other rules of criminal procedure) is the exclusion of improperly obtained evidence in any eventual prosecution. The common law on the admissibility of self-incriminatory refusals to participate in an investigatory procedure is unclear (cf *R v Burns*; *R v Fyfe*; *South Dakota v Neville*; *R v Smith*. See Uviller 1990). However, the Model Forensic Procedures Bill contains an exclusionary provision on evidence of refusal of consent to a DNA sampling request, clause 72:

> Evidence of a person's refusal or failure to consent, or withdrawal of consent, to a forensic procedure is not admissible in proceedings against the person...

However, exclusion only works against investigative techniques that create evidence for the purposes of criminal prosecution. It is unlikely that prosecutors would seek to rely on the fruits of DNA request surveillance in a criminal trial. Notably, if prosecutors have sufficient evidence to have a person charged with a criminal offence, then they will also have sufficient evidence to obtain DNA from that person compulsorily; it is the successful match between that sample and a crime scene sample that will be introduced in the trial. Thus, DNA request surveillance would only be of practical significance in matters where a crime scene sample was not recovered or the prosecution proceeded despite the absence of a match. In such matters, the use of evidence of reluctance to undergo DNA testing as 'consciousness of guilt' evidence would be subject to the High Court's requirement that innocent explanations of the evidence be excluded. Even if this hurdle is surmounted, it is unlikely that evidence of refusal would be sufficiently compelling to help the prosecution to prove the accused's guilt beyond reasonable doubt.[4] In short, clause 72 will make little practical difference to prosecutors, as DNA request surveillance is not a technique for obtaining admissible, probative evidence.

However, the information obtained by DNA request surveillance, while inadequately probative to prove criminal guilt, will be useful in establishing the much lower standard of reasonable suspicion. DNA request surveillance is a technique for producing investigative leads; these leads may, in turn, be used to produce evidence of guilt. A fascinating but presently unresolved legal issue is whether compelled testimonial evidence of consciousness of guilt is sufficient to satisfy the 'reasonable grounds' prerequisite for the availability of coercive investigative techniques. In particular, is a mere refusal to consent to a DNA sampling request sufficient to satisfy the Model Forensic Procedures Bill's conditions (reasonable grounds and justifiability) for a forceful non-intimate procedure (e.g. pulling out a hair) to obtain DNA (compare *Police v G*)? Would it be sufficient in combination with other evidence, for example fitting a vague demographic profile? The mere fact that the evidence of a refusal to consent is inadmissible under clause 72 is not fatal to the use of the evidence to supply a police officer's reasonable suspicion; indeed, officers and magistrates routinely rely upon inadmissible evidence, for example hearsay, for this purpose. Even if such an approach is found to be contrary to clause 72, inferences from a refusal of consent might be used to sustain a different coercive procedure, such as a search warrant (compare Dix 1985 at 951-958). Or investigators may simply rely on informal, but lawful, alternatives for gathering DNA, as in the following newspaper account of a recent Florida investigation:

> After Laurie Colannino was found raped and stabbed to death, laboratory technicians culled a DNA fingerprint from semen her attacker left behind. But investigators had no suspect to compare it to. In time, they would go door-to-door at the Largo apartment complex where the 23-year-old cocktail waitress lived, taking either a blood or saliva sample from every man willing to offer one. *One neighbor, however, balked. Now, after combing through garbage and obtaining DNA from cigarettes, detectives have charged that man as the killer*... (emphasis added, Thompson 2001)[5].

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4 It may be sufficient to establish the civil standard of balance of probabilities: see *G v H*. On defendants' attempts to use the fact that they did consent to a DNA sampling request as evidence of consciousness of innocence, see *R v Chisholm*; *Wisconsin v Santana-Lopez*.

5 The Florida police also asked the suspect's twin brother for his DNA and then searched his garbage!

There is also the more traditional alternative of simply using non-forceful policing techniques on suspects, such as inviting them to a police station for further inquiries, for which no legal authority is necessary. This use of the fruits of DNA request surveillance would be immune to any regulation via the control of evidence at any point in criminal proceedings.

DNA request surveillance's primary use at the early stages of an investigation makes it largely impervious to indirect regulation based on the admissibility of evidenc. However, another avenue for indirect regulation is the technique's symbiosis with DNA profile surveillance. Because DNA request surveillance operates through the threat of exposure via DNA profile surveillance, limits on the operation of DNA profile surveillance can be used to place effective limits on DNA request surveillance. For example, DNA request surveillance's operation as a technique for compelling self-incrimination for *unsuspected* crimes rests on the ability of DNA profile surveillance to generate unsuspected links between individuals and crimes (i.e. 'cold hits') via the DNA profile database. If cold hits were prohibited partially (by restricting suspect matches to profiles related to the suspected crime) or wholly (by barring the placement of non-suspect profiles on the database), then DNA request surveillance would be similarly restricted (assuming that these restrictions were known to the recipients of a request.) Unfortunately, such a reform is unlikely to be adopted in Australia, as there is already a strong political consensus in favour of the use of cold hits, especially the placement of non-suspect (e.g. offender) profiles on the general database.

The only remaining option to prevent DNA request self-incrimination is to restrict, not DNA profile surveillance, but rather the *participatory* scheme, which is the justification for asking individuals to provide a DNA sample. As discussed earlier, many Australian jurisdictions mandate a request for DNA samples, before a compulsory alternative can be used. Reversing this rule (i.e. mandating an application for a compulsory order before any request can be made) would bar the use of DNA request surveillance on many suspects and offenders. In *DPP v Morrison*, Ashley J argued that a prior request for consent was protective of the rights of citizens, in that it shields them from an unnecessary use of compulsory powers. However, while superficially attractive, this argument confuses the police's power to act without consent with their power to use reasonable force; in fact, the power to use force is contingent on an individual's resistance of lawful authority, rather than their refusal to consent to a mere request. Arguably, the use of DNA request surveillance to discern, via an individual's response to a request for consent, that that individual intends to resist physically involves a greater risk of the unnecessary use of force. Modern techniques of DNA sampling now provide police with a much simpler and more reliable method of discerning whether an individual is willing to comply with a compulsory sampling order: the subject of the order can simply be asked to self-administer a buccal swab, with a refusal prompting a recourse to the more 'forceful' technique of hair sampling.

However, merely requiring the use of compulsory orders whenever possible is not, on its own, an adequate remedy to the threat posed by DNA request surveillance to the privilege against self-incrimination. Obviously, it leaves DNA request surveillance available for the many persons who cannot be forced to provide a sample, especially non-suspects. Moreover, to the extent that the criteria for compulsory orders are flexible and dependant on the beliefs or judgments of investigators (e.g. the 'reasonable grounds' and 'justification' requirements in the Model Forensic Procedures Bill), police will have the option of using DNA request surveillance even on persons who might be the subject of a compulsory order (whilst still reserving the option of using compulsory powers on the pretext of further information becoming available).[6]

Accordingly, preserving the privilege against self-incrimination in practice necessitates a much more significant reform: limiting the use of participatory DNA profile surveillance even when compulsory orders are *not* available. Such a step would be a controversial one, because investigators, lawmakers and courts are united in their support for public cooperation with investigations, especially when compulsory powers are unavailable. Advocates of participatory DNA profile surveillance have a particularly compelling argument for allowing individuals to authorise the use of DNA profile surveillance: such cooperation allows everyone an opportunity to clear themselves of suspicion for criminal offences. A recurrent example is a released offender, who volunteers her or his DNA profile to avoid being treated as a 'usual suspect' by the police. Indeed, the Bill defines a 'volunteer' as 'a person who volunteers to a police officer to undergo a forensic procedure', omitting reference to requests from police officers prior to the act of volunteering (see cl 64(1)). However, while it is possible that some people will volunteer *of their own accord*, it is likely that most volunteering will only occur as the result of a request by investigators. In this context, the argument in favour of a universal system of participatory DNA profile surveillance is much more dubious, because such requests place so-called volunteers under considerable pressure and raise the prospect of compelled self-incrimination, as outlined in this paper.

In particular, the present approach throughout Australia of leaving the decision to issue requests to 'volunteers' in the hands of police officers is indefensible. Australian legislation on DNA places considerable constraints on the making of compulsory orders but no effective limits on who can be the subject of a DNA request. The arguments in this paper suggest that requests for DNA, especially requests aimed at non-suspect non-offenders, should be highly regulated because of the pressures they inevitably bring to bear. Investigators have 'nothing to lose' by asking for consent; however, the public has much to lose if the traditional limits of investigative compulsion are sidestepped. Accordingly, such requests should only be made with court approval, which is the present precondition for compulsory procedures on people not in lawful custody. The court should consider whether there is an investigative need that justifies the making of a request (and the consequent risk of compelled self-incrimination). The court should also set careful limits on the objects and form of any request. The discussion of the Wee Waa mass screening, above, suggests that scrutiny of the issue of investigative need may lead to targeted tests of likely suspects, rather than mass requests aimed at all people in a population. Court scrutiny would also minimise, if not entirely eliminate, the dubious practice, presently available at each police officer's discretion, to ask individuals for consent to 'unlimited purposes' DNA profile surveillance.

Unfortunately, even this major change in the participatory DNA profile surveillance scheme is probably insufficient to dispel the dangers of DNA request self-incrimination. DNA request surveillance will still occur through requests that receive court approval, for example in the context of 'mass' screenings. Moreover, it cannot be assumed that the courts will be strict in their scrutiny of applications to make such requests. Judges may feel that there is no need to carefully examine such applications, on the (erroneous) view that the decision to divulge information will still be in the hands of individual persons. Accordingly, a total solution to the problem of DNA request self-incrimination would require a considerably more radical reform: abolishing the participatory DNA surveillance scheme altogether and, instead, giving the courts an extraordinary jurisdiction to order *compulsory*

6 An example of this approach is the recent Northern Territory case of *R v Mellors*, where police were able to rely on the lack of certainty in an eyewitness description of a rapist to justify treating a person who fitted that description, and was otherwise linked to the victim, as a non-suspect, for the purposes of that jurisdiction's statute (at 12).

DNA profile surveillance on anyone. (Under this proposal, police officers would retain their present compulsory powers in relation to non-intimate procedures on suspects under arrest and specified categories of prisoners). In formal terms, this amounts to a massive extension of the present compulsory DNA profile surveillance scheme to cover the entire population. However, in practice, it provides the best chance of limiting the twin forms of surveillance described in this paper. The courts will be much more cautious about ordering the compulsory sampling of a group of non-suspects than they would be about authorising requests for those people's consent. Moreover, if compulsory orders were the exclusive legitimate method for investigators to obtain DNA profiles, then police would never have a legitimate basis to request consent to a forensic procedure. Most importantly, if everyone were aware that such requests were futile except when a compulsory order already existed, then compelled self-incrimination through those requests would no longer be possible.

Conclusion

DNA technology, by its nature, raises obvious concerns about genetic privacy. However, it also has the potential to undermine traditional constraints on criminal investigations, including those designed to preserve the privacy of people's thoughts. This paper argues that the introduction of DNA databases has undermined the privilege against self-incrimination, through the tyranny of the choice of whether or not to provide a profile for that database. Removing that choice is the most effective way to avoid compelling individuals to divulge their fears of detection through DNA identification. To many, a new criminal investigative power to order compulsory forensic procedures on non-suspect non-offenders would be an unacceptable invasion of privacy. The sobering answer to this criticism is that such a step may well be the lesser of two evils. Giving investigators full access to each person's genome is the only effective way of avoiding giving them unprecedented access to each person's mind. Obviously, many people would prefer to have both their bodily and mental privacy protected; however, now that DNA profile surveillance is a part of Australian policing, an unhappy choice is necessary. Indeed, given the political support for the continued expansion of the compulsory DNA profile surveillance scheme (as well as the plethora of informal ways in which anybody's DNA profile can be obtained in any case), the battle to protect bodily privacy is probably already a lost cause. The battle against compelled self-incrimination through DNA requests, on the other hand, is still worth fighting.

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