Forensic DNA Identification and Canadian Criminal Law

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INTRODUCTION

For approximately two decades, scientists have been using deoxyribonucleic acid (DNA) to help identify criminal suspects.[1] Other than identical twins,[2] it is believed that "[n]o two people share the same DNA."[3] Since each person's DNA is unique, and since it is found in every cell of the body, tissues and fluids found at a crime scene can be compared to DNA obtained from a suspect to determine if they match.[4] DNA evidence may eliminate suspects,

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1 *R. v. Love* (1988) 46 C.C.C. (3d) 414 (Alta. Q.B.).

2 U.S. Congress, Office of Technology Assessment, *Genetic Witness : Forensic Uses of DNA Tests*, OTA-BA-438 (Washington, D.C. : U.S. Government Printing Office, July 1990) at 3.

3 *Love*, *supra* note 1 at para. 24.

4 See R.G. Federico, "'The Genetic Witness' : DNA Evidence and Canada as Criminal Law" (1990) 33 Crim. L.Q. 204. DNA identification evidence has been extracted from items ranging from cigarette butts (*e.g. R. v. McCullough* (2000), 142 C.C.C. (3d) 149 (Ont. C.A.)) to gum (*e.g. R. v. Kyllo*, [1999] B.C.J. No. 717 (S.C.) (QL)) to automobile airbags (*e.g. R. v. Lebeau*, (1999), 47 M.V.R. (3d) 248 (Ont. Sup. Ct.) (QL)).

provide strong evidence of culpability, and help to exonerate the wrongfully convicted.[5] DNA has become, as one Canadian judge has put it, "the most dramatic forensic evidence ever discovered."[6]

In this paper, we describe the two statutory mechanisms in Canada governing the collection and use of DNA samples for forensic analysis: investigative warrants and DNA databank orders. Police use investigative warrants to compel criminal suspects to provide bodily samples for DNA identification analysis. DNA databank orders require convicted offenders to provide such samples so that their genetic profile may be included in a national database. We also compare these regimes to their analogues in the United States and the United Kingdom and make suggestions for reform.

INVESTIGATIVE WARRANTS

The Legislative Scheme

Before 1995, there was no statutory mechanism for obtaining DNA from criminal suspects. The only way that police could legally obtain a suspect's DNA was to collect bodily samples that had been voluntarily relinquished or "abandoned." [7] The courts ruled that there was no common law or statutory authority compelling suspects to provide bodily samples to police for DNA identification analysis.[8]

As a consequence, victims' rights groups and police agencies lobbied the government to respond with new legislation.[9] The

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5 See Barry Scheck, Peter Neufeld and Jim Dwyer, *Actual Innocence: When Justice Goes Wrong and How to Make it Right* (New York: New American Library, 2003).

6 *Love*, *supra* note 1 at para. 24. See also Simon J. Walsh, "Legal Perceptions of forensic DNA profiling part 1: a review of the legal literature" (2005) 155 Forensic Science International 51 at 51.

7 See *R. v. Van Nguyen*, [1995] O.J. No. 3586 (Gen. Div.) (QL) (no search warrant required to obtain abandoned gum).

8 See *R. v. Borden*, [1994] 3 S.C.R. 145; *R. v. Stillman*, [1994] 3 S.C.R. 145.

9 See Neil Gerlach, *The Genetic Imaginary: DNA in the Canadian Criminal*

Department of Justice released a discussion paper on the issue[10] and in January 1995, Parliament unanimously passed a Bill adding a DNA warrant power to the *Criminal Code*.[11]

The legislation authorizes police to obtain a warrant to obtain DNA samples from a person believed to be a party to a specific "designated" offence listed in the *Code*.[12] Obtaining a DNA warrant involves the following steps. First, the application must be made in front of a provincial court judge.[13] Second, the application is made ex parte, meaning that the suspect is not present at the hearing. The judge has the discretion, however, to require the suspect to be present for the hearing when necessary to "ensure reasonableness and fairness in the circumstances."[14] Third, a judge must be persuaded that there are reasonable grounds to believe:

(a) that a designated offence has been committed,
(b) that a bodily substance has been found or obtained

Justice System (Toronto: University of Toronto Press, 2004) at 68; Richard Mackie, "Compulsory DNA samples urged" *The Globe and Mail* (25 May 1995) A1.

10 Department of Justice (Canada), *Obtaining and Banking DNA Forensic Evidence* (Ottawa: Department of Justice, 1994).

11 Bill C-104, *An Act to amend the Criminal Code and the Young Offenders Act (forensic DNA analysis)*, 1st Sess., 35th Parl., 1995 (as passed by the House of Commons 22 June 1995).

12 *Criminal Code*, R.S.C. 1985, c. C-46, s. 487.05. Most designated offences involve violence against persons (*Criminal Code*, s. 487.04).

13 *Criminal Code*, s. 487.05 (1). The legislation also permits youth court judges to order a DNA warrant. *Criminal Code*, s. 487.04. A justice of the peace, in contrast, does not have the authority to issue a DNA warrant. See *R. v. Soldat*, [1995] N.W.T.J. No. 98 (S.C.) (QL). A tele-warrant may also be issued when appearing before a judge would be impracticable. This can be done either by telephone or other communicative means (*Criminal Code*, s. 487.05 (3)). Tele-warrant procedures are governed by s. 487.1 of the *Code*.

14 *R. v. S.A.B.*, [2003] 2 S.C.R. 678 at para. 56.

(i) at the place where the offence was committed,
(ii) on or within the body of the victim of the offence,
(iii) on anything worn or carried by the victim at the time when the offence was committed, or
(iv) on or within the body of any person or thing or at any place associated with the commission of the offence,

(c) that a person was a party to the offence, and
(d) that forensic DNA analysis of a bodily substance from the person will provide evidence about whether the bodily substance referred to in paragraph (b) was from that person.[15]

The fourth condition is that the order must be made in the "best interests of the administration of justice."[16] The judge must consider "all relevant matters," including the nature of the offence, the circumstances surrounding its commission, and whether a trained person is available to take a sample of the suspect's DNA.[17] The police are not required, however, to prove that their investigation would not succeed without a DNA sample.[18] In other words, DNA sampling does not have to be an investigative tool of "last resort."[19]

The judge may order the sample to be collected by any of three different methods: "the plucking of individual hairs from the person, including the root sheath;"[20] "the taking of buccal swabs by swabbing the lips, tongue and inside cheeks of the mouth to collect epithelial cells;"[21] or"the taking of blood by pricking the skin surface with a sterile lancet."[22] The judge may also impose "any terms and conditions" on the collection that he or she considers "reasonable in

15 *Criminal Code*, s. 487.05 (1).
16 *Ibid*.
17 *Criminal Code*, s. 487.05 (2).
18 *R. v. S.A.B.*, [2003] 2 S.C.R. 678 at para. 54.
19 *Ibid*. at para. 53.
20 *Criminal Code*, s. 487.06 (1) (a).
21 *Criminal Code*, s. 487.06 (1) (b).
22 *Criminal Code*, s. 487.06 (1) (c).

the circumstances."[23] For example, the judge may order that the sample be taken at the police station.

The police officer responsible for executing the DNA warrant owes a number of informational duties to the subject of the warrant. First, the police officer must inform the subject of the contents and purposes of the warrant as well as the chosen method of DNA collection.[24] This includes informing the subject that the results of the DNA analysis can be used as evidence.[25] While the DNA warrant legislation does not expressly grant the police authority to use force in DNA collection, it does authorize a peace officer to accompany and detain a subject for a reasonable time for achieving that purpose.[26] Further, the officer executing the warrant is required to inform the subject of his or her authority to use "as much force as is necessary for the purpose of taking the samples."[27] This has been taken to mean that police may not use excessive force.[28] Rather, the force must be "proportionate to the objective and other circumstances of the situation."[29] Finally, if the sample is being taken from a young person,[30] he or she has the right to know that they have the opportunity to consult with, and have the warrant executed in the presence of, a lawyer, parent, a relative, or an adult chosen by the suspect.[31] If a young person wishes to waive these rights, it must be recorded on tape or a document signed by the

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23 *Criminal Code*, s. 487.06 (2).

24 *Criminal Code*, ss. 487.07 (1) (a) -487.07 (1) (c).

25 *Criminal Code*, s. 487.07 (1) (e) (i).

26 *Criminal Code*, s. 487.07 (2).

27 *Criminal Code*, s. 487.07 (1) (e).

28 *R. v. S.F.* (1997) 120 C.C.C. (3d) 260 at para. 105 (Ont. Gen. Div.).

29 *Ibid*.

30 *Youth Criminal Justice Act*, S.C. 2002, c. 1, s. 2 : "young person" means a person who is or, in the absence of evidence to the contrary, appears to be twelve years old or older, but less than eighteen years old and, if the context requires, includes any person who is charged under this Act with having committed an offence while he or she was a young person or who is found guilty of an offence under this *Act*."

31 *Criminal Code*, ss. 487.07 (1) (e) (ii) and 487.07 (4).

suspect.[32] Though the legislation does not give adult suspects the right to consult with a lawyer, this right is granted by s. 10 (*b*) of the *Canadian Charter of Rights and Freedoms*[33], which applies to any person under detention.[34] Failure to implement these informational requirements may violate the suspect's *Charter* rights, causing the evidence to be inadmissible at trial.[35]

The DNA warrant legislation does not provide for subsequent applications for a suspect's DNA sample. In *Kyllo*, the absence of such a provision led the court to conclude that nothing prevents a court from collecting a successive sample.[36] Concerns over the admissibility of evidence obtained in the first DNA warrant application made police apply for a second warrant. The court stated that "a provincial court judge is entitled to issue successive warrants," provided it was informed of the reasons for the successive warrant and the order was made with the "best interest of the administration of justice" in mind.[37]

The legislation also contains a number of safeguards to protect the suspect's privacy and bodily integrity. In taking the sample, the suspect's privacy must be respected in a manner which is "reasonable in the circumstances."[38] Further, the use of collected bodily samples and DNA forensic results for purposes other than forensic analysis of a designated offence is prohibited and subject to criminal punishment.[39] Finally, the person taking the DNA sample is

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32 *Criminal Code*, s. 487.07 (5). The recording can be either on an "audio tape or video tape or otherwise."

33 Part I of the *Constitution Act, 1982*, being Schedule B to the *Canada Act 1982* (U.K.), 1982, c. 11 [*Charter*].

34 Section 10 (*b*) of the Charter declares that everyone "has the right on arrest or detention... to retain and instruct counsel without delay and to be informed of that right."

35 See *R. v. Kyllo* [1999] B.C.J. No. 717 (S.C.) (QL).

36 *Ibid*. at para. 104. See also *R. v. Good*, [1995] B.C.J. No. 2890 at paras. 32-33 (S.C.) (QL).

37 *Ibid*..

38 *Criminal Code*, s. 487.07 (3).

39 *Criminal Code*, ss. 487.08 (3), 487.089 (1), 487.089 (2).

required to inform the court of the type of bodily sample taken and the time that the procedure was administered.[40]

If there is no match between the suspect's DNA and the DNA found at the crime scene, all samples, records, and results must be permanently destroyed "without delay."[41] Occasionally, people may wish to voluntarily submit a DNA sample to eliminate them as suspects. If there is no match, the results and bodily substances provided must be destroyed.[42] Results and samples must also be destroyed if a person is not convicted of the offence,[43] unless a judge is satisfied that they may be "reasonably required in an investigation or prosecution of the person for another designated offence or of another person for the designated offence or any other offence in respect of the same transaction."[44]

Commentary

In *R. v. S.A.B.*, the Supreme Court of Canada upheld the constitutionality of the DNA warrant regime.[45] The Court concluded that the provisions "strike an appropriate balance between the public interest in effective criminal law enforcement for serious offences, and the rights of individuals to control the release of personal information about themselves, as well as their right to dignity and physical integrity."[46]

In coming to this conclusion, the Court rejected three constitutional arguments. First, it held that the *Charter* did not require suspects to be notified of the application so that their arguments could be heard.[47] Giving a suspect notice, the court

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40 *Criminal Code*, s. 487.057.
41 *Criminal Code*, s. 487.09 (1) (a)
42 *Criminal Code*, s. 487.09 (3)
43 *Criminal Code*, s. 487.09 (1) (c).
44 *Criminal Code*, s. 487.09 (2).
45 [2003] 2 S.C.R. 678.
46 *Ibid.*, at para. 52.
47 *S.A.B.*, *supra* note 18 at para. 56. For an argument in favour of such a

reasoned, could frustrate an investigation by giving the suspect a chance to flee.[48] Second, it found that the compulsory taking of bodily samples did not violate the principle against self-incrimination inhering in s. 7 of the *Charter*. That principle had been held, in some circumstances, to prohibit the state from using coercive measure to elicit evidence from criminal suspects.[49] In *S.A.B.*, the Court concluded that the DNA warrant scheme was consistent with the twin rationales underlying the principle: protecting against unreliable confessions and constraining state power.[50] The first rationale does not apply as DNA evidence is highly reliable.[51] And the legislation contains sufficient safeguards, the Court held, to minimize abuses, including the requirement of prior judicial authorization on reasonable and probable grounds and limitations on the use of collected information.[52] Lastly, the Court rejected the contention that DNA warrants should only be issued if police have exhausted other investigative means.[53]

Although *S.A.B.* silenced most criticism of the DNA warrant provisions, there are lingering questions about the methods for taking samples that Parliament should address. The legislation fails to distinguish between intrusive and non-intrusive methods of

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requirement, see Michael Plaxton, "Seizing What's Bred in the Bone: the Unconstitutionality of Canada's DNA Warrant Provisions" (2001) 12 Nat'l J. Const. L. 227 at 287-89.

48 *Ibid*.

49 See *R. v. Jones*, [1994] 2 S.C.R. 229; *R. v. S.* (R.J.), [1995] 1 S.C.R. 451; *R. v. Jarvis*, [2002] 3 S.C.R. 757; *R. v. Ling*, [2002] 3 S.C.R. 814; *R. v. White*, [1999] 2 S.C.R. 417; *R. v. Fitzpatrick*, [1995] 4 S.C.R. 154. See also Steven Penney, "What's Wrong with Self-Incrimination? The Wayward Path of Self-Incrimination Law in the Post-*Charter* Era, Part 3: Compelled Communications, the Admissibility of Defendants' Previous Testimony, and Inferences from Defendants' Silence" (2004) 48 Crim. L. Q. 474 at 491-94.

50 *S.A.B., supra* note 18 at para. 57.

51 *Ibid*. at para. 58.

52 *S.A.B., supra* note 18 at para. 59.

53 See Plaxton, *supra* note 47 at 270-80.

collecting bodily samples. Though the judge may direct that the sample be taken by certain means, there is no requirement that the least intrusive method be used.[54] Removing scalp hair, for example, is much a much lesser violation of bodily integrity than the "quasi-surgical" procedure of penetrating the skin to withdraw blood.[55] This may be of particular concern to people bound by religious limitations on the taking of blood.[56] Giving suspects the freedom to choose the type of sample they wish to submit would maximize religious liberty and individual freedom without hindering law enforcement.

Parliament could do also more to minimize the risk to suspects' safety and bodily integrity when blood samples are taken.[57] As mentioned, before issuing a DNA warrant, the judge must consider whether the person taking the sample has "training or experience." "Training or experience" is not defined, however.[58] In most cases the sample is taken by a police officer, not a health professional. Health practitioners are better equipped than police to prevent infection, limit re-testing, and minimize the suspect's anxiety.[59] Requiring blood samples to be taken by health professionals, moreover, would be consistent with the s. 256 of the *Criminal Code*, which stipulates that takings of blood from drivers for alcohol analysis must be undertaken "by or under the direction of a qualified medical practitioner," provided that they are satisfied doing so "would not

54 *Ibid*. at 235-37.

55 See Daniela Bassan, "Bill C-104: Revolutionizing Criminal Investigations or Infringing on Charter Rights?" (1996) 54 U.T. Fac. L. Rev 246 at 270; Plaxton, *supra* note 47 at 235.

56 See D.A. Sacks and R.H. Koppes, "Blood transfusion and Jehovah's Witnesses: medical and legal issues in obstetrics and gynecology" (1986) 154 Am. J. Obstet. Gynecol. 483; Dorothy Nelkin, "Cultural Perspectives on Blood," in Eric A. Feldman and Ronald Bayer eds., *Blood Fueds: Aids, Blood, and the Politics of Medical Disaster* (New York: Oxford University Press, 1999).

57 See *R. v. Fisher*, 1999 SKQB 87 at paras. 33-36; *R. v. Ku*, 2002 BCCA 559 at para. 36-38.

58 See Plaxton, *supra* note 47 at 248.

59 *Ibid*. at 245.

endanger the life or health of the person."[60]

The Canadian scheme may be contrasted to that in effect in the United Kingdom.[61] There, intimate samples[62] may only be taken if: (*i*) two or more non-intimate[63] samples are not sufficient to obtain useable DNA;[64] (*ii*) the taking is authorized by a senior officer; and (*iii*) the procedure is performed by a medical practitioner.[65] Further, a person with "good cause" may refuse to provide an intimate sample even if these conditions are met.[66]

DNA DATABANK ORDERS

The Legislation

After the DNA warrant provisions were enacted, the government solicited a wide range of public input on the creation of a national DNA database. The summary of those consultations revealed a division between law enforcement and privacy activists. Police wanted samples to be taken at the time a suspect was charged, with the option of retroactive sampling of current offenders.[67] Privacy advocates wanted only a limited number of samples to be taken by heath professionals; some even opposed the

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60 *Criminal Code*, ss. 254 (4) and 256 (1) (*b*). See also *R. v. Green*, [1992] 1 S.C.R. 614.

61 *Police and Criminal Evidence Act 1984* (U.K.), c. 62, as am. by *Criminal Justice and Public Order Act, 1994* (U.K.), c. 33, ss. 54-60.

62 An intimate sample can include a sample of blood, semen, urine, or a dental impression. *Ibid*.

63 Non-intimate samples consist of hair, saliva, or a swab from any part of the person's body. *Ibid*., s. 65. They may be taken by police officers.

64 *Ibid*., s. 62 (1A).

65 *Ibid*., s. 62 (9).

66 *Ibid*., s. 62 (10).

67 Solicitor General of Canada, *Establishing a National DNA Data Bank: Summary of Consultations* (Ottawa: Minister of Supply and Services, 1997) at v, 3, 8.

database altogether.[68] In the end, the government took a "middle of the road" position that attempted to balance individual privacy with the interests of law enforcement.

Bill C-3, the *DNA Identification Act*, was introduced in Parliament on September 25, 1997. It gained Royal Assent on December 10, 1998 and has been in force since June 30, 2000.[69] The legislation authorized the creation of the National DNA Data Bank (NDDB), the stated purpose of which is to "help law enforcement agencies identify persons alleged to have committed designated offences."[70] As the courts have noted, it can also serve to quickly eliminate suspects, streamline investigations, and deter re-offending.[71]

The databank consists of two indices: the Crime Scene Index (CSI) and the Convicted Offenders Index (COI). The CSI contains DNA profiles from bodily samples found at the scene of a crime of a designated offence. DNA may be collected from four relevant locations for this index: the place where a designated offence was committed,[72] on or within the victim of a designated offence,[73] on anything the victim was wearing or carrying when the designated offence was committed,[74] or on or within any person or place that is associated with a designated offence.[75] Samples collected for this index are submitted by local police[76] and are kept indefinitely, unless

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68 *Ibid*., at iii, v, 6, 9. The Act has been amended several times since.

69 S.C. c. 37. The provisions governing the operation of the database are split between the *DNA Identification* Act and the *Criminal Code*.

70 *DNA Identification Act*, s. 4.

71 See *R. v. Rodgers*, [2006] 1 S.C.R. 554 at para. 53-64; *R. v. R.C.*, [2005] 3 S.C.R. 99 at para. 23; *R. v. Briggs* (2001) 157 C.C.C. (3d) 38 at para. 22 (Ont. C.A.), leave to appeal to S.C.C. dismissed [2001] 2 S.C.R. xii; *R. v. Jordan* (2002) 162 C.C.C. (3d) 385 at paras. 32-39 (N.S.C.A.); *R. v. T.* (*T. N.*) (2004) 186 C.C.C. (3d) 543 at para. 2 (Alta. C.A.).

72 *DNA Identification Act*, s. 5 (3) (a).

73 *Ibid*., s. 5 (3) (b).

74 *Ibid*., s. 5 (3) (c).

75 *Ibid*., s. 5 (3) (d).

76 Canada, RCMP, *The National DNA Data Bank of Canada: Annual Report 2002* (Ottawa, Solicitor General of Canada, 2002).

the sample is from the victim or an eliminated suspect.[77]

The COI contains DNA profiles from persons convicted of designated offences.[78] Samples are obtained either through the offender's consent or by a court order and must be collected by a special DNA Databank Sample Kit.[79] Profiles are retained for an indefinite period of time, but are removed upon a final acquittal or within one year of an absolute discharge for a designated offence.[80]

As of 2006, the CSI contained 27,925 samples.[81] The COI contained 92,980 samples, with 300-400 more being added each week.[82] The overwhelming majority of samples are of blood (98.4%); saliva (1.5%) and hair samples (0.1%) are much less common.[83] As one would expect, there are many more adult offenders (84,856) than young (13,187) and military offenders (28) in the database. In 2006, the NDDB generated 2,323 matches,[84] bringing the total number of "hits" over its history to 5,689.[85] Interestingly, there have been over 48 matches to date from identical profiles but different individuals (identical twins).[86]

There are three types of DNA databank orders: retroactive, retrospective, and prospective.[87] Retroactive orders are reserved for certain offenders who committed offences before the databank provisions came into force. Before June 30, 2000, the offender must

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77 *DNA Identification Act*, s. 8.

78 *Criminal Code*, s. 487.071 (1); *National Defence Act*, s. 196.22 (1).

79 *DNA Identification Act Regulations*, SOR/2000-300, s. 2.

80 *DNA Identification Act*, s. 9 (1).

81 Canada, RCMP, *The National DNA Data Bank of Canada: Annual Report 2006* (Ottawa: Minister of Public Safety and Emergency Preparedness Canada, 2006) at 19 [Annual Report 2006].

82 *Ibid*. at 19.

83 *Ibid*. at 21.

84 This number includes crime scene to crime scene hits.

85 Annual Report 2006, *supra* note 81 at 6.

86 *Ibid*. at 19.

87 The procedure for collecting samples for DNA orders is identical to that of DNA warrants. See *Criminal Code*, s. 487.06.

have been declared a dangerous offender[88] or been convicted of murder, manslaughter,[89] or a serious sexual offence.[90] A provincial court judge, on an *ex parte* basis,[91] has the discretion[92] to grant the order, which must take into account the suspect's criminal record, the nature and circumstances of the offence, and the impact the order would have on his or her privacy and security.[93] If the subject of the order does not appear for sampling at the time indicated by the summons delivered to him, a warrant for his or her arrest may be issued.[94] There is no right of appeal, though orders are subject to judicial review.[95]

Retrospective orders may be made for offenders who committed a designated offence before June 30, 2000, but were convicted after that date. The prosecution must apply for these orders and bears the "evidential burden to produce sufficient information to raise the issue."[96] Like retroactive orders, retrospective orders are discretionary and judges must consider the same factors in making a decision.[97] One difference, however, is that a judge must ultimately be "satisfied that it is in the best interests of the administration of

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88 Under Part XXIV of the *Criminal Code*, or, before 1988, Part XXI of the *Criminal Code*, R.S.C. 1970, c. 34.

89 *Criminal Code*, s. 487.055 (1). Those convicted of manslaughter must, at the time of the application for a DNA order, be serving at least a two year sentence.

90 At the time of the application, the offender must be serving a sentence of at least two years for one of the offences. See *Criminal Code*, s. 487.055 (3) for a definition of "sexual offence."

91 *Criminal Code*, s. 487.055 (1). This provision was upheld in *Rodgers*, *supra* note 71 at paras. 20-21.

92 *Criminal Code*, s. 487.055 (1) provides that a judge "may," not "must," provide the order.

93 *Criminal Code*, s. 487.055 (3.1). A judge must also give written reasons for his or her decision.

94 *Criminal Code*, s. 487.055 (8).

95 *Rodgers*, *supra* note 71 at para. 52.

96 *R. v. Hendry* (2001) 161 C.C.C. (3d) 275 at para. 11 (Ont. C.A.).

97 *Criminal Code*, s. 487.052 (2).

justice" to make the order.[98] In *R. v. Hendry*, the court held that the administration of justice would be served by making the order in the "vast majority" of cases.[99]

Prospective orders are for offenders who have committed an offence after June 30, 2000.[100] The procedure for prospective orders depends on whether the offender has committed a designated primary or secondary offence. Primary designated offences consist of the most serious crimes, including murder, sexual assault, and terrorism offences.[101] When a person has been convicted of a primary offence, the order is virtually mandatory. The judge may refuse to grant the order, however, if the offender can establish that its impact on his or her privacy and security would be "grossly disproportionate to the public interest in the protection of society and the proper administration of justice, to be achieved through the early detection, arrest and conviction of offenders."[102] The courts have stated that this test should be met only very rarely,[103] although judges have declined to issue orders on grounds related the offenders' psychiatric needs,[104] youth,[105] and absence of a prior criminal record.[106] Unlike secondary offences,[107] as well as retroactive[108] and retrospective orders,[109] the legislation does not require a judge to provide reasons for his decision, although one court has suggested

98 *Criminal Code*, s. 487.052 (1).
99 *See Hendry, supra* note 96 at 289-90.
100 *Criminal Code*, s. 487.051.
101 *Criminal Code*, s. 487.04.
102 *Criminal Code*, ss. 487.051 (1) (*a*) and 487.051 (2).
103 *Hendry, supra* note 96 at 289-90; *R. v. Wigley* (2005), 371 A.R. 392 at para. 8 (C.A.).
104 See *R. v. Murie*, [2000] O.J. No. 5029 (S.C.J.) (QL).
105 See *R. v. A.H.*, [2001] O.J. No. 382 (S.C.J.) (QL); *R. v. S.M.*, 2004 ABQB 357.
106 See *R. v. Ross*, [2000] O.J. No. 2999 (S.C.J.) (QL); *R. v. D.A.Q.*, 2005 ABPC 90.
107 *Criminal Code*, s. 487.051 (3).
108 *Criminal Code*, s. 487.055 (3.1).
109 *Criminal Code*, s. 487.052 (2).

that this requirement is implicit.[110]

Secondary designated offences consist of less serious crimes, including assault, robbery, and offences related to child pornography.[111] A court has discretion to grant a DNA order if it is satisfied that doing so is in the "best interests of the administration of justice."[112] The factors considered in this analysis are identical to those applying to retroactive and retrospective orders.[113] Apart from trivial offences,[114] such orders succeed in most instances,[115] as "there are important state interests served by the DNA data bank and few reasons based on privacy and security of the person for refusing to make the order."[116]

Persons under the age of 18 are treated differently. Even though the legislation makes no reference to youth, the courts have held that unlike adults, there is no presumption that orders should be granted for young offenders,[117] even when they have committed primary designated offences.[118] In addition to giving weight to the purposes of the youth criminal justice legislation,[119] in deciding whether to grant the order, judges may consider the age of young offenders, any criminal record, the likely deterrence value of an order, and whether the offender has demonstrated remorse.[120]

The decision whether to grant a retrospective or prospective

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110 *R. v. D.* (*K.A.M.*), 2003 BCSC 1865 at para. 20.

111 *Criminal Code*, s. 487.04.

112 *Criminal Code*, s. 487.051 (1) (b).

113 *Criminal Code*, s. 487.051 (2) and text surrounding footnotes 93 and 97.

114 *Hendry, supra* note 96 at para. 23.

115 *Hendry, ibid*. at para. 25; *R. v. Durham*, 2007 BCCA 190 at para. 12; *R. v. North* (2002), 165 C.C.C. (3d) 393 at 411-412 (Alta. C.A.). See also A. Kapoor, "Bleeding the Offender II," Kapoor's Criminal Appeals Review, Issue 19, Jan. 19, 2002 (QL).

116 *Hendry, ibid*. at 288.

117 *R. v. B.* (*K.*), 67 O.R. (3d) 391 at para. 8 (C.A.).

118 *R.C., supra* note 71 at paras. 36-45, 66; *R. v. T.S.R*. (2005) 371 A.R. 353 (C.A.).

119 *R.C., ibid*. at paras. 68-69.

120 *R.C., ibid.; S.M., supra* note 105; *R. v. P.* (*D.*), 2006 BCCA 409.

order may be appealed by both sides.[121] The standard of review is one of deference to the court of first instance.[122] An appellate court may only overturn a trial decision if it was clearly unreasonable, resulted from an error in principle, failed to consider a relevant factor, or overemphasized certain factors.[123]

Commentary

The main concern arising from DNA databases is the potential for abuse. DNA can reveal very personal, intimate, and sensitive information, including medical conditions, genetic disorders, and possibly even predispositions for criminality.[124] The fear is that this information could be used to discriminate on the basis of the genetic disposition of persons catalogued in the database.[125]

Canada's legislation goes a long way to address these concerns. It contains numerous provisions prohibiting and criminalizing the use of samples and profiles for anything other than authorized, forensic identification purposes.[126] Moreover, the profiles in the database are derived from the "non-coding" or "junk" sections of DNA.[127] These sections do not reveal any sensitive biological information; they relate only to identity.

None of this eliminates the possibility of abuse. The legislation does mandate the preservation of bodily substances,[128] so sensitive

121 *Criminal Code*, s. 487.054.

122 *R. v. Briggs*, 157 C.C.C. (3d) 38 at 69 (Ont. C.A.).

123 *R.C., supra* note 71 at para. 49; *Hendry, supra* note 96 at 284.

124 See A. De Gorgey, "The Advent of DNA Databanks: Implications for Information Privacy" (1990) 16 Am. J. L. & Med. 381 at 388-89.

125 See Christa Scowby, "Private Costs of 'Safer Communities': DNA Evidence and Data Banking in Canada" (1999) 5 Appeal 86; E.D. Shapiro and M.L. Weinberg, "DNA Data Banking: The Dangerous Erosion of Privacy" (1990) 33 Clev. St. L. Rev. 455.

126 See *Rodgers, supra* note 71 at para. 11.

127 *Ibid*. at para. 12. See also Julianne Parfett, "Canada's DNA Databank: Public Safety and Private Costs" (2002) 29 Man. L.J. 33 at 46.

128 *DNA Identification Act*, s. 10 (1). DNA is preserved, presumably, in case

genetic information could be culled from them in the future.[129] The Supreme Court of Canada has nonetheless upheld the legislation under constitutional challenge. In *R. v. Rodgers*, the Court concluded that it struck an "appropriate balance between the public interest in the effective identification of persons convicted of serious offences and the rights of individuals to physical integrity and the right to control the release of information about themselves."[130] As DNA orders are used only for identification purposes, it reasoned, they are no more intrusive than fingerprinting.[131]

Compared with the United States and the United Kingdom, Canada's DNA databank regime is very modest. State DNA databases have existed in the United States since 1989.[132] All 50 states now require the collection of the DNA of convicted offenders.[133] Congress took note of the growing use of state DNA databases and, in 1994, created a national database operated by the FBI (CODIS[134]) that links to all state databases.[135] In the first 13 years in operation, CODIS has aided 50,343 investigations.[136]

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future technological advances permit the extraction of DNA from previously unusable samples. See Carol-Ann Bauman, "The DNA Data Bank: Privacy Concerns and Safeguards" (2000), 34 C.R. (5th) 39.

129 *DNA Identification Act*, ss. 6 (6) - (8), 9 (2), Criminal Code, s. 487.08.

130 *Supra* note 71 at para. 44.

131 *Ibid*. at para. 38.

132 See Paul E. Tracy and Vincent Morgan, "Big Brother and His Science Kit: DNA Databases for 21st Century Crime Control?" (2000) 90 J. Crim. L. & Criminology 635 at 685.

133 See Robert Berlet, "A Step Too Far: Due Process and DNA Collection in California After Proposition 69" (2007) 40 U.C. Davis L. Rev. 1481 at 1487.

134 CODIS stands for "Combined DNA Index System."

135 *Violent Crime Control and Law Enforcement Act of 1994* [*DNA Identification Act*], 42 U.S.C. §14132 (2007). See also Tracey Maclin, "Is Obtaining an Arrestee's DNA a Valid Special Needs Search Under the Fourth Amendment? What Should (and Will) the Supreme Court Do?" (2005) 33 J.L. Med. & Ethics 102 at 104.

136 Current to May 2007. FBI, "CODIS: Investigations Aided" U.S.

The U.S. database is much larger than Canada's, containing 1.5 percent of the entire population,[137] compared to 0.3 percent in Canada.[138] This has resulted from state legislation requiring the inclusion of samples from a greater range of persons than in Canada. California recently passed legislation, for example, requiring all past and present felons (as well as some misdemeanour offenders) to submit samples.[139] This immediately added 400,000 people to the database. States are also beginning to require arrestees to submit samples.[140] In California, which will introduce arrestee sampling in 2009, it is expected that this will add over 100,000 people per year to the database.[141]

DNA database legislation in the United States often makes it difficult, moreover, to remove samples from people who are not ultimately convicted. In California, unconvicted arrestees will have to apply to have their samples removed[142] and will not be permitted to challenge the discretionary decision of a court to refuse to do so.[143] Illinois prohibits removal altogether.[144] Unlike Canada, moreover, where the use of DNA samples is restricted to criminal

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Department of Justice (May 2007), online: FBI<http://www.fbi.gov/hq/lab/codis/aidedmap.htm>.

137 Current to May 2007: FBI, "NDIS Statistics" U.S. Department of Justice (May 2007), online: FBI<http://www.fbi.gov/hq/lab/codis/clickmap.htm>; U.S. Census Bureau, "US POPClock Projection" (August 2007), online: <http://www.census.gov/population/www/popclockus.html>.

138 Statistics Canada, "Canada's Population Clock" (August 2007), online: <http://www.statcan.ca/english/edu/clock/population.htm>.

139 *Cal. Penal Code* § 295; Tania Simoncelli and Barry Steinhardt, "California's Proposition 69: A Dangerous Precedent for Criminal DNA Databases" (2005) 33 J.L. Med. & Ethics 279 at 280..

140 See Berlet, *supra* note 133 at 1487 (noting that this is, or soon will be, a requirement in Louisiana, Virginia, Texas, and California).

141 *Ibid*. at 1496.

142 *Cal. Penal Code* § 299.

143 *Ibid*.; Berlet, *supra* note 133 at 1496.

144 Jonathan Kimmelman, "Risking Ethical Insolvency: A Survey of Trends in Criminal Databanking" (2000) 28 SYMP J.L. Med. & Ethics 209.

investigations, some states specify that DNA profiles and samples may be used for a variety of non-criminal purposes including research, humanitarian purposes, and paternity hearings.[145]

The United Kingdom has gone even further. Its database, which has been in existence since 1995, contains samples for people questioned, charged, or arrested with almost all criminal offences.[146] This has permitted the indexing of over 2.71 million people, comprising of over 5.2 percent of the population.[147] Approximately one percent of the population is being added to the database each year.[148] Unlike the Canadian database, moreover, samples are not automatically destroyed after exoneration.[149] They are retained indefinitely, unless police exercise their discretion to remove them under "rare" and "exceptional circumstances."[150]

The greatest difference between the United States and United Kingdom databases and the Canadian database is the former's inclusion of vast numbers of innocent persons. Not all persons who are not convicted of the crimes they arrested for, of course, are factually innocent. But many of them are. The question is whether the benefits of including the DNA profiles of criminals outweigh the

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145 See Carol-Ann Bauman, The DNA Data Bank: Privacy Concerns and Safeguards (2000), 34 C.R. (5th) 39; E.T. Juengst, "I-DNA-fication, Personal Privacy and Social Justice" (1999) 75 Chicago-Kent L. Rev. 61.

146 See *Criminal Justice and Public Order Act of 1994* (U.K.), 1994, c. 3, ss. 54-59. The vast majority of offences are recordable.

147 U.K., Forensic Science and Pathology Unit, DNA *Expansion Programme 2000-2005: Reporting achievement* (London: Home Office, 2005) at 5, online: <http://www.homeoffice.gov.uk/documents/DNAExpansion.pdf?view=Binary>.

148 In 2004/2005, 521,117 suspect profiles were added. *Ibid*. at 6.

149 "Police can keep suspects' DNA" BBC News (12 September 2002), online: BBC: <http://news.bbc.co.uk/2/hi/uk_news/2254053.stm>; *Police and Criminal Evidence Act*, s. 63.

150 ACPO, "Retention Guidelines for the Nominal Records on the Police National Computer" UK Home Office (16 March 2006), online: <http://www.homeoffice.gov.uk/documents/Bichard_Step_Model_Retention.pdf?view=Binary>at 12

costs associated with including the profiles of the innocent. These costs may include the stigmatization of members of disadvantaged groups disproportionately subject to arrest (such as young Black or Aboriginal men) and the increased magnitude of harm from any abuse of the information in the database.

This is a difficult policy question. The larger the database, the more useful it is in generating "hits," *i.e.*, positive matches between crime scenes and offenders. In the United Kingdom it is estimated that 20,000 investigations are being aided per year by the database.[151] Critics of the U.K. database have argued, however, that "the general retention of profiles from the un-convicted has not been shown to significantly enhance criminal intelligence or detection"[152] and there is little evidence that retaining DNA profiles and samples from the innocent makes a significant difference in crime detection.[153] The Home Office has responded that a significant numbers of matches have been generated from the profiles of non-convicted persons.[154]

Resolving this debate is beyond the scope of this paper. It can only be hoped that before any attempt to add the DNA samples of non-convicted persons to Canada's database, Parliament will undertake an extensive, evidence-based analysis of the costs and benefits of doing so.

CONCLUSION

On the whole, Canada's forensic DNA identification legislation is working well. The investigative warrant and database provisions both provide for a reasonable balance between the interests of privacy and bodily integrity, on the one hand, and law enforcement,

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151 *Infra*, note 147 at 12.

152 *Ibid*.

153 See Helen Wallace, "The UK National DNA Database" (2006) 7 EMBO reports at S26.

154 Home Office, *The National DNA Database, Annual Report, 2005-2006* at 36 online : <http://www.homeoffice.gov.uk/documents/DNA-report2005-06.pdf>.

on the other. One drawback of the legislation, however, is its failure to distinguish between intimate and non-intimate samples. Given that identifications derived from less intrusive bodily substances are just as reliable, it is difficult to justify the taking of blood.[155] Offenders should be given the option of requesting that non-intrusive samples be taken first.

155 Over 98 percent of samples obtained are blood. See *Annual Report 2006*, *supra* note at 21.