CHAPTER 12

Recommendations to Bring the Reality Closer to the Rhetoric

We hope that the previous chapters have established that there is a large gap between the rhetoric of impartial forensic science and prosecutions that seek the truth and the realities of flawed forensic science and prosecutions that have been marred by established miscarriages of justice. In this final chapter, we propose some specific reforms that are designed to reduce the troubling gap that has emerged between the aspirations and practice of forensic science and the criminal justice system.

As suggested in Chapters 10 and 11, reforms must be pursued both at the front end by the forensic science community and at the back end by the legal community. Indeed, each of these communities needs to better understand the values, methodologies, and limits of the other. We do not pretend that the recommendations offered below are the only possible ones or that they are a panacea. Nevertheless, they are a start.

A. RESEARCH AND REVIEW DEVELOPMENTS IN FORENSIC SCIENCE

The *NAS Report*[1] and other reports identify certain problem areas that need further research. One area that has caused particular concern in all the jurisdictions examined is that of sudden infant deaths and, in particular, shaken baby

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1 National Research Council, Committee on Identifying the Needs of the Forensic Sciences Community, *Strengthening Forensic Science in the United States: A Path Forward* (Washington, DC: National Academies Press, 2009) [*NAS Report*]. The report can be found online: www.ncjrs.gov/pdffiles1/nij/grants/228091.pdf.

syndrome. The *Harris* case on shaken baby syndrome is a good example of a legal system assessing a controversial form of forensic evidence.[2] The Goudge Inquiry in Canada also found many problems in this area.[3] The scientific community needs to devote more research to these and other issues of controversy frequently encountered in court. This research may not necessarily result in a consensus, but it should reveal areas of controversy and uncertainty. It is vital that lawyers, judges, and juries be made aware of areas of controversy and uncertainty so that they can apply the reasonable doubt standard and be aware of the need for new evidence to be introduced on appeal. Science evolves and is often controversial—the legal system must try to keep up to the evolving nature of the science it uses.

It would be sensible for each jurisdiction to have a forum for the independent review of contentious, emerging, and new issues in forensic science. At various times there will emerge certain principles, propounded by expert witnesses, which appear questionable in the forensic context. With ongoing scientific developments, it is clear that there will be challenges not only to existing areas of forensic science, but also to emerging areas, such as facial and body mapping, voice recognition, and further challenges to DNA evidence that will need to be assessed. There is need to establish standards for such evidence before it is found to have contributed to miscarriages of justice in individual cases.

Some broader review function of forensic issues should be ongoing in each jurisdiction. To counteract the marginalization of most forensic sciences within the larger scientific community, forensic scientists should work with the legal profession and the judiciary to help improve funding and review of the forensic sciences that the courts frequently rely upon. Such reviews may be especially beneficial if they bring scientists together with prosecutors and defence lawyers. Many issues relating to the adequacy of forensic evidence are not suitable for determination and evaluation in the context of a particular criminal trial. If questions about the adequacy of scientific techniques for the detection of explosive residues arise, the time to resolve them is before and not after the bomb goes off. Expert panels, with the assistance of the judiciary and the bar, can help establish standards for new types of forensic evidence. The point of this exercise is not only to ensure adherence to best practices, but to promote better understanding about areas of controversy and uncertainty within various forensic sciences.

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2 *R. v. Harris & Ors*, [2005] EWCA Crim 1980 [*Harris*].

3 *Report of the Inquiry into Pediatric Forensic Pathology in Ontario* (Toronto: Ministry of the Attorney General, 2008) [Goudge Inquiry].

B. AUDIT CASES INVOLVING SUSPECT FORMS OF EVIDENCE

Scientific research into areas of controversy, as well as individual cases of miscarriages of justice, can identify classes of cases where there are concerns about suspect forms of evidence, including controversial or evolving forms of forensic evidence. Both CCRC-type bodies and the petition procedure generally rely on individuals to seek redress, but for many reasons, individuals may not always be able or willing to bring miscarriages of justice to the attention of authorities. In non-homicide cases, victims of miscarriages of justice may have already served their sentences and want to focus on getting their lives back together. Especially in Australia and Canada, where reliance on petitions to the executive remains, victims of miscarriages of justice may have trouble in obtaining legal and scientific assistance in presenting their cases.

There is a need to bridge the gap between error correction in individual cases and broader approaches to the discovery and prevention of wrongful convictions. One promising method is to conduct audits of cases that have relied on suspect forms of evidence. If a forensic scientist or forensic pathologist has presented unreliable or misleading evidence in one case, he or she has likely made mistakes in other cases. In some cases, whole classes of evidence—for example, involving sudden infant death or shaken baby syndrome or hair microscopy evidence—may be suspect in light of evolving research and science. In such instances, proactive audits of cases should be taken.

James Driskell and the Association In Defence of the Wrongfully Convicted asked Manitoba's Driskell Inquiry to recommend a national audit of criminal cases, where hair microscopy evidence was used to obtain convictions. The province of Manitoba had already initiated an audit process for such cases, but the flawed evidence in Driskell's case came from a laboratory run by the Royal Canadian Mounted Police (RCMP), the national police force. Commissioner Lesage expressed concerns "that the problems identified relating to hair microscopy evidence in Driskell's case are not unique to his case or unique to Manitoba."[4] He did not however make a formal recommendation for such a national audit or of a review of the forensic laboratories of the RCMP.[5] As suggested above, national leadership is needed on many issues relating to forensic science even in those jurisdictions that follow a federal structure.

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4 *Report of the Commission of Inquiry into Certain Aspects of the Trial and Conviction of James Driskell* (Winnipeg: The Commission, 2007) at 192.

5 *Ibid.* at 192–94.

In 2005, Ontario's chief coroner announced a review of forty-five homicide or suspicious death cases since 1991, where Dr. Charles Smith had performed an autopsy or provided an opinion. In twenty of the forty-five cases, the reviewers had some issue with the opinions of Dr. Smith that appeared in a written report, or testimony in court, or both. The results from this review led to the Goudge Inquiry, and the Goudge Inquiry, in turn, recommended an audit of more pediatric cases.

There also needs to be systemic reporting of problems associated with particular expert witnesses. Many of the inquiries that have focused on the work of one particular expert have detailed many warning signs about the expert that were all too commonly ignored.

In Britain, various audits of cases were conducted in the wake of the publicity generated by the Sally Clark appeal, controversies over sudden infant deaths, and the performance of certain forensic scientists and expert witnesses. These reviews have not always led to the overturning of many convictions, but they remain worthwhile exercises that can help restore public confidence in the criminal justice system. Moreover, audits have a potential to discover miscarriages of justice that would not otherwise have been discovered. They also can help raise awareness in the scientific and legal communities about certain problems of evidence or practices that fall below professional standards.

C. ESTABLISH CCRC-TYPE BODIES

In our view, in Canada and in Australia there is a significant need to establish bodies equivalent to the British CCRC (Criminal Cases Review Commission) or its Scottish counterpart. The Canadian inquiries have explicitly recommended it, and even commentators in Australia, Canada, and the United States who have reservations about the CCRC acknowledge that they would like to see a CCRC-type body in their jurisdiction.[6] Volunteer innocence projects can

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6 Clive Walker and Kathryn Campbell conclude that "the establishment of the CCRC has secured gains over executive-based review such as the CCRG (in Canada), though the failure to resource it generously or to reform the CACD (Court of Appeal) undermine its delivery." Clive Walker & Kathryn Campbell, "The CCRC as an Option for Canada: Forwards or Backwards?" in Michael Naughton, ed., *The Criminal Cases Review Commission: Hope for the Innocent?* (Basingstoke, UK: Palgrave Macmillan, 2009) at 204 [Naughton, *CCRC: Hope*]. In Naughton, *CCRC: Hope* at 217, Robert Schehr has written that the North Carolina approach, which includes a state-funded error commission, albeit limited to factual innocence claims, is "the most promising and holistic approach to the problem of wrongful and unlawful commissions." Stephanie Roberts and Lynne Weathered go even further. They suggest that innocence projects should

make important contributions by providing legal representation in individual cases and advocating systemic reforms, but the systemic nature of wrongful convictions in all jurisdictions is now so well established that the state should assume responsibility for investigating and providing remedies for miscarriages of justice. This point was expressed with great eloquence by Cory J. in the Canadian Sophonow Inquiry when he recommended that a "completely independent entity" such as the CCRC be established to "effectively, efficiently and quickly review cases in which wrongful conviction is alleged . . . . if the State commits significant errors in the course of the investigation and prosecution, it should accept the responsibility for the sad consequences which will inevitably flow from them."[7]

We must also remember that the victims of miscarriages of justice are perhaps the most vulnerable of people in our societies. The available evidence suggests that victims of miscarriages of justice come disproportionately from disadvantaged groups—indigenous populations in Australia and Canada, African-Americans in the United States, and the poor and mentally disadvantaged in all countries. In addition to these disadvantages, victims of miscarriages of justice have been convicted of serious and often brutal crimes. The acknowledged victims of miscarriages of justice may now be recognized as innocent, but once they were convicted killers and child abusers. In such circumstances, it is important that independent, state-funded bodies have adequate resources and powers to investigate claims of wrongful convictions and if necessary, to refer them back to the courts. The criminal justice system is a state institution, and the state has an obligation to deal fairly and efficiently with the inevitable failure of a justice system that relies on fallible humans—including, we would add, expert witnesses, scientists, and doctors.

The need for CCRC-type bodies in Australia and Canada does not mean that the practices and procedures of the CCRC in the United Kingdom cannot be improved. There are concerns about the CCRC's decreased resources and its lack of powers to compel information from non-public bodies. There may also be a case for external audit of its work as well as the internal quality assurance program now in use. There may be value in encouraging legal representation of

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not downgrade broader fairness claims considered by the CCRC and that a test based on innocence "would be unworkable in practice." Stephanie Roberts & Lynne Weathered, *Assisting the Factually Innocent: The Contradictions and Compatibility of Innocence Projects and the Criminal Cases Review Commission* (2009) 29 Oxford J. Legal Stud. 43 at 58 [Roberts & Weathered].

7 Manitoba, Commission of Inquiry Regarding Thomas Sophonow, *The Inquiry Regarding Thomas Sophonow* (Winnipeg: Manitoba Justice, 2001) at 101.

assessments beyond the context of a particular complaint. Whether a CCRC-type body conducts such proactive audits of its own volition or upon a request from the Attorney General, the Forensic Regulator, members of the judiciary, or medical or forensic organizations can be determined in due course.

It should be noted that the CCRC has already reconsidered whole groups of cases of its own volition. For example, it has chosen to reconsider groups of cases where the prosecution witness has since been discredited (pathologist Dr. Heath) and after the Omagh bombing judgment, DNA cases, where LCN DNA ("low-copy number" DNA) was relied upon. More recently, in response to changes to the Royal College of Paediatrics and Child Health guidelines, it has re-examined child abuse cases (2009/10) where, under the previous guidelines, certain signs and symptoms were regarded as indicative of abuse. In the revised guidelines of 2008, the same signs and symptoms can be regarded at best as "neutral" findings. At the time of writing, it is too early to say what, if anything, will be uncovered as a result of this "trawl." The recent judgment in *R. v. PF*[12] is an example of a conviction being quashed by the Court of Appeal (Criminal Division) following a reference from the CCRC made, in large part, as a result of the changes to the guidelines. The wider issues raised in respect of other potential cases led the CCRC to commence its own audit of cases in its system, in addition to which, in accordance with its usual practice, it informed the Crown Prosecution Service (CPS) so that it, too, could take all appropriate steps. The CCRC has an ability to respond to changes in the underlying forensic sciences; changes that may not always be fully appreciated by potential applicants to reopen their convictions.

Thought needs to be given as to how a CCRC will best interact with the forensic science community in cases involving forensic science. Laurie Elks devotes a helpful chapter to this topic in his recent study of the CCRC. He makes the important point that the CCRC "is not financially constrained to the same extent as legally-aided defendants in selecting experts and commissioning forensic work." The CCRC, like the Crown Prosecution Service, is a player with access to "a database of leading experts" and is "generally able to call upon the most experienced experts. This luxury is not always available to defence lawyers."[13] Elks also demonstrates how the CCRC's many referrals in forensic science cases have revealed patterns of problems. Such patterns are

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12 [2009] EWCA Crim 1086.

13 Laurie Elks, *Righting Miscarriages of Justice? Ten Years of the Criminal Cases Review Commission* (London: Justice, 2008) at 77. Justice Goudge made a similar point when he stated "a structure like the CCRC may make it easier to find the necessary expertise because the institution, not the individual, is retaining the requisite expertise." Goudge Inquiry, above note 3 at 540.

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often found with experts offered by the prosecution who present "their hypotheses with excessive certainty"[14] and who leave "it to the defence expert—and the adversarial process—to point out the opposite view."[15] He makes the case for better regulation of forensic disciplines as well as the study of difficulties that juries may have in cases with conflicting experts. There has been some controversy over the CCRC and the Court of Appeal's treatment of new expert evidence, as well as some concern in the Court of Appeal that accepting new expert evidence may open the proverbial floodgates of appeal. Such concerns also underline our point about the importance of focusing not just on the CCRC, but on the ability of the Court of Appeal to deal with controversial and evolving forensic science. Laurie Elks submits, correctly in our view, "that the Commission should not hesitate to refer cases where it considers that the defence expert case was 'muffed' for reasons outside the control of the defendant and to the detriment of the fairness of the trial."[16]

One danger is that the focus of limited reform energies will be devoted to the creation of the CCRC-type body without enough attention to whether the appellate courts have adequate resources and tools to deal with cases then referred to them. As suggested in Chapter 10, many of the criticisms directed at the CCRC on matters such as lurking doubt and fresh evidence might be better directed at the Court of Appeal.

It is important that CCRC-type bodies not be considered in isolation. The Runciman Royal Commission on Criminal Justice, which recommended the creation of the CCRC in 1993, also made perhaps less well-known recommendations to increase independent audits of forensic science providers, to ensure that the defence had adequate disclosure and means to conduct its own scientific tests, and to encourage the Court of Appeal to be receptive to new evidence and claims of lurking doubt. Although CCRC-type bodies are necessary, they cannot solve all the problems related to miscarriages of justice. Broader systemic reforms are needed.

In Chapter 10, we discussed the need for both attention to correction of miscarriages of justice in past cases and systemic reform to prevent miscarriages of justice in future cases. Thought should be given to how the CCRC and bodies like it can make better contributions to systemic reform issues. Bear in mind the view expressed by the former chairman of the CCRC, Graham Zellick, when giving evidence to the Home Affairs Select Committee:

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14 *Ibid.* at 97.
15 *Ibid.* at 98.
16 *Ibid.* at 103.

> We have no funds available for supporting research. We did make inquiries. We approached the Home Office Research and Statistics Unit but they made it plain they did not have the funds to support work of this kind. We are also quite keen that it is work that should be carried independently of us.[17]

The academic community is a critical resource that can and should be better used. Volunteer innocence projects, other researchers in the universities, and the forensic science community should be encouraged to focus on the systemic issues raised by individual cases of miscarriages of justices. Such an approach could help strengthen the ties between the legal, forensic, and academic communities as advocated by many, including the Runciman Royal Commission on Criminal Justice, the Goudge Inquiry, and the National Academy of Sciences. In addition, governments might also ask a CCRC-type body to conduct inquiries somewhat along the lines of the Canadian public inquiries or to issue reports that identify patterns in its cases. A CCRC-type body would have considerable expertise. It might be able to conduct such inquiries more efficiently than a judicial inquiry that comes to the issue without any prior experience in the area. CCRC-type bodies have the potential to contribute to systemic study and reforms to prevent miscarriages of justice, but this potential generally remains largely untapped.

D. OBTAIN BETTER JUDICIAL CONTROL OVER EXPERT EVIDENCE

The judiciary needs to take a creative approach to forensic science. The question-and-answer format of adversarial proceedings conducted by lawyers who may incompletely understand the issues is ineffective in distinguishing reliable from unreliable evidence. One way to respond to the danger that the adversary system will not prevent the introduction of unreliable forensic science is to conduct pretrial inquiries into the scientific reliability of opinions being propounded by expert witnesses. Such inquiries could take place before the swearing of the jury in a criminal matter. Better preparation of expert reports and even, in some cases, meetings between opposing experts can assist the court. There is no reason why such an inquiry should be adversarial and every reason why it should be inquisitorial. In addition, there may be sound policy reasons why the inquiry should be chaired by a judge other than the trial judge. Doing so would avoid any suggestion of influence from the pretrial inquiry affecting the subsequent assessment

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17 Roberts & Weathered, above note 6 at 68, citing U.K., H.C., Home Affairs Committee, The Work of the Criminal Cases Review Commission 1703 (2005–2006) at question 79.

of the evidence given by the experts at the trial. The inquiry should focus on the adequacy of the scientific principles involved and whether they are capable of producing reliable conclusions. It should go well beyond the routine summary of the expert's credentials and experiences: it should get into the substance of the proposed expert evidence. Judges might even specialize in the vetting of scientific evidence and be assisted by scientific advisers. That said, we would caution that there are no guarantees. Now discredited experts, including Dr. Charles Smith and Professor Roy Meadow, would at one time have been the very kinds of scientific advisers used in such a screening process.

Another device that should be considered to promote better review and understanding of forensic science evidence is the online publication and wider sharing of pretrial expert reports. Such a practice would encourage openness and peer review, and the exposure of error or controversy. The separation of the scientific issues from the plethora of other issues raised in criminal cases would increase the likelihood that other specialists in the area will consider them. It could also encourage scientists and doctors to devote more attention to forensic issues presented in court. Online availability of such reports would ensure that anyone thinking of engaging the expert can consider his or her work, irrespective of where the evidence was given. Public scrutiny in this context could become more significant and current than whether the material has been published in peer-reviewed journals. The use of computer technology also means that quality assurance work can be globalized efficiently and cost effectively—a person in Australia can peer-review the work of an expert in Canada in real time.

As we pointed out in Chapter 3, appellate judges in Australia, Britain, and Canada all have powers in some instances to appoint special commissioners to investigate any scientific or other issues that could not be examined in court and to report back. In Britain, this power is limited to requesting the CCRC to undertake further investigation or to make inquiries, not usually of a scientific nature: the CCRC can do so under its section 15 powers.[18] The South Australian provision states that where any question arising on the appeal involves prolonged examination of any scientific investigation which cannot conveniently be conducted before the court, then it can be referred for inquiry and report to a special commissioner appointed by the court.[19] Perhaps such provisions could

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18 *CAA* 1995, above note 10.

19 *Criminal Law Consolidation Act (South Australia) 1935*, s. 359(d). For similar powers in Canada, see the *Criminal Code*, R.S.C. 1985, c. C-46, s.683(1)(e). For an American case where a court appointed a forensic scientist to examine the work of another forensic scientist, see *In re Investigation of the West Virginia State Police Crime Lab, Serology Div.*, 438 S.E.2d 501 (W. Va. 1993). For further discussion, see Kent Roach, "Wrongful Con-

be more widely used to enable the court, of its own volition, to examine and assess scientific principles being propounded by expert witnesses. The appeal courts should not hesitate to set out guideline judgments in areas of controversial forensic science and send clear messages to lawyers and forensic scientists about the expectations of the judiciary.

E. IMPOSE A NEW STANDARD OF DEMONSTRABLE RELIABILITY

Prof. Gary Edmond has argued that a higher standard of demonstrable reliability should be applied to prosecution evidence because the state has the ability to fund the type of research and verification procedure that can affirm the reliability of the evidence that it presents in criminal cases.[20] Although the Goudge Inquiry in Ontario adopted many of Professor Edmond's recommendations about the importance of determining threshold reliability and guidelines that judges could use to accomplish this task, the inquiry did not accept his proposal that the forensic science the prosecutor sought to introduce should be held to a higher standard of demonstrable reliability than would be applied to defence evidence. The UK Law Commission also seems to have dismissed the idea that asymmetrical standards for the admissibility of expert evidence can be applied, even though the prosecutor has an obligation to prove guilt beyond a reasonable doubt.

The imposition of standards that forensic evidence offered by the state be demonstrably reliable before it is admitted in court could help prevent miscarriages of justice; it could also encourage the state to invest in improving the forensic sciences. It has the potential to square the circle in the sense of providing perhaps the strongest incentives for the government to reform, fund, and regulate the forensic sciences to increase their reliability. Finally, it recognizes the special responsibility of judges not to allow people to be convicted on the basis of evidence that is neither reliable nor of unknown reliability. As suggested throughout this text, much work needs to be done by both forensic scientists and the legal community before the reality more closely matches the rhetoric of an impartial and reliable search for the truth.

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victions: Adversarial and Inquisitorial Themes" (2010) 35 N.C.J. Int'l L. & Com. Reg. 387 at 429–32.

20 Gary Edmond, "Pathological Science? Demonstrable Reliability and Expert Forensic Pathology Evidence" in Inquiry into Pediatric Forensic Pathology in Ontario, *Independent Research Studies: Pediatric Forensic Pathology and the Justice System*, ed. by Kent Roach, vol. 2 (Toronto: Ontario Ministry of the Attorney General, 2008) at 116–20.