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Thinking Goudge: Fatal child abuse and the problem of uncertainty

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Abstract
The increased valuation of children's lives characteristic of modern society emphasizes the problem of child abuse. Beginning in the 1960s, increased public awareness of child abuse led to increased attention to the professions concerned with child homicide. This attention has taken the form of inquiries into children's deaths that historically concentrated on social work 'error'. Recent inquiries have expanded their attention to other professions, particularly the medical and policing professions. Ontario's Goudge Inquiry centred on paediatric forensic pathology but, rather than focusing concern on murdered children, considered the moral hazard of wrongful convictions stemming from an overzealous concern with child abuse. The inquiry thus raises the problem of what evidence is certain, and how this certainty is evaluated. In turn, this makes the risk of child abuse reflexive insofar as under conditions of uncertainty professional medical judgement contains reflexive risk conditions. Because of these reflexive conditions, professional willingness to engage in child protection is being undermined and therefore threatens to paralyse the larger child protection project.

Keywords
child abuse, medico-legal, pathology, public inquiries, risk, uncertainty

Introduction

Perhaps one of the most overworked clichés of the 20th century is: 'children are our most precious resource'. However, as banal as the phrase has become, it captures something of the shifting valuation of children characteristic of modernity. As Ian Hacking put it, if

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you really think we live in morally relativist times try standing up in front of a group of people and claiming child abuse is a good idea.[1] Nothing unites modern society more than its condemnation of child abuse.

The revulsion caused by revelations of child abuse tends to obscure the fact that 'child abuse' has a history – albeit a short one. This means child abuse as both an area of scientific research, and as an area of medico-legal action, contains vast knowledge gaps and moral uncertainties. Yet despite these failings, the problem of child abuse cries out for somebody to *do* something. Into this area have come assorted philanthropists, volunteers, professionals, politicians and journalists, each with a belief that child abuse ought to be stopped, and given sufficient effort, that it can be stopped.

Despite increased awareness of child abuse, children have continued to die at the hands of abusers. As a result, public inquiries into child fatalities have become a recurring institution. Inquiries into 'failures' to protect children are now four decades old and until recently had become so routine in their structures, findings and recommendations that one tended to blur into another.[2] Recently, however, inquiries have begun to mutate. Prior to 2000, inquiries typically focused on social work, but since the turn of the century other vocations have also come under scrutiny. The 2008 Goudge Inquiry in Ontario demonstrates this enlarged field of inquiry and is the main source for this article.

The Goudge Inquiry was tasked with examining the state of paediatric forensic pathology in the province of Ontario. The inquiry had become necessary because of growing concern about the competence of Dr Charles Smith. Dr Smith was a paediatric pathologist who worked at the Sick Children's Hospital in Toronto and since 1981 had conducted post-mortems for the Chief Coroner of Ontario's Office. He had no training in forensics but unlike his colleagues he had an interest in conducting autopsies on children and eventually became an acknowledged expert on paediatric forensic pathology. In 1992 he became the first director of the Ontario Pediatric Forensics Pathology Unit (OPFPU) at Sick Children's and went on to establish himself as what many witnesses described as the 'go to' pathologist on cause of death for children who died under suspicious circumstances.

However, as early as 1991 concerns about Dr Smith's competence had been expressed by Judge Dunn before whom he had given evidence. Similar concerns continued throughout the 1990s culminating in a *Fifth Estate* story broadcast on national television.[3] Dr Smith was removed from coroner's work in January 2001, but an article in the national newsmagazine *McLean's* later that year ensured he stayed in the public eye. Meanwhile, complaints to various medical, coronial and government review bodies culminated in a critical report from the Ombudsman of Ontario. Dr Smith was then relieved of forensic pathology duties, and removed from his position at the OPFPU in 2004. The following year, the Coroner's Office commissioned five experts from around the globe to conduct a review of all the criminally suspicious cases Dr Smith had been involved with.

The reviewers took issue with 20 of 45 cases they reviewed, but the main cause for concern were 12 cases where there had been a finding of guilt by the court. In view of this, the government appointed Justice Goudge to conduct a judicial inquiry as a separate process to judicial appeals of specific cases. The inquiry was established on 25 April 2007 and reported on 30 September 2008.

Problems with paediatric forensic pathology are not unique to Ontario. England and Wales have experienced unsafe convictions – particularly those of Sally Clark and Angela Cannings – which led to extensive reviews of convictions for infant deaths at the behest of Lord Goldsmith. South Australia also experienced loss of confidence in an eminent pathologist, sparking media coverage and much soul searching (Moles and Sangha, n.d.). The Goudge Inquiry, however, has several unique characteristics. First, unlike the Goldsmith Review, its purpose was not to consider the safety of convictions, but to examine the functioning of forensic pathology within the Coroner's Office and in relation to other parties such as Crown prosecutors, the defence bar, child protection authorities and so forth. Second, the inquiry drew on pathology expertise from around the world including Australia, Canada, Finland, England, Northern Ireland and the US. This expertise came in the form of lengthy written background papers, formal evidence and more informal panel discussions. Third, counsel representing a variety of parties was able to cross-examine. This included organizations representing children, the wrongfully accused, aboriginal interests, the defence bar, as well as individuals affected by Dr Smith's conduct. Fourth, the inquiry was able to draw upon the experience of other jurisdictions and, in the case of Dr Helen Whitwell, had access to an important witness at the English Sally Clark trial. Finally, for the convenience of researchers, virtually all the background materials and transcripts of evidence are available online. This amounts to a massive resource of documentation of which this article barely scratches the surface.

To guide the analysis of the inquiry, the article draws primarily on three theoreticians. Andrew Abbott's (1988) work on the professions guides the analysis of the boundaries between the various professions involved with child abuse and its effects. As I argue later, child abuse is not a discipline; it is an intersection of professional interests and esoteric knowledge requiring various professional groups accommodate one another. However, child abuse is also an area of scientific interest involving both researchers and clinicians from many subspecialties. Yet, paediatric forensic pathology is an extremely small world composed of perhaps less than a dozen people qualified in both the paediatric and forensic specialties of pathology. The uncertainties and relative novelty of the area mean 'facts' are hard to come by and almost never stable. For this reason, readers familiar with Bruno Latour's (1987) Actor Network Theory will recognize his influence. Finally, the major concern underwriting this article is the 'risk' of professional error. The problem of 'risk' is a permanent feature of modern states – of the moral hazards generated within 'risk societies' – but tends to be elided by inquiries. Thus, the insights of Ulrich Beck inform my framing of the moral hazards created by child protection practices.

The deaths of children, especially those styled preventable, tend to receive large amounts of press coverage focusing on the failures of individuals or 'systems'. British Columbia's Gove Inquiry, for example, was sparked by press coverage of Verna Vaudrieul's lawyer's claim that it was not her client who had killed Matthew Vaudreuil, but the 'system' (Anderson, 1994: 5A). The close association between child welfare scandals, inquiries and the press in English history is closely examined by Butler and Drakeford (2003), who conclude inquires serve an important function in bringing public attention to governance flaws. Nevertheless, while 'naming and shaming' professionals in the child abuse field may provide benefits, its effects on individuals and professions can be corrosive.

Child abuse, professions and inquiries

It is notable that within medical literature concerned with child abuse the seminal moment is normally identified as Caffey's (1946) article describing the presence of unexplained healing fractures to children's bones revealed by radiography. Caffey offered no speculation on the cause of the fractures. Social work literature, on the other hand, tends to identify Kempe et al.'s (1962) paper as the genesis of our present concern with child abuse. Kempe cited Caffey so the different attributions are not competing stories of scientific discovery.[4] The difference seems to be that Kempe's audience was wider because he published in the *Journal of the American Medical Association* (the article was accompanied by a strident editorial) and Kempe asserted the cause was a *psychiatric* disorder within adults rather than a physiological defect in the child.

Despite medicine's seminal role, however, the concept of child abuse has never been the exclusive domain of a single discipline or vocation. Rather, child abuse combines the domains of medicine, justice and social work. The resulting collision of professional interests generates boundary disputes over responsibility, authority and knowledge both vertically within professions and horizontally across professions. Thus, for example, while judges certainly have more status than police constables, do police constables have more status than doctors?[5] How these relationships are negotiated has serious practical implications for how responsibility for preventing child abuse is attributed.

The ever-growing awareness of child abuse has not stopped children being killed as a consequence of child abuse. The public outcry over these deaths, fuelled by media reporting, set the stage for a series of public inquiries. England broke the ground for child homicide inquiries in 1973 (Corby et al., 1998), but Canada entered the tradition in 1982 with the publication of Judge H Ward Allen's four-volume report into the 1975 death of Kim Popen (Allen, 1982). Inquiries may be large judicial affairs or smaller more routine reviews. For the most part, inquiries into child homicides caused by child abuse have focused on social work practices. Where other professions have made an appearance, their roles have been relatively minor and their inadequacies generally described as of little consequence.

The relatively minor role assigned medicine by judicially led inquiries into child fatalities changed with events in Cleveland, England during 1987. The Cleveland 'affair' has many implications, but for present purposes two will be highlighted. First, many medical diagnoses of sexual abuse were made on the basis of physical evidence alone. Second, the diagnosis was bitterly disputed *within* the medical profession. In particular, the police surgeon and his allies did not agree with the diagnostic procedure used by hospital-based paediatricians. The dispute placed both social workers and the police in a quandary. On the one hand, the police were unlikely to disbelieve their own surgeon and even if they did could scarcely expect successful criminal convictions without his evidence. On the other hand, social workers who were being frequently and publicly pilloried for missing obvious evidence of child abuse could scarcely ignore the diagnoses of paediatricians. Thus, 121 children found themselves in care. The inquiry gives no figures as to convictions although it seems likely at least some of the children were criminally assaulted (Butler-Sloss, 1988: 21). Ordinarily, the central issue of Cleveland is described as conflict between parental 'rights' and an overly intrusive welfare state.

The Cleveland Inquiry's extension of error across the professions was reinforced in the new millennium. The 2003 report of Lord Laming into the death of Victoria Climbié examined social work but also paid equal attention to the fallibilities of medicine and policing. The following year, murders committed by Ian Huntley prompted two inquiry reports; one emphasized social work (Kelly, 2004) while the other centred on police failings (Bichard, 2004). In the Goudge Report (2008a), social work becomes a minor player in a drama formally concerned with the practices of forensic pathologists and investigating coroners with critical supporting roles supplied by police officers, Crown counsel and members of the defence bar.

Superficially, the Goudge Inquiry covers familiar ground. It is concerned with the death of children as a consequence of child abuse and uses close examination of the facts to make recommendations at both systemic and practice levels. However, the Goudge Inquiry has a very different focal point. The central tension within previous inquiries had been between children's protection from abuse as against parental rights. But in Goudge this is replaced by a tension between the necessary and sufficient evidence of fatal child abuse and the presumption of (adult) innocence. Paediatric forensic pathology is crucial to determining if fatal child abuse – that is, the commission of a crime – has actually occurred.

Paediatric forensic pathology is the branch of medical science charged with determining the cause of death for children who die under suspicious circumstances. In Ontario, pathologists examine bodies under a coroner's warrant, but they are not ordinarily employees of the Coroner's Office and, therefore, while they may report their findings to the coroner, their work is typically independent. Broadly speaking, pathologists determine cause of death, while coroners determine the manner of death.

To make their determination, pathologists may use a full array of diagnostic tools including skeletal x-rays, autopsies, microscopic examination of cells (histology), toxin screens and so forth. They take photographs of the body, make records and store relevant evidence (or forward it to the police or Crown). In cases where a criminal trial results pathologists may give expert evidence on their findings. Moreover, pathologists are often encouraged to testify for both prosecution and defence at different times in order to both expand their knowledge and to emphasize their 'objective' status before the court.

In Ontario, the number of deaths of children under five declined from 276 deaths in 2002 to 194 deaths in 2006 (Paediatric Death Review, 2008: 16). There are, however, several conditions unique to paediatric forensic pathology that have resulted in heated debates and unsafe convictions. These areas include Sudden Infant Death Syndrome (SIDS), short-fall head injuries and Shaken Baby Syndrome (SBS). In Ontario, SIDS is the second leading cause of death behind accidents (150 in 1994 and 1995 of a total 855 deaths) (OACAS, 1997: 8) and is notoriously difficult to determine. Therefore, the terms Sudden Unexpected Death (SUD) or 'unascertained' cause of death have become a more common pathological finding.

Only pathology can establish the medical fact of fatal child abuse upon which social work and law depend, but it was this very 'fact-making' capacity that is examined by the Goudge Inquiry. What are the 'facts' of short falls, SBS, SIDS and the possible persistence of recurring injury caused by the birthing process? Very young children's physiology remains poorly understood thereby creating many areas of uncertainty. Previous inquiries

had always presumed the cause of a child's death was certain. Thus, evidence of abusive or questionable prior child care could always be utilized as an 'obvious' indicator that the death of the child was predictable. For Goudge, the problem was reversed because the cause of the child's death was insecure and therefore evidence of prior caregiver conduct had little objective relevance to cause of death. Put another way, the problem had usually been posed as how to protect children from the *risk of homicide* whereas, for Goudge, the problem was how to protect adults from the *risk of wrongful criminal conviction* when children had 'really' died from accidental or natural causes. The problem hinged on what 'the pathology' revealed. But as all agreed, pathology is an 'interpretive' and 'evolving' science. The question then became: who can be trusted to do the interpreting?

Thinking dirty vs thinking truth

In 1995 the Office of the Chief Coroner of Ontario had issued a protocol to coroners and forensic pathologists which contained, among other things, advice to 'think dirty':

> The police and the coroner are both at a scene as independent parties. While working together they should also be prepared to vigorously, but fairly, question each other's conclusions about the death. Everyone should be 'thinking dirty' and not get lulled into accepting the most obvious conclusions at the beginning of an investigation. (Nov. 26/07, 48/7)

During the inquiry there was considerable debate over the meaning of 'think dirty'. Parties' counsel to the inquiry suggested it represented an invocation to bias. For example, Drs Butt and Milroy, both expert forensic pathologists assisting the inquiry, preferred the phrase 'a healthy index of suspicion' (Nov. 23/07, 53/13). However, Dr Cairns, who at the time of the issuance of the 'think dirty' memo was the Deputy Chief Coroner, explained:

MS. LINDA ROTHSTEIN:	Do you not accept, Dr. Cairns, that at the very least, the language 'thinking dirty' may suggest a lack of objectivity, a mind-set that may conclude that there is foul play where, indeed, there isn't any?
DR. THOMAS CAIRNS:	I think there is a very distinct difference between 'thinking dirty' and 'acting dirty' and I think 'thinking dirty' means do not accept things at face value; consider that there – that there is something else going on. (Nov. 26/07, 54/9)

Later he compares his use of language to that of the present Chief Coroner in this way:

> I don't mean this flippantly, but I think the best way I can describe it to you is I would called a shovel a shovel; Dr. McLellan might be inclined to call it an agriculture instrument. (Nov. 26/07, 59/12)

It is an interesting question as to why this phrase was of such concern to the inquiry's participants. According to Dr Cairns, he had first heard the phrase used by a retired

police officer who had been an assistant to a previous chief forensic pathologist. So far as I'm aware, no one connected with the inquiry questioned whether a police officer's use of the term indicated biased policing. Nor should one underestimate the temper of the times. With the exception of the Cleveland report, from the mid-1970s onward every inquiry into child protection practices had severely criticized social workers for lack of scepticism in evaluating parental conduct. Further, the assumption that children had been killed by their parents under circumstances of previous abuse is explicit in Judge Allen's comments in his 1982 report on the death on Kim Popen. On the issue of whether her sibling should have been removed after her death he wrote:

> I can only express wonderment that one with the general knowledge and experience in social work that Mrs. Harvey had, coupled with her knowledge of Kim's case and her belief that Kim had been abused by Jennifer Popen, should not have been aware of the likelihood that Kim's death was caused by abuse.
>
> Perhaps clinically or legally at that stage one could not 'know' it, but surely when asked if she believed Kim's death was the result of an accident she must have been able truthfully to express her belief rather than to retreat, as she did, to a denial of certain knowledge. (Allen, 1982: 1: 245)

The present Chief Pathologist of Ontario, Michael Pollanen, claims forensic pathologists should 'think truth' rather than 'think dirty' in order to 'know' how a child died. But what is 'truth' in the context of child abuse? And, who is to determine this 'truth'? There are two aspects to this problem. First, some children die in hospital which means they are often seen by a variety of clinicians before death and their body is autopsied by a forensic pathologist. Such a child is, in fact, two children – one that is alive and under the care of clinicians and one that is dead and literally composed of anatomical pieces distributed among specialist technicians whose various findings (facts?) are then assembled by forensic pathologists into a cause of death. The second aspect is the problem of pathologists disagreeing among themselves as to appropriate interpretations of physical evidence obtained by other pathologists or of the significance of 'facts' provided by ancillary specialists.[6]

From the cases before Goudge, an example of the first problem involves the 'Kasandra' case. In 1991 Kasandra was living with her father and stepmother. Many abuse complaints had been made by her mother and maternal relatives. Investigators noted bruises and what appeared to be a cigarette burn. Prior to her death, she had already been admitted to hospital while dehydrated, vomiting and bruised. She returned to hospital a short time later and eventually died there. As Dr Smith's counsel pointed out, during this second admission the receiving physician, two neurologists, two ophthalmologists and the director of the receiving unit all believed the child had been abused. Dr Charles Smith concurred in his post-mortem, believing the child to have died as a result of a head injury. Dr Whitwell, a leading English forensic pathologist, reviewed Smith's opinion for the Chief Coroner and gave evidence to Goudge. She did not dispute Smith's observations but was of the opinion that the child may have suffered from 'fits'.[7] She stated in her report: 'Probably would have been given by clinicians, pathologists in 1991, but alternative non-traumatic mechanisms not completed [*sic*] explored' (Dec. 13/07, 200/8).

The question of who to believe is summed up in this exchange:

> DR. HELEN WHITWELL: . . . I mean – I'm afraid, because you're reading out what they [the clinicians] – they've said.
> I – I've reviewed the case now, from a pathological aspect, so this is all factual, which I can't challenge one way or the other. I wouldn't be able to.
>
> MR. NIELS ORTVED: Well, what I'm saying to you is that they were reflecting on injuries that they saw while this child was still alive. (Dec. 13/07, 196/2)

The question of whether clinicians' views are of the same value as pathologists' views arises throughout the inquiry. Dr Pollanen states the view of forensic pathology on the limits of clinical knowledge (in this case, on sexual abuse indicators):

> Pediatricians which have as their experience living children, do not, on that basis, have experience with the dead anus, in this circumstance, therefore are not fully appreciative of the artifacts associated with that. So, this is where the – where the issues arise. (Nov. 16/07, 99/2)

Pollanen is clearly using experience to mark the boundary within which forensic pathology claims exclusive jurisdiction. Similarly, the Irish forensic pathologist Dr Crane shows no hesitation in overruling a neuro-pathologist's interpretations based on his superior experience with deceased bodies (Nov. 20/07, 212/9).[8] But the experience of autopsying infants is very limited even for experts. According to the Ontario Coroner's 1997 report, the Coroner investigates approximately 200 infant deaths a year but does not necessarily do an autopsy on all of them (OACAS, 1997: 6). In any event, according to the present Chief Forensic Pathologist, Dr Pollanen, and with very little variation, homicide accounts for only five to 15 infant deaths per year (Nov. 12/07, 57/4). There are three centres in Ontario where paediatric autopsies are done, which means infant autopsies are an extremely rare occurrence at any of these facilities. Dr Whitwell stated her experience as some 50 or 60 autopsies under suspicious circumstances since 1988 – roughly two or three a year. How many of Whitwell's autopsies were on children is not given, but one assumes their incidence is not significantly different than Canada. The rarity of suspicious child deaths explains why there are no pathologists in Canada, Australia, or the UK accredited in both paediatric and forensic pathology subspecialties.

Disagreements between pathologists are not marked by jurisdictional boundary disputes, but by disputes over interpretations. Such disputes are by no means a recent phenomenon. Indeed, medico-legal courtroom argumentation over the 'normative' range of anal dilation was argued in 1871 in the context of 'habitual sodomy' (Edmund, 2001: 198). This early instance questioned which preconditions are necessary for adequate interpretations including: what constitutes an adequate 'examination', and what kinds of equipment are necessary?[9] For the Goudge Inquiry additional issues included what kind of training and/or experience ought pathologists to have? What relative weight should be placed on reported research as against 'anecdotal' evidence?

For present purposes two themes are particularly significant. First, the question of what kinds of examination and equipment are pertinent and trustworthy. A hallmark of

science is replication, but first autopsies cannot be replicated. And, even if replication were possible it would inevitably cost money, which is a burden on the defence. Moreover, subsequent analysis of autopsy material is necessarily dependent upon the quality of the initial post-mortem examination and autopsy. Strictly speaking, then, the ability to replicate procedures – a necessary step in establishing scientific facts – is not possible. It is interesting to note that at one point the experts used by Goudge strongly criticize a case in which a pathology assistant actually did the 'cutting' for an autopsy because Dr Smith was incapacitated. The assistant was acknowledged as highly skilled by everyone who worked with him – more so than many doctors – but the Irish pathologist Dr Crane states:

> Because, for instance, if some organ is damaged – if you do it yourself as a pathologist, you know you've done it. But if you let someone else do it, you don't know. Was there was a laceration of the liver or did the technician make it? (Nov. 22/07, 235/8)

If we are to take this statement seriously, then it raises the question of whether any subsequent second opinion of an autopsy can be trusted because only the original pathologist can know what was actually done to the body. Given that pathologists routinely give second opinions on the basis of photographs and other secondary media it seems any second opinion must be suspect – not because of the knowledge of the pathologist but because the immediacy of personally handling the body is lost.

The second theme is perhaps more crucial. Forensic pathology is a very small world. For example, in England and Wales there are only approximately 40 forensic pathologists on the Home Office list of government recognized forensic pathologists (Nov. 19/07, 27/10). Canada has no training available for forensic pathologists who generally qualify in the UK or US. Further, remuneration is poor so Ontario has had periods where the Chief Forensic Pathologist was the only qualified person within the coroner's ambit. Moreover, evidence to Goudge indicated that forensic pathology has been largely abandoned by universities because it does not generate research funds and therefore lacks cachet within medicine. None of forensic medicine's journals achieve the minimum impact rating that English universities require and, besides, the pool of potential authors is necessarily small. In short, forensic pathology practitioners, researchers, expert witnesses and authors are one and the same. For example, even when his competence was being widely questioned, Dr Charles Smith was still co-authoring articles (with virtually the entire medical staff of the Coroner's Office) in forensic journals in 2002 and with researchers at the University of Toronto in 2005 (Pollanen et al., 2002; Somers et al., 2005).

Given this small world, comments by expert forensic pathologists on their colleagues can be surprisingly harsh. Dr Crane, for example, specifically states the literature cannot be trusted when it contradicts his own experience (Nov. 20/07, 220/1). Crane's English colleague, Dr Milroy, later claims a lot of literature in forensic journals is 'rubbish' (Nov. 20/07, 246/8). When Dr Saukko was asked about how forensic pathologists in Finland learn to give evidence he responded 'some don't learn it ever' (Dec. 3/07, 49/14). Despite the appeal to evidence, rationality and method, much of the evidence given to Goudge by acknowledged experts rests upon their personal experience and the small amount of research literature they have been able to generate and publish in journals of limited quality.

There are, then, several indications that forensic pathology is as much art as science. This is in keeping with Smith's (1989) account of the way English forensic pathologists think of themselves. Nor is it inconsistent with a view of science influenced by social construction. But the expert pathologists testifying before Goudge seem unable to decide where they stand on this issue. On the one hand, they agree with Dr Pollanen's assertion that forensic pathology should be 'truth-seeking', 'evidence-based' and supported by the relevant literature. On the other hand, they are more than willing to discount evidence relayed from other specialties or research from literature when it contradicts their own anecdotal experience. Indeed, at one point Dr Crane goes so far as to imply that the sign of a good forensic pathologist is that he or she is older. At the very least, he claims, an older and more experienced pathologist is more likely to find a cause of death as unascertained than a younger pathologist.

From risk to evidence-based

The late 1980s and early 1990s saw the proliferation of risk as an idea capable of mastering the ambiguities of child protection work. Inquiries established that social workers routinely failed to anticipate fatal child abuse (and therefore the incidence of child fatalities) because they were too concerned with supporting families rather than interpreting risk factors. Risk assessment tools were encouraged because it was believed their organization of contextual data could provide a basis for predicting abusive outcomes. Less obvious, but equally important, risk assessment tools ensured a 'paper trail' visible to the increasing prevalence of audit and accountability structures (Cradock, 2003). In fact, risk assessment tools simply lowered the threshold of risk tolerance for social workers (Leslie and O'Conner, 2002; Spratt, 2000, 2001). Increased managerial surveillance combined with an increasingly hostile public encouraged 'defensive social work' in which the main index of social work action was the risk felt by social workers – not the risk experienced by children (Regehr et al., 2002).

It seems forensic pathology underwent a similar, if more subtle, transformation. Evidence given before Goudge suggested that during the 1990s forensic pathologists and the Coroner's Office were unduly influenced by the Suspected Child Abuse and Neglect (SCAN) unit of the Sick Children's Hospital in Toronto (Nov. 17/07, 101/2; Nov. 21/07, 113/9). At the very least, there was an underlying suspicion that clinicians and Dr Smith were inclined to opine that children had been killed on the basis of circumstantial evidence or evidence of previous treatment by caregivers that may have been occasionally brutal, but was not necessarily fatal; at least not demonstrable to the criminal standard of beyond reasonable doubt.

The knowledge base of paediatric forensic pathology also changed rapidly. At the beginning of the 1990s, presence of the so-called 'triad' indicating fatal Shaken Baby Syndrome was generally accepted as the 'truth'.[10] By contrast, experts giving testimony before Goudge were not only sceptical of the triad's diagnostic veracity, they were sceptical SBS exists at all (Nov. 21/07, 227/5; Dec. 12/07, 145/1). Similarly, in the early 1990s it was generally believed short falls in infants of younger than two years were relatively benign but it is now generally accepted that while rare, a short fall can be fatal. These shifts in knowledge are not shifts in 'facts' in the sense that present observations are qualitatively

different.[11] Rather, these are ongoing controversies about appropriate *inferences* for which there are a range of opinions claiming validity under uncertain circumstances.

In this sense, the call for 'evidence-based' pathology is somewhat misleading. If the evidence itself is unsettled it is unclear how this provides support – let alone direction – to practitioners. The generally agreed solution placed before Goudge was that pathologists (and this is no different from the rationale expected of any evidence-based practice) make their reasoning transparent, indicate why they prefer one interpretation over others, and, if appropriate, support their position with reference to the literature. Further, forensic pathologists must be careful to present all sides of any controversy so as to not unduly influence judges and juries. This does not resolve the fundamental problem, however, because in this view unsettled evidence – that is, unresolved uncertainty caused by disagreement over *how* to determine the 'truth' of evidence – cannot be resolved.

Throughout the evidence given to Goudge the problem of how to evaluate the veracity of evidence and the truth value of statements is pervasive. What is striking is the legal players' – Goudge and counsel – persistence in trying to express opinions in terms of percentages. At no point do the participants seem aware that expressing evidence in terms of percentages is to invoke ratios; ratios are measures of probability; probability is another way of saying 'risk'. Legal functionaries' insistence on trying to express cause of death in terms of percentages led Dr Charles Smith to use the phrase 'If I were a betting man' in evidence. In a similar way, the eminent English paediatrician Sir Roy Meadow compared the percentages of two or more SIDS deaths occurring in one family to the running of the Grand National horse race. Both men were heavily criticized for this phrasing despite the fact that risk as a concept was originally rooted within gambling.

In short, except for obvious cases (say, gunshot wounds), no 'evidence-based' diagnosis is risk free. As Abbott (1988) pointed out, making decisions under conditions of ambiguity and uncertainty is fundamental to the definition of what a professional is. For those engaged in child protection, every 'evidence-based' decision is fundamentally a risk decision. If it were not, it would not be a professional decision; it could have been made by an automaton. A way out of this dilemma is to refuse to make a decision. For paediatric forensic pathologists this means characterizing the cause of death of an infant as 'unascertained'. This is, in fact, the most common reclassification of Dr Smith's findings. Yet, in at least some of the cases – Paolo, for example, whose father later admitted in the context of family court that he had punched his infant child with a closed fist – the finding of unascertained would have astounded Judge Allen in 1982 (*Children's Aid* v. *T. (M)*). Such a finding seems more an expression of moral weakness than scientific rigour. Nevertheless, it protects pathologists from public opprobrium in the form of public inquiries. To borrow from the social work literature, this is 'defensive pathology'.

Risk and reflexivity

In the context of child abuse, risk is ordinarily conceived in one of two ways, each related to Ariès' two concepts of childhood (Ariès, 1962: 128). Either children are innocents at risk of harm from adults or children pose a risk to others because they are incapable of controlling their baser instincts. However, there is another way to conceive of risk within child protection practice. Like any other bureaucratized techno-scientific activity child

protection creates moral hazards (Ewald, 2002). These hazards are the generally predictable harms generated by the activity itself. Thus, the process of criminally convicting persons for killing children will result in wrongful convictions. When those wrongful convictions occur, and who is affected by them, may be more or less random, but it is moral certainty some will occur. This is the reality of the 'risk society'.

The central characteristic of the 'risk society' described by Ulrich Beck (1992) is the universal distribution of risk within modern techno-scientific industrial culture. For Beck, the risks that really matter are globally distributed and thus unhinged from social class and status. Distinctively modern risks from global warming, nuclear meltdowns, resource exhaustion and so forth are independent of class insofar as there is nowhere on the planet from which to escape their consequences. The globalization of risk, then, produces a situation of radical self-reflexivity since all members of society have the potential to suffer from the moral hazards generated by activities guided by uncertain science or ambiguous facts. 'The ultimate deadlock of risk society, however, resides in the gap between knowledge and decision: there is no one who really knows the global outcome – at the level of positive knowledge, the situation is radically "undecideable" – but we none the less *have to decide*' (Beck, 1999: 78; emphasis in original). Beck's focus is catastrophic, but insofar as child abuse can potentially happen to anyone his analysis helps illuminate the knowledge crisis of 'child abuse' due to inevitable contradictions generated by an endlessly 'self-critical society':

> So risk society is provoking an obscene gamble, a kind of ironic reversal of predestination: I am held accountable for decisions which I was forced to make without proper knowledge of the situation. The freedom of decision enjoyed by the subject of risk society is the 'freedom' of someone who is compelled to make decisions without being aware of their consequences. . . . it is necessary to redefine the rules and principles for decision-making, for areas of application and critique. The reflexivity and incalculability of societal development therefore spreads to all sectors of society, breaking up regional, class-specific, national, political and scientific jurisdictions and boundaries. (Beck, 1999: 78–9)

The reflexivity of risk in the context of child abuse raises the possibility that those involved in seeking to discover and ameliorate child abuse are themselves placed at risk by the moral hazards generated by the project.

The classification 'unascertained' as a cause of death is out of step with Beck's analysis and the analysis of previous inquiries. From Kempe et al.'s first description of the battered baby syndrome there has been an assumption that fatal child abuse is obvious (or at the very least can be determined through the use of appropriate instruments such as risk assessments or autopsies) and therefore blame for children's deaths can always be located. The Goudge Inquiry's tendency to applaud forensic pathologists' willingness to admit uncertainty undermines the trend of inquiries over the previous four decades. Insofar as previous inquiries acknowledged the possibility of uncertainty, the advice was always to err on the side of safety. But those inquiries never seriously grappled with the possibility that ensuring children's safety through toleration of false positives might generate unacceptable risks elsewhere.

When 'blame' was located within social work practice uncertainty was obscured. Social work was, after all, a very junior and low status profession whose conduct was typically evaluated by more senior professions. Even where inquiries recognized

'systemic' problems, the solutions to those problems have been remarkably repetitive. At no time (with the possible exception of the Cleveland Inquiry) had the problem of unstable or uncertain knowledge been seriously raised within inquiries.

The new millennium expanded the scope of scepticism to medical doctors. In quick succession some of the leading lights of the medical profession were publicly castigated. In the UK, Sir Roy Meadow and David Southall – both leading paediatric researchers and clinicians – were disciplined by the General Medical Council in the context of children's deaths. In South Australia, Dr Colin Manock's pathological work came under critical scrutiny (Moles and Sangha, n.d.). Like Charles Smith, these doctors had been the eminent 'go to guys' in their jurisdictions because of their extensive research, publications, clinical practice and eminent status within paediatric professional associations.[12]

In the wake of the disciplining of Meadow and Southall three articles appeared in *Pediatrics* (one co-authored by 53 paediatricians, a 'senior lawyer' and a 'senior social worker') arguing that doctors were now being 'intimidated' by parents, the press and medicine's own governing councils (Chadwick et al., 2006; Jenny, 2007; Williams, 2007). The net result is: 'One third of child protection posts for designated doctors are unfilled and 62% of trainees in North West England do not wish to deal with child protection cases' (Williams, 2007: 801). Paediatricians were not alone in this concern. In his written judgement on the General Medical Council's appeal of a lower court's decision to reinstate Meadow on the medical register, Justice Thorpe spends considerable time on the need to protect expert witnesses. He notes: 'The volume and the nature of the public criticism of Professor Sir Roy Meadow caused anxious concern to the President and Council of the Royal College of Paediatrics and Child Health. Members of the Royal College were either withdrawing from or declining to enter forensic work, a vital ingredient of overall child protection services' (*GMC* v. *Meadow*, para. 232). These problems are not unique to England and Wales. According to Dr Pollanen's evidence, recruiting pathologists to forensic work is extraordinarily difficult because pathologists prefer work in hospitals where there is 'larger remuneration and less controversy' (Nov. 12/07, 81/20).

Two points can be made about the preceding. First, the reaction of English paediatricians is not dissimilar to the reaction of social workers before them. Inquiries have not only had a debilitating effect on the social workers involved in them, but they have contributed to making child protection work profoundly unattractive for new recruits to the field (Regehr et al., 2002). Second, if an occupational pool as large as social work can experience chronic and debilitating shortages of capable personnel, how much more so for the relatively small world of paediatricians, and the even smaller world of forensic pathologists. It is useful to remind ourselves that Dr Charles Smith became the 'go to guy' for child homicide in Ontario largely because nobody else wanted the position.

Conclusion

Child abuse generates reflexive risk conditions for adults. The overwhelming social imperative to protect children from harm which began during the mid-19th century was transformed into a techno-scientific project when Kempe et al. published 'The Battered Child Syndrome'. In turn, the re-presentation of child maltreatment from the moral realm of cruelty into the techno-scientific realm of child abuse presumed the creation and

evolution of a factual basis for determining cases of child abuse – and particularly fatal child abuse. This fundamental assumption underpinned the rationale for inquiries into child abuse 'failures'. Thus, those engaged in the discovery and amelioration of child abuse carried the enormous responsibility of realizing seamless protection for 'our most precious resource' from lethal harms conceived as scientifically self-evident.

The intensity of public emotions surrounding child mortality must be understood in the context of these assumptions. However, the Goudge Inquiry presented a competing and equally emotionally charged problem – the problem of the 'wrongfully convicted'. This is more than the usual public outcry over the state's agents trampling parental 'rights'. Criminal convictions can and have resulted in lengthy terms of imprisonment, the permanent loss of children through adoption, and in the tragic instance of Sally Clarke, death by suicide. When inquiries were demanding social workers and other professionals place the child at the centre of their practices the consequences of wrongful convictions were never contemplated.

Dr Charles Smith became the 'go to guy' in Ontario because he was not afraid to aggressively confront the 'fact' of child abuse. The relatively high status of medicine protected him from the kinds of inquisitions social workers had undergone. However, as the attention of inquiries expanded from social work he was eventually confronted by equally aggressive organizations and a sympathetic press pursuing defence of the wrongfully convicted. In this confrontation 'innocence' was not the exclusive prerogative of childhood but, in the absence of factual evidence, an assumed quality extended to all. In short, the death of children is now unascertained in the absence of *certain* evidence to the contrary. But, of course, it is the very problem of the constitution of certainty that creates the problem in the first place. What exactly is meant by terms such as 'a high index of probability'? When the world turns again, one wonders if the expert forensic pathologists who testified so confidently before Goudge might not find themselves equally vilified for their unwillingness to draw 'obvious' inferences from the 'facts'.

The popular enthusiasm for the claim that risk assessments could prevent the deaths of children prompted me to publish a paper ending with the question: 'What risks does risk thinking pose?' Now, some six years later, and taking account of the newly stated importance of 'evidence', I update the question. What are the evidential requirements for certain (enough) evidence?

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Notes

1. I heard Hacking make this comment at Green College, University of British Columbia, during his lecture 'The social construction of what?' in January 1998.
2. Corby et al.'s (1998) exhaustive analysis of inquiries in the UK includes an inquiry from 1945 and another from 1967. The authors note that there is no central location for inquiry reports so it is possible reports exist but are unknown to researchers. That said, they report only these two inquiries took place between 1945 and 1972. Between 1973 and 1982 the number was 31 and in the next decade another 28.

3. The *Fifth Estate* is a public affairs newsmagazine style television show broadcast by the Canadian Broadcasting Corporation.
4. Kleinman (2006) cites Frederick Silverman 'a protégé of Caffey' to the effect that Caffey believed the injuries he was observing were due to 'parental malfeasance' but 'did not go further because he was concerned about possible legal repercussions'. In any case, Silverman drew attention to Ambroise Tardieu who had identified both physical and sexual mistreatment of children as early as 1857 (Labbé, 2005). Clearly, child abuse was not 'discovered' but *conceived*. See also Hacking (1991, 1995).
5. The Laming Report contains the following remarkable passage: 'It is wrong for social workers or police officers to blindly accept everything they are told by doctors, no matter how important those doctors are, and they must fit the medical evidence in with the other information available before arriving at their own conclusion' (Laming, 2003: 302). Taken seriously, this sentence suggests each profession is required to evaluate each other profession's knowledge claims through the lens of their own epistemological practices. At the very least, each profession*al* is required to be sceptical of the knowledge claims of other professions.
6. Interestingly expert pathologists giving evidence to Goudge show no inclination to question the 'Black Boxing' of 'facts' generated by other services such as radiography, DNA analysis, etc. (Latour, 1987). They question the *significance* of the facts; not the creation of the facts themselves.
7. Smith co-authored a paper in 2001 on Sudden Infant Death in children with epilepsy in which it was noted 'because the causes of epilepsy in children differ from those in the adult population, the circumstances of sudden death may also differ' (Donner et al., 2001). Kasandra died in 1991 so arguably Smith contributed to the creation of the knowledge Whitwell implies was not available at the time of Kasandra's death.
8. Elsewhere, Crane asserts the view that while clinician's accounts must be 'taken account of', the forensic pathologist's opinion of the value of those accounts is primary (Nov. 21/07, 228/21).
9. Interestingly Tardieu's work was raised in the context of this case but rejected on the grounds that 'continental' knowledge couldn't be trusted. Hence, the reliability of knowledge had nationalist overtones.
10. The 'triad' is defined by as infants who presented with encephalopathy, thin subdural haemorrhages and retinal haemorrhages. 'In July of 2005, the Court of Appeal in the United Kingdom reversed or reduced three convictions of SBS, finding that the classic triad of retinal hemorrhage, subdural hematoma, and acute encephalopathy are not 100% diagnostic of SBS and that clinical history is also important' (Cordner et al., 2008: 85).
11. To be fair, the research into brain damage Whitwell co-conducted did utilize a new stain. But this then raises the problem of standards of validation for a 'novel' technique; whether scientific standards are sufficient to meet legal standards.
12. While Meadow was eventually vindicated by the English courts (twice), it is interesting to note his vindication is almost completely ignored in the literature. Before Goudge, Meadow is described as fallen 'from grace' (Nov. 23/07, 121/6). In Bala and Trocmé's (n.d.: 60) commissioned paper Meadow is called 'incompetent', and in Kramer's (2006) commentary Meadow is called a 'self-described child-abuse expert' and whose evidence 'resulted in the wrongful convictions of three women' (Kramer, 2006: 808). In fact, Meadow was chastised for overstepping his expertise by using erroneous statistics. His evidence in the Sally Clark case (which problematized the two other cases) did not result in her wrongful conviction which was overturned on other grounds. The evidence in question was, in fact, described by the original trial judge as a 'sideshow'. The suggestion he was merely a 'self-described' expert is disingenuous to say the least given his extensive publication record.

References

Abbott A (1988) *The System of Professions: An Essay on the Division of Expert Labor*. Chicago and London: University of Chicago Press.

Allen HW (1982) *Judicial Inquiry into the Care of Kim Anne Popen by the Children's Aid Society of the City of Sarnia and County of Lambton*, 4 vols. Toronto: Queen's Printer for Ontario.

Anderson C (1994) Killer mom 'failed by the system': Social services didn't rescue child: Lawyer. *The Province*, 22 April, p. 5(A).

Ariès P (1962) *Centuries of Childhood: A Social History of Family Life*, trans. Baldick R. New York: Vintage Books.

Bala N and Trocmé N (n.d.) Child protection issues and pediatric forensic pathology. Background paper commissioned by the Goudge Inquiry.

Beck U (1992) *Risk Society: Towards a New Modernity*. London: Sage.

Beck U (1999) Risk society and the welfare state. *World Risk Society*. Cambridge: Polity.

Bichard Sir M (2004) *The Bichard Inquiry Report*. London: The Stationery Office.

Butler I and Drakeford M (2003) *Scandal, Social Policy and Social Welfare*, 2nd edn. Basingstoke: Palgrave.

Butler-Sloss E (1988) *Report of the Inquiry into Child Abuse in Cleveland 1987*. London: HMSO.

Caffey J (1946) Multiple fractures in the long bones of infants suffering from chronic subdural hematoma. *American Journal of Roentgenology* 56(2): 163–173.

Chadwick DL, Drous HF and Runyan DK (2006) Meadow, Southall, and the General Medical Council of the United Kingdom. *Pediatrics* 117(6): 2248–2251.

Corby B, Doig A and Roberts V (1998) Inquiries into child abuse. *Journal of Social Welfare and Family Law* 20(4): 377–395.

Cordner S, Ehsani J, Bugeja L and Ibrahim J (2008) Pediatric forensic pathology: Limits and controversies. Background paper commissioned by the Goudge Inquiry.

Cradock G (2003) Risk, morality, and child protection: Risk calculation as guides to practice. *Science, Technology, and Human Values* 29(3): 314–331.

Donner EJ, Smith CR and Snead OC III (2001) Sudden unexplained death in children with epilepsy. *Neurology* 57(3): 430–434.

Editorial (1962) *Journal of the American Medical Society* 181(1): 42.

Edmund G (2001) The law-set: The legal-scientific production of medical propriety. *Science, Technology, and Human Values* 26(2): 191–226.

Ewald F (2002) The return of Descartes's malicious demon: An outline of a philosophy of precaution. In: Baker T and Simon J (eds) *Embracing Risk: The Changing Culture of Insurance and Responsibility*, trans. Utz S. Chicago and London: University of Chicago Press.

Goudge ST (2008a) *Inquiry into Pediatric Forensic Pathology in Ontario: Report*, 4 vols. Ontario Ministry of Attorney-General. Available at: www.goudgeinquiry.ca/

Goudge ST (2008b) *Index of Transcripts.* Available at: G:\Goudge Inquiry\Index of Transcripts_files\Index of Transcripts.htm

Gove TJ (1995) *Report of the Gove Inquiry into Child Protection*, 3 vols. British Columbia: Ministry of Attorney-General.

Hacking I (1991) The making and molding of child abuse. *Critical Inquiry* 17(2): 253–288.

Hacking I (1995) *Rewriting the Soul: Multiple Personality and the Sciences of Memory*. Princeton, NJ: Princeton University Press.

Jenny C (2007) The intimidation of British pediatricians. *Pediatrics* 119(4): 797–799.

Kelly Sir C (2004) *Serious Case Review, Ian Huntley: North East Lincolnshire 1995–2001*. North East Lincolnshire Area Child Protection Committee.

Kempe CH, Silverman FN, Steele BF, Droegemueller W and Silver HK (1962) The Battered-Child Syndrome. *Journal of the American Medical Association* 181(1): 17–29.

Kleinman PK (2006) Multiple fractures in the long bones of infants suffering from chronic subdural hematoma: A commentary. *American Journal of Roentgenology* 187 (December): 1403–1404.
Kramer K (2006) Coroners' interested advocacy: Understanding wrongful accusations and convictions. *Canadian Journal of Criminology and Criminal Justice* 48(5): 803–821.
Labbé J (2005) Ambroise Tardieu: The man and his work on child maltreatment a century before Kempe. *Child Abuse and Neglect* 29(4): 311–324.
Latour B (1987) *Science in Action: How to Follow Scientists and Engineers Through Society*. Cambridge, MA: Harvard University Press.
Leslie B and O'Connor B (2002) What are the products of the Ontario Risk Assessment Tool? *OACAS Journal* 46 (4): 2–32.
Lord Laming (2003) *The Victoria Climbié Inquiry: Report of an Inquiry by Lord Laming*. London: HMSO.
Moles RN and Sangha BM (n.d.) Comparative experience with pediatric pathology and miscarriages of justice: South Australia. Report to the Inquiry into Pediatric Forensic Pathology in Ontario.
OACAS (Ontario Association of Children's Aid Societies) and OCCO (Office of the Chief Coroner of Ontario). (1997) Ontario Child Mortality Task Force – Final report. *Journal: Special Edition*, July.
Paediatric Death Review Committee. (2008) Report of the Paediatric Death Review Committee and the Deaths Under Five Committee. Office of the Chief Coroner of Ontario (electronic copy).
Pollanen MS, Smith CR, Chiasson DA, Cairns JT and Young J (2002) Fatal child abuse-maltreatment syndrome: A retrospective study in Ontario, Canada, 1990–1995. *Forensic Science International* 126(2): 101–104.
Regehr C, Chau S, Leslie B and Howe P (2002) Inquiries into deaths of children in care: The impact on child welfare workers and their organization. *Children and Youth Services Review* 24(12): 885–902.
Smith R (1989) Forensic pathology, scientific expertise, and the criminal law. In: Smith R and Wynne B (eds) *Expert Evidence: Interpreting Science in the Law*. London and New York: Routledge.
Somers GR, Chiasson D and Smith CR (2005) Pediatric drowning: A 20-year review of autopsied cases: I. Demographic features. *American Journal of Forensic Medicine and Pathology* 26(4): 316–319.
Spratt T (2000) Decision making by senior social workers at point of first referral. *British Journal of Social Work* 30(5): 597–618.
Spratt T (2001) The influence of child protection orientation on child welfare practice. *British Journal of Social Work* 31(6): 933–945.
Williams C (2007) United Kingdom General Medical Council fails child protection. *Pediatrics* 119(4): 801–802.

Cases cited

Children's Aid Society of Kingston and Frontenac County v. *T. (M)*. Kingston Registry No. 207/94.
General Medical Council v. *Professor Sir Roy Meadow* with Her Majesty's Attorney General. [2006] EWCA Civ 1390.

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