

UNDUE DEFERENCE TO EXPERTS SYNDROME?

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INTRODUCTION

Expert witnesses are a recognized part of the legal landscape and, indeed, providing expert evidence to courts has become something of a growth industry.² Expert witnesses often make valuable contributions. Engineers give evidence of the unique nature of particular designs in patent cases. Accountants explain how the books might be kept in a business context. Forensic scientists speak to the methodology and probability of matching physical evidence, such as blood or hair samples found at a crime scene, to the accused. Expert witnesses play no less of a role in family-related cases. Psychiatrists explain what might drive one adult partner to kill the other when the killer has been the victim of domestic abuse at the hands of the deceased. Psychologists offer expertise in terms of what is likely to have positive or negative effects on a particular child in the context of custody disputes. Actuaries help the court to understand the value of various assets, like pensions, and how these valuations may be arrived at, in property disputes. Expert witnesses feature particularly prominently when “syndromes”³ come before the

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2. “In the past two decades, the use of expert witnesses has skyrocketed. . . . Some commentators claim that the American judicial hearing is becoming trial by expert.” JOHN W. STRONG, MCCORMICK ON EVIDENCE §13 (5th ed. 1999) (references omitted). “A large litigation support industry, generating a multi-million pound fee income, has grown up among professions such as accountants, architects, and others, and new professions have developed such as accident reconstructionists and care experts. This goes against all principles of proportionality and access to justice.” The Right Honourable the Lord Woolf, *Access to Justice: Final Report to the Lord Chancellor on the Civil Justice System in England and Wales*, ch. 13, ¶ 1 (1996), available at <http://www.dca.gov.uk/civil/final/contents.htm>. It is worth remembering that expert witnesses often play an important part in negotiations that take place prior to a case reaching court and may contribute to a settlement being reached in civil cases.

3. *Sedman's Medical Dictionary* defines the term as, “The aggregate of signs and symptoms associated with any morbid process, and constituting together the picture of the disease.” STEDMAN'S MEDICAL DICTIONARY 1721 (26th ed. 1995). Curiously, *Black's Law Dictionary* does not define the word “syndrome” itself. BLACK'S LAW DICTIONARY (8th ed. 2004). However, it does define a number of specific syndromes, variously equating the word with “condition” (Munchausen Syndrome By Proxy), *id.* at 1042, “situation” (parental

courts and, undoubtedly, there is no shortage of either syndromes or expert witnesses prepared to testify about them.⁴ Thus, we have had battered child syndrome,⁵ shaken baby syndrome,⁶ battered woman syndrome,⁷ parental

alienation syndrome), *id.* at 1146, or “disorder” (repressed memory syndrome), *id.* at 1329. *Merriam-Webster's Collegiate Dictionary* defines “syndrome” as “a group of signs or symptoms that occur together and characterize a particular abnormality.” MERRIAM-WEBSTER'S COLLEGIATE DICTIONARY 1196 (10th ed. 1995).

4. See *Scoping Study On Delay In Children Act Cases: Findings and Action Taken* ¶ 64 (2002), available at <http://www.dca.gov.uk/family/scopestud.htm>. This study was instructed by the Lord Chancellor in England and Wales, finding that delays in the handling of cases involving children were attributable, in part, to a shortage of available expert witnesses. *Id.* However, when one looks more closely at the findings, it appears that the shortage is not of expert witnesses *per se*, but is due to a desire for particular witnesses, court practice and overall poor case management. *Id.* at ¶ 65.

5. The term “battered child syndrome” first came to prominence at the multidisciplinary conference, organized by Dr. C. Henry Kempe on “The Battered-Child Syndrome” in 1961, and the seminal article he and others wrote the following year. C. H. Kempe et. al., *The Battered-Child Syndrome*, 181 JAMA 17 (1962). He and Ray Helfer co-edited the first edition of *The Battered Child* in 1968. For a discussion of these early developments, see THE BATTERED CHILD 24-25 (Mary Edna Helfer et al. eds., 5th ed., 1997). Originally, the term was used to describe “altered parent and child behavior, malnutrition, and multiple types and ages of inflicted injury.” Kenneth Wayne Feldman, *Evaluation of Physical Injury*, in THE BATTERED CHILD, *supra*, at 179.

6. “Shaken baby syndrome (SBS) is the result of a *violent shaking force* that causes a whiplash acceleration-deceleration motion of the relatively unstable infant's head upon its neck. . . . Rapid deceleration occurs when the victim's chin strikes the chest and subsequently when the occiput strikes the interscapular region of the back at the base of the neck. . . . SBS usually produces a diagnostic triad of injuries that includes diffuse brain swelling, subdural hemorrhage, and retinal hemorrhages.” Robert R. Kirschner, *The Pathology of Child Abuse*, in THE BATTERED CHILD, *supra* note 5, at 271-72 (emphasis in the original text). SBS came to international attention when an English nanny, Louise Woodward, was convicted in the United States of killing Matthew Eappen, a baby in her care. *Commonwealth v. Woodward*, 7 Mass.L.Rptr. 449 (Mass. Super. 1997); *Commonwealth v. Woodward*, 694 N.E.2d 1277 (Mass. 1998). Controversy has recently surrounded the diagnosis of SBS in respect of reliance on retinal hemorrhages and retinal folds as indicators of SBS and research suggesting that injuries mimicking SBS can be caused by a low-level fall. See J.F. Geddes & J. Plunkett, *The Evidence Base for Shaken Baby Syndrome*, 328 BRIT. MED. J. 719 (2004); P.E. Lantz et al., *Perimacular Retinal Folds from Childhood Head Trauma*, 328 BRIT. MED. J. 754 (2004); Michael T. Prange et al., *Anthropomorphic Simulations of Falls, Shakes, and Inflicted Impacts in Infants*, 99 J. OF NEUROSURGERY 143 (2003). See also Glenda Cooper, *Doubts Grow on Shaken Baby Syndrome*, THE SUNDAY TIMES, Dec. 26, 2004, available at <http://www.timesonline.co.uk/printFriendly/0,,1-210-1415464-210,00.html>; Sandra Laville, *Doubt Cast on Scores of Child Death Cases*, THE GUARDIAN, June 13, 2005; Lee Scheier, *Shaken Baby Syndrome: A Search for Truth*, CHICAGO TRIBUNE MAGAZINE, June 12, 2005, at 10. Recently, in *R v. Harris*, [2006] 1 Cr. App. R. 5, 55 (A.C.), the Court of Appeal in England heard a number of appeals against convictions of murder or manslaughter arising from the deaths of children. The Court took the opportunity to explore the evidence surrounding shaken baby syndrome. *Id.* at 68-77. One of the accused had her conviction overturned, one had his reduced from murder to manslaughter, and a third was unsuccessful in his appeal. *Id.* at 117. A fourth appellant was successful in having his conviction for causing grievous bodily harm overturned. *Id.* In February 2006, the Attorney General (for England and Wales) told the House of Lords that, having examined 88 recent “shaken baby” convictions, he believed that only three of them were questionable and should be reconsidered by the court: Amanda Brown, ‘*Shaken*

alienation syndrome,⁸ repressed memory syndrome,⁹ and child sex abuse

baby' cases set to be reviewed by the courts, THE SCOTSMAN, February 15, 2006, available at <http://news.scotsman.com/uk.cfm?id=234922006>.

7. The "battered woman syndrome" was articulated by psychologist Lenore E. Walker in the first edition of her book *THE BATTERED WOMAN'S SYNDROME* (1984). See also LENORE E. WALKER, *THE BATTERED WOMAN* (1979). She identified a "cycle of violence", often found in abusive relationships, involving a tension-building stage, an acute battering incident, and a honeymoon stage, characterized by contrition and relative tranquility, before the cycle began again. *Id.* at 126. In addition, she explored the notion that many women responded to their plight with a form of "learned helplessness" to explain why women stayed in abusive relationships. *Id.* This, in turn, might produce a "flight or fight" response on the part of the victim, which has been used to explain why some female victims of abuse went on to kill their abusers. *Id.* at 51. Walker's approach has been criticized by both feminists and those who fear that it provides a "special excuse for women." Anne M. Coughlin, *Excusing Women*, 82 Cal. L. Rev. 1, 27-28 (1994). Feminist criticism has focused on concern that Walker's early work tended to "pathologize" female victims, negating the reasonableness of their fears and perpetuating stereotypical notions of women as helpless. Some argue that, far from responding with passivity, many victims do seek to escape the abuse and that it is inadequate responses from the legal system, in particular, and society, in general, that render such attempts unsuccessful. In addition, it has been argued that Walker's approach presents a "one size fits all" picture of abuse that does not describe all such relationships accurately. The literature is extensive; see, e.g., Rebecca D. Cornia, *Current Use of Battered Woman Syndrome: Institutionalization of Negative Stereotypes about Women*, 8 U.C.L.A. WOMEN'S L.J. 99 (1997); David L. Faigman & Amy J. Wright, *The Battered Woman Syndrome in the Age of Science*, 39 ARIZ. L. REV. 67 (1997); Myrna S. Raeder, *The Double-Edged Sword: Admissibility of Battered Women Syndrome By and Against Batterers in Cases Implicating Domestic Violence*, 67 U. COLO. L. REV. 789 (1996). It is worth noting that our understanding of the psychology of abuse has come a long way since the 1970s and 1980s. In particular, we now understand a great deal more about post-traumatic stress disorder (PTSD). Walker and others now tend to adopt the language of PTSD in describing the situation of many abuse victims who respond violently to their abusers. See generally LENORE E. WALKER, *THE BATTERED WOMAN* (2d ed. 2000). Despite this movement from a "syndrome" to a "disorder" the issue remains of pathologizing what some argue is a reasonable response to an unreasonable situation. By 1996, expert evidence on battering and its effects had been admitted as evidence for the defense in every U.S. state. Janet Parish, *Trend Analysis: Expert Testimony on Battering and Its Effects* 3 (U.S. Dep't of Justice, 1996). In Scotland, the courts wrestled with the issue and now evidence of a history of abuse may be used to establish diminished responsibility, reducing a charge of murder to one of culpable homicide (manslaughter). *H. M. Advocate v. Galbraith* (No. 2), 2001 S.L.T. 953 (H.C.J.). In England and Wales, see Crown Prosecution Service, *The Use of Expert Evidence in the Prosecution of Domestic Violence* (2004).

8. Child psychiatrist Richard Gardner coined the term "parental alienation syndrome" (PAS) in 1985, in the context of alleged child sexual abuse, but he developed it into a much more broad-ranging theory over the last twenty years in his extensive publications on the subject. See, e.g., RICHARD GARDINER, *THE PARENTAL ALIENATION SYNDROME* (2d ed. 1998). While his claims in respect of its incidence have changed over the years, his central theme relates to the denigration of one parent by the other, leading the child to develop a campaign of irrational hostility towards the denigrated parent. *Id.* at 64. As a result, the child will refuse to have contact with the denigrated parent and will be critical of him or her. *Id.* Gardner advocates that the appropriate response is for the courts to transfer custody of the child to the denigrated parent, terminate contact with the denigrating parent, and de-program the child. *Id.* at 219-60. PAS has attracted considerable criticism in the academic literature. See, e.g., Carole S. Bruch, *Parental Alienation Syndrome and Parental Alienation: Getting It Wrong in Child Custody Cases*, 35 FAM. L.Q. 527 (2001); PETER JAFFE ET AL., *CHILD CUSTODY AND DOMESTIC VIOLENCE* (Sage, 2003); Janet R. Johnston & Joan B. Kelly, *Rejoinder to Gardiner's*

accommodation syndrome,¹⁰ to name but a few. That a number of the syndromes are themselves controversial makes the role of the expert witness all the more important, both in terms of establishing the existence or otherwise of the syndrome, and in assessing whether it is present in a given case.

Over the years, courts and other agencies around the world have faced problems with the evidence of expert witnesses in family-related cases. This article has its genesis in the coincidental occurrence of two recent examples in the United Kingdom and asks whether there is another syndrome, "Undue Deference to Experts Syndrome", at work in the legal system. In the first example, the evidence of Sir Roy Meadow (and his followers), an English

"Commentary on Kelly and Johnston's 'The Alienated Child: A Reformulation of Parental Alienation Syndrome'", 42 FAM. CT. REV. 622 (2004). However, Gardiner has his supporters; see Richard A. Warshak, Bringing Sense to Parental Alienation: A Look at the Disputes and the Evidence, 37 FAM. L.Q. 273 (2003). Courts in the United States have both accepted and rejected PAS. See Sally Melnick, An Aura of Reliability: An Argument in Favor of Daubert, 1 FLA. COASTAL L.J. 489, 506, 508 (2000). PAS is not recognized by the American Psychiatric Association in its highly-influential Diagnostic and Statistical Manual of Mental Disorders. DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS (4th ed. 1994) [hereinafter DSM-IV]. Support in Canada for PAS can be found in C (AJ) v. C (R), [2003] B.C.S.C. 664 and In Marriage of Johnson, [1997] 139 F.L.R. 384, 389 (Fam.). PAS has been accepted as a phenomenon by the courts in England, although some judges prefer the term "implacable hostility". See V v. V, [2004] 2 F.L.R. 851 (Fam.); Re M, [2003] 2 F.L.R. 636 (Fam.); and Re C (Children) [2002] 1 F.L.R. 1136 (A.C.). Courts in the United Kingdom remain aware of the need to listen to the genuine views of children who do not wish to have contact with a parent. Re S (Contact: Children's Views) [2002] 1 F.L.R. 1156 (Fam.).

9. Repressed memory syndrome (RMS) is known by critics as "false memory syndrome" which, it might be argued, rather prejudices the issue. Under the heading of "Dissociate amnesia", it is described by the American Psychiatric Association in the DSM-IV, as:

[A]n inability to recall important personal information, usually of a traumatic or stressful nature, that is too extensive to be explained by normal forgetfulness. . . . This disorder involves a reversible memory impairment in which memories of personal experience cannot be retrieved in a verbal form (or, if temporarily retrieved, cannot be wholly retained in consciousness).

DSM-IV, *supra* note 8, at 478. It appears that repressed memories can be recovered spontaneously, although greater controversy surrounds recovery through hypnosis and regression therapy. The psychiatric community is somewhat mixed in its acceptance of RMS. Harrison G. Pope, *Attitudes Towards DSM-IV Dissociative Disorders Diagnoses Among Board-Certified American Psychiatrists*, 156 AM. J. OF PSYCHIATRY 321 (1999). Some authors argue that RMS is particularly applicable in cases of past sexual abuse. Laura Johnson, *Litigating Nightmares: Repressed Memories of Childhood Sexual Abuse*, 51 S.C. L. REV. 939 (2000). Opponents of RMS point to the possibility of memory implantation or what is recognized in DSM-IV as "pseudomemory construction" of sexual abuse. David Lynch, *Post-Daubert Admissibility of Repressed Memories*, 20 CHAMPION 14, 17 (1996).

10. Dr. Roland Summit first described child sexual abuse accommodation syndrome (CSAAS) in 1983, "to provide a vehicle for more sensitive . . . response to . . . child sexual abuse and . . . [provide] advocacy for the child within the family and within [the criminal justice system]." Roland Summit, *The Child Sexual Abuse Accommodation Syndrome*, 7 CHILD ABUSE AND NEGLECT 177, 179 (1983). CSAAS describes the common reaction of children in delaying reporting of sexual abuse and retracting allegations later. *Id.* It is characterized by fearful, tentative and confused behavior on the part of the child. *Id.* Clearly, evidence of the syndrome is important in residence/custody, contact/visitations, and child protection cases, as well as prosecutions.

expert on Munchausen syndrome by proxy (MSBP) resulted in a number of women being convicted of killing their children and imprisoned. Eventually, the validity of the expert's theory was challenged successfully in court, a number of the convictions were quashed, and the women were freed.¹¹ The same expert's theories had led to the removal of countless children from their families, again on the basis of evidence that the child's parent (usually the mother) suffered from MSPB and had abused the child as a result. Some of these children have been adopted into new families and the fallout from this issue is still being addressed. In the second example, Dr. Colin Paterson, a Scottish doctor, "identified" a condition known as temporary brittle bone disease (TBBD). According to his theory, TBBD provided an alternative explanation of certain injuries to children which displaced the suspicion that the injuries were non-accidental. He appeared as an expert witness for accused parents in criminal cases and in child protection litigation. While both his research and his findings were subsequently discredited, it is not entirely clear how many children may have been returned to their care-givers as a result of his evidence.

The coincidental occurrence of these two examples is instructive for a number of reasons. First, it reflects the eternal dilemma of child protection: what can be described as the "damned if you do, and damned if you don't" phenomenon. Overzealous intervention, designed to protect children from (alleged further) abuse, but without adequate foundation, risks unjustified removal of a child from his or her family, resulting in distress to family members, stigmatization of the parents, and the violation of the rights of both the child and the parents.¹² On the other hand, failure to act timeously, when faced with allegations of abuse, risks exposing the child to further harm and possible death.¹³ In the MSBP example, the result of the expert's participation

11. R v. Clark, [2003] 2 F.C.R. 447 (A.C.); R v. Cannings, [2004] 1 All E.R. 725 (A.C.). A third woman, Donna Anthony, had her conviction for killing her two children quashed in April 2005, having spent seven years in prison. Joanna Bale, *Mother Set Free as Murder Convictions are Quashed*, THE TIMES, Apr. 12, 2005. In the case of yet another woman, Trupti Patel, the same expert's evidence was allowed. She was acquitted at trial at Reading Crown Court on June 11, 2003. Trupti Patel's case is not reported but references to it can be found in R v. Cannings, [2004] 1 All E.R. 725 (A.C.), paras. 15, 165 and 171. The results of an official review of cases involving parents convicted of killing their children in England and Wales has suggested that very few of the cases warrant reopening and has attracted much criticism. See discussion at footnotes 55 and 56 and accompanying text.

12. One of the most notorious examples of over-zealous intervention occurred in Cleveland, England, in 1987, resulting in an enquiry and reform of the law and procedures. See REPORT OF THE INQUIRY INTO CHILD ABUSE IN CLEVELAND 1987 (H.M.S.O., 1988, Cm 412). In Scotland, the removal of nine children from their families and the ultimate return of the children without anything having been proved again resulted in an enquiry, reform of the law and procedural changes. See REPORT OF THE INQUIRY INTO THE REMOVAL OF CHILDREN FROM ORKNEY IN FEBRUARY 1991 (H.M.S.O., 1992).

13. Sadly, there is no shortage of examples of a failure to intervene appropriately and the tragic consequences that can follow. The National Coalition for Child Protection Reform (NCCPR) has focused on the inadequacy of aspects of child protection law and procedures. See

was over-inclusive prosecution and the, sometimes permanent, removal of children from their families. In the TBBD example, there was the danger of an under-inclusive response, resulting in children being returned to their abusers and being left unprotected. Second, both examples involved the courts in addressing the admissibility of, and value to be attached to, expert evidence. Third, in each case, the experts whose evidence was to be considered were respected members of the medical profession. Finally, each involved the ultimate discrediting of the expert's evidence because of the danger posed by the way he conducted his research and presented his evidence.

Further reflection and research established that problems with these syndromes or diseases are not unique to the legal systems in the United Kingdom, and cases concerning both issues can be found in many other jurisdictions. Nor were they the only examples of expert testimony being called into question in family-related cases and sometimes discredited.¹⁴ This article will examine how the problematic examples of expert evidence about MSPB and TBBD played out in the United Kingdom and the harm that cases of this

NCCPR, at <http://www.nccpr.org> (n.d.) (last visited Mar. 17, 2006). Many states have responded by putting special procedures in place to investigate cases giving rise to concern. In Oregon, for example, such was the concern over failures in the child protection system that the Governor established a Critical Incident Response Team (CIRT), in 2004, to review cases of children who were abused or died while in state care in order to improve policy, training and practice. Oregon Dep't of Human Services, at <http://egov.oregon.gov/DHS/news/2004/news/2004-1213a.shtml> (n.d.) (last visited Mar. 17, 2006). Within months, CIRT had reviewed two cases. *Id.* One involved a five year-old girl who was in foster care and whose family members had expressed concern to about her care. Steve Mayes, *Human Services Needs Broad Changes*, THE OREGONIAN, Mar. 2, 2005, at C2. She was found unconscious with a fractured skull, and she was seriously malnourished. *Id.* The second case involved a fifteen-month-old boy, Ashton Parris, who died after having been returned to the care of his parents on a trial basis. *Id.* The boy's father has now been charged with his murder. *Id.* In England and Wales, a tragic trail of abuse cases from Maria Colwell, in 1972, to Victoria Climbié and Ainlee Labonte more recently, points to systemic failures in the child protection system. See CHILD ABUSE: A STUDY OF INQUIRY REPORTS 1980-1989 (H.M.S.O., 1991); CHRISTINA LYON ET AL., CHILD ABUSE 646-647 (3d ed. 2003). In Scotland, in 2001, eleven-week-old Caleb Ness died while being cared for by his brain-damaged father, who was later convicted of culpable homicide (manslaughter), despite the fact that the family's problems were known to the local social work department. See REPORT OF THE CALEB NESS INQUIRY (2003), available at <http://download.edinburgh.gov.uk/CalebNess>. For the Executive Summary and Recommendations of the resulting enquiry, see *Report of the Caleb Ness Inquiry* (2003), available at http://download.edinburgh.gov.uk/CalebNess/Caleb_Ness_Report_Summary_and_Recommendations.pdf. The full Report, running to 264 pages, is available at: <http://download.edinburgh.gov.uk/CalebNess>. In 2002, also in Scotland, thirteen-month-old Carla-Nicole Bone died at the hands of her mother's boyfriend while her mother looked on, despite repeated pleas from family members to the local child protection agencies. Stuart Patterson and Craig Walker, *Family's Anger at Baby Death Report*, THE SCOTSMAN, Sept. 18, 2003, available at <http://news.scotsman.com/scotland.cfm?id=1032682003&format=print>. The man, Alexander McClure, is now serving a life sentence for murder. *Id.* Cases like these provided the impetus for the latest Scottish child protection review, which resulted in the report, *It's Everyone's Job to Make Sure I'm Alright* SCOTTISH EXECUTIVE (2002), available at <http://www.scotland.gov.uk/library5/education/iaar-00.asp>.

14. See *infra* notes 37-50.

kind do, beyond the injustices suffered by the individuals involved. Drawing on the case law and literature from the United States,¹⁵ it will explore how U.S. jurisdictions have addressed the admissibility of expert evidence. In particular, it will examine the mechanisms that are in place to separate valid expert evidence from junk science: a dichotomy that, as we shall see, is rejected by sections of the scientific community. Finally, we will look at how the mechanisms might be improved: an issue which has implications well beyond the specific cases highlighted here. First, it may be helpful to consider the attraction of expert evidence for the legal system along with the attendant pitfalls.

THE ATTRACTIONS AND PITFALLS OF EXPERT EVIDENCE

The attraction of using expert witnesses in court proceedings is not difficult to fathom. To state the obvious, most lawyers and judges simply lack the expertise in a whole variety of non-legal disciplines to utilize the vast knowledge that these disciplines have to offer. Thus, courts need the assistance from experts in these disciplines in order to understand crucial information. Some commentators believe there is a fundamental problem in terms of what courts sometimes expect of expert scientific evidence. It is not simply that lawyers may not understand the information being presented but, rather, that there is something of a failure to comprehend the scientific process. This results in a tendency “to treat all science as a single discipline distinguished only by its classification as valid or junk.”¹⁶ If we could get past this simplistic approach, so the argument goes, we would be in a position to make more subtle evaluations of particular evidence. As Edmond and Mercer put it:

The rejection of a simple dichotomy between “good” and “bad” science facilitates discussion in a number of areas otherwise precluded. For instance, questions relating to the efficacy of various sciences, their objectives, and the ethics of their practitioners can be examined in more specific local terms, freed from the need to anchor them to over-arching, unworkable, mythological images of science.¹⁷

Somewhat paradoxically, it is this very ignorance of science that often results in non-scientists being mesmerized by it. Science is perceived as solid,

15. Where appropriate, occasional references will be made to cases in Australia, Canada and New Zealand, but any full exploration of developments there will have to await a future article.

16. Joelle Anne Moreno, *Einstein on the Bench? What Judges Do Not Know About Science and Using Child Abuse Cases to Improve How Courts Evaluate Scientific Evidence*, 64 OHIO ST. L.J. 531, 550 (2003).

17. Gary Edmond & David Mercer, *Trashing “Junk Science,”* 1998 STAN. TECH. L. REV. 3, ¶ 84 (1998).

knowable, measurable: in short, science offers certainty.¹⁸ These factors combine to place the person who *does* understand science, the expert, in an incredibly powerful position. After all, if one is coming from a position of ignorance, the person who holds the key to that certain body of knowledge is something of a savior. The danger for the legal system is that this empowerment of the expert witness will result in undue deference to his or her opinion.

The deference to scientific expertise is magnified when it involves experts who are not only scientists but also doctors. Lawyers are constantly amazed at (and mildly irritated by) how well the medical profession has managed public relations when the legal profession has been so spectacularly unsuccessful in that arena. Despite the prevalence of medical malpractice actions,¹⁹ members of the public, at least, remain largely deferential to, if not in awe of, the medical profession. Maybe it has something to do with the god-like power over life and death. Whatever the cause, there is no doubt that juries and some lawyers hold medical expert witnesses in particularly high regard. In addition, members of one profession tend to behave with the utmost courtesy to members of other professions. While anything that enhances good manners in the courtroom is to be welcomed, there is a danger that this simple courtesy may translate into undue deference. It is interesting to note that, prior to damning the evidence of Dr. Paterson, the expert witness on TBBB, Wall J., prefaced his remarks with the following statement:

[I]t is only fair that I should record at this point that [two other expert witnesses who disputed Dr. Paterson's findings] paid

18. This belief in the certainty of science is somewhat misplaced, not least because of the danger of "fashions", if not in the hard sciences, certainly in the social sciences. For instance, although the divorce of warring parents was once perceived as beneficial to children, summed up in the phrase "better one happy parent than two who are miserable", that view has been challenged by many studies and authors, including Judith Wallerstein and her colleagues. *See, e.g.*, JUDITH S. WALLERSTEIN & JOAN B. KELLY, *SURVIVING THE BREAKUP: HOW CHILDREN AND PARENTS COPE WITH DIVORCE* 15-16 (1980); JUDITH S. WALLERSTEIN ET AL., *THE UNEXPECTED LEGACY OF DIVORCE: A 25 YEAR LANDMARK STUDY* 39-51 (2000). Medicine is not immune from fashions either. One feature of the Cleveland child abuse debacle was the use, by the two doctors involved, of anal dilation as a diagnostic technique in assessing whether a child might have been sexually abused. *See* REPORT OF THE INQUIRY INTO CHILD ABUSE IN CLEVELAND 1987 (H.M.S.O., 1988, Cm 412). The Court of Appeal, in England, recently highlighted another example:

Not so long ago, experts were suggesting that new born babies should lie on their tummies. That was advice based on the best-informed analysis. Nowadays, the advice and exhortation is that babies should sleep on their backs – back to sleep.

This advice is equally drawn from the best possible known sources.

Cannings [2004] 1 All E.R. 725, at ¶ 28.

19. Note Weintraub's observation, "Physicians have been quick to condemn the legal profession as the cause for the surge in medical malpractice lawsuits. However, in reality, the greater impetus has been the medical expert witness who has developed unique theories of causation with consequent corruption of science." Michael I. Weintraub, *Expert Witness Testimony: A Time for Self-Regulation?*, 45 *NEUROLOGY* 855, 856 (1995).

tribute to the work which Dr. Paterson has done in the field of bone pathology. I should also record my own assessment of Dr. Paterson as a highly intelligent man whose manner is sympathetic and whose evidence was given persuasively with both enthusiasm and charm.²⁰

Certainly, lawyers and judges are not notorious for being particularly deferential. Nor are all lawyers and judges science-illiterate. That brings another danger into the picture. It is the responsibility of the lawyer to be a zealous advocate of his or her client's case, always within ethical bounds, of course. One result of this is that the lawyer will seek out expert testimony that will be of help to the client's case and a science-savvy lawyer will be somewhat selective in choosing the witnesses he or she calls.²¹ It is a feature of the adversarial system that another lawyer will present the opposing case and will have the opportunity to do exactly the same thing. However, the adversarial system itself encourages one advocate to advance a particular scientific theory as valid and the other advocate to seek to dismiss it, again reflecting a lack of subtlety in the understanding of the scientific process.

What of the expert witness themselves? There is no doubt that many experts give evidence in a neutral and objective manner in order to assist the court in understanding the expert's particular field. The fact that many experts are paid for their services is no reason to assume that their objectivity is necessarily compromised.²² Nonetheless, the fact that "career experts" do exist and that there is a lucrative industry in providing expert testimony might make one pause for thought.²³ That issue aside, there are other causes for caution. Given the powerful position of the expert witness, as the elucidator of knowledge to the ignorant, one might speculate that some experts enjoy being in this position and the issue of the expert's ego enters the picture.²⁴ A related danger is the extent to which the expert witness is personally invested in his or

20. *Re AB (Child Abuse: Expert Witnesses)*, [1995] 1 F.L.R. 181, 183 (Fam.).

21. The irony of the position in which Wall J. found himself in *Re AB* is instructive in this context. Before proceeding to deliver resounding condemnation of the evidence of an expert witness (Dr. Paterson) in the case before him, he quoted from a previous case in which Cazalet J. had criticized the position taken by the same witness. *See Re J (Child Abuse: Expert Evidence)*, [1991] 1 F.C.R. 193, 226. Wall J. then made the following statement: "I must also declare a personal interest in the case as I appeared as leading counsel for the parents and myself called Dr. Paterson as a witness on their behalf." *Re AB* [1995] 1 F.L.R. at 183.

22. In a recent Scottish case, the court was more concerned that the expert witnesses for the pursuer (plaintiff) gave their evidence free of charge, seeing this as a reflection of their commitment to a particular position and calling their impartiality into question. *See McTear v. Imperial Tobacco Ltd.* [2005] C.S.O.H. 69 (neutral citation) ¶ 5.18 and ¶ 8.48, available at <http://www.scotcourts.gov.uk/opinions/2005csoh69.html>, discussed *infra* at footnotes 165-166 and accompanying text. It contrasted this with the expert witnesses for the defender who followed the more usual course of charging for their services. *Id.*

23. *See supra* note 2.

24. This line of inquiry is one from which professors might gain valuable personal insights.

her own particular theory. By definition, an expert witness will have devoted considerable energy to working in a particular field. By and large, people prefer to have this devotion validated by it being proved to have been worthwhile, rather than feeling they have been wasting their time. Some experts will be speaking to their own original work. Bearing in mind that very few scientists achieve the fame associated with discovering penicillin or having a condition named after them, there is the danger that some experts will be so attached to their own theories that their ability to assess the theories objectively will be compromised.²⁵

In short, there are any number of reasons why, and ways in which, medical and other experts may provide less than objective and reliable evidence. That this danger is recognized by the medical profession itself is encouraging²⁶ and the profession will act against its own (eventually) where they are adjudged to fall below recognized professional standards. Of course, this will be little comfort to the child who has been injured further after being returned to an abusive parent or the parent whose child has been removed unjustifiably. Thus, the evidence of experts in the field, while often an essential part of child protection cases and associated prosecutions, is not without its dangers. How, then, did expert evidence play out in the selected examples of MSPB and TBBD?

MUNCHAUSEN SYNDROME BY PROXY (MSBP)

The term "Munchausen syndrome" was coined in 1951 by Dr. Richard P. Asher to describe the condition where a patient repeatedly makes false claims of symptoms, or deliberately induces illness in himself or herself, in order to gain medical attention.²⁷ The element of proxy entered the picture in 1977, when (then²⁸) Dr. Roy Meadow applied the term to a care-giver, usually a mother, who did much the same thing, but to a child.²⁹ Thus, the term

25. As we shall see, there are elements of this in both of the examples discussed *infra*.

26. See Weintraub, *supra* note 19. "Inaccurate or false testimony is an embarrassment to our profession . . ." *Id.* Chadwick and Krous provide the following criteria for irresponsible medical testimony, although they acknowledge that "other forms of irresponsible testimony will doubtless be described in the future": absence of proper qualifications; use of unique theories of causation; use of unique or very unusual interpretations of medical findings; alleging non-existent medical findings; flagrant misquoting of medical journals or widely used texts; making false statements; and deliberate omission of important facts or knowledge pertinent to the opinion being offered. David L. Chadwick & Henry F. Krous, *Irresponsible Testimony by Medical Experts in Cases Involving Physical Abuse and Neglect of Children*, 2(4) CHILD MALTREATMENT 313, 314 (1997).

27. Richard P. Asher, *Munchausen Syndrome*, 1 LANCET 339 (1951). The name derives from Baron Karl Fredrich von Munchhausen (note the additional "h"), an eighteenth century Prussian aristocrat who served in the Russian cavalry and was famous for telling tall tales. *Id.*

28. Dr. Meadow was knighted in 1997 for his contribution to medicine and childcare.

29. Roy Meadow, *Munchausen Syndrome by Proxy: The Hinterland of Child Abuse*, 2 LANCET 343 (1977).

Munchausen Syndrome By Proxy (MSBP) was born.³⁰ While it is most frequently used in the context of non-accidental injury to children, it can arise in other contexts.³¹ When the mother makes false claims about a child's symptoms, sometimes made more credible by the production of "evidence" such as a urine sample she has tampered with, the danger is that the child will be subjected to unnecessary, and possibly painful, diagnostic procedures and treatment.³² There is also the possibility that any condition the child does actually have will go undiagnosed. Where the mother goes as far as to induce illness, the threat to the child's health is obvious and the consequences can be fatal.³³ That some parents will harm their children, quite deliberately, is attested to by an abundance of civil and criminal case law, official enquiries, and academic and other literature on the subject. That some of them do so by means of alleging non-existent illness or fabricating symptoms is also reasonably clear.³⁴ Where concern about MSBP has arisen is in the way it was

30. While MSBP has been renamed "factitious disorder," the term MSBP will be used in this Article because it is the term used in most of the case law and literature and is, probably irreversibly, etched on the public consciousness.

31. The perpetrator need not be the mother of a child; other caregivers, including some with health care backgrounds, are sometimes implicated. One example is the case of Beverley Allitt, a nurse who was convicted of killing four children in her care and injuring nine others. *R v. Allitt (Beverley)*, unreported (1993), discussed in T.J. David, *Munchausen Syndrome by Proxy*, 31 FAM L. J. 445 (2001). Coincidentally, Dr. Meadow gave evidence at Beverley's trial. Nor need the victim be a child. Others, including elderly people or companion animals, may be at risk suggesting that the victim's vulnerability and dependence on the care-giver is a factor. See H.M.C. Munro & M.V. Thrusfield, 'Battered Pets': *Munchausen Syndrome by Proxy (Factitious Illness by Proxy)*, 42 J. OF SMALL ANIMAL PRACTICE 385 (2001) (detailing a study conducted in Scotland by faculty from the Royal School of Veterinary Studies at the University of Edinburgh and suggesting that companion animals may be victims of MSBP).

32. For the description of a range of procedures, including the taking of a bone marrow sample and a bowel sample and intra-muscular injections, to which a child was subjected over a period of a few months, see, e.g., *R v. L.M.*, [2004] Q.C.A. 192, at ¶¶ 15-16 (A.C.).

33. See, for example, the case of Petrina Stocker who was convicted of the manslaughter of her nine-year-old son, having added salt to his feeding bottles in the hospital. See Jenny Booth, *Salt Killer Mother is Jailed for Five Years*, TIMES ONLINE, Feb. 25, 2005, at <http://www.timesonline.co.uk/printFriendly/0,,1-2-1500104-2,00.html>. It appears that both social workers and police officers involved in the case may not have responded with sufficient rigor. *Id.* A subsequent review of hospital procedures was carried out and recommended that feeds be provided in tamper-proof containers and fridges should be lockable. *Id.*

34. For a good, short review of the evidence, see A. W. Craft & D. M.B. Hall, *Munchausen Syndrome by Proxy and Sudden Infant Death*, 328 BRIT. MED. J. 1309 (2004). The use of covert video surveillance (CVS) to observe suspected abusers in hospitals provides the clearest evidence of MSBP. David Southall, *Covert Video Recordings of Lifethreatening Child Abuse: Lessons for Child Protection*, 100 PAEDIATRICS 735 (1997) (describing the use of CVS in thirty-nine cases of suspected MSBP and providing evidence of abuse, mainly attempted suffocation, in respect of twenty-seven of them). Perhaps it should be noted that Professor Southall was later disciplined by the General Medical Council in respect of his evidence of MSBP in another context. See *footnote 72 and accompanying text*. Courts in England and the European Court of Human Rights have found CVS to be permissible in certain circumstances. See, e.g., *Re DH*, [1994] 1 F.L.R. 679 (Fam.); *Malone v. United Kingdom*, [1984] Eur. Ct. H.R. 8691/79, ¶ 39; *Huvig v. France*, [1990] Eur. Ct. H.R. 11105/84 ¶ 29. However, the use of the

diagnosed and attested to by one expert witness and his followers and this evidence was admitted into court and accepted so readily in a number of cases. Having named and identified MSBP, Dr. Meadow went on to elaborate on the theme in subsequent publications.³⁵ Perhaps most notable was the development of what came to be known as “Meadow’s law”, summed up in the statement: “One sudden infant death is a tragedy, two is suspicious and three is murder until proved otherwise.”³⁶ Sir Roy Meadow also provided expert evidence on the subject in court, as did others who subscribed to his view. His evidence was offered by the prosecution in criminal cases and by governmental child protection authorities in child protection cases.

The most notorious examples of Sir Roy Meadow’s contributions, in the criminal context, concerned the convictions of Sally Clark, in 1999, and Angela Cannings, in 2002.³⁷ In 1999, Ms. Clark was convicted, by a majority of ten to two, of murdering her two sons, one by suffocation and the other by smothering. Her appeal, in 2000, was dismissed. Her husband campaigned tirelessly and the Criminal Cases Review Commission referred the case back to the Court of Appeal which allowed the appeal and quashed the convictions in January 2003.³⁸ Central to her original conviction was Sir Roy Meadow’s colorfully presented statistical evidence on the likelihood of two children in the same family dying from Sudden Infant Death Syndrome (SIDS).³⁹ He likened this occurrence to picking the winning horse in the Grand National, running on odds of 80-1, in successive years. As the Court of Appeal concluded, “[w]e rather suspect that with the graphic reference by Professor Meadow to the

technique in the hospital setting is not without its critics. See, e.g., Michael T. Flannery, *First, Do No Harm: The Use of Covert Video Surveillance to Detect Munchausen Syndrome by Proxy – An Unethical Means of ‘Preventing’ Child Abuse*, 32 U. MICH. J.L. REFORM 105, 106-107 (1998) (arguing that, since CVS requires the observer to allow the abuse to continue, if only for a short time, it offends against the fundamental tenet of the medical profession “first, do no harm”).

35. Roy Meadow, *False Allegations of Abuse and Munchausen Syndrome by Proxy*, 68 ARCHIVES OF DISEASE IN CHILDHOOD 444 (1993) (Significantly, this article addresses false allegations of abuse as a manifestation of MSBP. It does not address false allegations of MSBP as a form of child abuse); Roy Meadow, *What Is and What Is Not ‘Munchausen Syndrome by Proxy’?*, 72 ARCHIVES OF DISEASE IN CHILDHOOD 534 (1995); ROY MEADOW, ABC OF CHILD ABUSE (3d ed. 1997) [hereinafter ABC].

36. Roy Meadow, *Fatal Abuse and Smothering*, in ABC, *supra* note 35, at 29. Sir Roy Meadow puts the statement in quotation marks and describes it as “a crude aphorism but a sensible working rule from anyone encountering these tragedies.” *Id.*

37. See also the case of Donna Anthony, who had her conviction overturned in April 2005 see *supra* note 11. For reference to the case of Trupti Patel who was acquitted on similar charges despite Dr. Meadow’s evidence, see *supra* note 11.

38. R. v. Clark, [2003] 2 F.C.R. 447, ¶ 181 (A.C.).

39. This was not the sole ground for allowing the appeal, since this Court heard for the first time about microbiology results, known to the prosecution but never disclosed to the defense, which led one expert to conclude that “overwhelming staphylococcal infection is the most likely cause of death” of one of the boys. *Id.* at ¶ 122. However, the Court did note that “it seems likely that if this matter had been fully argued before us we would, in all probability, have considered that the statistical evidence provided a quite distinct basis on which the appeal had to be allowed.” *Id.* at ¶ 180.

chances of backing long odds winners of the Grand National year after year it may have had a major effect on [the jury's] thinking notwithstanding the efforts of the trial judge to down play it".⁴⁰

In 2002, Ms. Cannings was convicted of murdering her two sons by smothering.⁴¹ Her appeal was allowed and the convictions were quashed in 2003.⁴² Again, Sir Roy Meadow appeared as a prosecution witness and part of his evidence related to the statistical probability of two children in the same family dying of SIDS. Again, the appeal did not relate solely to his evidence,⁴³ although the Court raised some questions about it.⁴⁴ Concluding that the convictions were unsafe, the Court observed:

We recognise that the occurrence of three sudden and unexpected infant deaths in the same family is very rare, or very rare indeed, and therefore demands an investigation into their causes. Nevertheless the fact that such deaths have occurred does not identify, let alone prescribe, the deliberate infliction of harm as the cause of death. ... If on examination of all the evidence every possible known cause has been excluded, the cause remains unknown.⁴⁵

In the light of this case and those of Sally Clark and Trupti Patel, the court noted the unexplained nature of deaths due to SIDS and paid tribute to the continuing research. However, it issued the following stern warning:

We cannot avoid the thought that some of the honest views expressed with reasonable confidence in the present case (on both sides of the argument) will have to be revised in years to come, when the fruits of continuing medical research, both here and internationally, become available. What may be unexplained today may be perfectly well understood

40. *Id.* at ¶ 178. The Grand National is the best-known horse race in the United Kingdom, attracting unparalleled sums in off-track betting. Thus, reference to it would strike a chord with any juror.

41. Ms. Cannings was also charged with the murder of the third of her four children, but that case did not proceed. *R. v. Cannings*, [2004] 1 F.C.R. 193 ¶ 2 (A.C.).

42. *Id.* at ¶ 175.

43. Subsequent to her conviction, evidence emerged of possible SIDS deaths and ALTEs ("acute" or "apparent life threatening events") in relation to children of Ms. Cannings' grandmother and, hitherto unknown to her, half-sister. *Id.* at ¶¶ 32, 34.

44. The picture here is complicated by the fact that there was some doubt about to which of two studies Sir Roy Meadow referred in his evidence and whether he had read the background notes in respect of one of them. While another expert witness described Sir Roy's Meadow's evidence as "a travesty", whether this was so or not hinged, in the Court's view, on the extent of his knowledge of the background notes. *Id.* at ¶¶ 143-144.

45. *Id.* at ¶ 177.

tomorrow. Until then, any tendency to dogmatise should be met with an answering challenge.⁴⁶

Nor was Sir Roy Meadow's influence confined to the criminal arena. In the context of child protection, it is not known how many children have been removed from their parents' care on the basis of evidence of the kind leading to the criminal convictions outlined above. As we shall see, estimates vary and the truth is that the precise figure may never be known.⁴⁷ This is due in part to the lack of response by some local authorities in England and Wales⁴⁸ and imperfect record-keeping in Scotland.⁴⁹ In addition, it should be remembered that the standard of proof in child protection cases requires proof on the balance of probabilities, while the standard in criminal cases is proof beyond reasonable doubt.⁵⁰ In short, what is insufficient in the criminal context, may be enough in a child protection case.

One might have thought that the fallout from these cases would have been enormous. After all, several women had been wrongfully incarcerated and children have been removed from their families on the basis of evidence that is, at the very least, questionable. However, if one had been expecting a spectacular official response, one would have been disappointed. Certainly, Sir Roy Meadow was vilified in the popular press⁵¹ and, to a lesser extent, in professional journals.⁵² Nor did his followers escape unscathed.⁵³ Despite this, it appears that Sir Roy was invited to speak at an international conference for

46. *Id.* at ¶ 22.

47. *See infra* footnotes 57-70 and accompanying text.

48. *See infra* footnote 60 and accompanying text.

49. *See infra* footnotes 67-69 and accompanying text.

50. *See Re Uddin (A Child) (Serious Injury: Standard of Proof)*, [2005] 2 F.L.R. 444 (A.C.).

51. *See, e.g.*, Anna Pukas, Roy Meadow's Evidence has Helped Jail Mums but Now His Reputation is in Tatters: The Man Who Made a Fortune Wrecking the Lives of Women, *THE EXPRESS (LONDON)*, Jan. 21, 2004, at 25; Tracey Lawson, Why an Expert Witness is in the Dock, *THE SCOTSMAN*, Jan. 24, 2004, at 4. Amongst other details, Tracey Lawson's article offers views by Meadow's former wife about his character, including: "[i]n retrospect the signs were there – in who Roy was – that he would go too far. . . . He found it everywhere. He was over the top. He saw mothers with Munchausen syndrome by proxy wherever he looked." *Id.* She also stated: "I don't think he likes women. . . . I don't think he's gay. But, although I can't go into details, I'm sure he has a serious problem with women." *Id.* On the one hand, a former spouse may be in a unique position to offer insights into an individual's character. On the other hand, who would really welcome such opinions being published in the press?

52. Sally Gillen, *Expert Witness in the Dock*, *COMMUNITY CARE*, Feb. 5, 2004, at 32.

53. Professor David Southall was similarly criticized in the press. *See, e.g.*, Tanya Thomson, *Angry Parents to Confront Doctor*, *THE SCOTSMAN*, Aug. 4, 2004, at 5; Maxine Frith, *Southall Verdict: A Pioneer or a Menace? Once in Demand, Professor Faces End of Career*, *THE INDEPENDENT (UK)*, Aug. 7, 2004. Professor John Stephenson, the leading expert to give evidence to the Scottish courts, has had his diagnosis challenged in at least one case. Tanya Thomson, *Abuse Expert to Face Court Over 'Munchausen' Case*, *THE SCOTSMAN*, January 20, 2004, at 13 [hereinafter *Abuse Expert*].

child protection workers in San Diego in January 2005, much to the annoyance of some of his victims.⁵⁴

What of the response at government level? In January 2004, the Attorney-General, Lord Goldsmith, ordered a review of 258 cases in England and Wales where women had been convicted of killing their children.⁵⁵ It appears that only three of the cases reviewed revealed cause for concern, prompting criticism from lawyers, doctors and parents convicted of killing their children.⁵⁶ Press reports initially suggested that as many as 5,000 children may have been removed from their families as a result of allegations of MSBP, although this figure has been questioned subsequently.⁵⁷ Initially, it was unclear whether these civil cases would be re-examined, with the Children's Minister, Margaret Hodge, and the Solicitor General, Harriet Harman, appearing to differ on the matter.⁵⁸ In any event, the government issued guidance to local authorities asking them to review their own cases.⁵⁹ One hundred and thirty of the one hundred and fifty local authorities responded to a survey conducted by the Association of Directors of Social Services.⁶⁰ They reported that disputed medical evidence arose (or was anticipated to arise) in forty-seven of 5,175 cases.⁶¹ The impact of the medical evidence was known in nine of these cases and, in a further thirty-eight, the case was not sufficiently advanced for the outcome to be clear.⁶² That there have been calls for a public enquiry is hardly surprising but, at the time of writing, these calls have fallen on deaf government ears. Incredulity and outrage followed the announcement that Angela Cannings would receive no compensation from the state for the eighteen months she spent in prison wrongfully.⁶³

In Scotland, a parallel investigation of criminal cases was conducted by the Crown Office, the body responsible for bringing prosecutions.⁶⁴ It appears that twenty-two cases of convictions for murder or culpable homicide

54. Jamie Doward, *Parents Demand Gag on Cot Death Doctor's Lectures: Outrage at International Acclaim for Meadow*, THE OBSERVER, Jan. 16, 2005, at 6.

55. Clare Jerrom, *Care Proceedings Excluded From Review of Expert Witness Cases*, COMMUNITY CARE, Jan. 29, 2004, at 6.

56. Clare Dyer, *Quashed Convictions Unlikely After Shaken Baby Review*, THE GUARDIAN, Feb. 15, 2006, at 8.

57. Roy Greenslade, *Media: Sense and Sensitivity*, THE GUARDIAN (LONDON), Apr. 19, 2004, at 4 (noting that it is unclear where this figure came from but that it continues to be repeated in the press).

58. Jerrom, *supra* note 55.

59. *Newsline - Medical Expert Witnesses*, 34 FAM. L.J. 556 (2004).

60. *Id.*

61. *Id.*

62. *Id.* Interestingly, the BBC's Radio 4 *Today* program conducted a poll, to which seventy of the one-hundred-and-fifty local authorities replied. Seventy-four percent of those replying indicated that they were not reopening any cases. Jerrom, *supra* note 55

63. Tanya Thomson, *Compensation Blow for Cot Death Mother Wrongly Jailed*, THE SCOTSMAN, Jan. 12, 2005, at 11.

64. Tanya Thomson, *22 Scottish Child Death Convictions Reviewed by Crown Office*, THE SCOTSMAN, June 2, 2004, at 1.

(manslaughter), some going back as far as ten years, were re-examined and it was concluded that there had been no miscarriages of justice.⁶⁵ This was hardly a transparent process and, thus, did little to assuage public concern. The Scottish review of child protection cases involving the removal of children from their parents amid allegations of MSBP has been even less satisfactory. The Scottish Children's Reporter Administration (SCRA), responsible for investigating and pursuing child protection proceedings, re-examined some forty-three cases, dating from 1981 onwards, and found that three of them warranted a return to the courts.⁶⁶ Particularly disturbing was the admission by SCRA that five cases could not be reviewed in detail, "three because staff had only a vague recollection of a relevant case and therefore the child could not be identified, two because due to the passage of time the case files or papers are not available."⁶⁷ Little wonder, then, that a "SCRA insider" branded the review "a bit of a joke."⁶⁸ Indeed, the media seems to have had greater success in tracing cases of children removed from their families and sometimes adopted, amid allegations of MSBP, than has SCRA, albeit journalists have the luxury of relying on nothing more than the, sometimes partisan, accounts of the individuals involved.⁶⁹ It is hardly surprising that a number of parents are raising actions in court seeking to have their children returned to them⁷⁰ and calls for a public enquiry continue.

It is one function of the General Medical Council (GMC) in the United Kingdom to police the professional standards of its members.⁷¹ How did it respond to these events? In August 2004, the GMC's professional conduct committee banned Professor David Southall, the expert witness in Sally Clark's

65. *Id.*

66. *Cannings Judgement: SCRA Review and Findings*, ¶ 22, at www.scra.gov.uk/documents/Cannings_Judgement_-_Final_Report.pdf (last visited Mar. 17, 2006).

67. *Id.* at ¶ 8. See also, Kate Foster, *Lost Without Trace: The Families Who Were Torn Apart on a Whim*, SCOTLAND ON SUNDAY, Oct. 10, 2004, at 9.

68. Liam McDougall, *Officials Consider Attempt to Trace Parents Wrongly Accused of Child Abuse 'a Joke'*, SUNDAY HERALD, June 5, 2005, at 13. The same anonymous source claimed that the initial review of the SCRA database highlighted 3,500 "potential cases of concern." *Id.* The article quotes Alan Miller, then the Principal Reporter (head of SCRA), as having written to the Scottish Executive warning of "considerable difficulties in practice" in undertaking a thorough review. *Id.*

69. Tim Pauling, *Solicitor Backs Calls for a Public Inquiry Into Misdiagnoses*, ABERDEEN PRESS & JOURNAL, Jan. 27, 2004, at 8 (referring to a "dozen" cases and giving details of two, one of which involved children who have been adopted subsequently); Tanya Thomson, *'Whitewash' Fear Over Child Abuse Review*, THE SCOTSMAN, May 17, 2004, at 2. (referring to twelve families and the nineteen children found by the newspaper).

70. *Abuse Expert*, *supra* note 53 (giving details of a Glasgow solicitor who is representing six mothers who are challenging the removal of their children from their care).

71. "The main objective of the General Council in exercising their functions is to protect, promote and maintain the health and safety of the public." Medical Act 1983 (Amendment) Order 2002, S.I. 2002/3135, §3.

case, from working in any area of child protection for the next three years.⁷² That decision was appealed to the High Court and, while it ruled that he should keep his medical license, it did call for the conditions applying to him to be tightened.⁷³ In June 2005, Dr. Alan Williams, the Home Office forensic pathologist who carried out the post-mortem examination on Sally Clark's sons and failed to disclose aspects of findings in his evidence at her trial, was found guilty of "serious professional misconduct" by the GMC's professional conduct committee and banned from Home Office pathology work for three years.⁷⁴ Finally, in July 2005, Sir Roy Meadow was also found guilty of "serious professional misconduct," largely for giving evidence beyond his field of expertise, and lost his license to practice medicine.⁷⁵ Ironically, it was expert evidence led at the hearing over allegations that he was guilty of "serious professional misconduct" that may have proved most damning in his case. Sir David Cox, retired Professor of Statistics at Imperial College London, gave evidence that Sir Roy Meadow made fundamental errors in calculating the probability of more than one infant in the same family dying from SIDS.⁷⁶ As we shall see, the reaction of sections of the medical profession and the Royal College of Paediatrics and Child Health has been somewhat defensive, albeit the latter went on to respond more constructively thereafter.⁷⁷ Sir Roy's "striking off" was to prove short-lived since, seven months later, the High Court overturned the decision and reinstated his license.⁷⁸

MSBP has not escaped the notice of the European Court of Human Rights, although it has addressed the cases before it in terms of the procedures followed rather than the condition itself.⁷⁹ In *P, C, and S v. United Kingdom*,⁸⁰

72. Sam Lister, *Doctor Will Not Be Struck Off for False Murder Claim*, THE TIMES (LONDON), Apr. 15, 2005, at 16.

73. *Id.*; John Aston, *He Should Have Been Struck Off; Husband's Anger as Baby Doctor Avoids Being Barred*, DAILY POST (LIVERPOOL), Apr. 15, 2005, at 13 (reporting that Professor Southall will be required to refer all cases involving alleged child abuse to another doctor and to report to the GMC every six months).

74. Nigel Hawkes, *Pathologist in Sally Clark Trial is Found Guilty of Misconduct*, THE TIMES, Apr. 4, 2005, at 27.

75. Sam Lister, *Meadow Struck Off for Misleading the Sally Clark Trial*, THE TIMES (LONDON), July 16, 2005, at 2. Strictly speaking, the Fitness to Practice Panel has directed "that the person's name shall be erased from the register." Medical Act 1983, (Amendment) Order 2002, S.I. 2002/3135, §13, at 35D(2)(a).

76. Clare Dyer, *Why Didn't They Spot the Flaws?*, THE GUARDIAN (LONDON), June 21, 2005; Dominic Kennedy, *Cot Death Numbers Don't Add Up, Says Eminent Statistician*, THE TIMES, June 25, 2005, at 27.

77. See *infra* footnotes 140-144 and accompanying text.

78. *Meadow v General Medical Council* [2006] EWHC 146, Mr. Justice Collins expressed the following view: "[H]e made one mistake, which was to misunderstand and misinterpret statistics. . . . It may be proper to criticize him for not disclosing his lack of expertise, but that does not justify a finding of serious professional misconduct". *Id.* at ¶ 54. It is understood that the GMC intends to appeal against this decision.

79. Precisely where the European Court is going on the issues of emergency removal of children from their parents, representation of the parents and the child, and adoption of children

a case also of interest for its trans-Atlantic dimension, a child, S, was removed from her parents at birth, largely due to concerns that the mother suffered from MSBP.⁸¹ Finding violations of Articles 6 (right to a fair trial) and 8 (right to respect for family life) of the European Convention on Human Rights of 1950,⁸² the Grand Chamber concentrated on the lack of legal representation of the parents in the proceedings. In *Venema v. Netherlands*,⁸³ the Court found that the authorities in the Netherlands had violated the parents' Article 8 right to family life by denying the parents the opportunity to contest the allegations against them prior to the removal of their daughter and by acting on incomplete information, including allegations of MSBP.⁸⁴

The reach of Sir Roy Meadow's work goes far beyond the United Kingdom. In the United States, MSBP seems to have made its first appearance in the case law in 1981 when Priscilla Philips was convicted of murdering her daughter.⁸⁵ Subsequently, attorneys⁸⁶ and the press⁸⁷ drew attention to concerns over misdiagnosis of the condition. In Australia, the Queensland Court of Appeal set aside the verdict in the case of a woman who was convicted of torturing one of her children and wounding two others, and ordered a retrial, due to concern that the conviction resulted from undue reliance on the MSBP label.⁸⁸ In New Zealand, concern has been expressed over the removal of six

against the wishes of their parents, is a fascinating subject which, sadly, is beyond the scope of this article. *See also*, K and T v. Finland (2001) 31 Eur. Ct. H.R. 18.

80. P, C, & S v. United Kingdom, [2002] 35 Eur. Ct. H.R. 31. .

81. *Id.* at ¶ 13. The mother, P, a citizen of the United States, had been convicted of child endangerment in California in respect of allegations that she administered laxatives inappropriately to her child, B, because she suffered from MSBP. B was removed from her care and placed with his father. P subsequently moved to England, married, and gave birth to S. Child protection authorities in the U.S. alerted the authorities in England to the earlier case and concerns that P suffered from MSPB. It was this information that triggered the removal of S. *Id.* at ¶¶ 9-56.

82. European Convention for the Protection of Human Rights and Fundamental Freedoms, Nov 4, 1950, E.T.S. 45.

83. *Venema v. Netherlands*, (2004) 39 Eur. Ct. H.R. 5.

84. *Id.* at ¶¶ 98-99.

85. *People v. Phillips*, 122 Cal. App.3d 69, 82 (Cal. Ct. App. 1981) (referring specifically to Sir Roy Meadow's 1977 article).

86. Tom Ryan, an attorney in Arizona, is a leading critic of misdiagnosis of MSBP. He is quoted by Gloria Padilla as observing, "Munchausen Syndrome by Proxy has become the disease du jour. This diagnosis is nothing more than modern day medical McCarthyism, where mothers are accused of a sinister form of child abuse with nothing more than suspicion, rumor and innuendo." Gloria Padilla, *Lawyer Blasts 'Disease Du Jour'*, SAN ANTONIO EXPRESS-NEWS, May 4, 1998, at 1. In the Foreword to David Allison's and Mark Roberts' *Disordered Mothers or Disordered Diagnosis*, Ryan likens the diagnosis of MSBP to the Hans Christian Andersen fairy tale, *The Emperor's New Clothes* (in which the Emperor is, in fact, naked, but courtiers conspire to feed the fallacy of his spectacular new outfit). DAVID B. ALLISON & MARK S. ROBERTS, *DISORDERED MOTHERS OR DISORDERED DIAGNOSIS*, ix (1998).

87. Charlotte Faltermayer, *Medea's Shadow*, LEGAL AFF. 43 (June 2004); Steve Levin, *Parental Illness or Child Abuse?*, PITTSBURG POST-GAZETTE, Jan. 3, 1999; Padilla, *supra* note 84.

88. *R v. LM*, [2004] Q.C.A. 192 (A.C.); *see* Helen Hayward-Brown, *Munchausen Syndrome by Proxy (MSBP)*, 16(5) JUDICIAL OFFICER'S BULLETIN 33, ¶ 93 (2004).

children from their mother amid allegations of MSBP.⁸⁹

It is no exaggeration to say that the recent experiences surrounding MSBP in the United Kingdom has rocked the world of child protection. Due largely to the work of one highly-influential man, who attracted quite a following in the medical community, a number of women served prison sentences for crimes they did not commit. Furthermore, some children were removed from their parents' care for months or years, and other children and parents have been lost to each other through adoption. That this can happen in developed legal systems is nothing short of scandalous. The courts were all too willing to listen to the dogmatic views of experts adhering to a particular theory and, while they may have learned something from this debacle, it remains to be seen whether the deference accorded to experts, and particularly medical experts, will be less absolute in the future. While some of the expert witnesses involved have been subject to sanction by their own professional body, the GMC, it was neither swift to act nor were the sanctions particularly severe.⁹⁰ Before we examine the criteria the courts apply in admitting expert evidence – criteria designed to prevent just this sort of injustice from occurring – and the damage that cases of this kind cause, we will look at another example of the influence of an expert and how his theory played out in the courts.

TEMPORARY BRITTLE BONE DISEASE (TBBD)

If Sir Roy Meadow and the impact of his views on MSPB produced a media feeding frenzy, the reaction to Dr. Colin Paterson and his views on the existence of “temporary brittle bone disease” (TBBD),⁹¹ amounted to something of a low-calorie snack. There never was a “Paterson’s Law” sitting alongside Meadow’s Law. TBBD did not attract a following amongst other members of the medical profession and, indeed, it was its rejection by other experts that may have reduced its impact. Unlike the investigations which followed the overturning of the convictions of Sarah Clark and Angela Cannings, there was initial resistance to the idea of reviewing the cases in which Dr. Paterson played a part.⁹² After some dragging of feet, the Children’s

89. Lauren Quaintance, *Nursery Crimes: A Mother’s Illness*, SUNDAY STAR-TIMES (AUCKLAND), Dec. 21, 2003, at 1.

90. In the light of this, it is interesting to note that Dr. Paterson whose evidence on TBBD is equally questionable did lose his license: see footnotes 125-128 and accompanying text.

91. More recently, the term “transient brittle bone disease” has been used to describe the condition but, as with MSBP, TBBD will be used here since it is better known. See Colin Paterson, *The Child With Unexplained Fractures*, 147 N.L.J. 648 (1997) [hereinafter *Unexplained Fractures*].

92. Writing in the influential UK newspaper, *The Guardian*, Clare Dyer reported that David Spicer, a barrister and chair of the British Association for the Study and Prevention of Child Abuse and Neglect, wrote to the Minister for Children, Margaret Hodge, asking if local authorities would be advised to reopen cases in which Dr. Paterson had been involved. Clare Dyer, *Inexpert Witness: In the Fuss Over Roy Meadow, Whose Evidence Incriminated Angela Cannings, the Case of Another Medical Courtroom Specialist Has Gone Unnoticed*, THE

Minister for England and Wales, Margaret Hodge, finally called for a review.⁹³

While there is now a body of case law rejecting TBBD, which gives some of the strongest condemnation of an expert's testimony found in the law reports, it is not known how often his evidence held sway and led to the return of children to their families.⁹⁴ Writing in 1997, Dr. Paterson estimated that seventy-eight children had been returned to their parents after he gave evidence in care proceedings in England and Wales,⁹⁵ and his evidence had a similar effect in at least one Scottish case⁹⁶ and had an impact in at least two cases in the United States.⁹⁷

What, then, was the theory advanced by Dr. Paterson about this alleged condition, TBBD? Essentially, TBBD provides an alternative explanation to the cause of a pattern of injuries, specifically broken bones, in children. When a child comes to the attention of the authorities because of suspected abuse, part of the child's body will often be X-rayed, with a skeletal survey sometimes being carried out over the whole body. Sometimes the X-rays disclose previous injuries, including bone fractures, typically to the arms, wrists, legs, ankles, or ribs. If the child's caregiver(s) (usually the parent(s)) cannot provide an innocent explanation of how the injuries occurred that is consistent with the injuries themselves, then a strong suspicion arises that the child has been abused.⁹⁸ In a small number of cases, a child will suffer from *osteogenesis imperfecta* (OI), better known as brittle bone disease.⁹⁹ This is a permanent genetic condition, of varying severity, in which the sufferer has increased bone fragility, leaving him or her unusually susceptible to bone fractures.¹⁰⁰ Where a child has this condition, and it can usually be diagnosed using well-accepted tests, then the suspicion of non-accidental injury is displaced, since there is now

GUARDIAN (LONDON), Apr. 6, 2004, at G2. Initially, it appeared that there would be no such instruction. *Id.*

93. See, *Newline – Medical Expert Witness*, 34 FAMILY L.J. 556 (2004); see also Clare Dyer, *Hodge Calls for Child Care Review*, THE GUARDIAN (LONDON), Nov. 8, 2004, at 10.

94. For a discussion of some of the cases, see *infra* at footnotes 113-116 and accompanying text.

95. *Unexplained Fractures*, *supra* note 89, at 648.

96. This case has never appeared in the law reports and, thus, there is no case name. See the discussion of the case *infra* at footnotes 117-118 and accompanying text.

97. *State v. Talmadge*, 999 P.2d 192 (Ariz. 2000). See also the discussion *infra* at footnotes 120-122 and accompanying text, of the case referred to in Alicia O. Cata, *Child Abuse v. Temporary Brittle Bone Disease: One Lawyer's Experience with Medical Research and its Misapplication to the Facts*, 22 CHAMPION 16 (1998).

98. Feldman, *supra* note 5, at 176-77.

99. *Id.* at 213-15.

100. *Osteogenesis imperfecta* is classified on a scale from IA to IVB, in terms of severity. Statistics on the frequency of the condition vary, but Feldman cites type IA as occurring in 3.5 out of 100,000 births. He notes that type 4A "has the greatest potential of confusion with abuse, but it accounts for only 5% of OI cases. . . . Rarely, mild OI type 3 can also cause confusion. OI types 2 and 3 usually cause severe disease from infancy and, hence, are unlikely to be confused with abuse." *Id.* at 214. Bays estimates the incidence of Type I, the most common form of the condition, as one per 30,000 births. Jan Bays, *Conditions Mistaken for Child Physical Abuse*, in CHILD ABUSE: MEDICAL DIAGNOSIS AND MANAGEMENT 200 (Robert Reece & Stephen Ludwig, eds. 2d ed., 2001) [hereinafter *Conditions Mistaken*].

an innocent explanation of the child's injuries.¹⁰¹

It was in this context that Dr. Paterson developed his theory about a condition he called temporary brittle bone disease (TBBD).¹⁰² Where he departed from established medicine was by suggesting that there might be a condition, similar to OI, which created a susceptibility to bone fractures, but which was temporary.¹⁰³ Essentially, to put it in lay-person's terms, the child had suffered from brittle bone disease but had "recovered". Again, there was an innocent explanation for the child's past injuries. The problem was that, once the child healed, the condition could no longer be established by recognized tests. To fill that gap, Dr. Paterson provided his own explanation of what might cause TBBD and how it could be established using the evidence that did remain available. He noted similarities between TBBD and both copper deficiency and collagen defects.¹⁰⁴ He found that TBBD generally occurred within the first year of the child's life, appeared to be more common in twins and where birth had been premature. While there was usually no family history of brittle bones, there might be a history of bone laxity. The pattern of injuries often included fractures to the ribs and at the ends of long bones and the condition was sometimes accompanied by projectile vomiting and anemia.¹⁰⁵ Dr. Paterson attached considerable weight to the absence of bruising accompanying diagnosis of fractures when TBBD had occurred, although it appears that bruising is often absent when young children sustain bone fractures.¹⁰⁶

101. It is possible, of course, that a child can suffer from OI and also be the victim of abuse. Daniel R. Cooperman & David F. Merten, *Skeletal Manifestations of Child Abuse*, in CHILD ABUSE: MEDICAL DIAGNOSIS AND MANAGEMENT 149-150 (Robert Reece & Stephen Ludwig, eds. 2d ed., 2001).

102. Colin R. Paterson & Dr. Susan J. McAllion, *Osteogenesis Imperfecta in the Differential Diagnosis of Child Abuse*, 299 BRIT. MED. J. 1451 (1989). Ablin & Sane express the view that "[t]he so-called entity of TBBD, proposed as a variant form of OI, originated as a presentation at the Fourth International Conference of OI in 1990. An article was subsequently published in the *American Journal of Medical Genetics* without peer review." Deborah S. Ablin & Shashikant M. Sane, *Non-Accidental Injury: Confusion with Temporary Brittle Bone Disease and Mild Osteogenesis Imperfecta*, 27 PEDIATRIC RADIOLOGY 111 (1997). This observation appears to discount prior publication in the *British Medical Journal*, so presumably what Ablin and Sane mean is that the first presentation of TBBD in the *United States* occurred at the 1990 conference.

103. Colin R. Paterson et al., *Osteogenesis Imperfecta: The Distinction from Child Abuse and the Recognition of a Variant Form*, 45 AM. J. OF MED. GENETICS 187, 188 (1993) [hereinafter *Distinction from Child Abuse*]; Colin R. Paterson, et al., *Reply to Dr. Bawle: Temporary Brittle Bone Disease*, 49 AM. J. OF MED. GENETICS 132 (1994) [hereinafter *Reply to Dr. Bawle*]; Colin R. Paterson et al., *Osteogenesis Imperfecta Variant v Child Abuse: Reply*, 56 AM. J. OF MED. GENETICS 117, 118 (1995) [hereinafter *Variant*]; *Unexplained Fractures*, *supra* note 91.

104. *Variant*, *supra* note 103, at 117.

105. *Distinction from Child Abuse*, *supra* note 103, at 187; *Variant*, *supra* note 103, at 117; *Unexplained Fractures*, *supra* note 91.

106. In *Re AB (Child Abuse: Expert Witnesses)*, [1995] 1 F.L.R. 181, 195 (Fam.), Dr. Paterson attached considerable significance to the absence of bruising, stating that "[h]ad these

TBBD attracted almost unanimous criticism from the medical community,¹⁰⁷ and prosecutors were warned of this new defense.¹⁰⁸ Much of the medical condemnation of the so-called disease was absolute. Kirschner stated, "the concept of 'temporary brittle bone disease' . . . remains totally unsubstantiated",¹⁰⁹ and others expressed similar views.¹¹⁰ In addition, some commentators were concerned about the credentials of those involved in the research and the lack of opportunity to evaluate the findings.¹¹¹ Perhaps of

fractures been sustained as a result of a series of deliberate injuries inflicted on a child with normal bones, it would be almost inconceivable that evidence of such injuries would not be obvious." However, Wall J. noted the evidence of two other experts "that fractures in young children frequently occur without evidence of bruising," and considerable support for this proposition can be found in the medical literature. *Id.* This led him to prefer the latter's evidence. *Id.*

107. There appears to be at least one domestic advocate of TBBD in the United States: Dr. Marvin Miller, author of *Temporary Brittle Bone Disease: Associated with Decreased Fetal Movement and Osteopenia* (1998), which was rejected by a number of leading medical journals and published in *Calcified Tissue International*. See *Family Independence Agency v. Detrych*, 654 N.W.2d 331 (Mich. App., 2002). He has appeared in a number of cases but his testimony has not prevailed over that of other experts. See *State v. Swain*, 2002 WL 146204 (Ohio App.2002) (This case involved an unsuccessful appeal against conviction for felonious assault and child endangerment. At trial, all three of the state's witnesses discounted TBBD as a legitimate theory.); *State v. Glover*, 2002 WL 31647904 (Ohio App. 12 Dist., 2002) (This case involved an unsuccessful appeal against convictions for felonious assault. Dr. Miller's theories "had not been accepted by the medical community." The theories were rejected by the jury as part of the larger picture of evidence.); *Detrych*, 654 N.W.2d at 331 (On appeal, Dr. Miller's testimony was found inadmissible applying a variant of the Frye test. "Dr. Miller's testimony is based on a novel theory which lacks the appropriate objective and independent validation necessary to permit its admissibility at trial."). TBBD is mentioned and rejected by the courts in a number of appeals. See, e.g., *In the Matter of Eric CC*, 653 N.Y.S.2d 983, 985 (N.Y. App. 1997).

108. "The bottom line is that TBBD is not accepted in the scientific community. . . . TBBD remains an unsubstantiated hypothesis lacking empirical support. If TBBD is raised as a defense in your jurisdiction, it most certainly should be challenged." NAT'L CTR. FOR PROSECUTION OF CHILD ABUSE, AM. PROSECUTOR'S RESEARCH INST., QUESTIONABLE 'BRITTLE BONE DISEASE' DEFENSES TO PHYSICAL ABUSE 1 (8(10) update) (Oct. 1995). "It is vitally important that all MDTs know that TBBD is not a recognized disease." JOËLLE ANNE MORINO, AM. PROSECUTOR'S RESEARCH INST., A COURTROOM DIAGNOSIS: COUNTERING THE DEFENSE OF TEMPORARY BRITTLE BONE DISEASE AND MILD OI (16(8) Update) (2004). Update from 1997 onwards is available online through the APRI website, at www.ndaa-apri.org (last visited Mar. 17, 2006). I am most grateful to the staff at APRI for sending me a copy of the 1995 article in response to an email.

109. Kirschner, *supra* note 6, at 262.

110. Deborah S. Ablin, *Osteogenesis Imperfecta: A Review*, 49 CAN. ASS. OF RADIOLOGISTS J. 110 (TBBD "remains a medical hypothesis lacking the support of sound scientific data"); Ablin & Sane, *supra* note 102, at 112 ("until clinical research scientifically established the existence of TBBD, it should remain strictly a hypothetical entity and not an acceptable medical diagnosis").

111. Ablin & Sane, *supra* note 102, at 112 ("objective analysis of the data by an independent observer is not possible"); Ralph S. Lachman, *Differential Diagnosis II: Osteogenesis Imperfecta*, in *DIAGNOSTIC IMAGING OF CHILD ABUSE* 221 (Paul K. Kleinman, ed., 2d ed, 1998) ("because no radiologists were authors of this publication, and no details are given regarding the methods employed in the radiologic evaluation of these patients, it is difficult to assess the accuracy of these findings").

greatest concern was that “most of the radiologic features ascribed to transient brittle bone disease are those classically noted in cases of abuse.”¹¹²

The English courts were the first to express concern over Dr. Paterson’s evidence. Cazalet J. made the following observation in 1990: “[Dr. Paterson] accepted that he has been criticised in certain previous cases for developing particular theories as to their causation. In the present case, I think he may have developed a theory of causation rather than a diagnosis.”¹¹³ Similarly, in 1994, Wall J. noted:

Whilst the courts of course accept that there may be cases where there is a divergence between judicial and clinical findings, I regard as worrying in the extreme Dr. Paterson’s failure to record in his research material of cases of proven brittle bone disease judicial findings to the contrary. In my judgment this is a factor which must cast the gravest doubt on his findings.¹¹⁴

He then went on to detail the following shortcomings in Dr. Paterson’s evidence and contribution to the case: omission of reference to the child’s brain damage; failure to disclose the controversial nature of his research and omission of factors that did not support his opinion, demonstrating a lack of objectivity; failure to record the fact that previous judicial findings cast doubt on the validity of his research data; reinforcing false hope in parents that they would be exonerated; and the resulting increase in costs in the case.¹¹⁵ Lest his fellow judges had been too subtle in their criticism, Singer J. was even more forthright in 2001, when he said:

In my judgment, in relation to any future potential diagnosis by Dr. Paterson of TBBD, his methodology and his credentials to express opinion deserve to be and should be subjected to rigorous scrutiny before he is given leave to report in further cases. In this case, notwithstanding [the earlier comments of Cazalet and Wall JJ.] Dr. Paterson has in my opinion provided a misleading opinion, failed to be objective, omitted factors

112. Lachman, *supra* note 111, at 221. The same point is made by Dr. Jan Bays who gives a detailed analysis of the similarities between TBBD and child abuse, criticizing the lack of evidence produced by Dr. Paterson in support of his theory. *Conditions Mistaken*, *supra* note 100, at 486.

113. See *Re J*, 1 F.C.R. at 193. It should be noted that Dr. Paterson’s evidence was mentioned in *Re P (Minors) (Child Abuse: Medical Evidence)*, [1988] 1 F.L.R. 328 (Fam.), but largely in the context of a need for further research into the copper deficiency that he mentioned.

114. *Re AB*, 1 F.L.R. at 199.

115. *Id.*

which do not support his opinion, and lacked proper research in his approach to the case in point.¹¹⁶

In the midst of this, Dr. Paterson's evidence was instrumental in securing the return of twins to their parents in Scotland in 2000.¹¹⁷ Somewhat frustratingly, the only information in print about this case comes from a newspaper report. Since it was disposed of at first instance, there was no appeal, and there is no law report.¹¹⁸ It appears that the twins had been removed from their parents at the age of seven months and placed in the care of relatives for almost two years before being returned to their parents by Sheriff John Stewart as a result of Dr. Paterson's evidence of TBBD as a medical condition.

Despite the warnings about TBBD that had been given to prosecutors in the United States by their own professional organization,¹¹⁹ Dr. Paterson appears to have played a central role in the acquittal of parents on charges of child abuse in Tucson, Arizona in 1998.¹²⁰ Two years later, in *State v. Talmadge*,¹²¹ a mother secured a retrial on child abuse charges on the basis that the trial court had improperly excluded Dr. Paterson's evidence. She and her partner (the child's father) were subsequently convicted and imprisoned.¹²²

Despite opposition to his theory, Dr. Paterson made himself available to the courts as an expert witness on TBBD and, it will be remembered, according to his own estimate, in 1997, seventy-eight children had been returned to their parents after he gave evidence in care proceedings in the England and Wales.¹²³

It may be some tribute to the legal system that it was members of the judiciary who prompted the General Medical Council to intervene in Dr. Paterson's case,¹²⁴ but what is more alarming is the fact that Dr. Paterson was able to

116. *Re X (Non-Accidental Injury: Expert Evidence)*, [2001] 1 F.L.R. 90, ¶¶ 119-20 (Fam.).

117. While there was passing reference to Dr. Paterson's evidence of temporary brittle bone disease in an earlier unreported Scottish case, this was not central to the decision. *Strathclyde Region v. DH and KH*, [1992] (Inner House) (appeal taken from Scot.) (U.K.).

118. Tara Womersley, *Brittle bones 'are being diagnosed as child abuse'*, DAILY TELEGRAPH, Oct. 18, 2000, available at www.whale.to/m/sbs26.html.

119. NAT'L CENTER FOR PROSECUTION OF CHILD ABUSE, *supra* note 108.

120. In an article in the journal of the (US) National Association of Criminal Defense Lawyers, Alicia O. Cata waxes lyrical about the contribution of Dr. Paterson in securing the acquittal of her clients, identified only as R and L, on child abuse charges. Cata, *supra* note 97.

121. *State v. Talmadge*, 999 P.2d 192 (Ariz. 2000). Part of the GMC case against Dr. Paterson related to his having given evidence in this case after having received a letter of guidance from the GMC. Owen Dyer, *GMC strikes off proponent of temporary brittle bone disease*, 328 BRIT. MED. J. 604 (2004).

122. David J. Cieslak, *Parents Found Guilty of Child Abuse for Second Time*, TUCSON CITIZEN, Feb. 22, 2002, at 1E. Fortunately, it appears that the child involved, Amber, had been fostered suggesting that she was not returned to the care of her abusive parents. She was subsequently adopted by her foster caregivers. *Id.*

123. *Unexplained Fractures*, *supra* note 91, at 648.

124. It is reported that, having received complaints from three High Court judges, Dame Elizabeth Butler-Sloss wrote to the General Medical Council expressing concern about Dr.

continue appearing as an expert witness long after the courts had signaled disquiet over his evidence.

In March 2004, the professional conduct committee of the General Medical Council found Dr. Paterson guilty of serious professional misconduct, citing that his “criteria for the diagnosis of TBBD were unclear, and/or variable, with the result that the use of these criteria in legal proceedings could mislead others thereby posing an unacceptable risk to the safety of children.”¹²⁵ It is only fair to note that the chairwoman of the committee described Dr. Paterson as “an honest, dedicated professional.”¹²⁶ His license to practice medicine was withdrawn or, to put it in ordinary parlance, he was “struck off.”¹²⁷ Sections of the medical community regard the removal of his medical license as harsh.¹²⁸

This, then, was what was being presented to courts from 1990 until 2001. As we have seen, the medical and scientific communities were skeptical of TBBD since its inception, ultimately condemning it. However, the theory continued to be advanced in the courts well after its dismissal due to the lack of scientific validity. That this could happen calls into question the whole issue of how so-called scientific evidence is admitted into court. Before the rules on admissibility of evidence are examined, it is worth exploring the harm caused by cases of this kind.

WHAT IMPACT DO CASES LIKE THESE HAVE?

It is stating the obvious to note that cases of the kind outlined above harm the individuals involved but, lest we forget, let us recap on the magnitude of that harm. Angela Cannings, Sally Clark and Donna Anthony are real women, not characters in a law school class hypothetical. Each spent years in prison

Paterson. Rhiannon Edward, *Bone Expert 'Misled Court,'* THE SCOTSMAN, Mar. 2, 2004, available at <http://news.scotsman.com/uk.cfm?id=244182004&format=print>.

125. Hugo Duncan, *Bone Expert Struck Off for Misleading Court,* THE SCOTSMAN, Mar. 5, 2004, available at <http://news.scotsman.com/uk.cfm?id=256922004&format=print>.

126. *Id.*

127. Strictly speaking, the Fitness to Practice Panel has directed “that the person's name shall be erased from the register.” Medical Act 1983, (Amendment) Order 2002, S.I. 2002/3135, §13.

128. News of the decision to remove Dr. Paterson's name from the register was broken in the *British Medical Journal* by Owen Dyer. Dyer, *supra* note 121. The Journal offers a “Rapid Response” feature which allows individuals to send letters by email in response to a particular article and sometimes a dialogue develops between correspondents. Correspondence relating to Dyer's article can be found by accessing the article at <http://bmj.bmjournals.com> and clicking on “[r]ead responses to this article” on the top right-hand corner of the screen. Much of the correspondence was in support of Dr. Paterson and criticized the GMC decision. See, e.g., Peter M.R. von Kaehne, *Time For an Overhaul of Child Protection* (March 14, 2004); Michael D. Innis, *Medical Ignorance Perverts Due Process in Alleged Child Abuse* (March 16, 2004); Mark Struthers, *Re: Time For an Overhaul of Child Protection* (March 20, 2004); and Michael Innis, *GMC Ruling Unjust* (June 16, 2004). Prior to Sir Roy Meadow being subject to the same sanction, albeit the sanction was short-lived, some commentators saw a sinister dimension in the fact that a person who gave evidence for the defense suffered a greater penalty than those who were witnesses for the prosecution. See von Kaehne, *supra*.

before her conviction was overturned. Each had lost children and, far from her loss attracting the sympathy usually extended to a bereaved parent, was vilified and blamed for the deaths. Each had family members who, fortunately for them, often showed incredible courage, loyalty and determination in campaigning on her behalf. Nonetheless, these relatives too had suffered bereavement and their plight was exacerbated by the legal system. In addition, there are the families of living children, torn apart amid allegations of MSBP. Although estimates of the number of families affected vary widely, there are undoubtedly cases where expert evidence has resulted in children being removed from their parents and, sometimes, adopted into new families.¹²⁹ Whether, on review, the removal proves to be unjustified remains to be seen, but it seems likely that at least some cases of unwarranted removal will emerge. For the children who can be returned to their parents, the disruption has been enormous; for those who cannot, the toll is immeasurable. Similarly, the parents have experienced nightmares that few of us can truly comprehend. Conversely, in the TBBB cases, there is no way of knowing how many children may have been returned to abusive situations because of expert evidence. Nor is it known how many parents are failing to address fundamental parenting problems, believing they are doing nothing wrong.¹³⁰

However, the damage done by cases of this kind goes well beyond those individuals directly involved. Such cases discredit the whole legal process. When people are wrongfully convicted and incarcerated, the credibility of the legal system is damaged. Although lawyers might argue that the later correction of these errors is something of a tribute to the legal system's ability to police itself, there is little doubt that considerable harm is done by the fact that the errors occurred in the first place. In the context of child protection, whether we are addressing over-zealous intervention (MSBP) or a defense later found to be invalid (TBBB), these failures diminish public faith in the system and may result in a reluctance to trust it and to participate in it. Given that child protection relies on members of the public reporting cases of suspected abuse, society cannot afford to undermine public confidence in the child protection system.

In addition, these cases have, quite properly, discredited evidence of the expert witnesses involved. Both the MSBP and TBBB cases share the common

129. See *supra* footnotes 59-62 and accompanying text.

130. This danger was emphasized by Wall J, in *Re AB (Child Abuse: Expert Witness)*, 1 F.L.R. at 193, when he noted:

If . . . the truth is that the parent has injured the child non-accidentally, the damage done by an opinion which exonerates the parent is severe. The process of acceptance and recognition is either set back or destroyed; the parent's conviction that he or she has not injured the child is reinforced; the question of rehabilitation of the child is rendered more complex and the risks to the child of a return to parental care become even more difficult to quantify. In short, both the parents and more importantly the child, whose interests are paramount, are ill-served.

characteristic of experts being allowed by the courts to advance their own theories – theories to which the experts were particularly attached. To some extent, the lawyers involved must bear responsibility. Why did those opposing the cases advanced by Sir Roy Meadow *et al.* not seek out their own experts of the right kind? Is this an indication of lawyers simply not being sufficiently well-versed in the sciences? It is a feature of the adversarial system that reliance is placed on the competing attorneys to make their cases. With the twenty-twenty vision afforded by hindsight, it seems that Sir Roy Meadow made some fundamental and elementary errors in the use of statistics. That did not become apparent until the General Medical Council heard evidence in his disciplinary case.¹³¹ Had the defense lawyers working for Ms. Clark, Ms. Cannings, and Ms. Anthony known more about statistics, could the whole problem have been avoided? As we have seen, it was the evidence of other experts in the TBBB cases that went a long way to alerting the courts to the problems with Dr. Paterson's theory. It is not usually the function of the court to conduct its own investigation into the facts. Perhaps it should be or, at least, perhaps the court should have greater opportunity to appoint independent experts to assist it.

If these experiences make experts and courts more careful in the future, then that is all to the good. Certainly, there are recent examples of the established position of experts being called into question in other contexts and it may be that this questioning process has been facilitated by the recent experiences of MSBP and TBBB. So, for example, a healthy debate is now underway with respect to shaken baby syndrome and the evidence of its occurrence.¹³² However, these cases may have had a more general negative effect in tainting all expert evidence, creating a risk that well-researched and accurate expert evidence may carry less weight in the future. This, in turn, could lead to further injustice to litigants and risk to children.

What of the professionals involved? Clearly, individual careers have been damaged. For Sir Roy Meadow, who is seventy-two years old and retired, the temporary loss of his license to practice medicine had little practical impact.

Nor was the diminution to his reputation as significant as it might have been. While disciplinary proceedings were pending, he was invited to speak at an international conference.¹³³ Only one week after he lost his license, the Court of Appeal, in England, went out of its way to stress that Sir Roy Meadow "had and still has enormous expertise" as a child abuse expert.¹³⁴ Dr. Colin

131. See *supra* footnote 76 and accompanying text.

132. See *supra* footnote 6.

133. Doward, *supra* note 54 (reporting that he was invited to speak at an international conference for child protection workers in San Diego in January 2005). An argument might be made that, since disciplinary proceedings were pending, it was correct that he should benefit from the presumption of innocence. However, the convictions of Sally Clark and Angela Cannings had already been overturned by this time and there had been considerable publicity of Sir Roy's role in each.

134. Refusing the appeal in *R v. Martin*, [2005] EWCA Crim. 2043, para.26,

Patterson is also retired, albeit he has lost his license to practice his profession. As we have seen, others involved have got off rather more lightly.¹³⁵ While it is sad to see distinguished careers end in ignominy,¹³⁶ where a professional has overstated a case or has erred, causing such significant consequences for others, public sympathy is likely to be somewhat minimal.

The lack of humility shown by some of the experts involved is remarkable. Most have not apologized for their actions, albeit Sir Roy Meadow came close at the eleventh hour in the course of his disciplinary hearing before the GMC.¹³⁷ For some of the experts involved, the failure to engage in a public “*mea culpa*” may be due to the fact that they still think they are correct.¹³⁸ Others may believe their actions are excused by the fact that they acted in good faith.¹³⁹

What of the impact on the medical profession, more generally? Failure by an individual member of a profession reflects badly on the profession as a whole, which is why bar associations are so harsh on attorneys who transgress. On February 2, 2004, as the Meadow affair unfolded, Professor Sir Alan Craft, President of the Royal College of Paediatrics and Child Care, had a letter published in *The Times*. It contained the following statements:

The recent cases concerning cot deaths . . . and suspected Munchausen syndrome by proxy (which has been redefined in recent years as “*factitious or induced illness*”) have confused the legal and medical professions and public. . . . We accept that there must be a review of any cases involving unexplained infant deaths where there may have been a miscarriage of justice. However, this will do nothing to restore public and

135. See *supra* footnotes 74-78 and accompanying text

136. In the light of the Court of Appeal’s recent attempt, in *R v. Martin* [2005] EWCA 2043, to rehabilitate Sir Roy Meadow’s reputation, the reinstatement of his license and the fact that he remains welcome as a speaker in the US, perhaps “*ignominy*” has not been his fate.

137. Ben Farmer, *Meadow says sorry to family of jailed cot death mother*, THE SCOTSMAN, July 7, 2005, available at <http://news.scotsman.com/topics.cfm?tid=892&id=751412005>. That headline is, itself, somewhat misleading if it is read to mean that Sir Roy Meadow made a spontaneous apology. The story deals with the GMC hearing where misleading statistical evidence was being discussed and counsel asking him, “[i]s that something you feel profoundly sorry about?”, to which he is reported as replying, “[y]es, it is.” *Id.*

138. Far from apologizing, it is reported that Professor Southall stands by the allegations he made against Mr. Clark and has vowed to “continue working for children.” Karen McVeigh, *Still in a Job – the Child Doctor Who Falsely Accused a Father of Murder*, THE SCOTSMAN, Aug. 7, 2004, at 1.

139. A statement made to the press on behalf of Dr. Paterson included the following:

Dr. Paterson is naturally very disappointed with the decision reached by the GMC. He has spent his working life helping others and researching the intricacies of brittle bone disease, in which he is acknowledged as a world expert. He has never knowingly misled any tribunal or court in setting out his views and has always had regard for the views of others.”

Duncan, *supra* note 125.

professional confidence in the management of child abuse. Many medical posts in the field of child protection remain unfilled and paediatricians are, not surprisingly, increasingly reluctant to act as expert witnesses in these complex cases.

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If, as indeed appears to be the case, young doctors are less willing to enter the field of community pediatrics for fear of litigation,¹⁴¹ and experienced pediatricians are becoming reluctant to offer their services as expert witnesses, then the child protection system is, again, placed in jeopardy. However, Professor Craft's response to justified public concern is somewhat defensive, if not downright threatening. It comes very close to saying, "if you dare to criticize us, we will take our ball and go home."¹⁴² To be fair, once some of the dust had settled, the Royal College of Paediatrics and Child Health took a more constructive approach to the issues raised. It launched two reviews, one examining the quality of evidence in recent high-profile child abuse cases and the other addressing recent research on child abuse.¹⁴³ In addition, together with the Royal College of Pathologists, it established a working group to develop a protocol for the care and investigations of SIDS cases.¹⁴⁴ Despite the

140. Letter from Professor Sir Alan Craft, President, Royal College of Paediatrics & Child Health, *Need to review child protection*, THE TIMES, Feb. 2, 2004 at 17. On February 11, 2004, he wrote to the members of the Royal College itself, highlighting "an unprecedented number of media attacks on paediatricians." He noted that this was exacerbating an existing problem "that paediatricians are becoming reluctant to become involved in child protection unless they absolutely have to." *Kent County Council v. The Mother, The Father, B*, [2004] EWHC 411, ¶ 88 (Fam.). In 2003, Professor Craft's predecessor commented in the *British Medical Journal* that one reason for the unpopularity of child protection as a pediatric specialty was "the fear of complaints and litigation." *Id.* at ¶ 89. He continued, "No one condones poor clinical practice, but some complaints are malicious and are intended to obstruct social work and police investigations, and some arise from orchestrated campaigns." *Id.*

141. A survey conducted by the Royal College of Paediatrics and Child Care found that, while the number of pediatricians in the United Kingdom rose quite rapidly by 15.2% between 2001 and 2003, less than 1% of them were going into work in the community covering child protection cases and 7.4% of consultant posts in community trusts remained unfilled. Royal College of Paediatrics and Child Care, *Supporting Services for Children: Workforce Census 2003* (Mar. 2005), available at http://www.rcpch.ac.uk/publications/research_division_workforce_docs/Censusnew.pdf.

142. It is a pity that members of the public are less likely to see the article Professor Craft co-authored and published only months later, which is rather more balanced and less defensive. See generally Craft & Hall, *supra* note 34.

143. Liam McDougall, *Testimony of Child Abuse Experts Under New Scrutiny*, SUNDAY HERALD, May 9, 2004, at 11. The Royal College of Paediatrics and Child Health was not helpful in providing further details of these reviews. An email from the author was passed on by the designated recipient to another person, but the latter did not respond.

144. THE ROYAL COLLEGE OF PATHOLOGISTS & THE ROYAL COLLEGE OF PAEDIATRICS & CHILD HEALTH, *Sudden Unexpected Death in Infancy: A Multi-agency Protocol for Care and Investigation* (2004). This was the report of a working group convened by the Royal College of Pathologists and the Royal College of Paediatrics and Child Health and can be found by searching at www.rcpch.ac.uk.

responses of the professional bodies, some members of the medical profession continue to see Sir Roy Meadow's treatment as scapegoating.¹⁴⁵

Lest we respond to these implicit threats and fall into the trap of undue deference to medical experts, it is worth noting that a balance can be struck. In *Kent County Council v. The Mother, The Father, B*,¹⁴⁶ for example, a mother, who claimed she had been falsely accused of suffering from MSBP and harming her child, sought to publicize her case in the press. The pediatricians involved sought to protect their identity. In balancing the competing interests of freedom of speech and privacy, Justice Munby noted that, "it is scarcely an exaggeration to say that Sir Roy Meadow has been pilloried and almost demonised in the media."¹⁴⁷ However, he acknowledged that "there is a powerful public interest . . . in knowing who the experts are whose theories and evidence underpin judicial decisions which are increasingly coming under critical and sceptical scrutiny."¹⁴⁸ In the event, he went on to protect the identity of two pediatricians.

Central to ensuring that the legal system makes the best use of sound expert evidence while guarding against that which is hasty, exaggerated, or just plain wrong, are the rules and procedures employed by courts in admitting expert evidence and attaching the appropriate weight to it. What, then, are the relevant rules and procedures?

ADMITTING EXPERT EVIDENCE IN THE UNITED KINGDOM AND THE WEIGHT TO BE ATTACHED TO IT

In England and Wales, reference is made to the "expert witness"¹⁴⁹ and, while the more traditional Scottish term is "skilled witness,"¹⁵⁰ the former will be used here since it is used and understood in both jurisdictions.¹⁵¹ Essentially, there are three issues to be resolved with respect to expert evidence. First is the question of admissibility: that is, whether the expert evidence will be

145. See, e.g., Richard Horton, *In Defence of Roy Meadows*, 366 LANCET 3, 3-5 (July 2, 2005); Clare Dyer, *Professor Sir Roy Meadow Struck Off*, 331 BRIT. MED. J. 177 (2005) (quoting Sir Alan Craft as saying: "The one thing it will do is frighten any sensible doctor away from doing expert witness work, and the more eminent you are and the more important you are in terms of providing expert evidence the less likely you will be to provide it in the future.")

146. *Kent County Council v. The Mother, The Father, B*, [2004] EWHC 411 (Fam.).

147. *Id.* at ¶ 129.

148. *Id.*

149. COLIN TAPPER, CROSS AND TAPPER ON EVIDENCE 568-72 (10th ed. 2004).

150. W.G. DICKSON, A TREATISE ON THE LAW OF EVIDENCE IN SCOTLAND (3rd ed. 1887) (writing in 1887, Dickson noted the English origins of the term "expert" in this context).

151. Many modern Scottish writers note the English origins of the term "expert witness" and go on to use it nonetheless. See, e.g., I.D. MACPHAIL, EVIDENCE ¶¶17.10A et seq. (1987); FIONA RAITT, EVIDENCE 337-53 (3rd ed. 2001). Cf., A.G. WALKER & N.M.L. WALKER, THE LAW OF EVIDENCE IN SCOTLAND 241, (2nd ed. 2000) (illustrating that the term "skilled witness" is preferred "since it reflects the range of attributes which may qualify the witness to give opinion evidence").

heard at all. Second, if expert evidence is admitted, there is the issue of the content of the expert's evidence and, in particular, the permitted parameters of opinion evidence. Third is the matter of the weight to be attached to the expert's evidence. The first two issues are questions of law, to be decided by the court, and the third is for the trier of fact, either a judge or a jury. It is worth bearing in mind that, in civil cases in the United Kingdom, fact-finding is almost exclusively the province of the judiciary, since civil juries are something of a rarity and are unknown in adoption and child protection proceedings. In criminal trials, juries are a key feature of the system except for more minor offences.

Turning to the question of the admissibility of expert evidence, the first hurdle to overcome is demonstrating the need for such evidence. As Lord Justice Lawton put it: "[i]f on the proven facts a judge or jury can form their own conclusions without help, then the opinion of an expert is unnecessary."¹⁵² Ordinary human behavior is usually regarded as inappropriate for expert testimony for this reason.¹⁵³ Giving a hint of the danger of undue deference to experts, his Lordship continued:

The fact that an expert witness has impressive scientific qualifications does not by that fact alone make his opinion on matters of human nature and behaviour within the limits of normality any more helpful than that of the jurors themselves; but there is a danger that they may think it does.¹⁵⁴

Since medical conditions and syndromes will often be beyond the knowledge of ordinary people, evidence about them from an expert will often be entirely appropriate. Assuming that the court accepts the need for expert evidence, the qualifications and experience of the individual expert proffered must be established. Details of the witness' degrees, other qualifications, publications, memberships of learned societies, and professional organizations, and the like, will normally suffice to demonstrate the requisite level of expertise.¹⁵⁵ Only rarely will a witness be cross-examined on the question of qualifications, and

152. *R. v. Turner*, [1975] Q.B. 834, 841.

153. In exceptional circumstances, evidence of human nature and behavior falling short of a psychiatric condition will be permitted. See Malcolm D. MacLeod & David Sheldon, *From Normative to Positive Data: Expert Psychological Evidence Re-examined*, CRIM. L.REV. 811, 812 (Nov. 1991).

154. *Turner*, [1975] Q.B. at 841.

155. Formal qualifications are not essential and expert evidence may be based on the witness' practical experience. In an older English case, a solicitor (attorney) was permitted to give evidence on handwriting on the basis of his amateur interest in the subject. *Queen v. Silverlock*, [1894] 2 Q.B. 766, 767. See also *R. v. Murphy*, [1980] Q.B. 434, 436-37 (permitting an experienced police officer to give evidence on the speed and displacement of vehicles involved in a road accident); *White v. H. M. Advocate*, [1991] S.C.C.R. 555 (permitting experienced police officers to give evidence on the quantity of drugs an individual might reasonably possess for his own consumption).

medical experts, like Sir Roy Meadow and Dr. Colin Paterson, would have had no difficulty in demonstrating the requisite expertise.

Unlike their counterparts in the United States, where judges perform a gate-keeping function,¹⁵⁶ courts in the United Kingdom do not engage in detailed exploration of the subject-matter of the evidence at this stage, since that is more usually addressed in assessing the weight to be attached to the evidence. Nonetheless, the ordinary rules of relevance and reliability apply,¹⁵⁷ and these may inject an element of gate-keeping when the court determines whether the evidence proffered is, indeed, expert evidence at all. Thus, for example, the Court of Appeal in England found inadmissible the evidence of a psychologist who offered his opinion on human behavior indicating the likelihood of the deceased having committed suicide, rather than having been killed by her husband, on the basis that it “was not expert evidence of a kind properly to be placed before the Court.”¹⁵⁸ In reaching this conclusion, it noted, “his reports identify no criteria by reference to which the Court could test the quality of his opinions: there is no data base comparing real and questionable suicides and there is no substantial body of academic writing approving his methodology.”¹⁵⁹ Having got the expert witness into court, what of the content of the evidence he or she may give? Frequently, the expert will be giving evidence of matters observed first-hand or tests he or she has carried out, with the evidence of the pathologist who carried out an autopsy being an obvious example. It is permissible for the expert to refer to relevant literature and texts and passages so referred to, although not the rest of the document, become part of the expert’s opinion.¹⁶⁰ Most significant for our purpose is the role of the expert witness in expressing opinions. It is sometimes suggested that there is a general rule to the effect that a witness must give evidence of facts, not opinions. However, it is widely acknowledged that the rule is honored more in the breach than the observance, even as it relates to non-expert (ordinary) witnesses.¹⁶¹ Whatever the position with respect to ordinary witnesses, when

156. See *infra* footnotes 179-204 and accompanying text.

157. For an example of how general court procedures may limit scrutiny of a particular claim of expertise, see *Mearns v. Smedvig Ltd.*, 1999 S.C. 243, 250 (1998) (where the Outer House of the Court of Session refused to require the pursuer in a personal injury case to submit to quasi-medical tests as to the effects of a particular injury (the “Blankenship system”) to be carried out by a person who was not medically-qualified and whose methods were novel and unorthodox in nature and not yet accepted by the medical profession).

158. *R. v. Gilfoyle*, [2001] 2 Cr.App.R. 57, 67 (Eng.). The court could have reached the same decision by applying the rule that expert evidence on the behavior of ordinary people is inadmissible.

159. *Id.*

160. *Main v. McAndrew Wormald Ltd.*, 1988 S.L.T. 141, 142 (Scot.). See also *Balmoral Group Ltd. v. H.M. Advocate*, 1996 S.L.T. 1230, 1231 (Scot.) (stating it is permissible for an expert to refer to an unapproved code of practice since he was simply asked whether he regarded it as a statement of good practice).

161. Indeed, the Law Reform Committee noted that an ordinary witness might more naturally give an accurate account of events by mixing a certain amount of opinion with the

“the issue involves scientific knowledge, or acquaintance with the rules of any trade, manufacture, or business, with which men of ordinary intelligence are not likely to be familiar,”¹⁶² it is permissible for the expert witness to express opinions on the relevant matters and, indeed, that is often the whole point of calling an expert witness. An obvious example here would be the expert witness speaking to the standard of care to be expected of a member of a particular profession. However, it is crucial that, prior to offering opinion evidence, a factual basis for that evidence must be laid.¹⁶³ This will be of particular importance where, for example, a witness is speaking to the existence of a syndrome and its applicability to a particular individual, but has never met or examined the individual.

In all of this, the role of the expert is to assist the court, rather than to advocate for a particular position.¹⁶⁴ A Scottish court had the opportunity to explore this point in a recent case, where the widow of a cigarette smoker who had died of lung cancer was seeking damages from a tobacco company.¹⁶⁵ The court heard from a number of expert witnesses on the subject of the link between smoking cigarettes and contracting lung cancer. It noted that the witnesses for the pursuer (plaintiff) “were or had been connected in one way or another with ASH [an anti-smoking lobbying group], and were clearly committed to the anti-smoking cause; and no doubt for this reason were prepared to give evidence *gratis*.”¹⁶⁶ While this generosity on their part was not, in itself, fatal, the court felt it justified “scrutiny of each of their evidence, so as to see to what extent they complied with their obligations as independent expert witnesses and how soundly based their views were.”¹⁶⁷ In the event, the

facts. See Law Reform Committee, *17th Report: Evidence of Opinion and Expert Evidence* ¶ 4 (1970, Cmnd 4489). See also WALKER, *supra* note 151, at 239 (stating that “[t]estimony, which at first sight appears to be of fact, may prove to be actually of belief or opinion” and citing identification of a person as an example).

162. DICKSON, *supra* note 150, at ¶ 397.

163. TAPPER, *supra* note 149, at 568. (“The facts upon which an expert’s opinion is based must be proved by admissible evidence”); WALKER, *supra* note 151, at 244 (“Since opinion is based on a certain state of facts, it is valueless unless the facts are averred and proved.”).

164. In *National Justice Compania Naviera S.A. v. Prudential Assurance Co. Ltd.*, [1993] 2 Lloyd’s Rep. 68, 22 (Eng.), Mr. Justice Cresswell set out the duties and responsibilities of expert witnesses and included the following:

1. Expert evidence presented to the Court should be, and should be seen to be, the independent product of the expert uninfluenced as to form or content by the exigencies of litigation
2. An expert witness should provide independent assistance to the Court by way of objective unbiased opinion in relation to matters within his expertise An expert witness in the High Court should never assume the role of an advocate.

Id.

165. *McTear v. Imperial Tobacco Ltd.*, [2005] C.S.O.H. 69 (Sess. Cass.), available at <http://www.scotcourts.gov.uk/opinions/2005csoh69.html> (the Scottish Court website).

166. *Id.* at ¶ 5.18. The court noted that the expert witnesses for the defender had charged for their services but found this unsurprising stating: “This is generally the case: expert witnesses are usually professional people who would normally expect to seek appropriate remuneration for research, preparation of reports and attendance at court.” *Id.*

167. *Id.* at ¶ 5.18.

court found that none of them had been “mindful of the need to be independent and each appeared . . . to engage in advocacy to a greater or lesser extent,”¹⁶⁸ and this greatly diminished the value the court attached to their evidence.

The opinion of a given expert is open to challenge, of course, either through cross-examination or by leading other expert witnesses who reach a different conclusion: a technique used to great effect in *McTear*. Despite these safeguards, it is a matter for concern that expert witnesses were able to have the impact they did in the context of MSBP and TBBB. However, such problems with expert scientific evidence are not new.¹⁶⁹

On the third question posed at the beginning of this section, the weight to be attached to the expert’s evidence, one cannot do better than to remember the words of Lord President Cooper from 1953. In what has come to be the *locus classicus* of the position of the expert witness in the Scottish courts, he said:

Expert witnesses, however skilled or eminent, can give no more than evidence. They cannot usurp the functions of the jury or a Judge sitting as a jury Their duty is to furnish the Judge or jury with the necessary scientific criteria for testing the accuracy of their conclusions, so as to enable the Judge or jury to form their own independent judgment by the application of these criteria to the facts proved in evidence . . . the decision is for the Judge or jury.¹⁷⁰

This position has long been accepted in England, where the above passage is cited frequently with approval.¹⁷¹ The weight to be attached to particular evidence is a question of fact and, on occasion, courts have been quite brutal in their condemnation of particular expert evidence.¹⁷² While the trier of fact is not bound by expert opinion, the Court of Appeal issued the following warning:

168. *Id.* at ¶ 6.149.

169. In the 1970s and 1980s, the evidence of a leading Home Office forensic scientist resulted in a number of successful appeals in criminal cases. In *Preece v. H.M. Advocate*, 1981 CRIM.L.R. 783 (1981), a man who had served seven years of a life sentence had his conviction overturned when it became apparent that the expert had drawn unwarranted conclusions from blood samples and seminal stains. In 1999, a police officer, Shirley McKie, was acquitted of perjury arising from the alleged presence of her fingerprint at a murder scene where she claimed never to have been. Her acquittal was based largely on two fingerprint witnesses from the United States who discredited the evidence of the experts from the Scottish Criminal Records Office Fingerprint Bureau. An internal inquiry followed, resulting in changes in procedure, and the man convicted of the murder appealed. For a discussion of this case, see RAITT, *supra* note 151 at 347. In February 2005, Ms McKie accepted a settlement of £750,000 from the Scottish Executive and there have been calls for a public enquiry into the whole affair: Michael Howie et al, *Pressure builds for a public inquiry into McKie affair* THE SCOTSMAN, February 23, 2006, at 10.

170. *Davie v. Magistrates of Edinburgh*, 1953 S.C. 34, 40 (Sess. Cas.).

171. *See, e.g.*, TAPPER, *supra* note 149, at 569.

172. *E.g.*, *Re B. (a child)*, [2003] 2 FCR 156, ¶ 36 (Eng. C.A.) (addressing the issue of ordering a child to be given the controversial combined MMR (measles, mumps and rubella)

Where expert evidence is admissible in order to enable the judge to reach a properly informed decision on a technical matter, then he cannot set his own 'lay' opinion against the expert evidence which he has heard. But he is not bound to accept the evidence even of an expert witness, if there is a proper basis for rejecting it in the other evidence which he has heard, or the expert evidence is such that he does not believe it or for whatever reason is not convinced by it.¹⁷³

As we have seen, there was considerable criticism of the evidence of Dr. Paterson in the courts. It took longer for Sir Roy Meadow's evidence to be subject to similar challenge, but the courts got there eventually. Nonetheless, in each case, we have examples of later-discredited evidence being admitted and weight being attached to it. This can only add strength to the calls for rethinking the law on admissibility of expert evidence in the United Kingdom.¹⁷⁴ In that, can anything be learned from the very different approach taken in the United States?

ADMISSIBILITY OF EXPERT EVIDENCE IN THE UNITED STATES

In the United States, as in the United Kingdom, the court must be satisfied, first, that the assistance of an expert is warranted by the subject-matter in question. That is to say, "the subject of the inference must be so distinctively related to a science, profession, business, or occupation as to be beyond the ken of lay persons."¹⁷⁵ While there is some support for the view that this permits the judge a degree of latitude in determining whether an expert is really required, the Federal Rules of Evidence tend to permit expert evidence where it is simply helpful. Rule 702 provides for the use of expert evidence "if scientific, technical or other specialized knowledge *will assist* the trier of fact to understand the evidence or to determine a fact in issue"¹⁷⁶ The second hurdle to overcome, in introducing expert evidence, relates to the credentials of the particular expert witness presented, since Rule 702 refers to "an expert by knowledge, skill, experience, training, or education"¹⁷⁷ Given the

vaccine, Lord Justice Sedley went as far as to brand the views of one expert witness "junk science").

173. *Dover Dist. Council v. Sherred*, (1997) 29 H.L.R. 864 (Eng. C.A.).

174. *See, e.g.*, MIKE REDMAYNE, *EXPERT EVIDENCE AND CRIMINAL JUSTICE* ch. 5 (2001). *See also* Simon Pearl & Genesta Luxmoore, *The Judge as Gatekeeper - a US Practice Worth Adopting*, 148 *NEW L.J.* 974 (1998).

175. JOHN W. STRONG, *MCCORMICK ON EVIDENCE* § 13 (5th ed. 1999 & Supp. 2003). *See also* CHRISTOPHER B. MUELLER & LAIRD C. KIRKPATRICK, *EVIDENCE: PRACTICE UNDER THE RULES* § 7.6 (2nd ed. 1999 & Supp. 2004).

176. PAUL F. ROTHSTEIN, *FEDERAL RULES OF EVIDENCE* 385 (3rd ed. 2005) (emphasis added). Even where expert evidence would be of assistance, it may still be excluded if it would tend to mislead or prejudice the jury, for example, by introducing evidence they cannot evaluate for themselves. *Id.* at 76.

177. *Id.*

abundance of experts offering their services, this should not be a difficult hurdle to leap. State courts apply much the same two tests in terms of subject-matter need and the qualification of the expert.¹⁷⁸

Thereafter, the U.S. approach to admissibility of expert evidence diverges, quite dramatically, from that found in the United Kingdom, by requiring U.S. judges to play a more active part in assessing the validity of scientific evidence. The following is a brief overview of how this central role for the judiciary has developed. The federal courts first recognized the need for a specific rule in 1923, in what came to be known as the "*Frye* test", which requires that expert evidence had to be "generally accepted" in order to be admissible. Considering whether to admit evidence of a "systolic blood pressure test" (a precursor of the polygraph), the Court of Appeals for the District of Columbia was confronted, in *Frye v. United States*,¹⁷⁹ with a novel scientific development. It articulated the test in the following terms:

Just when scientific principle or discovery crosses the line between the experimental and demonstrable stages is difficult to define. Somewhere in this twilight zone the evidential force of the principle must be recognized, and while courts will go a long way in admitting expert testimony deduced from a well-recognized scientific principle or discovery, the thing from which the deduction is made must be sufficiently established to have gained general acceptance in the particular field in which it belongs.¹⁸⁰

While the *Frye* test was adopted subsequently in many state courts,¹⁸¹ its status was called into question at federal level in the 1970s, in part due to what were then the new Federal Rules of Evidence.¹⁸² In addition, there were concerns that either it excluded useful evidence or that some evidence could pass the test and yet result in a court being presented with evidence that was too inconclusive to be of assistance.

The U.S. Supreme Court sought to clarify matters, in 1993, in *Daubert v. Merrell Dow Pharmaceuticals*.¹⁸³ There, the plaintiffs were two young

178. STRONG, *supra* note 2, at §13; *See also*, MUELLER & KIRKPATRICK, *supra* note 175, at §7.5.

179. *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923).

180. *Id.* at 1014.

181. *See* Alice B. Lustre, *Post-Daubert Standards for Admissibility of Scientific and Other Expert Evidence in State Courts*, 90 A.L.R.5th 453 (stating that the *Frye* test, or variants thereon, continues to be employed in a number of states today).

182. Rule 702 is of particular relevance here. *Pre-Daubert* it read as follows: "If scientific, technical or otherwise specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training or education, may testify thereto in the form of an opinion or otherwise." *See infra* note 197 for the post-*Daubert* amendments to Rule 702.

183. *Daubert v. Merrell Dow Pharmaceuticals*, 509 U.S. 579 (1993).

children who claimed that their limb reduction defects were the result of their mothers having taken an anti-nausea drug, Bendectin, during pregnancy. They were unsuccessful in securing damages from the manufacturer of the drug because they could not produce published studies demonstrating that Bendectin did actually cause limb reduction.¹⁸⁴ While the Court clarified that the *Frye* test had been superseded and displaced by the Federal Rules of Evidence,¹⁸⁵ for our present purpose, the greater significance of the case was the new test it laid down for the admissibility of expert scientific evidence and the proactive role given to judges. Under what came to be known, unsurprisingly enough, as the “*Daubert* test”, judges are charged with the function of acting as gatekeepers in determining the admissibility of expert scientific evidence by applying a two-stage test. First, the judge must determine whether the evidence is, indeed, “scientific knowledge”. While the Court did not provide any satisfactory definition of “scientific knowledge”,¹⁸⁶ Justice Blackmun set out the criteria for this evaluation.¹⁸⁷ He made clear that the following questions should be asked in respect of the theory or technique, but should be regarded as neither exhaustive nor as exclusive:¹⁸⁸ (a) Can the theory or technique be tested and has it been so tested;¹⁸⁹ (b) Has it been subjected to peer review and publication;¹⁹⁰ (c) What is its known or potential error rate; (d) Is there a standard governing the operation of the technique; (e) To what extent is it generally accepted in the relevant scientific community?¹⁹¹ Thus, the *Frye* test

184. Under the relevant procedure, the defendants were granted summary judgment at district court level. *Id.* at 583.

185. *Id.* at 587.

186. *Id.* at 590-91. Justice Blackmun describes “scientific knowledge” as “an inference or assertion . . . derived by the scientific method.” *Id.* He refers to the “scientific method” as “scientific knowledge” that “implies a grounding in the methods and procedures of science.” *Id.*

187. *Id.* at 593-94.

188. The Court elaborated in *Kumho Tire Co. Ltd. v. Carmichael*, saying: “*Daubert*’s list of specific factors neither necessarily nor exclusively applies to all experts in every case.” *Kumho Tire Co. Ltd. v. Carmichael*, 526 U.S. 137, 141 (1999). That decision also extended the *Daubert* test to all expert evidence. *Id.*

189. KARL POPPER, CONJECTURES AND REFUTATIONS: THE GROWTH OF SCIENTIFIC KNOWLEDGE 37 (5th ed. 1989) Justice Blackmun quoted Karl Popper in *Daubert* as follows: “The criterion of the scientific status of a theory is its falsifiability, or refutability, or testability.” *Daubert*, 509 U.S. at 593.

190. *Daubert*, 509 U.S. at 593-94. Justice Blackmun’s elaboration on this criterion was quoted as follows:

Some propositions, moreover, are too particular, too new, or of too limited interest to be published. But submission to the scrutiny of the scientific community is a component of ‘good science’, in part because it increases the likelihood that substantive flaws in methodology will be detected. . . . The fact of publication (or lack thereof) in a peer reviewed journal thus will be a relevant, though not dispositive, consideration in assessing the scientific validity of a particular technique or methodology on which an opinion is premised.

Id.

191. *Id.* With respect to this criterion, Justice Blackmun quoted, with approval, from *United States v. Dowling*, 753 F.2d 1224, 1238 (3rd Cir, 1985): “[a] reliability assessment does

was subsumed into a more wide-ranging enquiry. Only if the evidence qualifies under the first step, need the judge move on to the second step and assess the relevance of the evidence to the particular case and admit it if it will "assist the trier of fact to understand the evidence or determine a fact at issue".¹⁹² This second issue has been described as one of "fit" and as "an aspect of relevancy and helpfulness".¹⁹³ As the Court acknowledged, "[f]it is not always obvious, and scientific validity for one purpose is not necessarily scientific validity for other, unrelated purposes".¹⁹⁴ The *Daubert* test has been adopted, in whole or in part, in over thirty states.¹⁹⁵ It was refined by subsequent case law¹⁹⁶ and, as a result, the Federal Rules of Evidence were amended further in 2001 to include more specific reference to *Daubert*-type criteria.¹⁹⁷

The result is that U.S. judges are now called upon to play a very active gatekeeping function in assessing expert evidence at the stage of admissibility. The *Daubert* Court itself was at pains to point out that the judge is focused "solely on principles and methodology, not on the conclusions that they generate,"¹⁹⁸ albeit the Court has since acknowledged that "conclusions and methodology are not entirely distinct from one another."¹⁹⁹ The Court was mindful of the dangers posed by scientific evidence and noted Rule 403 of the

not require, although it does permit, explicit identification of a relevant scientific community and an express determination of a particular degree of acceptance within that community." *Daubert*, 509 U.S. at 594.

192. *Id.* at 592.

193. MUELLER & KIRKPATRICK, EVIDENCE: PRACTICE UNDER THE RULES § 7.17 (4th ed. 2000).

194. *Daubert*, 509 U.S. at 591. The question of "fit" was further clarified in *General Electric Company v. Joiner*, where a majority of the Court observed "[a] court may conclude that there is simply too great an analytical gap between the data and the opinion proffered." *General Electric Co. v. Joiner*, 522 U.S. 136, 146 (1997).

195. Each state has its own admissibility standards, used in state courts, and they can be classified as states that have adopted the *Daubert* test; those that continue to apply the *Frye* test; those that have not rejected *Frye* entirely but which apply *Daubert* factors; and those which have developed their own tests. For a full discussion of where each state fits into this picture, see Lustre, *supra* note 181.

196. While the *Daubert* Court emphasized that its criteria provided a non-exclusive list, the courts have developed the criteria further. A good summary of the developments is set out in the *Advisory Committee's Note to FRE 207 as Amended December 1, 2001*. This note is reproduced as Appendix 1 to MUELLER AND KIRKPATRICK, EVIDENCE: PRACTICE UNDER THE RULES (Supp. 2004).

¹⁹⁷ *Daubert*-type criteria were added to Rule 702 which now reads as follows (the additions are indicated in italics):

If scientific, technical or otherwise specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, *if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.*

FED. R. EVID. 702 (emphasis added).

198. *Daubert*, 509 U.S. at 595.

199. *Joiner*, 522 U.S. at 146.

Federal Rules of Evidence, which permits exclusion of evidence “if its probative value is substantially outweighed by the danger of unfair *prejudice*, confusion of the issues, or misleading the jury.”²⁰⁰ Further, it addressed the concern raised in the case that its approach would “result in a ‘free-for-all’ in which befuddled juries are confounded by absurd and irrational pseudoscientific assertions”.²⁰¹ However, it viewed this concern as “overly pessimistic about the capabilities of the jury and the adversary system generally.”²⁰² Chief Justice Rehnquist’s opinion in *Daubert* noted that “judges should not become amateur scientists”²⁰³ but, as has been observed, “that and more is surely what *Daubert* presupposes.”²⁰⁴

Initially, at least, it has been suggested that members of the federal judiciary were not particularly welcoming of the *Daubert* test.²⁰⁵ A recent survey of U.S. state judges sheds more light on how the *Daubert* test operated prior to the latest round of amendments to the Federal Rules of Evidence, and it addresses the operation of basic concepts that remain central to admissibility decisions. In the first part of the study,²⁰⁶ four hundred state judges were sampled and ninety-four percent of those responding said they found the *Daubert* test valuable in their decision-making, with fifty-five percent expressing the view that it provided “a great deal of value.”²⁰⁷ So much for the popularity of *Daubert*, but what of its efficacy? This is where the survey signals cause for concern, since it demonstrated that an overwhelming number of judges did not understand two of the basic concepts used in the *Daubert* test. While eighty-eight percent of the judges reported that they found “falsifiability” to be a useful guideline in determining the merits of proffered scientific evidence, only six percent of them demonstrated a true understanding of the concept of falsifiability.²⁰⁸ Similarly, while ninety-one percent of judges reported that they found “error rates” to be useful in assessing the quality of the

200. ROTHSTEIN, *supra* note 176, at 385 (emphasis added).

201. *Daubert*, 509 U.S. at 595.

202. *Id.* at 596.

203. *Id.* at 601, (Rehnquist, C.J., concurring in part, dissenting in part).

204. MUELLER & KIRKPATRICK, *supra* note 175, at § 7.17.

205. Rorie Sherman, *Judges Learning Daubert: ‘Junk Science’ Rule Used Broadly*, NAT’L L.J., Oct. 4, 1993. “Many federal judges believe *Daubert* has made their lives more difficult . . . They are going to have to give a more reasoned statement about why they are letting in evidence.” *Id.*

206. Sophia I. Gatowski et al., *Asking the Gatekeepers: A National Survey of Judges on Judging Expert Evidence in a Post-Daubert World*, 25 LAW & HUM. BEHAV. 433, 441 (2001). Part I of the study, a total of four hundred surveys of judges were completed with a seventy-one percent response rate. The surveys were conducted by means of a structured telephone interview. *Id.*

207. *Id.* at 443.

208. *Id.* at 444. Perhaps this finding should come as no surprise in the light of the observation of Chief Justice Rehnquist in *Daubert* itself, when he wrote: “I defer to no one in my confidence in federal judges; but I am at a loss to know what is meant when it is said that the scientific status of a theory depends on its ‘falsifiability’, and I suspect some of them will be, too.” *Daubert*, 509 U.S. at 600 (Rehnquist, C.J., concurring in part, dissenting in part).

evidence offered, only four percent of them demonstrated an accurate understanding of the definition of error rates.²⁰⁹ They did considerably better in understanding what was meant by two of the other *Daubert* criteria, “peer review and publication”²¹⁰ and “general acceptance”,²¹¹ but the results of the study do suggest that a *Daubert*-type test is, perhaps, just too technical and complicated for every-day use in the courts. Like earlier studies, analyzing judicial opinions, it may be that judges simply do not have the requisite knowledge or skills to engage in this kind of scientific evaluation.²¹²

The second part of the study was based on the responses of 325 state judges²¹³ and was rather more specific in its ambit.²¹⁴ For our present purpose, the responses addressing psychological syndromes are of particular interest.²¹⁵ Judicial experience of a range of syndromes varied²¹⁶ and, while MSPB was not one of the syndromes addressed by the researchers specifically, eight of the judges mentioned “factitious disorders” when asked about experience of other syndromes.²¹⁷ The judges were asked to identify what aspects of psychological syndrome evidence they found most problematic in determining admissibility.

209. Gatowski, *supra*, note 206, at 45-47. In *Daubert*, the Supreme Court opined that “in the case of a particular scientific technique, the court ordinarily should consider the known or potential rate of error . . . and the existence and maintenance of standards controlling the technique’s operation” *Daubert*, 509 U.S. at 594. It was against this standard that the judges were tested.

210. Gatowski, *supra* note 206, at 447. Seventy-one percent responded in a way that showed a clear understanding of the peer review process. *Id.* Even here, ten percent demonstrated a clear lack of understanding of the process. *Id.* This improved performance is not surprising when one remembers that “peer review and publication” is a familiar concept, at least in academic legal circles.

211. *Id.* at 447-48. Eighty-two percent demonstrated an accurate understanding of “general acceptance”: It should be remembered that “general acceptance” is the familiar *Frye* test. *Id.*

212. See Erica Beecher-Monas, *Blinded by Science: How Judges Avoid the Science in Scientific Evidence*, 71 TEMP. L. REV. 55, 72 (1998).

213. Veronica Dahir et al., *Judicial Application of Daubert to Psychological Syndrome and Profile Evidence*, 11 PSYCHOL. PUB. POL’Y. & L. 62, 68 (2005). Judges who completed Part I of the survey were given the option of participating in Part II, which was conducted by means of structured telephone interviews or written questionnaires and had an eighty-one percent response rate. *Id.*

214. Part II was directed to judges’ experience with particular kinds of scientific evidence (DNA, epidemiology, specific kinds of psychological evidence, including syndromes and profiles) and their techniques for managing scientific evidence in court. Gatowski, *supra* note 206, at 440; Dahir, *supra* note 213, at 67.

215. Dahir, *supra* note 213, at 68-9. Of the 325 judges who participated in part II of the study, 318 provided codable answers to the questions dealing with syndromes, and 260 reported at least some exposure to psychological syndrome evidence. *Id.* at 68.

216. See *id.* at 69. The syndromes on which the study focused particularly (the rate of “some” experience is shown in brackets) were: battered women’s syndrome (78%); rape trauma syndrome (64%); child sex abuse accommodation syndrome (75%); parental alienation syndrome (39%); repressed memory syndrome (41%); and post-traumatic stress disorder (79%). *Id.*

217. *Id.* at 70.

Perhaps it is rather telling that few of the judges mentioned the *Daubert* criteria at all,²¹⁸ referring slightly more often to qualification of the expert, subjectivity of the diagnostic process, and application to the particular case (relevance), as being of greater concern.²¹⁹ While one might conclude from this that the judges surveyed found the *Daubert* criteria unproblematic, the results of Part I of the study, demonstrating a lack of judicial competence in aspects of the criteria, should be borne in mind. Thus, it is not unreasonable for the researchers to conclude, as they do, that their “results reveal a strong tendency for judges to continue to rely on more traditional standards such as general acceptance and qualifications of the expert when assessing psychological syndrome . . . evidence.”²²⁰

WOULD APPLICATION OF THE *DAUBERT* TEST HAVE MADE A DIFFERENCE?

A crucial question is whether application of the *Daubert* test would have dealt with the Meadow-Paterson problem in a U.S. context. As we have seen, the *Daubert* test involves a number of elements: falsifiability; peer review and publication; error rate; and general acceptability.²²¹ We have also seen that many judges have a great deal better understanding of two of these elements - peer review and publication and general acceptability - than they do of the others.²²² It can certainly be argued that it is the factors that judges understand that weigh most heavily when they make their decisions. Conversely, if judges do not understand some of the elements of the *Daubert* test, it can be doubted that these factors play any significant part in their decision-making process. There is no reason to suppose that members of the judiciary in the United Kingdom are any more science-savvy than their U.S. counterparts and, indeed, their educational backgrounds may suggest that many are likely to be less so.²²³

Turning first to peer review and publication, it should be remembered that both Sir Roy Meadow and, perhaps to a lesser extent, Dr. Paterson were eminent members of their profession with a slew of publications to their names. As far as general acceptability is concerned, it is important to note that it already forms part of the test of admissibility of expert evidence in the United Kingdom. In any event, Sir Roy Meadow certainly had no difficulty in attracting a significant following from other members of the profession, in part

218. *Id.* at 72. The most often-cited of the *Daubert* criteria was “general acceptance”, which was mentioned by nine percent of the judges, with “falsifiability” and “peer review and publication” receiving only three mentions each. *Id.*

219. *Id.* Each was mentioned in eleven percent of the responses. *Id.*

220. *Id.* at 74-5.

221. See the discussion at footnotes 186-194 and accompanying text.

222. See footnotes 206-212 and accompanying text.

223. While the study of law in the United States is undertaken at post-graduate level, it is usually studied at the undergraduate level in the United Kingdom, with most law students proceeding straight from high school to law school. Thus, most members of the judiciary in the United Kingdom will not have had exposure to the sciences at college or university level.

due to his very eminence so, again, that element of the *Daubert* test would probably have been satisfied. Dr. Paterson's theory was always subject to more controversy, but it may have attracted sufficient support to pass muster and, as we have seen, did so on occasions in the United States under the general acceptability standard of the *Frye* test.²²⁴ Even supposing that the other elements of the *Daubert* test - falsifiability and error rates - had been understood and applied, the very facts that might have caused the expert evidence to be rejected were not led in the MSBP cases.

It is difficult to assess whether the *Daubert* test proved helpful with respect to MSBP in the United States in avoiding the debacle experienced in the United Kingdom, since the position taken here is not that the phenomenon of parents fabricating illness in children never occurs. We have ample evidence that it does. The difficulty exemplified by the United Kingdom cases is that it was being inappropriately diagnosed. Thus, the fact that MSBP has been found to be present in a given case in the United States is of no assistance.²²⁵ Slightly more insight can be gleaned from how TBBD played out in the United States. As we have seen, the evidence of Dr. Paterson was accepted in at least two cases in the United States,²²⁶ but under a version of the *Frye* test. Certainly, attempts to lead evidence from the home-grown TBBD proponent, Dr. Marvin Miller, seem to have met with considerably less success,²²⁷ so it may be that *Daubert* had some impact.

All of this suggests no more than that application of a test along the lines of the *Daubert* test might have made a difference, at least in the some of the TBBD cases. That is hardly a resounding vote of confidence. When one considers the difficulty experienced in the United States in applying the test, the conclusion must be that adopting such a test would not, in itself, guarantee that the problems experienced in the United Kingdom would be avoided. Thus, we must look at what else we might do.

224. See footnotes 120-122 and accompanying text.

225. See, e.g., *Commonwealth v. Robinson*, 565 N.E.2d 1229, 1237-38 (Mass. 1991) (mother convicted of involuntary manslaughter having caused child to ingest large quantities of salt; trial judge prohibited specific mention of MSBP or Failure to Thrive syndrome); *State v. Lumberera*, 845 P.2d 609, 619 (Kan. 1992) (mother convicted of murder; no expert evidence that she actually suffered from MSBP; reversed on appeal due to a catalogue of errors); *Reid v. State*, 964 S.W.2d 723, 727 (Tex. 1998) (mother convicted of murder; evidence of MSBP admitted); *Adoption of Keefe*, 733 N.E.2d 1075, 1080 (Mass. 2000) (mother's consent to adoption dispensed with; reversed on appeal; MSBP not found to be present here); *In re A.B.*, 600 S.E.2d 409, 410 (Ga. 2004) (child found deprived due to mother's MSBP; reversed on appeal); *State v. Hocevar*, 7 P.3d 329, 341-42 (Mont. 2000) (it is worth noting that at least one court found the *Daubert* test to be inapplicable to MSBP, since it was not a novel scientific theory).

226. *State v. Talmadge*, 999 P.2d 192, 197 (Ariz. 2000) and the unnamed case, both discussed at footnotes 120-122 and accompanying text.

227. See the discussion *supra* at footnote 107.

WHAT ELSE MIGHT BE DONE?

Recent experiences in the United Kingdom with MSPB and TBBD serve as a warning that legal systems must take greater care in the use of expert evidence, not only in respect of these examples, but over the whole spectrum of syndromes, disorders and conditions. The state of our knowledge and understanding of the world around us is advancing at an unprecedented rate and “science” plays an enormous part in that. Almost daily, new studies are published on this or that and new theories emerge. In so far as they contribute to debate within the scientific community, this is all very healthy. In so far as they may offer insights into new treatments for troubled people, rather more caution may be warranted. It is when we turn to the use of this developing knowledge in court proceedings that we are presented with an enormous challenge. In the context of the family, the decision to admit particular evidence may have far-reaching consequences for the safety of an individual child, the privacy and integrity of a given family, or the liberty of a particular parent. The evidence may relate to whether a condition exists at all, as in the case of TBBD, or to the applicability of a given condition, like MSBP, in the case of a particular individual.

The trick for the legal system is to identify that which is sufficiently well-researched and well-tested to warrant placing reliance on it and to reject the rest. We have heard the admonition against treating “all science as a single discipline distinguished only by its classification as valid or junk.”²²⁸ That may be sound advice on how to approach scientific inquiry, but the point is that evidence is either admissible, or it is not. There is no subtle middle ground in that decision. On the one hand, if we admit evidence that later proves to be exaggerated, too generalized, or just plain wrong, we risk injustices of the type outlined in the foregoing discussions of MSBP and TBBD. On the other hand, if we simply place more obstacles in the way of admitting expert testimony in court, we risk missing the opportunity to understand better what is happening. Many theories that were once controversial are now well-accepted. In this context, it is tempting to cite Galileo’s view that the earth might not be the center of the universe and the reaction of many of his contemporaries that his position was not only wrong but blasphemous. However, there are numerous, more recent examples of theories that were once novel and are now accepted. It was a long and hard battle to get courts to accept the impact of a history of domestic abuse in driving the victim to kill her aggressor.²²⁹ We should remember that Henry Kempe was breaking new ground when he published his seminal article on child abuse in 1962.²³⁰ Thus, we need to find a way to utilize

228. Joelle Anne Moreno, *Einstein on the Bench? Exposing What Judges Do Not Know About Science and Using Child Abuse Cases to Improve How Courts Evaluate Scientific Evidence*, 64 OHIO ST. L.J. 531, 550 (2003).

229. See *supra* note 7.

230. See Kempe *supra* note 5.

new information while, at the same time, guarding against unfounded theories. So what can we do to enhance the ability of judges to make the decision?

It is tempting to advocate a macro solution, like abandoning the adversarial system in favor of the more inquisitorial model of justice found in many European countries. This would place the court under the obligation to find its own experts and remove the iniquity of impecunious defenders being placed at a disadvantage when pitted against the limitless resources of the state in finding experts willing to testify. Aside the fact that such a radical change to the legal system is unlikely to happen any time soon in either the United Kingdom or the United States, the question remains whether this would solve the problem. It would still leave the judge with the question of what scientific evidence to admit and this, in turn, would require assessment of the evidence being proffered. In short, we would be no further forward. A more modest solution might be to suggest that old favorite of family lawyers - the family court. But, still, the problem of admissibility of scientific evidence would remain. Granted, if the particular judge was hearing only a discreet range of cases (family-related matters), the range of expert evidence proffered might be narrower, thus enabling him or her to develop a familiarity with the science and the evidence. However, that would be of little help as new theories emerged, as they most certainly will.

Still on the macro level, but rather more attainable, would be to improve the education of lawyers and judges so that each has a better understanding of scientific methodology and information. It will be recalled that in Sir Roy Meadow's case, the fundamental errors he made in respect of statistical analysis did not become apparent until he was being disciplined by the General Medical Council. Throughout the cases in which he gave evidence, it seems his powerful evidence about the probability of more than one child dying of SIDS in the same family went unchallenged. If ever there was an example of lawyers "not knowing what we don't know", that was it. If one does not know what to question, one cannot know what other expert advice to seek and to offer to the court. Unless the court is given the full range of competing expert views, how can it assess the reliability of scientific evidence? As we saw with the example of TBBD, it was only once the courts were exposed to the views of those who disagreed with Dr. Paterson's theory that they were able to discount his evidence. In order to meet these problems, it has been suggested that "[t]hose involved in legal education at every level should make efforts to raise the scientific literacy of all those involved in the legal system."²³¹ Those who advocate this approach "are not proposing that judges become scientists but only that they be trained to ask relevant questions when determining the admissibility of proffered scientific evidence"²³² and that "[w]hat judges need to know is not how to design the best scientific study, but how to evaluate

231. Gatowski, *supra* note 206, at 455.

232. Dahir, *supra* note 213, at 74.

imperfect ones.”²³³ We are beginning to appreciate that meaningful legal education goes well beyond teaching law students “the law” and legal methodology. This, in turn, requires law teachers to be more aware of the broader picture of law in context.²³⁴ In the meantime, resources have been developed to assist the judiciary and lawyers, and more could be done here.²³⁵

The recent U.K. experience suggests that there may be a case for the judiciary taking a more active gatekeeping role in assessing the admissibility of expert evidence. On the other hand, as we have seen, it may be that a full-blown *Daubert* test is rather too complex for judges to apply, causing them to rely on concepts they understand, like peer review publication and general acceptability. Of course, a more science-savvy judiciary, assisted by similarly improved attorneys, might make the *Daubert* test more useful, but we might also consider reformulating the test to ask simpler questions. For example, Moreno suggests that judges ask themselves: “How did the experts arrive at their conclusions?;” “How did the experts test their conclusions?;” and “How did the experts rule out other conclusions?”²³⁶

In addition, there are a number of ways in which the presentation of expert evidence could be policed or changed. First, we might consider using expert witnesses selected from a panel of experts accredited by their own profession.²³⁷ It has been suggested that such a body should be independent, set standards of competence, have a code of conduct making clear to expert witnesses what is expected of them, and have the power to remove a given expert from the panel in certain circumstances.²³⁸ At first sight, such a solution looks attractive since it suggests a monitoring of experts by members of their own profession and might reduce the incidence of mavericks peddling their own particular theories. However, there is the danger that those who were advancing a theory outside the mainstream of accepted wisdom in the

233. Gatowski, *supra* note 206, at 455.

234. See, e.g., *Family Law Education Reform Project*, Hofstra University School of Law – The Center for Children, Families, and the Law, http://www.hofstra.edu/Academics/Law/law_center_family.cfm (last visited Mar. 17, 2006). This project is run jointly by Hofstra University Law School’s Center for Children and the Association of Family and Conciliation Courts, and is designed to provide law teachers with the tools to teach students about the interdisciplinary nature of family law. *Id.*

235. See, e.g., Gatowski, *supra* note 206 at 455. “In recent years, a number of educational resources have been developed to assist judges in understanding their gatekeeping role and to help them properly apply appropriate admissibility standards in the courtroom,” *Id.* (citing the FEDERAL JUDICIAL CENTER, REFERENCE MANUAL ON SCIENTIFIC EVIDENCE (2nd ed. 2000) and their own publication, SHIRLEY A. DOBBIN AND SOPHIA I. GATOWSKI, A JUDGE’S DESKBOOK ON THE BASIC PHILOSOPHIES AND METHODS OF SCIENCE, produced by the State Justice Institute, available at www.unr.edu/bench (last visited Mar. 17, 2006)).

236. Moreno, *supra* note 16, at 565.

237. Such a body has been established by the Council for the Registration of Forensic Practitioners, See Council for the Registration of Forensic Practitioners, at <http://www.crfp.org.uk> (last visited Mar. 17, 2006).

238. LORD JUSTICE AULD, REVIEW OF THE CRIMINAL COURTS IN ENGLAND AND WALES 572-73 (2001).

profession might be excluded, thus denying the courts the opportunity to hear new ideas and challenges to existing ones. In any event, the courts seem to have little difficulty in assessing the credentials of experts. Perhaps most telling of all is that Sir Roy Meadow would, most probably, have had little difficulty in gaining accreditation from his peers. After all, he was a former president of the Royal College of Paediatrics and Child Care.

A second possibility would be for the court to appoint expert witnesses in place of, or in addition to, those proffered by the parties.²³⁹ Such a system presupposes a panel of experts from which the court would choose so that the benefits and shortcomings of that aspect are rolled into any system involving a court-appointed expert. There are other advantages, as well. First, the impecunious defender (whether in a criminal case or a case relating to child protection) would not be placed at a disadvantage by his or her lack of resources. Second, where the court-appointed expert is the only expert heard, there would be cost savings. Third, it is less likely that a court-appointed expert would be chosen to advance a particular position, and the so-called "battle of the experts" could be avoided. However, it is often the case that there is more than one credible view on matters covered by scientific evidence, and the danger is that the court would not be afforded the full picture. A variation on the idea of a court-appointed expert is to give the court the power to direct that evidence be given by a joint expert. If the parties cannot agree on a joint expert, then the court will appoint one. This is the solution found in the new Civil Procedure Rules in England and Wales,²⁴⁰ as part of a far-reaching reform of civil justice system there, resulting from the Woolf Report.²⁴¹ It should be noted that these rules are confined to civil cases and that family proceedings are exempt from them.²⁴² Again, while this has the attraction of reducing costs, there is the danger that the court will be deprived of competing views from relevant professionals.

CONCLUSION

So, to return to our original question, is there a phenomenon - "Undue Deference to Experts Syndrome" - at work in the legal system? There is no doubt that the legal systems in the United Kingdom have been shaken, if not rocked, by the recent experiences of expert witnesses and their evidence about MSBP and TBBD. Individuals have been incarcerated, families dismantled,

239. For differing views on the benefits of such a system, see M.N. Howard, *The Neutral Expert: A Plausible Threat to Justice*, 1991 CRIM.L.R. 98 (1991); Geoffrey L. Davies, *Expert Evidence: Court Appointed Experts*, 2004 C.J.Q. 367 (2004).

240. Civil Procedure Rules 1998, 35.7 (SI 1998/3132). The new Rules came into force on April 26, 1999. For a critique of how this system is working, see Brian Thompson, *The Problem With Single Joint Experts*, 154 NEW L.J. 1134 (2004).

241. Lord Woolf, M.R., *Access to Justice: Final Report*, ¶ 13 (1996), available at <http://www.dca.gov.uk/civil/final> (last visited Mar. 17, 2006).

242. Civil Procedure Rules 1998 2.1 (SI 1998/3132).

and children returned to potentially abusive parents, all because courts were persuaded by medical experts with impressive credentials who pedaled their own theories. Where does responsibility for these debacles lie? Clearly, some of the responsibility lies with the expert witnesses themselves. They were either too blinkered or too arrogant to admit to the doubts that existed about their own theories, or they failed in their fundamental duty to offer balanced and impartial testimony. In short, they were fallible human beings and they have paid the price for their fallibility. However, it is the responsibility of the legal system to protect against just such human failings. Initially, at least, the legal system failed to do so. Some responsibility must lie with the adversarial system that encourages lawyers to seek out witnesses who will support their case. While that very system should ensure that other, possibly equally single-minded experts are found by opposing counsel, ignorance or economics may preclude that from happening. In this, the lawyers, and those who educate them, failed. Certainly, it is difficult “to know what you don’t know”, but lawyers must be vigilant to ensure that expert evidence is subjected to rigorous scrutiny by trawling for all of the necessary specialists to assist them. They would be armed to do so better if legal education included additional components specifically addressing scientific method. Ultimately, however, responsibility lies with the courts. It was the courts that permitted the educated, confident and articulate Sir Roy Meadow to make the sweeping statements that so swayed juries. Similarly, while Dr. Paterson’s evidence first appeared in the courts in 1988, doubt was being cast on his evidence in the early 1990s and, while courts continued to criticize him, he went on appearing throughout that decade and into the next. There seems little doubt that very considerable deference is shown to expert medical witnesses by the courts. If we have learned anything from the MSBP and TBBB debacles, it is that we must not allow “considerable deference” to become “undue deference.”

