THE CASE OF KATHLEEN FOLBIGG: MEDICAL EXPERT
TESTIMONY, A SYSTEM FAILURE

‘People are … convicted for the illegal acts that they do’¹

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ABSTRACT
This article considers the two discredited hypotheses of Sir Roy Meadow: Munchausen Syndrome by Proxy (‘MSBP’) and the ‘rule of three’ in relation to multiple infant deaths. These hypotheses are controversial. While appellate courts have either rejected them outright or called them speculative, they have been used to achieve convictions in other courts.

This article considers how these hypotheses were used in the trial of Kathleen Folbigg, specifically in the prosecution’s questioning and eliciting of witness responses. Although not acknowledged specifically by name, the hypotheses underlined the expert testimony of the prosecution witnesses, thereby creating a presumption of guilt. It is argued that this presumption was compounded by the use of exclusion evidence and the implied use of discredited statistical calculations previously utilised, and rejected, in the trial of Sally Clark.

¹ Interview with Richard Refshauge, (then) director of Public Prosecutions ACT, (telephone, 20 July 2004.
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These questionable hypotheses were rejected in a later similar Australian case.

There is a failure of courts in the Folbigg case to recognise that siblings could die for reasons that are natural. This article considers the view that evidence of significant bacterial infection cannot be ruled out as a potential cause of death in two of the Folbigg children, thus giving rise to the prospect of an unsafe conviction.

**Keywords:**

Folbigg, Meadow, cot death theory, Munchausen Syndrome by Proxy, MSPB, judicial failure, system failure, medical expert evidence, bacterial infection, statistics, sudden infant death, sudden unexplained infant death, rule of three.

**SIR ROY MEADOW**

British paediatrician, Professor Sir Roy Meadow, promoted himself as a child abuse expert. He gave evidence in child abuse or infant death cases in the United Kingdom (‘UK’) and Australia and edited, *The ABC of Child Abuse*. In 2005, when questioned during professional misconduct hearings, Meadow stated that he did not hold himself out as an expert on child abuse and rejected suggestions he was a guru on the subject.

Meadow’s child abuse hypotheses have been discredited and rejected in a number of court cases. His testimony, based on his hypotheses, in

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4 General Medical Council, Fitness to Practice Panel (Professional Conduct), transcript Tuesday 5 July 2005, D9-2 at E.
5 Ibid D9-2 at D.
6 These cases include the UK’s *R v Sally Clark* [2003] EWCA Crim 1020 and *R v Cannings* [2004] EWCA Crim 1, in the USA, *State of Tennessee v Shabree Ward* 138 S.W. 3d 245 (Tenn, 2003) and Australia, *R v Matthey* [2007] VSC 398 and *R v KJF* (Unreported, New South Wales Supreme Court, October 2007). Meadow was paid by the New South Wales (‘NSW’) Crown Solicitor’s Office for his report on one case in NSW. Meadow was struck off the UK medical register for professional
multiple civil and criminal proceedings, has been demonstrated to lack any evidentiary basis.\(^7\)

One Australian case based on Meadow’s discredited hypotheses stands out: that of Kathleen Folbigg, who was convicted of the murder of her four children in 2003.

**MEADOW’S TWO HYPOTHESES:**

**First hypothesis: the ‘rule of three’**

Meadow’s first hypothesis relates to multiple unexplained cot deaths in the same family: one (infant) death is a tragedy, two is suspicious and three is murder.\(^8\)

Before considering this hypothesis in detail, it is necessary to consider the definition of ‘sudden unexplained death in infancy’ (SUDI) previously described as ‘sudden infant death syndrome’ (SIDS). Generally it is regarded as the sudden and unexpected death of an infant under one year of age, with onset of the lethal episode apparently occurring during sleep.

\(^7\) The cases will be outlined later in this article. Meadow was found to have given evidence beyond his area of expertise – he is a kidney specialist – he is not an expert on matters relating to statistics, cot death, suffocation, genetics, or microbiology etc.

that remains unexplained after a thorough investigation including a complete autopsy, and review of the circumstances of death and the clinical history.\(^9\)

Therefore, Meadow dismissed the notion of three unexplained infant deaths in the same family.

Meadow’s rule relied upon an untested hypothesis by two American pathologists, Dominick and Vincent Di Maio\(^10\), who referred to it as ‘the rule of three.’ In Buchanan v State of Nevada 69 P.3d 694 (2003) (‘Buchanan’) Dr Di Maio testified that he did not accept that sudden infant deaths recur in a single family.

In Buchanan, Dr Vincent Di Maio explained:

> when you get a first case that appears to be sudden infant death syndrome (‘SIDS’) … treat it as SIDS … [i]n the second case, we know that in all probability it’s not a SIDS. It’s a homicide … you always give them the benefit of the doubt … than to falsely accuse them … [i]t’s when you get to the third one, then you’ve gone beyond reasonable doubts and you have to call it a homicide.\(^11\)

The Di Maio hypothesis was quoted in the State of Tennessee v Shabree Ward 138 S.W. 3d 245 (Tenn, 2003) (‘Ward’) by prosecution witness Dr Case:

> [t]he second child … if there is no findings at all, you cannot establish the cause of death, there is nothing that comes from the

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\(^11\) Buchanan 69 P.3d 694, 703-704 (2003). The accused, Denise Buchanan, was charged with three counts of first-degree murder concerning the deaths of her three infant sons in 2000. Her 2003 appeal against her conviction was dismissed. There was little agreement as to the cause of death of the three children.
history except that there has been a preceding child dying in that
family, you remove that child from the sudden infant death
category, because of the previous death. The second child becomes
a[n] undetermined cause of death and an undetermined manner.
There is suspicion with that second child that that is not a natural
death, but that suspicion is not, it is just a suspicion. If there is a
third child that dies in that situation where there is no (sic), where
you are totally unable to determine why the child has died … we
consider those deaths homicide … if we are not able to establish a given
cause of death.12

To re-enforce the homicide conjecture Dr Case reasoned backwards,13
stating:

I consider all three deaths, but it is not until I have the third death
that I make that determination. While I may be suspicious at the
second death, I’m going to make the determination at the third
defeat, but I certainly consider the first and second to be
homicides.14

Second hypothesis: Munchausen Syndrome by Proxy

Meadow’s second hypothesis, labelled ‘Munchausen Syndrome by Proxy’
(‘MSBP’)15, described an individual (usually the mother) who purportedly

12 Ward 138 S.W. 3d 245 (Tenn, 2003) quoting Dr Case. (emphasis added)
(Reproduced with errors).
13 ‘Reasoned backwards’ is a term applied by Couldry J in R v Matthey [2007] VSC
398 [69] (‘Matthey’) concerning the evidence of Dr Susan Beal.
14 Ward 138 S.W. 3d 245, 262 (Tenn, 2003) quoting Dr Case.
15 Roy Meadow, ‘Munchausen Syndrome by Proxy, The Hinterland of Child Abuse’
(1977) 310(8033) The Lancet 343. MSBP has frequently been used in the child
protection sector and therefore in children’s courts in various Australian and
overseas jurisdictions. Author’s note: Munchausen Syndrome by Proxy was
relabelled Factitious Illness by Proxy. This has again been relabelled to ‘Factitious
Disorder Imposed on Another ’ and is now listed as a sub-type of the somatic
symptoms and related disorders in the DSM V (Fifth Edition of the Diagnostic and
Statistical Manual of Mental Disorders) published by the American Psychiatric
Association [309 – 327]. The DSM V sets out the criteria for the diagnosis and
induced or exaggerated illness in her child to gain attention from the medical profession.16

A mother is usually accused of MSBP by profiling.17

Meadow stated:

where no intrinsic [medical] cause can be identified in the patient, it is necessary to look for a cause in the environment where the patient is living … and … the environmental factor … is harmful acts by the parent.18

ALIGNMENT OF THE TWO HYPOTHESES

These two hypotheses were often aligned by Meadow, with MSBP being used as a ‘motive’ for murder. In one Australian child protection case, Meadow stated that the deaths of two children were caused by the harmful actions of the parent.19 He relied upon MSBP profiling of the parent rather than robust medical evidence.20

In the UK, Meadow aligned the two hypotheses in the trials of Sally Clark21 and Donna Anthony.22 In Anthony, Meadow concluded that Donna classification of mental disorders. The overview to the somatic symptom and related disorders states ‘[i]t is not appropriate to give an individual a mental disorder diagnosis solely because a medical cause cannot be demonstrated’ [309].

(refer: www.dsm5.org)

16 Refer Dr Helen Hayward-Brown’s doctoral thesis Misdiagnosed Children, Misdiagnosed Parents: Chronic Illness and the Spectre of Munchausen Syndrome by Proxy (2003) Charles Sturt University, for a full background on the difficulties of MSBP.

17 Interview with Dr Helen Hayward-Brown, (In person, 20 February 2013). Also refer above n 14.


19 Roy Meadow, ‘Report to the NSW Crown Solicitor’s Office’, 1 November 2000. This Meadow report was regarding a child protection matter involving the mother and was used as the basis for the subsequent attempted murder charge in R v KJF (Unreported, New South Wales Supreme Court, October 2007). R v KJF was no billed.

20 Ibid

21 R v Sally Clark [2003] EWCA Crim 1020 (‘Clark’).

22 R v Donna Anthony [2005] EWCA Crim 952 [4] (‘Anthony’). Meadow is also said to have linked MSBP with murder in the 1993 case of Beverley Allitt who was
Anthony was suffering from MSBP on the basis of medical and social services records alone. In Clark, he alluded to MSBP, despite never interviewing her or diagnosing her with the syndrome. Like Sir Roy Meadow, doctors Dominick and Vincent Di Maio linked the ‘rule of three hypothesis’ with MSBP in their discussion on SIDS, considering it a ‘motive’ for killing children.

REJECTION OF MEADOW’S UNSCIENTIC HYPOTHESES

A leading Australian case concerning the admissibility of expert evidence, Makita (Australia) Pty Ltd v Sproaoles [2001] NSWCA 305 (‘Makita’), states that an expert’s opinion requires demonstration or examination of the scientific evidence or other intellectual basis for its conclusions.

If the opinion fails such examination, then it fails to be expert evidence and should be ruled inadmissible. Further, speculative medical expert evidence was ruled inadmissible by the NSW Supreme Court in R v Phillips [1999] NSWSC 1175 [58] (‘Phillips’) and in Straker v The Queen (1977) 51 ALJR 690 (‘Straker’), where Jacobs J said ‘[t]he jury may be invited to draw inferences from the evidence but not to join an expert witness in speculation on possibilities adverse to the accused.’

Both of Meadow’s hypotheses fail those tests. They are unreliable and speculative. Further, Meadow was not qualified to give such an opinion.

23 R v Donna Anthony [2005] EWCA Crim 952
24 Di Maio and Di Maio, above n 8, 292.
25 State v Cutro, 332 S. C. 100; 504 S.E. 2nd 324 (1998) (‘Cutro’).
27 Ibid [85].
28 Ibid [85].
29 Straker (1977) 51 ALJR 690, 696 (Jacobs J).
30 Meadow’s primary expertise was in the field of paediatric nephrology. Meadow was a general practitioner and later studied the epidemiology of urinary tract infections (Refer: http://reporter.leeds.ac.uk/428/mead.htm, accessed 7 April 2014).
It is concerning that legal academics argue that there is a tendency to allow trained professionals to testify in areas beyond their actual expertise or beyond the collective ability of any recognisable field or identifiable sub-discipline. The Australian High Court’s Gleeson CJ cautioned that:

…experts who venture ‘opinions’ (sometimes merely their own inference of fact), outside their field of specialised knowledge may invest those opinions with a spurious appearance of authority, and legitimate processes of fact-finding may be subverted.

Gleeson CJ added that such opinions therefore provide a ‘good example of the mischief’ which a court should avoid and hence ‘the evidence in question was not admissible as opinion evidence’.

Meadow’s ‘rule of three’ hypothesis was criticised and discredited by the UK Court of Appeal in cases such as R v Cannings [2004] EWCA Crim 1 (‘Cannings’), R v Anthony [2005] EWCA Crim 952 [81] (Anthony), R v Kai-Whitewind [2005] EWCA Crim 1092 (‘Kai-Whitewind’) and Clark [2003] EWCA Crim 1020.

The hypothesis was rejected when it was used by implication in the Australian cases of R v KJF (Unreported, New South Wales Supreme Court, October 2007) and Matthey [2007] VSC 398, and the USA case of Shabree Ward 138 S.W. 3d 245 (Tenn, 2003).

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32 HG v The Queen (1999) 197 CLR 414 at [44]. HG was an appeal from the NSWCCA and this passage was cited, with approval, by Heydon JA in Makita at [84]
33 HG v The Queen (1999) 197 CLR 414 at [44].
34 Ibid at [45].
35 In this case, a mother was charged with attempted murder of her child, with the prosecution using similar facts evidence relating to the deaths of two of her other three children to support the accusation.
In the UK case *Cannings*, Professor Jean Golding said:

> there is a fashion nowadays that if you have more than one sudden infant death, the next one must have been killed deliberately and that is something that people … have taken on board without sufficient evidence.\(^{36}\)

Their Honours stated ‘if that is the fashion, it must now cease.’\(^{37}\)

Professor Golding said that the hypothesis was ‘mostly a “hunch” by the paediatrician or other person and it is not based on any scientific foundation.’\(^{38}\)

In *Cannings*, consultant paediatric and perinatal pathologist, Dr Rushton, stated that the ‘current dogma is that an unnatural cause has been established unless it is possible to demonstrate an alternative natural explanation for these events.’\(^{39}\) This ‘dogma’ was an ‘erroneous approach,’ the Appeal Court stated.\(^{40}\)

Further censure was made in *Kai-Whitewind*, where it was stated that *Cannings* was a criticism of the prosecution’s hypothesis that ‘the rarity of three deaths, not specifically identified as natural, raises an overwhelming … inference that the deaths resulted from the infliction of deliberate harm.’\(^{41}\)

The Court said that the reasoning was flawed and ‘for the time being’ should not be applied.\(^{42}\)

The UK Court of Appeal in *Anthony* said the previous confidence in Meadow’s unfounded ideas required a rethink, and ‘research undermined

\(^{36}\) *Cannings* [2004] EWCA Crim 1 [20].

\(^{37}\) Ibid.

\(^{38}\) Ibid [21] (emphasis added).

\(^{39}\) Ibid [18].

\(^{40}\) Ibid.

\(^{41}\) [2005] EWCA Crim 1092 [82].

\(^{42}\) Ibid.
former certainties’ concerning infant deaths.\textsuperscript{43} Anthony highlighted the false line of reasoning in Meadow’s hypothesis by stating that Cannings was based on a fallacious approach.\textsuperscript{44} Cannings, in the first instance, erroneously depended on inferences based on coincidence, or the unlikelihood of two or more infant deaths in the same family.\textsuperscript{45}

The ‘rule of three’ hypothesis is without scientific backing.\textsuperscript{46} It is not a conclusion reached by analysis of observations.\textsuperscript{47} There is no supportive data and there are no illustrative case histories, or references to earlier publications.\textsuperscript{48} An investigation concerning Meadow’s contributions to the medical literature has likewise failed to uncover supportive pathological evidence or references.\textsuperscript{49}

Lawyer Stephen Clark, husband of Sally Clark, advised that when Meadow was asked at Sally Clark’s committal hearing to produce evidence to support the theories that underpinned his career, Meadow initially prevaricated, and then eventually admitted he was unable to do so because his secretary had ‘shredded it.’

This meant that his hypothesis could not be properly tested.\textsuperscript{50}

In the USA, the ‘rule of three’ hypothesis was rejected in Ward.\textsuperscript{51} Their Honours were concerned that the hypothesis was implied, but not named, by the principal crown witness, medical examiner Dr Bruce Levy, who said

\textsuperscript{43} Anthony [2005] EWCA Crim 952 [81].
\textsuperscript{44} Ibid [76].
\textsuperscript{45} Kai-Whitewind [2005] EWCA Crim 1092 [82].
\textsuperscript{47} Ibid.
\textsuperscript{48} Ibid.
\textsuperscript{49} Ibid.
\textsuperscript{51} Ward 138 S.W. 3d 245 (Tenn, 2003).
'[y]ou can’t look at any of these three deaths in isolation. You have to look at all of them together in order to be able to explain these deaths’.  

Dr Case testified that the ‘rule of three’ was not a rule, but rather ‘it is a saying …’ He stated the hypothesis was not based upon scientific evidence, but:

upon experience … when there is more than one child dying within a family and you are able to exclude other reasons for the child being [sic] dying, that when you have three children … those are circumstances which do not occur in the course of reality, that there is something wrong there, and that is the type of experience …

In Ward, it was found that the application of the ‘rule of three’ was ‘not a proper foundation upon which to base expert opinion testimony’ and it did not substantially assist the jury. It was described as speculative and not constituting reliable expert evidence.

Similarly, in Buchanan, defence expert, Dr Cyril Wecht, said the cot death hypothesis was not based on science. Another defence expert, Dr Enid Gilbert-Barness, called it a disgrace.

In Australia, at Kathleen Folbigg’s application for separate trials, Wood CJ at CL said ‘any [rule of three] reasoning or any reasoning based only upon an exercise of statistical probability would be potentially misleading.’

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52 Ibid 261.
53 Ibid 262.
54 Ibid 263.
55 Ibid 271.
56 Ibid 264.
57 Buchanan 69 P.3d 694, 707 (2003). The accused Denise Buchanan was charged with three counts of first-degree murder concerning the deaths of her three infant sons. Her appeal against her conviction was dismissed.
58 Ibid 706.
Likewise, in 2004, MSBP was rejected as a valid medical diagnosis by the Queensland Court of Appeal in *R v LM* [2004] QCA 192, where evidence relating to MSBP was ruled inadmissible. At that time, *R v LM* found MSBP was not a recognized medical condition or psychiatric illness. *R v LM* was endorsed by the UK’s High Court where Ryder J stated he would ‘consign ... MSBP to the history books.’

The labels of MSBP and/or ‘rule of three’ hypotheses or any implied similar premise by the prosecution creates guilt. The terms reverse the burden of proof; the accused has to prove that they are not guilty. Once labelled, a prejudice is created that is extremely difficult to overcome to counter the prosecution’s case.

As Ryder J in *Oldham Metropolitan Borough Council and GW and PW and KPW and Dr W. St C. Forbes* [2007] EWHC 136 (Fam) (‘Oldham’) commented:

> an ‘innocent’ parent caught in the glare of accusation and without medical knowledge or support is in a difficult position. Their attempts to find anything that might explain what had happened

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59 *R v Folbigg* [2002] NSWSC 1127 [88] revised - 30/05/2003. This judgment, that rejected Folbigg’s application for separate trials, was not released until after Folbigg’s trial. Wood CJ at CL directed that it not be released prior to the matter to ensure a fair trial. While, Wood CJ at CL criticised the cot death statistical reasoning (at [88]), this is exactly what prosecution expert Professor Peter Herdson used in his three page report on the deaths of the four Folbigg children when he quoted Meadow’s cot death theory. See Peter Herdson, Expert Report (17 January 2002).

60 The legal ruling on MSBP in *R v LM* [2004] QCA 192 was endorsed in the UK High Court in *A County Council and a Mother and A Father and X, Y and Z (by their Children’s Guardian)* [2005] EWHC 31 (Fam).

61 *R v LM* [2004] QCA 192. Also refer above n 14 where it is noted that Munchausen Syndrome by Proxy was relabelled Factitious Illness by Proxy. This has again been relabelled to ‘factitious disorder imposed on another’ and is now listed as a subtype of the somatic symptom and related disorders in the DSM V (*Fifth Edition of the Diagnostic and Statistical Manual of Mental Disorders*) published by the American Psychiatric Association [309 – 327]. DSM V was published in 2013.

62 *A County Council and a Mother and A Father and X, Y and Z (by their Children’s Guardian)* [2005] EWHC 31 (Fam) [178].
will inevitably have had something of the character of desperation if not hopeless conjecture.\textsuperscript{63}

**MULTIPLE SUDDEN INFANT DEATH AND/OR UNEXPLAINED ILLNESS: FAILURE OF THE DELIBERATE HARM HYPOTHESIS?**

Meadow’s hypothesis relating to multiple unexplained cot deaths surmises, and speculates, that homicide has taken place, rather than death as a result of natural causes.\textsuperscript{64}

In a number of cases, expert witnesses took up Meadow’s mantel.

For example, in *Folbigg*, Dr Ophoven stated

> the statistical probability that four children in one sibship could die from SIDS would be infinitesimally small.\textsuperscript{65}

In *Matthey*, Dr Ophoven said

> where…there [are] more than one sudden and unexpected death in the children but that it is consistent with homicide in another of the siblings which makes the diagnosis of SIDS improper.\textsuperscript{66}

In her report on the *Matthey* case, Dr Ophoven stated:

> [i]n this case there is no known entity that is consistent with the facts present to explain these deaths except the homicidal act of another person.\textsuperscript{67}

\textsuperscript{63} *Oldham* [2007] EWHC 136 (Fam) [39].


\textsuperscript{65} R v Folbigg [2002] NSWSC 1127 revised - 30/05/2003 [9]

\textsuperscript{66} R v Matthey [2007] VSC 398 [109].

\textsuperscript{67} R v *Matthey* [2007] VSC 398 [136]. These comments by Dr Ophoven appear at odds with her comments in *Buchanan*, where she testified that ‘she is familiar with the forensic approach of labelling the first unexplained infant death in a family SIDS, the second as undetermined, and the third as homicide. It is an approach to the handling of cases like this by coroners and is standard practice within the forensic community, but not in her practice’ [Buchanan page 8].
In the plethora of literature advocating the hypotheses of the ‘rule of three’ and MSBP, including articles by Meadow in the publication he edited,\textsuperscript{68} Meadow and his supporters failed to consider other reasons for a child’s death or illness.

These reasons include adverse reaction to drugs or combination of drugs, toxic poisoning, bacterial infections or inflammation, allergies to foods or food additives, adverse reaction to chemicals, genetic problems, doctor negligence or error, misdiagnoses, environmental impacts or other causes.

Those promoting the hypotheses take the stance that current medical knowledge provides all the answers, ignoring the fact that future advances in medical or scientific knowledge might resolve the questions at issue.

Illustrating this point, the premise that a child’s illness may be un-natural (that is, the death could be murder) was rejected in Oldham: the evidence of two experts conflicted until a third opinion showed that the parents of the child did not inflict any injury on the child.\textsuperscript{69} As Ryder J stated, the parents had no case to answer and the experts ‘got it wrong.’\textsuperscript{70} It was also stated that the new expert medical evidence was at the cutting edge of medical knowledge.\textsuperscript{71} It is therefore quite probable that in any investigation into the cause of the deaths of a number of siblings in the same family, the actual cause of death might not be known until some time in the future, or never.

Similarly, the UK government’s report from Baroness Helena Kennedy QC stated that infants do die without an illegal act.\textsuperscript{72} The report found that ‘in

\textsuperscript{68} The publication was the Archives of Disease in Childhood.
\textsuperscript{69} Oldham [2007] EWHC 136 (Fam) [2].
\textsuperscript{70} Ibid [3].
\textsuperscript{71} Ibid [73].
\textsuperscript{72} Helena Kennedy, ‘Sudden Unexpected Death in Infancy: A Multi-agency Protocol for Care and Investigation’, The Royal College of Pathologists and The Royal College of Paediatrics and Child Health, (September 2004) 1.
the vast majority of cases where babies suddenly die, nothing unlawful has taken place."\textsuperscript{73}

A similar position was adopted in Cannings:

\begin{quote}
 in our present state of knowledge, it does not necessarily follow that three sudden unexplained infant deaths in the same family leads to the inexorable conclusion that they must have resulted from the deliberate infliction of harm. There is acceptable evidence that even three infant deaths in the same family may be natural, and may indeed all properly be described as SIDS.\textsuperscript{74}
\end{quote}

In Cannings, Professor Golding told the court that she knew of two other families in which there were a number of unexplained sudden infant deaths properly characterised as SIDS.\textsuperscript{75}

Likewise in Anthony, the court noted that:

\begin{quote}
 families … have experienced three unexpected deaths … and that the occurrence of a second or third unexpected death in infancy within a family, although relatively rare, is in most cases from natural causes.\textsuperscript{76}
\end{quote}

Concurring with this view, in the UK, Carpenter et al\textsuperscript{77} stated that when three sudden infant deaths have occurred in a family, there is no initial reason to suppose that they are more likely to be homicidal than natural.\textsuperscript{78} Carpenter et al concluded that, in most cases, a second or third sudden

\textsuperscript{73} Ibid.
\textsuperscript{74} Cannings [2004] EWCA Crim 1 [148].
\textsuperscript{75} Ibid [147]. Professor Golding told the court that she had studied two other families where there had been three sudden infant deaths in each family. Golding concluded that the child deaths were all properly categorised as SIDS.
\textsuperscript{76} Anthony [2005] EWCA Crim 952 [79].
\textsuperscript{77} Professor Carpenter is a leading UK researcher on sudden infant deaths.
unexpected infant death within a family is the result of natural causes.\footnote{R G Carpenter et al, ‘Repeat Sudden Unexpected and Unexplained Infant Deaths: Natural or Unnatural?’ (2005) 60(6) Obstetrical & Gynecological Survey, <http://journals.lww.com/obgynsurvey/Abstract/2005/06000/Repeat_Sudden_Unex- pected_and_Unexplained_Infant.10.aspx>.} Further, Dr Eugene Diamond reported on the deaths of five infants born to the one mother from three different fathers. A six month police investigation into these deaths revealed no evidence of foul play.

In one of these deaths, the child was approximately two years of age.\footnote{Eugene Diamond, ‘In Five Consecutive Siblings: Sudden Infant Death’ (1986) 170(1) Illinois Medical Journal 33, 34.} In another UK case of multiple infant deaths, Trupti Patel was charged with the murder of her three infants. Her grandmother testified that five of her 12 children died soon after birth. Patel was acquitted.\footnote{BBC News, ‘“Tide Turned” on Cot Death Cases’, BBC News (online), 12 June 2003 <http://news.bbc.co.uk/2/hi/uk_news/england/berkshire/2983652.stm>.}

UK courts have indicated that if the Crown equates multiple infant deaths with murder, without other substantive evidence, then a fallacious line of reasoning is applied.\footnote{Anthony [2005] EWCA Crim 952 [76].}

In Australia, in Matthey,\footnote{This was a case where a mother was charged with the murder of her four children. The Folbigg case contrasts with the later case of Matthey, which did not proceed after Coldrey J criticised the prosecution case, in particular expert evidence from Drs Ophoven, Cala and Beal, all of whom also gave expert evidence for the prosecution in the Folbigg case.} a forensic medical expert report stated that there were a number of families where three or four siblings had died inexplicably and that a natural cause of the deaths was ‘more likely.’\footnote{R v Matthey [2007] VSC 398 [136].}

However, in contrast, in Folbigg, the NSW Supreme Court and the Australian High Court took the view that multiple cot deaths could not occur naturally.\footnote{For example in Folbigg v R [2005] HCA Trans 657 at 250 and 280. The reasoning of the NSW Supreme Court and the High Court needs be considered in light of the}
became a self-fulfilling prophesy: if it has not occurred before, or is not known to have occurred before by a specific expert witness, then it has not occurred now. Applying this logic means that it can never happen.\(^{86}\)

**THE FOLBIGG CASE**

Kathleen Folbigg was accused of killing her four children (Caleb, Patrick, Sarah and Laura) over a 10 year period. She pleaded not guilty to the charge of murdering Caleb, inflicting grievous bodily harm upon Patrick, murdering Patrick, murdering Sarah and murdering Laura. She was the primary carer of all her children. The children died of unexplained causes.

Initially, all the deaths were deemed to be the result of sudden infant death syndrome (SIDS), with no consistent medical evidence pointing to the cause of death of the children. The case shifted from that SIDS diagnosis to one of multiple murders.

The Crown case was based on exclusion evidence by eliminating what did not cause the children’s deaths. There were no eyewitnesses or other scientific evidence against Folbigg.

The prosecution asserted that the deaths could not be natural on the basis that there were four unexplained infant deaths in the one family.

During pre-trial hearings, the prosecution relied on Sally Clark’s first appeal, which concerned the similarity of the circumstances of the deaths of two children,\(^{87}\) arguing that separate trials should not be held. They

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\(^{86}\) It is interesting to note that the Folbigg trial took place in April 2003 at the time the written Clark judgment was released.

argued that the legal principles in *Clark* determined that the four Folbigg murder charges should be heard together.\(^{88}\)

In Folbigg’s application for separate trials concerning the deaths of her four children,\(^{89}\) Woods CJ at CL noted the case of Sally Clark, where, in her first appeal, the court considered the deaths of her two children together.\(^{90}\) He stated ‘it would be contrary to common sense, due to the similarity of the circumstances of the deaths, to confine the jury to a consideration of any one case, in isolation from the others.’\(^{91}\) The application for separate trials for Folbigg was rejected.\(^{92}\)

In the appeal against that decision, Folbigg’s defence advised the court that Sally Clark’s conviction had been overturned on her second appeal and the first appeal judgment had been rendered void.\(^{93}\) The defence argued that a decision should wait until the written *Clark* second appeal judgment was handed down.\(^{94}\)

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\(^{88}\) Ibid [56]. It is interesting to note the analogy offered to demonstrate the prosecution’s position. See [57](i), where a doctor describes a hypothetical case of death as pneumonia, but later, when there are four similar deaths, the first is reclassified as Legionnaires Disease. The prosecution’s view was that it would be ‘quite artificial to diagnose the cause of death for the first person in absence of the other deaths’ (at 58). In my view, this analogy fails to explain why the medical experts failed to undertake relevant scientific post mortem analysis after the first death to determine that Legionnaires Disease was the cause. A correct first diagnosis, in this analogy, may have resulted in no more hypothetical deaths.

\(^{89}\) Judgment in *R v Folbigg* [2002] NSWSC 1127 was delivered on 29 November 2002 and released 30 May 2003 following the Folbigg trial.


\(^{91}\) Ibid [56].

\(^{92}\) Ibid [101].


\(^{94}\) *R v Folbigg* [2003] NSWCCA 17 [20].
Neither the NSW Appeal Court,\textsuperscript{95} nor the High Court’s McHugh J, who rejected the application for leave to appeal for separate trials,\textsuperscript{96} waited for the written judgment in the Clark second appeal.\textsuperscript{97} Those Clark written reasons were delivered while the Folbigg trial was being conducted.\textsuperscript{98}

The prosecution argued that the deaths of the four children could not be attributed to a natural cause because:

- Caleb’s death was not caused by his defective larynx,
- Patrick’s death was not the result of an epileptic episode causing him to stop breathing long enough to die,
- Sarah’s death was not caused by a displaced uvula, and
- Laura’s death was not caused by myocarditis.\textsuperscript{99}

The prosecution contended that the only explanation for the deaths of the four children was that Folbigg had killed them because she was the only person who was present when each died\textsuperscript{100} and there was no other reason for their deaths. It was alleged that all the children died by suffocation, although there was no conclusive scientific or medical evidence to support that position.

The use of Meadow’s two hypotheses can create a potent prejudice that it is difficult for the accused to overcome.

\textsuperscript{95}This judgment \textit{R v Folbigg} [2003] NSWCCA 17 was handed down on 13 February 2003.

\textsuperscript{96}This decision \textit{Folbigg v The Queen} S59/2003 [2003] HCATrans 601 was made on 19 February 2003.

\textsuperscript{97}The judgment \textit{Clark} [2003] EWCA Crim 1020 was delivered on Friday 11 April 2003 during the Folbigg hearing dates of 1 April to 29 August 2003.

\textsuperscript{98}Ibid. Sally Clark’s conviction was quashed due to evidence of missing microbiology reports that were withheld by Dr Williams and subsequently presented at the second appeal. Statistical evidence given at first instance by Sir Roy Meadow was also rejected.

\textsuperscript{99}\textit{R v Folbigg} [2005] NSWCCA 23 [80] (‘Folbigg Appeal’).

\textsuperscript{100}This issue of one person being present with the children when each died will be discussed in this article.
Initially, the label of MSBP was attached to Kathleen Folbigg during the committal phase.\(^\text{101}\) The MSBP label implied guilt at the expense of forensic evidence,\(^\text{102}\) while, the ‘rule of three’ compounded the prejudice.

A starting point in any investigation can be critical, as Cannings makes clear. If a case is started at that wrong position, then the outcome could lead to injustice: ‘lightning does not strike three times in the same place. If so, the route to a finding of guilt is wide open. Almost any other piece of evidence can reasonably be interpreted to fit this conclusion.’\(^\text{103}\)

The case against Kathleen Folbigg also relied on diaries that she had written. It was alleged that these diaries amounted to a ‘confession’ or ‘admission’ by Folbigg that she killed her children.\(^\text{104}\) The meaning of the diary entries is open to interpretation and is subjective.

A jury convicted Kathleen Folbigg of the manslaughter of Caleb, grievous bodily harm upon Patrick and the murders of Patrick, Sarah and Laura. Justice Barr sentenced Folbigg to 40 years gaol with a non-parole period of 30 years.\(^\text{105}\) The sentence was reduced on appeal to 25 years.\(^\text{106}\) After the trial in June 2003 and during the appeal process, Folbigg continued to maintain her innocence.\(^\text{107}\)

**EXCLUSION EVIDENCE**

The prosecution’s case in Folbigg highlights ‘exclusion evidence’: if a natural cause of death cannot be proven in any of the four infant deaths in

\(^{101}\) Interview with Folbigg’s first lawyer, Brian Doyle, Newcastle, NSW (Email, 6 March 2008).
\(^{102}\) Refer R v LM [2004] QCA 192 [68].
\(^{104}\) The diaries will be discussed in more detail later.
\(^{105}\) See Dr Robert Moles website Networked Knowledge at <http://netk.net.au/Cala/Folbigg.asp> for a more detailed summary of the Folbigg case.
\(^{106}\) Folbigg Appeal [2005] NSWCCA 23 [191].
\(^{107}\) R v Folbigg [2003] NSWSC 895 [68].
a single family, then murder has taken place. This ‘negative proof’ assumes that all possibilities have been covered. It is not positive proof with real substantial evidence.

The deaths of all four Folbigg children were originally classified as SIDS or undetermined. The label SIDS is itself a diagnosis by exclusion, in that no cause of death can be determined. It is subject to change if an actual cause is uncovered.

Prosecution expert witness Professor Jem Berry used exclusion evidence in Folbigg.

In the voir dire, he stated that he was unaware of three or more thoroughly investigated infant deaths in one family from SIDS. He stated it was unprecedented in his experience and he knew of no substantial examples in the literature.

Similar evidence was given by prosecution witnesses Professors Peter Herdson and John Hilton. They were not aware, when asked, that there had ever been three or more thoroughly investigated, infant deaths from SIDS in the one family.

Therefore, the Folbigg appeal highlights the use of exclusion evidence. Sully J outlined the Crown’s case as a:

> circumstantial one … that absent a natural cause of death in any one of four successive infant deaths in a single family, the only

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110 Professor Jem Berry is a UK expert on SIDS.
112 In fact, Professor Herdson, in his expert evidence, directly quoted Meadow’s cot death theory.
113 Folbigg Appeal [2005] NSWCCA 23 [65]. Folbigg expert witnesses Dr Beal, Professors Byard and Berry, also answered similar questions with similar responses.
inference rationally available was that the deaths had been caused in some unnatural way.\textsuperscript{114}

This is an important element in the Folbigg case; the only inference established is that the deaths had been caused in some unnatural way as a natural cause of death could not be determined. The above statement assumes that the court and the jury cannot accept that there is a reasonable natural explanation for the deaths.

Sully J also remarked that the expert evidence:

\begin{quote}
does no more than to establish … that reputable and apparently reliable expert opinion cannot identify another known case where four infants in one family have died successively from unknown natural causes.\textsuperscript{115}
\end{quote}

His Honour also noted that ‘when added to all other known facts and circumstances concerning the four deaths, there is left open no other reasonable hypothesis than that the four deaths were unnatural’.\textsuperscript{116}

In this way, the argument in the Folbigg case differed markedly to the later UK cases of Cannings and Anthony. The inference that there was no reasonable natural explanation for the two children’s deaths was found

\textsuperscript{114} Ibid [80] Item 7 (emphasis added). The prosecution case in Folbigg argued that in the deaths of the Folbigg children, there was ‘not a reasonable possibility’ of natural causes [80 items 1-6], rationally the deaths were caused in an unnatural way [80 item 7], and that rationally they were suffocated by somebody with that somebody being the appellant [80 items 8-9]. The NSW Court of Criminal Appeal now considers there is a need for a court to recognise, in the evaluation process [of tendency and coincidence evidence], the existence of alternative inferences inconsistent with guilt arising from the Crown evidence. If that [was] a possibility, did it substantially alter [the court’s] view as to the otherwise significant capacity of the Crown evidence to establish the facts in issue: DS/ v R; NS v R [2012] NSWCCA 9 [130, 132].

\textsuperscript{115} Ibid [91].

\textsuperscript{116} Ibid.
wanting in *Anthony*, where the original conviction had depended on the conclusion that the deaths were unnatural.\(^{117}\)

The *Cannings* case could be regarded as a landmark finding in cases of this character, stating as a legal principle:

> whether there are one, two or even three deaths, the exclusion of currently known natural causes of infant death does not establish that the death or deaths resulted from the deliberate infliction of harm. That represents not only the legal principle, which must be applied in any event, but, in addition … it appears to us to coincide with the views of a reputable body of expert medical opinion.\(^{118}\)

*Cannings* stated that medical opinion supported a view that the deaths could be natural. Developing medical knowledge was a factor in *Cannings*, where it was noted that what may be unexplained today may be perfectly well understood tomorrow.\(^{119}\) *Cannings* considered the Care of Next Infant study, which included two families where child deaths were attributed to the same condition, stating: \(^{120}\)

> diagnosis was assisted or confirmed by the birth of a third child identified with the same condition. Rib fractures, attributed to resuscitation, were found in the VLCAD.\(^{121}\) A few years ago these deaths would have been totally unexplained. Both families would probably have had a third unexplained death had the underlying cause not been identified and treated, and at least one of the parents might have been suspected of murder.\(^{122}\)

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\(^{117}\) *Anthony* [2005] EWCA Crim 952 [85].

\(^{118}\) *Cannings* [2004] EWCA Crim 1 [13].

\(^{119}\) *Cannings* [2004] EWCA Crim 1 [22].

\(^{120}\) *One condition was a very long-chain acyl-coenzyme A dehydrogenase (VLCAD) deficiency and the other, prolonged QT syndrome.*

\(^{121}\) Ibid.

\(^{122}\) *Cannings* [2004] EWCA Crim 1 [23].
In Australia, Matthey highlighted that medical knowledge is not ‘frozen’, and that there is a possibility that medical conditions ‘not well understood or yet to be discovered’ may provide a cause of death for the children.\textsuperscript{123} Additionally, Button \textit{v} The Queen [2002] WASCA 35 observed that ‘science does not stand still.’\textsuperscript{124}

In the UK, Mr Justice Charles noted that courts must always be on guard against the over-dogmatic expert, the expert whose reputation or \textit{amour propre} is at stake, or the expert who has developed a scientific prejudice.\textsuperscript{125} Courts should be aware that current medical certainty may be discarded by the next generation of experts.\textsuperscript{126}

Implied in exclusion reasoning is the view that ‘we cannot determine why the children died, therefore someone killed the children and (usually) it is the mother.’\textsuperscript{127} There is no evidence or empirical scientific basis for this reasoning. It is a type of circular reasoning dismissed by Holmes J in \textit{R \textit{v} LM} concerning MSBP:

\begin{quote}
the reasoning process behind the Crown’s argument for admission was inherently circular: one had to assume the occurrence of the behaviour before the label could be applied to it. Quite apart from whether the evidence was properly characterised as expert, the existence at large of the syndrome did nothing to prove criminal conduct by the appellant here.\textsuperscript{128}
\end{quote}

\textsuperscript{123} Matthey [2007] VSC 398 [136]. Matthey was charged with the murder of her four children. The matter did not proceed.

\textsuperscript{124} Button \textit{v} The Queen [2002] WASCA 35 [348].

\textsuperscript{125} A Local Authority \textit{v} K, D and L [2005] EWHC 144 (Fam) [52] quoting the Court of Appeal in \textit{Re U, Re B} [2004] 2 FLR 263 [22]-[23].

\textsuperscript{126} Ibid.

\textsuperscript{127} Interview with Dr Helen Hayward-Brown, (In person, 20 February 2013). Dr Hayward-Brown is the author of the doctoral thesis \textit{Misdiagnosed Children, Misdiagnosed Parents: Chronic Illness and the Spectre of Munchausen Syndrome by Proxy} (2003) Charles Sturt University.

\textsuperscript{128} R \textit{v} LM [2004] QCA 192 [97].
THE INFLUENCE OF MEADOW’S HYPOTHESES IN FOLBIGG

In the Folbigg appeal judgment, Sully J made the observation that the case was different from similar cases in the UK where the theories and evidence of Sir Roy Meadow were found to be unsound.129 Sully J identified a number of reasons why the Folbigg case was different.130

Sully J noted, in relation to Cannings, that one of the principal Crown experts had given evidence in another trial and it had been demonstrated that his evidence had been seriously flawed.131 This is a reference to Sir Roy Meadow. But his Honour found that this was not the case with the expert evidence given for the Crown at the Folbigg trial.132 Whilst it is true that Meadow did not directly provide expert evidence at the Folbigg trial,133 his hypotheses, MSBP and the ‘rule of three,’ pervaded it.134

Meadow’s hypotheses were a dominating factor in Folbigg by inference, as shown by the prosecution’s questioning of witnesses and in a prosecution expert witness report.

One of the most striking examples of the effect of Meadow’s hypotheses in the Folbigg case can be found in the prosecution’s expert witness Professor Peter Herdson’s three page report on the death of the four children:

the first unexplained death of an infant in a family may be attributed to sudden infant death syndrome, the second should be

129 Cases such as Cannings [2004] EWCA Crim 1 and Clark [2003] EWCA Crim 1020.
131 Ibid at [138]. Sully J also did not address the fact that missing microbiology reports that were recovered for Clarks’ second appeal showed that one of the Clark children died of massive bacterial infection and that this formed the basis of the quashing of Clark’s murder conviction.
132 Ibid.
133 Ibid [138].
134 Sully J also addressed other issues in Cannings that he said were not in the Folbigg appeal: (1) fresh evidence; (2) genetic causes for the deaths of Canning’s children; and (3) allegations of violence by Folbigg, as he claimed were evidenced by her diaries.
labelled undetermined, and the third should be considered homicide until proven otherwise.\textsuperscript{135}

Professor Herdson suggested in his ‘expert’ report that the ‘rule of three’ was stated by other pathologists involved in the case.\textsuperscript{136} He also drew attention to Meadow’s MSBP in his report, observing that ‘the pattern of the mother’s actions and reactions over the ten year period is not [sic] typical of so-call MSBP’, showing the direct consideration and influence of Meadow’s hypotheses in the case. Whilst he stated Folbigg’s behaviour was not typical of MSBP, it was a factor at the committal.

The prosecution’s questioning of its expert witnesses in Folbigg, as reflected in the Court of Appeal judgments, showed that the Crown was introducing the ‘rule of three’ into evidence by inference;\textsuperscript{137} an invisible label and prejudice that is difficult for the accused to counter. This is illustrated in the testimony of prosecution expert Dr Cala.\textsuperscript{138} He concurred with a comment from the American Academy of Pediatrics\textsuperscript{139} that a study of infants suffocated by the parents indicates that certain features should raise the possibility of suffocation.

According to the academy, this includes previous unexpected or unexplained deaths of one or more siblings or the previous death of infants under the care of the same, unrelated person.\textsuperscript{140}

\textsuperscript{135} Professor Peter Herdson’s expert report was provided to the author by the NSW Supreme Court in July 2011 following the author’s formal application for court documents on the Folbigg matter. This quote from Herdson’s report was not mentioned in the Folbigg appeal case.
\textsuperscript{136} The author did not have access to all the pathologists’ reports.
\textsuperscript{137} R v Folbigg [2003] NSWCCA 1127 revised – 30/05/2003.
\textsuperscript{138} Ibid [38], [45].
\textsuperscript{139} American Academy of Pediatrics 94(1) 1 July 1994, 124-126.
\textsuperscript{140} R v Folbigg [2003] NSWCCA 1127 revised – 30/05/2003 [45]; judgment when the defence appealed for separate trials concerning the deaths of the four children. The application for separate trials was dismissed.
Similarly in Matthey, Dr Cala, also implied Meadow’s hypothesis in the following exchange:

Q: You would have called this death [of the child] undetermined?
A: Yes.

Q: And that’s, as I understand it, simply because of the earlier death?
A: The first death I could not ignore. The first death was unexplained. This is unexplained, and I wouldn’t have called this one SIDS.

Q: No, simply because of the earlier death?
A: That’s correct.141

Folbigg prosecutor, Mark Tedeschi QC, implied the ‘rule of three’ hypothesis when he questioned Crown witness pathologist Professor John Hilton, who conducted the post mortem of Sarah, Folbigg’s third child. Tedeschi is reported to have said that Professor Hilton was ‘wrong to attribute Sarah's death to SIDS when he was aware of the family history’.142

The questioning of Professor Hilton on the cause of Sarah’s death provided another example of testimony where the ‘rule of three’ hypothesis was introduced by inference:

Q: Would you tell us whether or not you agree with this proposition, that there are certain

141 Matthey [2007] VSC 398 [90].
circumstances which should indicate to a pathologist conducting a post-mortem the possibility of intentional suffocation and that they include the following: the previous unexpected or unexplained death of one or more siblings, that is, a brother or sister, of the deceased. What do you say to that?

A: Yes.

Q: And another factor that should indicate the possibility of intentional suffocation for a pathologist conducting a post-mortem is an ALTE, that is, an acute life-threatening event of a sibling while in the care of the same person who cared for the deceased?

A: Yes.

Q: And would you agree with this proposition, that when conducting a post-mortem examination one should give consideration to the possibility of intentional asphyxiation, that is smothering, in cases of unexpected infant death with a history of ALTEs, or one ALTE, witnessed only by a single care-giver in a family, or of previous unexplained infant deaths. Do you agree with that?

A: Broadly, yes.143

Professors Berry and Herdson utilised exclusion evidence in their Folbigg testimony, as did Dr Susan Beal, who was asked:

Q: At the present time has there been accepted in the medical community, to your knowledge, that there have been any

143 Folbigg Appeal [2005] NSWCCA 23 [126].
families that you are aware of, either from your own experience or the experience of your colleagues or from the medical literature, in which there have been three or more children who have died from SIDS?

A: No.\textsuperscript{144}

Dr Beal provided her expert opinion over the objection of the defence counsel,\textsuperscript{145} who stated that Dr Beal had not read the post mortem reports on the deceased children and that her evidence was largely based on an examination of patterns.\textsuperscript{146} Further, the defence objected to the use of statistical evidence as a foundation for opinion.\textsuperscript{147} In the subsequent case of Matthey, where a mother was charged with the murder of her four children, Dr Beal’s evidence was rejected.

In that case, Coldrey J said that ‘Dr Beal reasoned backwards to a probability that the other three children died by non-accidental suffocation.’\textsuperscript{148} The evidence of Drs Cala and Ophoven was similarly rejected.\textsuperscript{149}

In Ward, it was recognised that the ‘rule of three’ was being used by implication even though it was not directly put to the jury.\textsuperscript{150} In Folbigg, the court failed to see the connection between the line of questioning by the

\textsuperscript{144}Ibid [75]. In 1993, Dr Beal co-authored a paper with Dr Roger Byard, a defence expert witness in Folbigg, on Meadow’s hypotheses: ‘Munchausen Syndrome by Proxy: Repetitive Infantile Apnoea and Homicide’ (1993) 29 J. Paediatr. Child Health 77-79. In this paper the authors referenced a 1986 paper written by Dr Eugene Diamond. Dr Diamond discussed the deaths of five siblings. All the deaths of the five siblings were attributed to SIDS by Dr Diamond. See Eugene Diamond, ‘Sudden Infant Death In Five Consecutive Siblings’ (1986) 170(1) Illinois Medical Journal 33, 34.

\textsuperscript{145}Folbigg Appeal [2005] NSWCCA 23 [72].

\textsuperscript{147} Ibid.

\textsuperscript{148} R v Matthey [2007] VSC 398 [69].

\textsuperscript{149} Ibid [198].

\textsuperscript{150}Ward, 138 S.W. 3d 245 (Tenn, 2003) (McDaniel at 265) Pg 22.
prosecution (establishing the basis of their case) and the inferences to the 'rule of three' hypothesis.

The line of questioning by the prosecution and the answers given by the expert witnesses implied a line of speculation to the jury. This conjecture concerned the central fact in issue, and as noted in Straker, when speculation of this nature would be adverse to the accused, and when there is no evidence to support the speculative conclusion, the evidence of the expert is inadmissible.151

The 'fact in issue' in Folbigg was whether four children born of the same mother could all die by natural means. None of the prosecution witnesses could say for certain if the deaths of the children were un-natural or natural: therefore they reasoned backwards and, using the 'rule of three' hypothesis, speculated that the deaths were un-natural because they could not establish a natural cause of death. This brought forward, without substantial supporting evidence, the fallacy that the mother had killed the children.

In the successful Anthony appeal in the UK, their Honours found that the manner in which the experts gave their testimony 'permeated the way in which the jury ... approached this evidence.'152 'There is no doubt that the manner of the prosecution's questioning in Folbigg, particularly surrounding knowledge of other cases of multiple or four sibling deaths, was designed to inculcate in the jurors' minds that such an occurrence could not happen naturally.

In Folbigg, the alleged rarity of four such infant deaths was critical to the opinions expressed by the experts showing the influence of the 'rule of three' hypothesis.

151 Straker (1977) 51 ALJR 690, 696 (Jacobs J).
152 Anthony [2005] EWCA Crim 952 [85].
A MOTHER ALONE WITH THE CHILD: A CASE FOR MURDER, OR NOT?

The issue of Kathleen Folbigg being alone at home, or being alone with the children when they died, is another major element in the case against her.

In Folbigg’s leave to appeal to the High Court, McHugh ACJ reasoned that being alone with a child was a pointer to murder:

In each case the applicant was alone with the child, the child ceased breathing, the husband was either absent or asleep and there was no clear, natural cause of death and all the children showed signs that were consistent with smothering with a pillow.

This was a similar point that was raised by Professor Berry in Folbigg:

This raises the question that the person who finds the baby may have been present when the collapse occurred and may have been in its cause.

Dr Cala, in Folbigg, considered that it was relevant if the deceased child was in the care of a person who lost children in similar circumstances.

Dr Ophoven also gave this erroneous line of reasoning in cases such as Buchanan, where she stated:

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153 As stated by McHugh ACJ in Folbigg’s High Court Leave to Appeal application: Folbigg v The Queen [2005] HCATrans 657 [175].
154 Folbigg v The Queen [2005] HCATrans 657 [175]-[180](McHugh ACJ).
156 Dr Cala is a forensic pathologist.
157 R v Folbigg [2003] NSWCCA 1127 revised – 30/05/2003 [8] – this case was the judgment in the defence appeal to have separate trials. Dr Cala agreed with the American Academy of Pediatrics 94(1) July 1994, 24-126. The appeal was dismissed.
[a] child’s death, in isolation, is not totally inconsistent with SIDS. But other factors are significant, such as the fact that [the child] was found by the same person as the others … [children who had died] … the only person who reported that the children [had a problem] was the mother.

In Matthey, she again considered the mother by stating that:

there had been the unexplained and unexpected death of one or more siblings … and … the deaths had occurred in the care of the same person [that is Mrs Matthey].

Dr Ophoven’s reasoning was rejected in Matthey, where Coldrey J stated that such issues have no ‘relevance or probative weight in determining a cause of death.’

Their Honours in Clark agreed:

Children frequently spend the majority of the early part of their life in the sole care of their mother and hence it cannot in any way be said to be an unusual feature for just two events to occur when the babies are in the mother’s sole care … [and] in the ordinary incidence of family life, it could be anticipated that some imprecise similarity of this kind could always be found.

The Clark court added that it could not realistically see how being alone with the children when they were found deceased can be thought to be any significant indication of murder.

159 [2007] VSC 398 [113]. The court rejected the assertion.
160 Matthey [2007] VSC 398 [193].
161 Clark [2003] EWCA Crim 1020 [15]; in the Clark case, Sally Clark found her two children, at different times, unconscious in their bedroom. Sally Clark was alone when she found the children. Sally Clark’s second appeal was upheld. Sally Clark was released in January 2003. She died in March 2007.
162 Ibid [15].
This view was supported in Cutro: their Honours stated that such evidence ‘does not support the conclusion that the appellant was the sole person who could have inflicted the injuries.’

The question of whether Folbigg was alone with her children when they died also needs to be addressed. Folbigg’s first lawyer stated that there is no evidence Folbigg was actually with three of the children when they died. The Appeal Court judgments and the High Court’s leave to appeal transcript are silent on the matter of whether Folbigg was actually alone in the same room with three of her children when they died.

Folbigg was only witnessed as being near one child, Sarah, at about the time she died.

EXPERT TESTIMONY: PROFESSOR JEM BERRY

In the UK, Donna Anthony was charged with the murder of her two children. Professor Jem Berry conducted the post-mortem examination on one of Donna Anthony’s children and said he could not find a natural cause of death, characterising the cause of death as unascertained.

Donna Anthony’s appeal (R v Anthony [2005] EWCA Crim 952) considered Professor Berry’s first instance testimony for the prosecution in 1998 where he was asked to consider the possibility of one mother having two unexplained infant deaths. Professor Berry used an analogy about ‘lightening striking twice’ and that the deaths were ‘most unlikely and

164 Interview with Brian Doyle, (Email, 6 March 2008). Also see Folbigg Appeal [2005] NSWCCA 23 at [14], [21] and [39].
166 Ibid [31].
167 Anthony [2005] EWC A Crim 952 [86]. The case against Anthony argued that she killed her two babies by smothering them. Donna Anthony said she had done no harm to the children and that they died naturally. Anthony was convicted but released on appeal.

168 R v Anthony [2005] EWCA Crim 952 [86].
outside his experience”. 169 Their Honours noted that Professor Berry testified that it was most likely that both babies had been ‘suffocated.’ 170 

He ‘recommended that the deaths be reviewed by paediatricians who specialised in infant death cases.’ 171 

The Anthony appeal does not provide any explanation as to why Professor Berry concluded that the children had been suffocated except for the statement ‘one mother having two unexplained deaths.’ 172 

Professor Berry’s comments alluding to Meadow’s ‘rule of three’ hypothesis were noted in the Anthony appeal, where their Honours considered part of Professor Berry’s testimony at the original trial:

"... if the death of each of these children is looked at without reference to the other, their deaths are unexplained. So looking at them entirely separately, they are not cot deaths, they are unexplained deaths. Therefore, although he [that is Professor Berry] accepted that if one baby in a family dies from a cot death, the second and subsequent babies have an increased risk of doing the same, it does not apply here, he said, because Jordan’s death was not a cot death. It only applies if the first baby was a cot death when you are looking at the other, and this one was not.” 173 

Their Honours further noted that Professor Berry stated: ‘he would not then ([in] 1997) have applied the phrase ‘cot death’ where more than one infant in the same family had died.’ 174 

169 R v Anthony [2005] EWCA Crim 952 [86]. 
170 Ibid [60]. 
171 Ibid. 
172 Ibid [59]. 
173 R v Anthony [2005] EWCA Crim 952 [86]. 
174 R v Anthony [2005] EWCA Crim 952 [59].
Professor Berry appeared as an expert witness in the case of Sally Clark who was also charged with the murder of her two children. Clark’s first appeal against her conviction in October 2000 was dismissed\textsuperscript{175} but her second appeal in 2003 was upheld.\textsuperscript{176}

The second Clark appeal notes that Professor Berry said he was ‘not clever enough to diagnose and recognise’ what killed Clark’s son, Christopher, with the cause of death being unascertained.\textsuperscript{177} He stated:

\begin{quote}
It means that the child’s death may have been natural but without explanation, perhaps what the jury knows as cot death. It might be that the child died unnaturally but I can’t find out why or it might be the child died of a natural disease that I am not clever enough to diagnose and recognise...\textsuperscript{178}
\end{quote}

Their Honours added that Professor Berry testified that Christopher’s post mortem was not sufficiently thorough ‘to document possible injuries that might indicate a pattern of care of the child’.

Professor Berry appeared as an expert witness for the prosecution in Folbigg and stated:

\begin{quote}
[1]his raises the question that the person who finds the baby may have been present when the collapse occurred and [they] may have been its cause.\textsuperscript{179}
\end{quote}

\begin{footnotes}
\item[175] R v Clark [2000] EWCA Crim 54 (2nd October, 2000).
\item[176] Clark [2003] EWCA Crim 1020.
\item[177] Ibid [61].
\item[178] Ibid.
\item[179] R v Folbigg [2002] NSWCCA 1127 revised - 30/05/2003 [27].
\end{footnotes}
He further stated in *Folbigg*:

I am unable to rule out that Caleb, Patrick, Sarah and possibly Laura Folbigg were suffocated by the person who found them lifeless, and I believe that it is probable that this was the case.\(^{180}\)

Professor Berry gave evidence in *Folbigg* that he was not aware of any of his colleagues coming across multiple sudden infant deaths; he had not had any such deaths reported to him, nor was he aware of any such deaths being reported in the available medical literature.\(^{181}\)

Professor Berry has written a number of peer reviewed papers with Professor Golding. Both were expert witnesses in *Cannings*.\(^{182}\) In testimony in *Cannings*, Professor Golding said she was aware of two families that suffered a number of sudden infant deaths.\(^{183}\) Professor Golding concluded that the child deaths in those families were all SIDS.\(^{184}\)

**EXPERT TESTIMONY: PROFESSOR PETERHERDSON**

In *Folbigg*, the expert report of the late Professor Peter Herdson directly quotes Meadow’s hypotheses.\(^{185}\) He considered that all four Folbigg infants probably died from intentional suffocation.\(^{186}\)

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180 *Ibid* [44].
181 *Folbigg Appeal* [2005] NSWCCA 23 [67].
182 *Cannings* [2004] EWCA Crim. 1 [147].
183 *Ibid*.
184 *Ibid*.
185 Professor Herdson wrote that the first unexplained death of an infant in a family may be attributed to sudden infant death syndrome, the second should be labelled undetermined, and the third should be considered homicide until proven otherwise.
186 Professor Peter Herdson’s expert report, dated 17 January 2002, was provided to the author by the NSW Supreme Court in July 2011 following the author’s formal application for court documents on the *Folbigg* matter.
Professor Herdson was an adult renal pathologist. A review of his career indicates that he had little or no involvement or expertise with sudden and unexpected infant death, nor did he publish in this area.\textsuperscript{187}

During his work in Canberra, in the ten year period to the year 2000, official figures show he conducted a total of 14 autopsies on infants ≤12 months of age whose death could be described as SIDS.\textsuperscript{188}

Cot death expert Professor Goldwater\textsuperscript{189} reviewed\textsuperscript{190} Professor Herdson’s expert report on the autopsies of the four Folbigg children.\textsuperscript{191} Professor

\textsuperscript{187} In his early career, Professor Herdson worked at King Faisal Hospital in Saudi Arabia. Information provided by Professor Herdson to the SIDS awareness group, the Hayes Foundation, shows that Dr Herdson reported that there were no sudden unexpected deaths in infancy and no infant autopsies in Saudi Arabia in 1990 (document accessed from www.hayesfoundation.org/intstats2.pdf April 2012). Later, Professor Herdson worked at the University of Auckland School of Medicine in New Zealand. Cot death expert Professor Paul Goldwater was a member of Professor Herdson’s department of pathology. At the time in New Zealand, autopsies of infant deaths were handled by specialist paediatric pathologists at the Princess Margaret Children’s Hospital. Following New Zealand, Professor Herdson worked at Canberra Hospital (ACT Health). His publications, according to the ACT Pathology website, ranged from basic scientific research, mainly renal and cardiac pathology, to education, medical politics and workforce analysis. Searches do not reveal any articles authored by Professor Herdson concerning the deaths of infants or SIDS or cot deaths.

\textsuperscript{188} Official figures from the ACT Coroner’s Office show that in the 10 year period 1990 to 2000, Professor Herdson undertook a total of 14 autopsies on infants of about 12 months of age or under, whose death could be described as SIDS.

\textsuperscript{189} Professor Paul Goldwater had undergraduate training in microbiology and medicine at the Universities of Surrey (1968) and London (The London Hospital Medical College, 1973), respectively. He undertook post-graduate training in infectious diseases, microbiology and virology at Auckland Hospital, New Zealand and St. Thomas’ Hospital, London. Since 1986 he has been senior consultant clinical microbiologist/infectious diseases physician at the Adelaide Children’s Hospital and the Women’s and Children’s Hospital/Children Youth and Women’s Health Service and now SA Pathology. Present research interests include the role of toxigenic bacteria and viruses in the pathogenesis of sudden unexpected death in infancy. He has published over 150 papers, including 30 relating to sudden unexpected death in infancy, in international journals and one text on HIV/AIDS.

\textsuperscript{190} This was at the request of the author.

\textsuperscript{191} Interview with Professor Paul Goldwater (Email, 4 August, 2011). Professor Herdson’s expert report on the Folbigg matter was provided to the author following a formal application to the NSW Supreme Court for various court documents and reports on the Folbigg case. The Supreme Court provided these documents in July 2011.
Goldwater observed that Professor Herdson largely endorsed the four other prosecution expert’s reports. Concerning Laura’s autopsy findings, Professor Herdson stated that:

histopathology of the heart reveals a myocarditis which is probably of viral origin and I further agree with Dr Cala that his finding of myocarditis is consistent with Laura’s recent illness and is probably incidental.192

A conclusion, noted by Professor Goldwater, but not proffered by Professor Herdson, was that myocarditis was a plausible cause of death. Professor Goldwater suggests that this indicates a bias in Professor Herdson’s thinking, consolidated by the fact that he invoked Meadow’s now discredited cot death hypothesis in his expert report for the Folbigg case.

In Folbigg, Professor Herdson opined that Sarah’s death, looked at in isolation, came closest to satisfying the generally accepted criteria for SIDS; but he could not ‘distinguish between SIDS and suffocation.’193

Professor Goldwater said this is ‘a broad statement, made without careful consideration of autopsy findings such as intrathoracic haemorrhage, which, on detailed analysis, can be helpful in distinguishing between sudden unexplained death and suffocation’.194

Considering Professor Herdson’s career and published articles, a question must be raised whether he was an expert in sudden unexplained deaths in infancy (‘SUDI’). Additionally, Professor Goldwater believes Canberra’s small population could not provide the required number of infant deaths

192 Hersdon, above n 177.
193 Folbigg Appeal [2005] NSWCCA 23 [64]. Other experts gave evidence in Folbigg that it is difficult to distinguish between SIDS, and suffocation. See also Dr Byard [130]. The issue is that many other experts had some expertise in SIDS while Professor Herdson did not appear to have any such expertise.
194 Goldwater, above n 177.
necessary to achieve a level of expertise in SUDI.\textsuperscript{195} He considers that Professor Herdson could not be regarded as a SUDI expert.\textsuperscript{196} Therefore, it is suggested that Professor Herdson gave evidence outside his area of expertise.

THE ISSUE OF PROBABILITIES AND STATISTICS

The prosecution’s premise in Folbigg was based on the argument that it was improbable that the deaths of the four children and one acute life-threatening event occurred coincidentally. It was argued that they were not the result of SIDS or any other illness, disease or syndrome.\textsuperscript{197}

Probabilities were used at Folbigg’s committal hearing and included in the sentencing judgment of Barr J. He said the jury was entitled to take into account the ‘improbability that all five events [that is, the deaths of the four children and Patrick’s acute life threatening episode] occurred naturally and spontaneously.’\textsuperscript{198}

Before the Folbigg trial started, the defence objected to the use of statistics by medical experts\textsuperscript{199} such as Drs Ophoven and Beal. The objection was dismissed.\textsuperscript{200}

It is of concern that the jury could have used inadequate or conflicting information on the cause of death of the children\textsuperscript{201} and the behaviour of the accused,\textsuperscript{202} to arrive at the probability that murder took place. The dilemma with the use of probabilities is that they should not be used unless

\begin{itemize}
\item \textsuperscript{195} \textit{Ibid.}
\item \textsuperscript{196} \textit{Ibid}
\item \textsuperscript{197} \textit{R v Folbigg} [2002] NSWSC 1127 [61] revised - 30/05/2003. This also refers to s 98(1) of the \textit{Evidence Act 1995} (NSW).
\item \textsuperscript{198} \textit{R v Folbigg} [2003] NSWSC 895 [34].
\item \textsuperscript{199} \textit{R v Folbigg} [2003] NSWCCA 1127 revised 30 May 2003 [20]. This was an appeal against a decision not to hold separate trials. The appeal was dismissed.
\item \textsuperscript{200} \textit{Ibid} [34].
\item \textsuperscript{201} As presented by the various medical expert witnesses.
\item \textsuperscript{202} As noted in the diaries.
\end{itemize}
two main conditions are satisfied: first, the numbers used for the probabilities must be accurate; and second an event must be independent without any information carrying over from previous like events. Additionally, the Folbigg jury would have had to compare at least two different probability models to correctly understand probabilities.

It is unlikely that the jury would have been able to make a probability judgment with any accuracy considering the various circumstances of all the children’s deaths. But this was the Crown’s case and as Barr J indicated, this is what the jury was being asked to do.

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203 Interview with Emeritus Professor Robert Gregson Ph.D.(Lond.), D.Sc.(A.N.U.), C.Psychol., FASSA, FBPsS, FSS (Email, 18 June 2011). Emeritus Professor Robert Gregson is a Visiting Fellow in the Department of Psychology at the Australian National University. He has published six books on various problems in mathematical and statistical psychology and about 140 papers published in refereed scientific journals internationally. Professor Gregson has undergraduate degrees in engineering, psychology and mathematical statistics, and two doctorates, the second, a Doctor of Science, was awarded in recognition of his work. He is a Fellow of the Academy of the Social Sciences in Australia, a Fellow of the British Psychological Society, and a Fellow of the Royal Statistical Society.

204 Professor Gregson said first, the jury would need to consider if one person could have murdered a series of separate children at spaced events particularly with the facts, as we know them in the Folbigg case. In this case, there is inadequate or conflicting information on cause of death and the behaviour of the apparent murderer. Second, the jury could have considered the probability of a genetic disorder or other illness in which a series of children with the same parents die for apparently common reasons. The jury would need to consider this, knowing that the cause of the death of the children could not be determined or the deaths were not correctly diagnosed and investigated. Professor Gregson said that in the commonly used significance tests one always works by comparing a null hypothesis, where nothing but random noise is operating, against an alternative or alternatives, where there is some other causal process operating that is not random. Other methods focus on likelihood ratios, which are made up of probabilities arising from two competing alternative theories. A final probability estimate can be made only after alternatives have been eliminated; in ordinary language, it is a sort of ‘first past the post’ reasoning, and is always conditional on what total information can be brought to bear on the situation and the confidence the statistician has in that information before he or she begins analysis.

205 Interview with Emeritus Professor Robert Gregson (Email, 19 June 2011). Professor Gregson puts this another way: that before one ever tries to compute numerical probabilities, one has to take cognizance of all the potentially relevant
The jury undoubtedly arrived at a conclusion, based on probabilities, that the accused was responsible for the deaths, without any substantial data, except that four children had died and experts could not determine or agree on how the children died.

What the jury most likely determined was not, in fact, a probability, but a likelihood ratio or the likelihood that the accused killed the four children. This might correspond in legal language to a ‘balance of probabilities.’ The legal standard, a ‘balance of probabilities’, is not used in criminal courts to arrive at a conviction; it is ‘beyond reasonable doubt.’

In that regard, Professor Gregson says, what the Folbigg jury could have done was to repeat the mistakes of Meadow, when he asserted the rule of three without supportive pathological evidence.

The improper use of probabilities was given impetus by the equally erroneous use of statistics during the Folbigg court process. Similar statistical evidence has been rejected in other cases such as Clark, where the evidence was part of the prosecution’s first instance case, but was rejected by the UK Court of Appeal.

evidence that is available, and that includes both events and processes running through time.

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207 R v Folbigg [2003] NSWSC 895 [34]. This includes the fact that the jury was being asked to consider the deaths of the children in light of current medical knowledge where the cause of death might not be discovered until some time in the future.
208 Interview with Emeritus Professor Robert Gregson (Email, 19 June 2011).
210 Clark [2003] EWCA Crim 1020 [177]. It is interesting to note that in the committal hearing at R v KJF (Unreported, New South Wales Supreme Court, October 2007) similar statistics and racing analogy were used by a prosecution medical expert. When alerted, these statistics were withdrawn before the trial.
In Clark, Meadow said:

you end up saying the chance of two children dying naturally in the circumstances is very, very long odds indeed one in 73 million. 211

The UK Court of Appeal criticised Meadow’s use of statistics:

[P]utting the evidence of one in 73 million before the jury with its related statistic that it was the equivalent of a single occurrence of two such deaths in the same family once in a century was tantamount to saying that without consideration of the rest of the evidence one could be just about sure that this was a case of murder. 212

The appeal court concluded that the evidence should never have been put before the jury and if there had been a challenge to its admissibility, it should have been excluded. 213

Lawyer Stephen Clark, Sally’s husband, wrote that at his wife’s committal hearing, Meadow cited a figure of one in a million as the likelihood of two sudden infant deaths occurring in the same family. 214 This use of statistics was criticised by the Royal Statistical Society who described it as fallacious argument. 215

211 Clark [2003] EWCA Crim 1020 [99].
212 Ibid [175].
213 Ibid [177].
214 Stephen Clark, Letter to the Editor, (2005) 366 The Lancet 449-450. Stephen Clark also wrote that when Meadow was asked at his misconduct hearing for the source of that figure he stated he did not know but suggested it could have come from a member of the audience at a lecture he had given. Note how Meadow gave differing statistics in Sally Clark’s committal hearings and the trial itself.
The society, noting that statistical evidence can be wrong, wrote that there are very strong reasons for supposing that the (statistical) assumption used in *Clark* was false, the evidence was the ‘Prosecutor’s Fallacy’ and that a serious error had occurred.\(^{216}\) The society stated that the statistics quoted in *Clark* would:

only be valid if SIDS cases arose independently within families, an assumption that would need to be justified empirically. Not only was no such empirical justification provided in the case, but there are very strong a priori reasons for supposing that the assumption will be false.\(^{217}\)

Likewise, in *Anthony*, at first instance, Meadow gave evidence on the incredibly long odds against two children in the same family dying of natural unexplained causes. In the appeal judgment, their Honours stated that Meadow’s use of flawed statistical evidence undermined his ‘reputation and his general authority as a witness’\(^{218}\) and therefore, undermined the essential thrust of the case against Anthony.\(^{219}\)

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\(^{216}\) Ibid. Further, the Royal Statistical Society noted that the UK Court of Appeal has recognised the dangers in using such statistical evidence (*R v Deen* 1993, *R v Doheny/Adams* 1996) in connection with probabilities used for DNA profile evidence, and has put in place clear guidelines for the presentation of such evidence. The dangers extend more widely, and there is a real possibility that without proper guidance, and well-informed presentation, frequency estimates presented in court could be misinterpreted by the jury in ways that are very prejudicial to defendants. The Society noted that *Clark* is one example of a medical expert witness making a serious statistical error, one which may have had a profound effect on the outcome of the case. <Accessed from http://www.rss.org.uk/archive/evidence/index.html>.


\(^{218}\) *Anthony* [2005] EWCA Crim 952 [92].

\(^{219}\) Ibid.
A prosecution expert witness in Folbigg, Professor Berry, when giving evidence for the defence in Clark, criticised Meadow’s use of statistics, stating that it was ‘illegitimate over simplification’.²²⁰

In Buchanan, the probability of multiple occurrences of SIDS was found to be inadmissible, due to the lack of information upon which it was based. Rose J, in Buchanan, stated ‘that the admission of statistical evidence to show the probability of an event occurring has long concerned courts throughout the United States’.²²¹ In State v Sneed 414 P.2d 858 (1966), the Supreme Court of New Mexico stated that ‘mathematical odds are not admissible as evidence to identify a defendant in a criminal proceeding so long as the odds are based on estimates, the validity of which have not been demonstrated’.²²² Wilson supports this view by stating that there is inadequate proof of the statistics of SIDS in a single family and that it should not be used to calculate the likelihood of multiple SIDS within a single family.²²³

At Folbigg’s bail hearing, police prosecutor Daniel Maher presented statistical evidence from USA forensic pathologist Dr Janice Ophoven²²⁴ concerning the likelihood of SIDS being responsible for the deaths of the four children.

²²⁰ R v Clark [2003] EWCA Crim 1020 [103].
²²¹ 69 P.3d 694 (2003), 708.
²²² 414 P.2d 858, 862 (1966); State v Sneed was quoted in People v. Collins 68 Cal. 2d 319 (1968) where Sullivan J said the testimony as to mathematical probability infected the case with fatal error and distorted the jury’s traditional role of determining guilt or innocence according to long-settled rules. He added: that mathematics ... while assisting the trier of fact in the search for truth, must not cast a spell over him…(and) [w]e conclude that on the record before us, defendant should not have had his guilt determined by the odds and that he is entitled to a new trial.
²²³ Wilson v Maryland 370 Md. 191 (2002).
²²⁴ Dr Ophoven has given evidence in many trials concerning the deaths of children and has also given similar statistical evidence in the case of Melbourne woman Carol Matthey.
Dr Ophoven stated:

the chances of cot death being responsible were a trillion to one.
And, what that means is this is the only case that has occurred in
the world. It's just not likely.225

In her Folbigg report, Dr Ophoven observed:

the statistical probability that four children in one sibship could die
from SIDS would be infinitesimally small.226

Wood CJ at CL in Folbigg said any reasoning based only upon an exercise of
statistical probability would be potentially misleading.227 However, he still
rejected Folbigg’s application for separate trials,228 despite the fact that
statistics were being implied or used by some of the prosecution’s experts.
As I have noted previously, this type of statistical evidence proffered by Dr
Ophoven, as well as Meadow, is now considered to be inadmissible.229
Wood CJ at CL also apparently failed to recognise that Meadow’s ‘rule of
three’ hypothesis was being used, by implication, in Folbigg.

THE FOLBIGG DIARIES

The Crown case against Kathleen Folbigg depended heavily upon the
contents of her diaries. The Crown alleged that the diaries contained
virtual admissions of guilt in the murders of Caleb, Patrick and Sarah and

225 As the writer did not have access to court transcripts or reports, this material was
May 2007. Folbigg’s lawyer at the committal hearing, Brian Doyle, has confirmed
the accuracy of this statement. (Email, 14 April 2013).
226 Folbigg Appeal [2003] NSWCCA 1127 revised – 30/05/2003 [9] – this case was the
judgment in the defence appeal to have separate trials. The appeal was dismissed.
227 R v Folbigg [2002] NSWSC 1127 [88] revised - 30/05/2003. This judgment, that
rejected Folbigg’s application for separate trials, was not released until after
Folbigg’s trial. Wood CJ at CL directed that it not be released prior to the matter to
ensure a fair trial.
228 Ibid.
229 R v Sally Clark [2003] EWCA Crim 1020
that Folbigg knew she was at risk of causing the death of Laura.\textsuperscript{230}

According to Barr J, the diaries allegedly showed Folbigg’s:

- constant concerns about isolation, her fear of being unable to bond with her children, her fear of being left alone with them, her fear of the danger of losing her temper with them, her feelings of unworthiness and depression, her desire not to let it happen again, and later on, anxious concerns about having lost her temper with Laura in spite of her desire not to do so.\textsuperscript{231}

Morrissey claims the diaries formed the foundation for the Crown case and without them the prosecution could never have won.\textsuperscript{232} Morrissey believes the prosecution was successful because the diaries were used to paint Kathleen Folbigg as a ‘bad’ mother. She states that the Crown alleged Folbigg was ‘frustrated and angry with her children at times,’\textsuperscript{233} that ‘her husband’s lack of help with the babies was hard to handle,’\textsuperscript{234} and that she was ‘scared that she would fail to mother her children well, and as they died, was scared that the next one would not live.’\textsuperscript{235}

Morrissey observes that the prosecution was able to make these allegations from a ‘little over five A4 pages’\textsuperscript{236} from eight years of diary entries.\textsuperscript{237} It was the diaries that were on trial, but Folbigg went to gaol.\textsuperscript{238}

\textsuperscript{230} R v Folbigg [2005] NSWCCA 23 [44].
\textsuperscript{231} R v Folbigg [2003] NSWSC 895 [54].
\textsuperscript{233} Ibid 5.
\textsuperscript{234} Ibid 5-6.
\textsuperscript{235} Ibid 6.
\textsuperscript{236} R v Folbigg [2005] NSWCCA 23 [131].
\textsuperscript{237} Morrissey, above n 216, 6.
\textsuperscript{238} Ibid.
When considering the Folbigg diaries, it is valuable to consider ‘observer effects’, as it was known that Kathleen Folbigg had written the diaries. There is no indication in any of the Folbigg judgments that the diaries were subject to ‘blind’ testing or forensic analysis. That is: were the diaries analysed by appropriate experts who did not know that they were written by Folbigg?

In ‘observer effects’, people tend to see what confirms their own assumptions, even if this involves a distortion or omission.

Observer effects’ are most potent in circumstances in which ambiguity is the greatest and the judgment of the observer is most likely to succumb to expectations or subjective preferences. People have a strong motivation to see something; the consequence is whatever that something is, there is an increased likelihood of it being ‘seen.’ The more ambiguous and ill-defined the information, the more likely observer effects will occur, resulting in an inaccurate result.

There were many ambiguous and ill-defined diary entries by Folbigg which could have misinterpreted due to observer effects. These include:

**4 February 1997** Still can’t sleep. Seem to be thinking of Patrick & Sarah & Caleb. Makes me generally wonder wether (sic) I am stupid or doing the right thing by having this baby. My guilt of how responsible I feel for them all, haunts me, my fear of it happening again haunts me. My fear of Craig & I surviving if it

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240 Ibid 9. In writing about observer effects, Risinger et al note that in 1903, when ‘N-rays’ appeared, they were said to reflect light more intensely. So long as it was believed N-rays existed, the effects of N-rays were ‘observed’ by many scientists. But once it was found that N-rays did not exist, their effects ceased to be observed.

241 Ibid 16.


did, haunts me as well. I wonder whether having this one, wasn’t just a determination on my behalf to get it right & not be defeated by me total inadequate feelings about myself. What sort of mother am I, have I been – a terrible one, that’s what it boils down too – that’s how I feel & that is what I think I’m trying to conquer with this baby. To prove that there is nothing rong (sic) with me, if other women can do it so can I.

Is that a wrong reason to have a baby. Yes I think so but its too late to realise now. Im sure with the support I’m going to ask for I’ll get through. What scares me most will be when I’m alone with baby. How do I overcome that? Defeat that?

14 January 1997 Not happy with myself lately. Finally starting to physically show that I’m pregnant. Doesn’t do much for the self esteem. Don’t get me wrong. I couldn’t be happier its just Craig’s roving eye will always be of concern to me. I suppose this is a concept known by all women. We are vulnerable (sic) emotionally at this stage. So everything is exaggerated 10 fold.

13 March 1997 …Told Craig about my concerns of being alone in Sydney. But he wasn’t impressed. Its something I’ll just have to get over & deal with myself. Today I got the impression he just didn’t want to be or have me around.244

In United States v. Patrick Leroy Crisp 324 F.3d 261 (‘Leroy’), the technique used in expert evidence was considered to be unreliable due to observer effects.245 The Leroy minority opinion considered that expectation and suggestion – the observer effects – when used elsewhere, resulted in experts changing their opinion from one adverse to the Crown’s case to one

244 R v Folbigg [2003] NSWSC 895 at 55; reproduced with errors.
245 United States v. Patrick Leroy Crisp 324 F.3d 261, [57] (4th Cir. 2003), <http://cases.justia.com/us-court-of-appeals/F3/324/261/577168/>. This was a minority opinion.
supporting the Crown. According to Michael J, the ’dogged certainty of its examiners was insufficient to show that the technique was reliable.’

*Lee Crager v State of Ohio* 557 U.S 930 (2009) (’Crager’) illustrates observer effects in misperceptions that DNA evidence is ’both objective and error-proof.’ The court indicated that experts can make mistakes and report positive results with inconclusive material or report a negative result as a positive. *Crager* stated that an analysis of the evidence must be ’both objective and error-proof’ and observer effects must be taken into account when considering evidence.

It was well known that these were Folbigg’s diaries and this information was used to build the circumstantial case. This could have led readers of the material to ’succeed to the expectation’ that the diaries amounted to ’confessions’ by Folbigg that she killed her children.

**BACTERIAL SEPSIS AS A CAUSE OF DEATH**

There has been considerable evidence that inflammation and infection can contribute to the sudden and unexpected deaths of infants since the original *Folbigg* trial in 2003 and the appeal in 2004.

It is now considered, in SUDI or SIDS, that a significant number of infants have evidence of infectious agents in what are normally sterile sites, compared with infants who died of other causes such as accidents or drowning.

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246 Ibid per Michael J [56].
247 Ibid [57].
249 Ibid 8.
250 Ibid.
Cot death expert Professor Paul Goldwater wrote that studies show that bacteriological findings at autopsy, in cases of SUDI, should be given serious consideration before the cause of death is finalised and that recognised pathogens, especially *Staphylococcus aureus*, found in normally sterile sites, may have a contributory role in SUDI. In a SUDI, there are three distinct markers that can be determined at autopsy. These are petechial haemorrhaging in three organs – the thymus, the surface of the lungs and the surface of the heart. If petechial haemorrhaging is found in all three locations in significant quantities there is a 90% probability that there is a sudden unexplained death in infancy.

Professor Goldwater advises that petechial haemorrhages can occur in the intrathoracic organs in both sudden unexplained death in infancy and suffocation, however extrathoracic petechiae (eyes, face, etc) would make a pathologist suspicious of asphyxia. Also, the number and density of petechiae involving the intrathoracic organs differs between the two conditions. They are usually far more dense/numerous in sudden unexplained death in infancy compared with asphyxia.

As noted earlier, generally the term ‘sudden infant death syndrome’ (SIDS) or sudden unexplained death in infancy’ (SUDI), is usually applied to the sudden and unexpected death of an infant under one year of age, however some medical experts have a different opinion about an upper age limit for SUDI or SIDS. One expert described the case of a six year old child who died suddenly and unexpectedly following a severe cold and antibiotic treatment. The child had *Staphylococcus aureus* in his nose and throat that

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252 Goldwater, above n 234.
253 Interview with Professor Goldwater (Email, 6 July 2011).
254 Ibid.
produced a powerful toxin in a test tube. The toxin was also found in the child’s brain and other tissues. By routine autopsy, this toxin would not have been found. The tests to identify the toxin are expensive and often restricted to research laboratories, and therefore are often not conducted.

These medical matters were accepted by superior courts around the time of the Folbigg hearings from April to August 2003 and the judgment in October 2003. The role of infection was accepted in Sally Clark’s second appeal, with the written judgment being delivered in April 2003 (the Folbigg trial was conducted at about the same time). The Clark second appeal heard from Professor James Morris, an expert in the role of bacteria and bacterial toxins in SIDS.

Professor Morris stated that one of the Clark children, Harry, died from natural causes, and it was difficult to avoid the conclusion that the bacteraemia had contributed to the death.

The court noted Professor Morris’ conclusion that ‘overwhelming staphylococcal infection was the most likely cause of death’, and therefore, the conviction relating to Harry’s death was ‘unsafe’ and needed to be ‘quashed.’ According to Stephen Clark, (Sally Clark’s husband), at the second appeal, twelve leading British and international medical experts

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257 In the Sally Clark second appeal, the UK Appeal Court delivered a verbal judgment on 29 January 2003, with the full written judgment delivered on 11 April 2003. See Clark [2003] EWCA Crim 1020.

258 Clark [2003] EWCA Crim 1020 [114].

259 Professor Morris was a consultant pathologist with Morecambe Bay Hospitals NHS Trust, who (at the time) had published over 100 research articles. Many of these were concerned with the role of bacteria and bacterial toxins in sudden infant deaths.

260 The role of bacterial infections in SIDS has been reported in well respected, refereed scientific and medical journals. See, eg, Blackwell et al., 2004; Goldwater, 2004; Blackwell et al., 2005.

261 Clark [2003] EWCA Crim 1020 [114].

262 Ibid [121].

263 Ibid [122].

264 Ibid [134].
provided material, with varying degrees of certainty, to the effect that following the discovery of the microbiology report, (previously not disclosed), his son Harry had died from an overwhelming bacterial septicaemia.

A study showed that staphylococcal toxins associated with toxic shock syndrome were identified in over half of infants who died suddenly. The toxins cannot be produced post mortem. They are only produced at between 37-40°C. These temperatures are not reached when a body has cooled after death or has been refrigerated. The toxins have been seen in a child who died at about six years of age and had a medical history with a respiratory infection.

Professor Goldwater says that there is a strong correlation between the types of bacteria carried within a family, such as when two siblings die suddenly. There is now a strong view that if an infant dies unexpectedly it is more likely to be carrying pathogenic bacteria than a healthy baby. There is increasing evidence that there could be a genetic predisposition to the inflammatory responses to infection.

In another paper, the authors concluded that despite the lack of associations, there remains the likelihood that genetic factors influence the interactions between infectious agents and the host, so these factors may be part of the multi-factorial aspect of sudden unexpected death in infancy.

267 Interview with Professor Goldwater, (Email, 6 July 2010).
268 Pathogenic bacteria are bacteria capable of producing disease.
269 Amanda Highet et al., ‘The Frequency of Molecular Detection of Virulence Genes Encoding Cytolysin A, High-pathogenicity Island and Cytolethal Distending Toxin of Escherichia coli in Cases of Sudden Infant Death Syndrome Does Not Differ from
The Folbigg sentencing judgment notes the post mortem on Sarah Folbigg. It provides an account of whether a diagnosis of SUDI or suffocation could be made. The judgment notes that the formal post mortem on Sarah Folbigg was death by unknown natural causes. But the post mortem states that small abrasions were located near Sarah Folbigg’s mouth. It also states that Sarah’s lungs showed petechial haemorrhage, minor congestion and oedema.

It was claimed that the ‘phenomena [are] consistent with death by asphyxiation caused by the application of mild force.’ Professor Goldwater states that such ‘phenomena’ are also consistent with a sudden unexplained natural death.

In the Folbigg case, the issue of whether bacteriological inflammation in the heart of one of the children, Laura, played a significant role in her death, was considered to some extent. Prosecution expert Dr Cala did not that in other Infant Deaths and Healthy Infants (2009) 58 Journal of Medical Microbiology 285–289.

271 Ibid.
272 Ibid.
273 Ibid.
274 Interview with Professor Goldwater, (Email, 6 July 2011). Professor Goldwater adds that if all three intrathoracic organ sites have petechial haemorrhages with no evidence of extra-thoracic sites anywhere outside the chest cavity, and the history, death scene and remainder of the autopsy is compatible with a SIDS diagnosis (i.e. no obvious cause found), then the findings are predictive of a diagnosis of SIDS. The finding of petechiae in all three intrathoracic sites in cases of asphyxia and other deaths is quite rare. The number of petechiae in a given area on an organ differs between SIDS and asphyxial deaths. Petechiae tend to be much more numerous in cases of SIDS and quite sparse in asphyxia. Other autopsy evidence that should be taken into account, but did not seem to be, is the organ weight findings of heavy brain, heavy thymus, light heart and light kidneys. Aspects of this are discussed in detail in Professor Goldwater’s recent publication in BioMedCentral Medicine 9(64) 2011 <http://www.biomedcentral.com/1741-7015/9/64> 275 Folbigg Appeal [2005] NSWCCA 23 [127].
believe the inflammation played a role in Laura’s death, stating that the amount of inflammation was ‘not particularly heavy.’

That view has been criticised by Professor Blackwell, who says it ignored evidence that implicates infection and inflammation in sudden infant deaths and that this view is not a vague theory by microbiologists or ‘junk science.’

Professor Blackwell noted that there was evidence of infections in two of the Folbigg children: Sarah and Laura.

The autopsy report concerning Sarah Folbigg showed petechial haemorrhage in lungs, pericardium and thymus. Professor Blackwell said these findings in Sarah were consistent with SUDI. Sarah also had copious numbers of coliforms in the lungs, along with alpha haemolytic streptococci and some *Staphylococcus aureus*.

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276 Ibid.

277 Professor Blackwell was influential in the acquittal of Sally Clark when she found that microbiology reports were not presented to Clark’s trial in 1999. She noticed that microbiology reports were missing from Harry Clark’s file. The file was eventually recovered and, as noted, Clark’s conviction relating to Harry was quashed. Subsequently Clark was acquitted of the murder of her two sons. Professor Blackwell was also involved as an expert witness, for the defence, in the NSW case of *R v KJF* (Unreported, New South Wales Supreme Court, October 2007), where the mother was charged with the attempted murder of her child. The prosecution attempt to use similar fact evidence involving the deaths of the mother’s two other children was dismissed by James J. The case was no billed and did not proceed.

278 Interview with Professor Blackwell, (Email, 8 August, 2011).

279 The author provided Professor Blackwell with the autopsy reports of the four Folbigg children following their release to the author by the NSW Supreme Court. Professor Blackwell did not comment on the autopsy reports for Caleb and Patrick Folbigg due to the conduct of the reports.

280 This was described as ‘some internal petechiae on the pleura, epicardium and thymus’ in *R v Folbigg* [2003] NSWCCA 17 revised - 30/05/2003 [7].

281 Professor Blackwell added that Sarah had some signs of inflammation in the lungs, including polymorphonuclear (‘PMN’) cells, which are found in early stages of infection. Additionally, Sarah had some aspiration of gastric contents that could be an artefact or possibly vomiting associated with infection or toxin production.
This view that Sarah’s death is consistent with a SUDI rather than suffocation is supported by the peer reviewed publications of Professors Goldwater et al and Weber et al on the role of infection in SUDI.

Professor Blackwell stated that Laura had increased lymphocytes in the lungs and plentiful numbers of coliforms in the lungs and the spleen, profuse numbers of alpha haemolytic streptococci and moderate numbers of Staphylococcus aureus. The increased numbers of lymphocytes in the lungs and spleen indicate that Laura had mounted an inflammatory response.

Professor Blackwell considers that infectious illness cannot be ignored as a potential cause of death of either Sarah or Laura.

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284 Professor Blackwell added that Laura had profuse numbers of alpha haemolytic streptococci and moderate numbers of Staphylococcus aureus, and that these bacteriological findings are not post mortem contamination and must have occurred before her death.

285 If microbiology tests for bacterial infection or toxins were available at the time of the Folbigg case, then a more precise determination may have been made to determine if any of the deaths of Kathleen Folbigg’s children were related to bacterial infection. I understand that when NSW police were investigating the Folbigg case, prior to the trial, that an expert microbiologist offered to screen post mortem samples from the Folbigg children for bacterial toxins. This apparently was not taken up. If the toxin was found, it could have been evidence that a form of toxic shock may have taken place in one or more of the Folbigg children, showing that a child’s death could have been natural. If the microbiological material was available, was there a real chance of Kathleen Folbigg’s acquittal as in the Clark case? In Sally Clark’s second appeal (Clark [2003] EWCA Crim 1020 [180]), the ‘mislaid’ microbiology report was central to her acquittal. In the original Clark case, the evidence that one of Sally’s sons, Harry, had Staphylococcus aureus in his body, was known at the autopsy, but its relevance was dismissed by the pathologist and not brought before the first instance court.
At this point it is worth repeating that in Sally Clark’s second appeal, a finding of *staphylococcal* infection resulted in the quashing of her conviction in relation to the death of her son, Harry.\(^{286}\)

This followed the evidence of Professor Jim Morris who concluded that overwhelming staphylococcal infection was the most likely cause of [Harry’s] death.\(^{287}\)

Their Honours noted that if this evidence had been before the jury they might have reached a different verdict on the count in respect of Harry. Their Honours concluded the verdict relating to Harry was unsafe and needed to be quashed.\(^{288}\) As a consequence, ‘no safe conclusion could be reached that [the other son] Christopher was killed unnaturally’.\(^{289}\)

**PATRICK FOLBIGG – AUTOPSY FAILURES?**

The post mortem report for Patrick Folbigg did not provide any evidence to support a finding of an unnatural death according to Professor Goldwater.\(^{290}\) He said the autopsy findings for Patrick, who died aged eight months, were compatible with SUDI.

It was curious, as Professor Goldwater points out, that there was no attempt made to interpret the brain findings in Patrick’s post mortem. He refers to the key findings that Patrick had a larger than normal brain for his age,\(^{291}\) including abnormal brain grooves along with cystic degeneration.\(^{292}\) Professor Goldwater says this is compatible with pathology often found in cerebral palsy: therefore a diagnosis of cerebral palsy could have been put

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\(^{286}\) *R v Sally Clark* [2003] EWCA Crim 1020, [121]

\(^{287}\) Ibid [121]

\(^{288}\) Ibid [134]

\(^{289}\) Ibid [135]

\(^{290}\) Interview with Professor Goldwater (Email, 6 July 2011).

\(^{291}\) The weight of the brain was 750 gram compared to a normal weight for that age of 714 grams.

\(^{292}\) Professor Goldwater described this as gross changes including abnormal sulci and cystic degeneration in the occipital cortex.
forward. Such a diagnosis for Patrick was not mentioned in any of the Folbigg judgments.

MASS MEDIA PREJUDICE

The public and the mass media knew that the Folbigg case was based on Meadow’s hypotheses. This was established by comments from Folbigg’s foster sister Lea Brown outside the Supreme Court. When referring to the case, she quoted the ‘rule of three.’ The same media article also quotes the (then) chief executive of Sydney’s Westmead Hospital, Dr Kim Oates, who used similar statistics to Meadow, relating to the chance of multiple cases of SIDS. Meadow’s statistics were discredited in the Clark second appeal judgment.

Adele Horin, a writer for the Sydney Morning Herald, linked the Folbigg case to Meadow’s hypotheses, by stating that the ‘seminal research by Roy Meadow dashed the myth that sudden infant death syndrome could be genetic.’

She also quoted Meadow’s hypotheses and stated that Meadow urged for the term SIDS to be abandoned because it was allowing ‘most cases’ of child murder to go undetected. The Folbigg case and Meadow’s hypotheses were also linked in an item published in The Age newspaper.

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293 Professor Goldwater is a principal investigator, South Australian Cerebral Palsy Research Group.
294 These comments relate to the daily mass media not academic media.
295 As quoted in the Sunday Telegraph (25 May 2003). Dr Oates was a member of the child abuse group ‘Helfer Society’, <http://helfersociety.org>. Sir Roy Meadow was an honorary life member of society.
297 Ibid. Horin’s article, referencing research by Meadow, is incorrect and misleading. Horin failed to produce such research when requested by the author on 12 June 2011. Meadow has not produced any scientific or pathological research to support his cot death theory assertions. See also Ray Hill, ‘Multiple Infant Deaths – Coincidence or Beyond Coincidence?’ (2004) 18 Paediatric and Perinatal
AUTHOR’S COMMENT

The community has enormous antipathy towards a mother who is accused of killing her child. One only needs to consider the case of Lindy Chamberlain, who was accused of killing her child, Azaria, at Uluru in August 1980, to see how misogyny played a role in the prosecution. There is a worrying recent history of blaming a mother when her child dies in an unexplained manner.

In the writer’s view, it is difficult to determine why Folbigg was convicted, or even charged, as the case was based entirely on beliefs, surmise and conjecture. The allegation that the deaths of her children were un-natural is not supported by the evidence. It is speculation, based on inappropriate and flawed probabilities, which resulted in the conviction.

The Crown case essentially argued that there was no known natural cause of death in any of the successive infant deaths, so therefore they must be un-natural, caused by suffocation by a person with primary care of the children. That person, the prosecution stated, was Kathleen Folbigg. This conclusion differs from the judicial reasoning in the cases of Cannings, Ward, Anthony and others.

The common law test, ‘no reasonable view consistent with innocence’, that the prosecution apparently applied in Folbigg, should now be considered in the light of the views of the NSW Court of Criminal Appeal. It is now thought that there is a need for a court to recognise, when it considers tendency and coincidence evidence, whether there are any alternative inferences that are inconsistent with guilt arising from the

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Epidemiology 320, 326, where Hill observed that Meadow has not produced any scientific or pathological research to support his cot death theory assertions, <http://www.cse.salford.ac.uk/staff/RHill/ppe_5601.pdf>.


Crown’s evidence. The court also needs to consider if these alternatives are a possibility and whether they substantially change the Crown’s case which aims to establish guilt.

There is strong evidence that bacterial infection/inflammation was the likely cause of death of two of Folbigg’s children, Sarah and Laura, and that Patrick suffered from cerebral palsy. It could be argued that the conviction was unsafe.

The prosecution relied on the erroneous probability that the deaths of the four children could not be natural, without giving the jury adequate information about the determination of probability considerations. The use of the probability calculations has been shown to be based on inexpert use of statistics, as found in the Clark case. There must be doubts that the jury could deliver a correct determination without the fundamentals of statistical reasoning; furthermore, if the balance of probabilities was used, it is not the criminal standard.

In Folbigg, the community, the police and the judicial system were faced with the fact that four children had died. There was no obvious accident or illness and the medical profession could not point to any indisputable reason why the children died. The false reasoning seems to be, if there is no obvious medical explanation for the deaths of the children, then someone must be responsible for those deaths and must be held accountable.

The prosecution obtained expert witnesses to support their case, based primarily on the hypotheses of Meadow. Questions of predisposition of positions among the experts need to be considered. Were their qualifications relevant, as in the case of Professor Herdson? Were they

300 DSJ v R; NS v R [2012] NSWCCA 9 [130].
301 Ibid [132].
independent, as in the case of Professor Ophoven? Did the experts and their hypotheses assume a high eminence and stature that was not questioned, like Professor Herdson? In cases of infant deaths, such status has resulted in a failure of the courts to exclude irrelevant evidence that is not probative. Meadow was a person of high reputation and stature. His irrelevant evidence was not initially challenged and was allowed to stand, influencing other expert witnesses in many court cases such as Folbigg. Expert evidence must undergo the utmost scrutiny by courts or be ruled inadmissible.

Folbigg is a case in which the medical or scientific experts could not ascertain the cause of death from normal enquiry, due to the limitations of general medical knowledge at a particular time or the limited specific knowledge of the medical witnesses.

There is a requirement that infant deaths such as these be thoroughly investigated, ensuring that a pathologist’s postmortem evidence is complete. If a pathologist’s postmortem evidence is incomplete, as in the case of Sally Clark, there can be a miscarriage of justice. If there is a failure to gather scientific evidence because it is too hard or costly to obtain, or when the evidence might not advance the police case, then justice is at risk. Unproven hypotheses should not replace precise forensic evidence.

While it is acknowledged that mothers may murder their children, a mother should not be convicted by labels such MSBP and the ‘rule of three’, that prioritise speculation and belief in the stead of precise forensic evidence and reliable evidence.

Kathleen Folbigg had enormous difficulty in overcoming the prejudice created by MSBP and the ‘rule of three’, even if they were only used by inference. It is more difficult to refute implied prejudice than stated prejudice.
The former head of the UK’s Criminal Cases Review Commission, Graham Zellick, has stated that there is a real risk in cases in which the Crown relies on unproven theories and where the evidence has been superseded.  

The writer can only agree with the final comment of their Honours in *Cannings*:

> [i]n a criminal case, it is simply not enough to be able to establish even a high probability of guilt. Unless we are sure of guilt the dreadful possibility always remains that a mother, already brutally scarred by the unexplained death or deaths of her babies, may find herself in prison for life for killing them when she should not be there at all. In our community, and in any civilised community, that is abhorrent.

And, in *Antoun v The Queen* [2006] HCA 2, Kirby J said:

> [t]his court must accept its obligation to ensure against wrongs which can be proved and then corrected. At stake is something greater even than the interests of the parties to the case. At stake is the integrity of our system of law and justice.

There are many failings in the *Folbigg* case.

**Postscript:**

On Wednesday, 16 May 2007, Kathleen Folbigg was given leave to reopen her appeal against her conviction based on jury irregularity. This hearing took place on 27 November 2007 in the New South Wales Court of Appeal. The appeal was rejected. Kathleen Folbigg is still in gaol.

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303 *Cannings* [2004] EWCA Crim 1 [179].
304 [2006] HCA 2 [47].