

Neutral Citation Number: [2010] EWCA Crim 1085

Case No: 2008/4666/B3

IN THE COURT OF APPEAL
CRIMINAL DIVISION

Royal Courts of Justice
Strand
London, WC2A 2LL

Date: Thursday, 4 March 2010

B e f o r e:

LORD JUSTICE THOMAS
MR JUSTICE COULSON

SIR GEOFFREY GRIGSON

R E G I N A

v

PETER WELLER

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Mr G Cooke appeared on behalf of the **Appellant**
Mr K Millett appeared on behalf of the **Crown**

J U D G M E N T

1. LORD JUSTICE THOMAS: On 30th November 2006 the appellant was convicted of sexual assault by penetration. He was subsequently sentenced to three years' imprisonment. The appellant applied for leave to appeal out of time. After several preliminary hearings before this court it was eventually argued that fresh evidence was available on the basis of an expert report. Leave was given by the court on the usual basis.

The issue

2. What is submitted to be fresh evidence relates to DNA evidence given at the trial which

occurred at Kingston Crown Court before Her Honour Judge Barnes. At the time the trial took place the Criminal Procedure Rules dealing with expert evidence had not been made, but they have now been made and what happened in this case underlines, (1) the fundamental importance of the strict adherence to Part 33 of the Rules, (2) the necessity in every DNA case for there to be detailed consideration by the parties and the judge of that evidence and (3) there be a refinement of the issues. As this court made clear in Reed and Reed [2009] EWCA Crim. 2698, such a review was essential in each case. We say that because what is submitted to be fresh evidence in this case relates to the issue about the possibilities of transfer of DNA material and the ability of experts to evaluate it. That was also an issue that was considered in Reed and Reed at paragraphs 59 to 61 and 115 to 134. But, as we shall explain in a moment, the only issue was the difference between the experts at the trial over the evaluation of the possibility of transfer. Had that been isolated at trial as the issue, it would have meant that the DNA evidence in the case could have been dealt with much more expeditiously at trial.

3. However, what is said on this appeal is that fresh evidence shows that this was a case where the evidence was not sufficiently reliable for experts to have been able to express an evaluation of the possibilities. The legal principles are again set out in Reed and Reed at paragraphs 111 to 113. This case has also raised another important issue in relation to DNA evidence, namely the way in which evidence relating to scientific research and experience that is not in published papers should be dealt with. Before turning to deal with that question, it is necessary briefly to set out the facts of this case.

The factual evidence

4. The complainant, Emma, was 16. In March 2006 she went to a party with a friend at a house in Carshalton. She went, as one would expect with a girl of that age, to see friends of her own age. At the house there lived the appellant who was much older and his partner. Emma knew the appellant and she gave evidence that he had told her that he was attracted to her. He always complimented her on her beauty and would make other remarks to her which showed his interest in her. She described him as a "charmer".
5. During the evening in question Emma drank very steadily. At 10 pm the friend with whom she had come went home. Emma did not do so. She was violently vomiting in the bathroom at the time, having drunk clearly far too much. Later because she was vomiting and her mother could not be contacted, it was agreed she should stay the night.
6. The appellant took her to her bedroom and helped her. Emma's evidence was that he returned several times and on one occasion with a bowl in case she vomited again. She said she got into bed as she felt dizzy and unwell. She then gave evidence that the appellant began to stroke her body, her breasts and her legs and had then inserted his finger into her vagina in a way that she found very painful. Her evidence was that she was too shocked to say or do anything, but later got herself together and tried to put her jeans on. She fell and the noise brought the appellant to her bedroom. She said she wanted to go downstairs and did so. She said she did not then want to tell anyone what

had happened as she did not want to create a scene. Eventually she left but did not go home as it was so late and it would cause such trouble at home. She met a friend, told him what had happened and he took her to the police station where she was seen at about 4 o'clock in the morning. She told the police that she had been indecently assaulted.

7. The appellant's account of events was that he confirmed what she had said about him looking after her when she became sick. He said he had to pull the hair out of her eyes to stop her vomiting on it. He had helped her into bed. When in bed he had checked her several times and on one occasion had had to put her into the recovery position. He had indeed had to pick up her clothes, including her knickers which she had left on the floor. He strongly denied the account of the sexual assault that she had given.

The expert evidence

8. Apart from Emma's evidence and that of the police officers, there was expert evidence. There was a doctor who had examined Emma. Her evidence was that Emma had injuries to her fourchette and abrasions and it was red; the injuries were not accidental and had not been caused by infection but because something blunt had penetrated her vagina. Fingers were the likely cause of those injuries.
9. There was also a toxicology expert but that was of very little relevance.
10. There was also DNA evidence and it is necessary to describe that in more detail as the appeal relates solely to that evidence as we have set out.

11. The DNA profiles

12. The way in which the DNA was obtained is not in dispute. First of all the appellant's right hand and left hand fingernails were clipped. Unfortunately the way in which the samples were taken did not identify the surfaces of the nails. That should have been done, because it is important to know which is the underside, as it is on the underside that it is much more common to find DNA residue. The nails were swabbed and on the right hand there was only found a DNA profile for the appellant.
13. On the left hand a full mixed profile was obtained. The major profile was that of the appellant but there was a minor full profile of another person; there is no dispute, though this was not gone into at trial, that the DNA in the minor profile was that of Emma. The match probability was over one billion to one. In the circumstances it cannot be disputed that it was the DNA of Emma that had been found on his left hand. Furthermore, it was a full profile. This was obtained by the SGM Plus method of analysis, one nanogram being used on the first run and two nanograms being used on the second run. Although this was low template DNA, it was a full profile obtained by a recognised method of analysis with adequate quantities.
14. It therefore was common ground at the trial and on this appeal that the DNA had come

from Emma.

Possibilities of transfer

15. Furthermore, it was common ground, both at the trial and on this appeal, that there were a number of possibilities as to how the DNA had been transferred - four possibilities of primary transfer and one of secondary transfer. The four possibilities of primary transfer were:
 1. From the appellant's contact with the hair of Emma whilst moving her hair out of the way when she was vomiting or putting her to bed.
 2. Touching Emma when putting her into bed or holding her in the recovery position.
 3. Contact with vomit.
 4. The insertion of fingers into her vagina.

The only possibility of secondary transfer, and that is the fifth possibility in the case, was by contact with her clothes, particularly her knickers which the appellant said he had picked up.

The identification of agreed and disputed issues

16. The lesson from this case is that, if the procedure in Part 33 of the Criminal Procedure Rules had been followed, all of that would have been isolated as common ground and should have been put before the jury as an agreed statement of expert evidence.
17. The issue which was identified before the jury in the trial, which is a slightly different issue to that which is before us here on the appeal, related to the evaluation of the possibilities of transfer. At the trial the sole issue was, as it was not in issue that evaluation was possible, the strength of the evaluation. On this appeal the issue was whether there was sufficient scientific certainty and sufficient scientific reliability for an expert to be able to express an opinion on the evaluation of the possibilities.
18. It is, we think, becoming increasingly common for there to be little dispute in the majority of cases as to whether the DNA is the DNA of a particular person, although that may be in issue where quantities are very small or the amount obtained has been difficult in analysis or there are mixed profiles. But where, as in this case, that is clear, it is essential that this issue is put before the jury as admitted and agreed expert evidence. It makes the task of the jury so much easier if they do not have to plough through and listen to evidence that is simply not in dispute. It enables the jury to perform its essential function of assessing, where it is agreed that there is a sufficient scientific basis for expert evidence to be given, what is in fact in issue without being troubled by matters that are not.

The evidence of evaluation of the possibilities

19. At the trial the expert called by the Crown, Miss Jones, said that she considered in evaluating the possibilities that she believed that the most likely source of the DNA was the vagina. She went on to say that she considered that it provided strong scientific support for the view that the source of the DNA was contact with the vagina.
20. The expert called by the defence, Mr Webster, gave the following evidence to the jury:

"Well, I should say that I do think that the allegation that, you know, the fingers of the left hand were inserted in the vagina is a ready explanation for the evidence we observe. I mean that would put DNA on the fingers. You're inserting the fingers in to an area where there's a lot of DNA and inevitably there will be contact with the fingernails. So I think that is a more likely scenario. The evidence is more likely to be seen given that scenario than other scenarios. When we come to consider the other scenarios, well I have in mind what strong means in terms of the scale, and I think that's setting it too high."

Thus, before the jury the simple issue was, was the Crown right in saying it was strong or was the expert who gave evidence on the part of the defence right in saying that was putting it too high? Both were convinced it was possible to give an evaluative opinion and as can be seen from what we have set out, the evaluative opinion differed only in the emphasis. It was common ground that the likelihood was that it came from the vagina.

The contention on the appeal: evaluation was not possible

21. On appeal, however, what has been sought to be argued and has been put forward before this court with great clarity by Mr Cooke is that fresh evidence would show that there is no reliable scientific basis on which a scientist could have evaluated the possibilities. In essence, therefore, it is submitted that, as there was not a sufficiently reliable scientific basis, the evidence as to the evaluation of the possibility should not have been admitted.
22. It is, we think, important to emphasise that it is not disputed that the expert called on behalf of the Crown, Miss Jones, who had worked for the Forensic Science Service and had been experienced in DNA for two years, was sufficiently qualified to give that evidence. Nor could it be disputed that the defence expert, Mr Webster, was sufficiently qualified. Indeed his qualifications were most impressive. He had a first class degree, he had worked in forensic science since 1979 and therefore by the time of the trial had a quarter of a century's experience. In 1991 he had left the Forensic Science Service and practised between then and the time of the trial on his own account. There can be no doubt about his expertise or extensive experience.
23. Thus, if we may say so, Mr Cooke did not, very properly, make any attack on the

expertise of the two scientists who gave evidence at trial. His submission was that if a proper review had been undertaken by either of them of the available scholarship and available papers and a proper analysis of the scientific evidence had been made, it would have shown that the state of scientific knowledge was such that on analysis on the facts of the case neither of those two experts could properly have given the evaluative evidence that they gave. It was said, quite simply, that however experienced someone was, the state of the science was not such that an evaluative judgment could be expressed.

24. **The respective backgrounds of Dr Bader and Dr Clayton**

25. That submission was based upon the reports of Dr Bader. We decided that we would hear the evidence *de bene esse* as it seemed to us that, if there was in truth a concern in relation to issues of the ability to evaluate in circumstances of this kind, the court ought in the interests of justice to consider that.

26. The evidence of Dr Bader was given to us in a manner that reflected a witness who was a scholar. He was a part-time lecturer at the University of Edinburgh. He had a first class degree from the University of Oxford and was also a Doctor of Philosophy of that University. He had done an extensive amount of post-doctorate research work at leading universities in the United States. He had published a large number of papers in areas of cell biology and molecular biology. He was a consultant to the Forensic Institute, an institution which we described at paragraph 105 of Reed and Reed. However, in Dr Bader's case we have no doubt about his scholarship, his academic ability or his integrity. He has done his best to assist the court. However, we must emphasise he is a scholar, not a man of practical experience in DNA.

27. In contrast, Dr Clayton, who gave evidence from the Forensic Science Service, had a wealth of experience and knowledge on the subject of DNA and practical experience of how this science is being applied day in day out. He had been with the Forensic Science Service since 1990 and held at the time of the appeal a senior position in the Forensic Science Service in relation to its work on DNA. In contrast to Dr Bader he was a man who had the benefit of an enormous amount of knowledge of a scientific nature derived, not from published papers, but from day-to-day work carried out which showed the scientific position that had been reached in practical work.

28. **The common ground on the appeal as to transfer**

29. It was indeed apparent that there was a great deal of common ground between Dr Bader and Dr Clayton in relation to the possibilities of transfer.

30. (i) Vomit. It was common ground that using the standard SGM Plus method of analysis, vomit was a low source of DNA. It was extremely difficult, for reasons Dr Clayton explained to us, using this method of analysis (which was used in this case as we have explained) to get DNA from vomit. However, recent advances had shown there was a possibility of getting DNA from vomit by another process, but this new process

cannot be relevant to the evaluation of the possibilities in this case, as it is highly unlikely what was shown as the DNA on the runs obtained by using the SGM Plus analysis was from vomit.

31. (ii) It was very difficult to get a transfer of DNA by touching or stroking or moving hair out of the way. It might be easier to get DNA from hair roots, but that was not a mechanism in the present case.
32. (iii) DNA could be obtained by touching a person, but the amount and rate of transfer depended on the circumstances.
33. (iv) In contrast to the difficulties of transfer in those three possibilities of primary transfer, it was common ground that the fourth possibility, the vagina, was a likely source for transfer, as the vagina was rich in DNA. As had been common ground at the trial, if fingers were inserted in the vagina, then there was a strong likelihood that DNA would be transferred.
34. (v) As to the fifth possibility, namely that of secondary transfer from touching the clothing, that possibility of transfer depended upon the circumstances.

The common ground as to the correct approach

35. In addition to that common ground as to the possibilities, there was also a measure of common ground as to the proper approach. It is inevitable that in most criminal cases there will be no forensic laboratory study that replicates the circumstances in a particular case. In a laboratory, the scientist is able to conduct an experiment as to touch or contact and measure precisely what happens at the time of contact, how that contact occurred, how much DNA was transferred and how DNA persists thereafter. In an actual case that is quite impossible. Take, for example, one of the scientific studies to which we were referred, namely that where an experiment was undertaken to measure the amount of DNA transferred by inserting fingers into the vagina. It was possible in those circumstances to measure the amount of DNA at the initial point of contact and at set times thereafter and to monitor the conduct of those concerned in the meantime. Therefore with the use of scientific experiments one can obtain fairly accurate results. However, in actual cases there is rarely the opportunity to monitor or measure matters as they happen. There are a number of possibilities.
36. What therefore was common ground between the experts was that one could use the scientific research as a basis for considering whether in the circumstances of the particular case inferences could be drawn as to the methods of transfer.
37. Where there was not common ground, however, was the weight that could be attached to matters that were not published and we shall return to that.
38. **The relevant scientific studies**

39. We had the benefit of examining during the course of the evidence a number of scientific papers, including the paper by Cooke and Dixon: *The prevalence of mixed DNA profiles in samples taken from individuals in the general population*, (2007) Forensic Science International: Genetics, Volume 1, Issue 1, pages 62 to 68: Malsom and Flanagan et al, *The prevalence of mixed DNA profiles in fingernail samples taken from couples who cohabit using autosomal and Y-STRs*, (2009) Forensic Science International: Genetics, Volume 3, Issue 2, pages 57 to 62 and a paper that has not yet been published, produced by two scientists in the Forensic Science Service, Flanagan and McAlister: *The transfer and persistence of DNA under the fingernails after digital penetration*.
40. In relation to the last paper there was a significant disagreement between Dr Clayton and Dr Bader. Dr Bader said in his evidence to us that if one carefully examined that paper one would find that the experiments had shown that the major profile after a given interval was that of the female because the experiments clearly show that as being the case in 75 per cent of the cases after 12 hours. It was therefore suggested that that paper showed that if the appellant had been in contact with Emma's vagina in this case, one would have expected there to be a dominant female profile (namely that of Emma) and not a dominant male profile (namely that of the appellant). It was therefore said by Dr Bader that that paper showed that it was not safe to draw an inference in the circumstances of this case.
41. **Unpublished papers and evidence of scientific practice**
42. On the other hand, we had Dr Clayton's evidence of his experience as a scientist in the day-to-day work that he conducts as a scientist looking at DNA. His evidence was that he had built up himself and in discussions through colleagues details about the ease or difficulty in which DNA was transferred in the huge variety of circumstances that one sees in day-to-day life. For example, he referred to the many attempts he had made to obtain DNA from hair. None of this was published, but his conclusions were not in doubt. The problem, it seems to us, that Dr Bader faced was that he simply did not have that practical day-to-day experience of work that necessarily is unpublished, but from which it is possible to draw scientific conclusions.
43. We return to the paper upon which he primarily relied. It seems to us on analysis of that paper that it showed that, if under controlled circumstances a full DNA profile was obtained and which was at the moment of its obtaining the major profile, then that would persist in the vast majority of cases for some time. The paper was designed to show persistence not the amount transferred. As it seems to us clear, what we do not know and which would never be known in the facts of an actual criminal case is the amount of DNA that would have been transferred on contact. What the paper showed was that there was persistence of DNA transferred by contact from the vagina after a significant period of time. It seems to us, therefore, that that paper, far from undermining the position of both experts at trial that it was possible to give an evaluation, confirms their

views because it shows (a) that a significant amount of DNA will be transferred from the vagina on contact and (b) the DNA transferred will be present some time later.

44. Furthermore Dr Clayton was able to put forward on the basis of his experience a sufficiently reliable scientific basis for a forensic science officer to give evidence of the evaluation of the possibilities of transfer in the circumstances of this case. Although inevitably more careful sampling by identifying which was the top and which was the underside of the finger nail clippings would have identified the surface, nonetheless we do not think that makes any difference to the overall conclusion.
45. Looking, therefore, as we have enumerated already, at the relative ease or difficulty with which DNA is transferred from the various potential sources of DNA and the richness of the source of DNA in the vagina, it was entirely right on the basis of the scientific evidence available at the time of the trial and confirmed by subsequent studies that the possibilities could have been evaluated. It is not merely a question of experience. It also seems to us that the evidence given by Dr Clayton was logically compelling because an examination by logic of the various possibilities would show that it was realistic to make an evaluation in this case.
46. **Reliance upon unpublished work and field experience**
47. The question therefore arises as to whether we are entitled to take into account an unpublished paper and unpublished field experience that Dr Clayton has relied upon. It seems to us there are two clear answers to that question.
48. First, is the matter of the evidence before us in relation to the hair and vomit. Dr Bader accepted the evidence given in relation to the ease and difficulty of transfer without there being any scientific paper. That demonstrates, if demonstration was needed, that it is unrealistic to examine a field of science of this kind only by reference to published sources. A court in determining whether there is a sufficiently reliable scientific basis for expert evidence to be given and a jury in evaluating evidence will be entitled to take into account the experience of experts and, if their experience is challenged, to test that. If the evidence upon which they rely for the basis of their experience is challenged, then that can be evaluated by cross-examination.
49. Secondly, each of our long experience of dealing with expert witnesses in different fields is that experts often rely of necessity on unpublished papers and on their own experience and experiments. As long ago as 1982 in the case of R v Abadom 76 Cr.App.R 48, the question arose as to whether an expert could rely on the work of others. Kerr LJ, who had enormous experience of expert evidence in many areas of the law, gave the judgment of the court which included the following passage at page 52:

"Once the primary facts on which their opinion is based have been proved by admissible evidence, they are entitled to draw on the work of others as part of the process of arriving at their conclusion. However, where they

have done so, they should refer to this material in their evidence so that the cogency and probative value of their conclusion can be tested and evaluated by reference to it."

What is said by Mr Cooke in this case is that the experience and evidence upon which Dr Clayton relies is not publicly available and was not available to Dr Bader. But the real problem was that Dr Bader was a scholar not a person who had experience of this form of science.

It is clear that there are many competitor providers of expert evidence in DNA science and many individuals of great experience who can draw on their own practical experience. Dr Bader was at the distinct disadvantage that he had none. He therefore could not bring to bear any experience of his own which could challenge the logical cogency and clarity of the evidence given by Dr Clayton.

It therefore seems to us that what this appeal demonstrates is that if one tries to question science purely by reference to published papers and without the practical day-to-day experience upon which others have reached a judgment, that attack is likely to fail, as it did in this case.

It also demonstrates that the appellant in this case had a very fair trial. Mr Webster was obviously an expert of great experience. He drew upon that experience in, if we may say so, an entirely proper way. He accepted what seems to us to have been the logically cogent evidence from the agreed facts before us that it was obviously possible to evaluate the possibilities of transfer in this case. He therefore adopted the position of a responsible expert by not seeking to put in issue a matter that could not sensibly be challenged. We accept, of course, the integrity of Dr Bader, but we do hope that the courts will not be troubled in future by attempts to rely on published work by people who have no practical experience in the field and therefore cannot contradict or bring any useful evidence to bear on issues that are not always contained in scientific journals. There are plenty of really experienced experts who are available and it is to those that the courts look for assistance in cases of this kind.

50. We are entirely satisfied that there is no fresh evidence in this case. We heard the evidence to determine for ourselves whether that was so. If there had been fresh evidence or we had been concerned we would certainly have admitted it, even though it might have been discoverable by due diligence because the interests of justice would have so demanded. But there was none.
51. We would finally conclude by saying that there was a strong case against this appellant. The evidence of the doctor was cogent. It strongly supported that of the complainant. The DNA evidence in this case might be described as a makeweight which proved conclusively that the jury were right in the verdict that they reached and this verdict was entirely safe. This appellant was rightly convicted of a gross breach of trust in his

serious sexual assault upon this young girl. The appeal is dismissed.

52. MR COOKE: My Lord, your Lordship spoke of Miss Jones' strong support at page 51 of the bundle. It is strong scientific support.
53. LORD JUSTICE THOMAS: Okay. If the word "scientific" adds anything, yes.
54. MR COOKE: Secondly, the other concerns the detail that was given early in the judgment about the finger clippings and because of the reference to the other papers, may I respectfully suggest that the actual process which was clip or file and put them in one bag with the clippers be set out within the Court's judgment because that will inform other people.
55. LORD JUSTICE THOMAS: Obviously it is the better practice to take them individually and label which side was which. Certainly.
56. MR COOKE: That will, I hope, inform other people who will read the judgment, otherwise it is not clear.
57. LORD JUSTICE THOMAS: Thank you very much.