Forensic Science Regulator
Overseeing Quality

Information

Legal Obligations

FSR-I-400

Issue 6

1. EXECUTIVE SUMMARY

1.1 Introduction

1.1.1 This section provides a relatively high level overview of the obligations placed on expert witnesses in the Criminal Justice System in England and Wales. The obligations are discussed in greater depth in the paper.

1.2 Expert Evidence

1.2.1 Expert evidence is admissible "to furnish the court with scientific information which is likely to be outside the experience and the knowledge of a judge or jury". [1]

1.2.2 In presenting expert evidence the witness's "duty is to furnish the Judge or jury with the necessary scientific criteria for testing the accuracy of their conclusions, so as to enable the Judge or jury to form their own independent judgment by the application of these criteria to the facts proved in evidence". [2]

1.2.3 This places the expert witness in a privileged position. The nature of the role requires that the witness comply with certain obligations. Further obligations have been imposed for the benefit of the Criminal Justice System.

1.3 Basic Condition

1.3.1 The above makes clear that expert testimony is only admissible when it is required.

1.3.2 It is also clear that expert evidence can only be given by a person who is an expert in the relevant field (see *The Ikarian Reefer, R v. Barnes* and *R v. Harris & Ors*.).

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1 *R v. Cooper* [1998] EWCA Crim 2258
2 *Davie v. Edinburgh Magistrates* [1953] SC 34; 1953 S.L.T. 54

1.4 Obligations

Overriding Objective

1.4.1 As a participant in the CJS the expert witness must comply with the overriding objective that cases are dealt with justly which includes:

▪ Acquitting the innocent and convicting the guilty; and	Rule 1.1 Criminal Procedure Rules Rule 1.2 Criminal Procedure Rules
• Dealing with the case efficiently and expeditiously.	Rule 1.1 Criminal Procedure Rules Rule 1.2 Criminal Procedure Rules

Case Management

1.4.2 Expert witnesses must assist the court in its case management functions. Part 3.3 of the Criminal Procedure Rules places duties on "the parties" actively to assist the court in fulfilling its duty to further the overriding objective by actively managing the case. Part 19 places specific obligations on expert witnesses.

Objectivity and Impartiality

1.4.3 An expert witness must provide the court with objective, unbiased opinion on matters within his expertise. [3] This is, in essence, a restatement of the witnesses' obligation to act with objectivity and impartiality.

1.4.4 A number of aspects of this duty have been addressed by the courts and the Criminal Procedure Rules. These include the following.

• The witness owes an obligation to the court which overrides any obligation to the party instructing him.	Rule 19.2 Criminal Procedure Rules *R v. Bowman* *Polvitte Ltd v Commercial Union*
• The evidence must be, and be seen to be, the independent and objective product of the expert's work.	*The Ikarian Reefer* *R v. Harris & Ors.* *R v. Bowman* *General Medical Council v. Meadow* *Whitehouse v. Jordan*

[3] Part 19.2 Criminal Procedure Rules. See also *The Ikarian Reefer* and *R v, Harris & Ors*.

• The evidence must not be influenced by the interests of the parties to the case and, in particular, the party instructing the witness.	Rule 19.2 Criminal Procedure Rules *Whitehouse v. Jordan*
• The witness must state the facts and assumptions upon which his opinion is based.	Rule 19.4 Criminal Procedure Rules *The Ikarian Reefer* *R v. Harris & Ors.*
• The witness must make clear when his opinion is provisional or controversial or is not properly researched.	Rule 19.4 Criminal Procedure Rules *R v. Harris & Ors.* *Re J*
• Where a range of opinion exists the witness must note this and the reason for his opinion.	Rule 19.4 Criminal Procedure Rules *R v. Bowman* *R v. Reed & Ors.* *R v. T*
• The witness must disclose any circumstances which might be considered as giving rise to a conflict of interest.	*Toth v. Jarman* *R v. Stubbs*
• The witness must not assume the role of the jury. • The witness must not assume the role of advocate.	*R v. Doheny and Adams* *Davie v. Edinburgh Magistrates* *The Ikarian Reefer* *R v. Harris & Ors.* *R v. Henderson & Ors.* *R v. Cleobury* *Re J*
• The witnesses assessment of, and use of, scientific theories must be objective.	*A Local Authority v. S*
• The witness must notify the Court if he changes his opinion	Rule 19.2 Criminal Procedure Rules *The Ikarian Reefer* *R v. Harris & Ors.*

1.4.5 The general duty is extremely wide and the principles stated above illustrate the application of that duty but do not define it exhaustively. What needs to be set out in the report of an expert witness is set out more fully in section 8 below.

Honesty and Good Faith

1.4.6 Witnesses must act with honesty and good faith. This obligation is extremely wide and must be seen as demanding the highest standards of honesty, integrity and good faith in all aspects of the work of the witness.

1.4.7 The courts have discussed certain aspects of this duty, set out below. These principles illustrate the application of that duty but do not define it exhaustively.

• The witness must act with honesty and must not mislead, or risk misleading, the court.	*Ikarian Reefer* *General Medical Council v. Meadow*
• The witness must not impugn the integrity of other witnesses unless there is sound evidence to support an attack.	*R v. Broughton*
• An attack o the integrity or competence of other witnesses must be based on sufficient research	*R v. Conaghan & Ors*
• The witness must respect other witnesses in the case.	*R v. Burridge*

Reasonable Skill and Care

1.4.8 The witness must exercise reasonable skill and care and comply with relevant professional codes of ethics.

1.4.9 Points discussed by the courts include the following.

• In the work undertaken (e.g. analysis).	*General Medical Council v. Meadow* *A Local Authority v. S*
• In the preparation of reports.	*A Local Authority v. S*

	R v. Bowman
• In the use of research papers.	*A Local Authority v. S* *R v. Thomas*
• In the use of source material.	*A Local Authority v. S* *R v. Thomas*
• In presenting evidence to assist the jury.	*R v. Smith*

Provision of Criteria

1.4.10 As noted in the quotation above the witness must provide the court with the criteria to assess his evidence and conclusions. (See *Davie v. Edinburgh Magistrates*, *R v. Broughton* and *R v. Gilfoyle*). CrimPR 19.4(h) states that the expert's report must "include such information as the court may need to decide whether the expert's opinion is sufficiently reliable to be admissible as evidence".

1.4.11 The expert must also explain their conclusions (see *Kennedy (Appellant) v. Cordia (Services) LLP (Respondent) (Scotland)* [2016] UKSC 6).

Disclosure

1.4.12 Witnesses instructed by the prosecution have duties related to the disclosure of evidence. These cover the following areas.

• The witness must record all relevant information.	*R v. Bowman* *R v. Clarke* *R v. Smith*
• The witness must retain all relevant information.	*R v. Bowman*
• The witness must reveal all relevant information to the prosecution.	*The Ikarian Reefer* *R v. Bowman* *R v. Clarke* *R v. Smith* *R v. Puaca*
• The witness must make his work available to those acting for the	*The Ikarian Reefer* *R v. Ward*

defence (through the prosecution).	
• To disclose to the CJS	
o Any information which would undermine his evidence.	*R v. Ward* *R v. Harris & Ors.* *R v. Bowman* *A Local Authority v. S*
o Any reservations he has about his evidence.	Rule 19.4 Criminal Procedure Rules *R v. Harris & Ors.*
o Whether any theory employed is well established or not.	*R v. Harris & Ors.*
o Any information which would support the case put forward by the defence	*R v. Ward*

1.4.13 The expert should also have regard to the content of the Crown Prosecution Service Disclosure Manual.

<u>Evidence</u>

1.4.14 The courts have given extensive guidance on the evidence of expert witnesses.

1.4.15 Particular issues which have been considered include the following.

• Use of the work of others.	*R v. Abadom* *R v. Weller*
• The use of statistics.	*R v. Adams* *R v. Doheny and Adams* *R v. Adams (No. 2)* *R v. T*
• The use of developing areas of science.	*R v. Clarke* *R v. Canning* *R v. Kai-Whitewind* *R v. Henderson & Ors.* *R v. Burridge*
• The discussion of possible explanation for facts.	*R v. Reed & Ors* *R v. Weller*

• The provision of degrees of support for a hypothesis.	*R v. Otway* *R v. Shllibier* *R v. Atkins and Atkins*
• The extent to which an expert can comment on the ultimate issue for the court.	*R v. Stockwell*

1.4.16 Certain of these issues are addressed in more detail in the Criminal Practice Directions as discussed in section 8.12.

Form and Content of Evidence

1.4.17 There are a number of requirements related to the form and content of expert witnesses' reports. Many of these are imposed by law and apply to all witnesses. Some are imposed by the Crown Prosecution Service and, as a result, only apply to those instructed by the prosecution. The requirements differ between reports, certificates and statements. The requirements can be summarised as the following.

• Mandatory requirements (e.g. signature by the witness).	Section 9 Criminal Justice Act 1967 Rule 19.4 Criminal Procedure Rules *R v. Harris & Ors.* *R v. Bowman*
• Mandatory statements (e.g. statement of truth).	Section 9 Criminal Justice Act 1967 Rule 19.4 Criminal Procedure Rules *R v. Harris & Ors.* *R v. Bowman*
• Mandatory content (e.g. statement of qualifications and experience)	Section 9 Criminal Justice Act 1967 Rule 19.4 Criminal Procedure Rules *R v. Harris & Ors.* *R v. Bowman*

1.4.18 These issues have been addressed in more detail in guidance [1].

2. INTRODUCTION

2.1 Purpose

2.1.1 In announcing the post of the Forensic Science Regulator (the Regulator) in a Written Ministerial Statement (12 July 2007), the Minister stated [4]:

> "I am today announcing the arrangements that we have put in hand to establish the post of forensic science regulator, whose role will be to advise the Government and the criminal justice system on quality standards in the provision of forensic science. This will involve identifying the requirement for new or improved quality standards, leading on the development of new standards where necessary; providing advice and guidance so that providers will be able to demonstrate compliance with common standards, in procurement and in courts, for example; ensuring that satisfactory arrangements exist to provide assurance and monitoring of the standards; and reporting on quality standards generally."

2.1.2 A key requirement of any standards framework in forensic science is that the output meets the requirements of the Criminal Justice System (CJS). For that requirement to be achieved there must be, and the Regulator must have, an understanding of the requirements of the CJS.

2.1.3 This document sets out the view of the Regulator as to the legal landscape within which forensic scientists operate within the CJS. It endeavours to describe the law as it applies to England and Wales as at 2 April 2018.

2.2 Sources

2.2.1 The legal requirements/obligations relating to expert witnesses acting within the CJS arise from legislation or from decisions of courts exercising criminal jurisdiction within England and Wales.

2.2.2 Cases from outside England and Wales are considered in this document when the principles have been adopted by the courts within this jurisdiction.

2.2.3 Decisions of courts which do not, or were not in the case of interest, exercising criminal jurisdiction do not, unless subsequently adopted by criminal courts, establish requirements/obligations within the CJS. However, the Court of

[4] Hansard 12 July 2007: The Parliamentary Under-Secretary of State for the Home Department (Meg Hillier MP).

Appeal (Criminal Division) has shown a willingness to adopt principles set out in civil courts as existing standards within the CJS – see *R v. Harris, Rock, Cherry & Faulder* [2005] EWCA Crim 1980. The Supreme Court has also made changes to the obligations on medical practitioners with retrospective effect – see *Montgomery v. Lanarkshire Health Board* [2015] UKSC 11.

2.2.4 This document therefore considers (a) non-criminal cases, from England and Wales and (b) cases from outside England and Wales which have not been adopted by the criminal courts. These cases do not establish requirements/obligations within the CJS but they set out principles which appear sensible and, should the issue come to be determined by a criminal court, may be adopted as existing requirements.

2.3 Citation

2.3.1 Where known the neutral citation[5] will be given for cases referred to in this document.

2.3.2 The neutral citation indicates the court involved and, consequently, the court will not normally be quoted in the text. In other cases the court will be specified.

2.3.3 The court indicators, for courts in the UK, in the neutral citation, employed in this document, are as follows.

a. UKAIT indicates the United Kingdom Asylum and Immigration Tribunal. [6]
b. UKUT indicates the United Kingdom Upper Tribunal.
c. IAC indicates the Immigration and Asylum Chamber of the UKUT.
d. NICC indicates the Northern Ireland Crown Court.
e. NICA indicates the Northern Ireland Court of Appeal.
f. ScotHC indicates the High Court of Justiciary.
g. HCJAC indicates the High Court of Justiciary acting as an appellate court.
h. EWHC indicates England and Wales High Court. It can have the following sub-classifications.

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5 The neutral citation is a standard method of identifying the judgment of a court. It comprises the year of the judgment, an identifier for the court and a number identifying the case. The number is often sequentially allocated by the court in the year.

6 The UKAIT was abolished and its jurisdiction transferred Asylum and Immigration Chamber of the First-Tier Tribunal created by the Tribunals, Courts and Enforcement Act 2007.

i. Admin. indicates the Administrative Court.
ii. Fam. indicates the Family Division.
iii. Ch. indicates the Chancery Division.
iv. Pat. indicates the Patents Court.
v. QB indicates the Queen's Bench Division.
vi. Technology indicates the Technology and Construction Court.

i. EWCA indicates England and Wales Court of Appeal. It can have the following sub-classifications.

i. Crim. indicates the Criminal Division.
ii. Civ. indicates the Civil Division.

j. UKHL indicates the United Kingdom House of Lords. [7]
k. UKSC indicates the United Kingdom Supreme Court.
l. UKPC indicates the Judicial Committee of the Privy Council. [8]

2.4 Scope

2.4.1 This guidance applies to the Criminal Justice System of England and Wales only. In relation to the Coroners Courts System see Part 9.

2.4.2 The Crown Prosecution Service (CPS) has published guidance for those instructing expert witnesses. This is available at http://www.cps.gov.uk/legal/assets/uploads/files/expert_evidence_first_edition_2014.pdf. [9]

2.5 Reservation

2.5.1 This document has been prepared to set out the Regulator's understanding of the requirements/obligations the CJS imposes on expert witnesses. The wider publication of this document has been approved as it sets out information which

7 The judicial functions of the House of Lords were transferred to the Supreme Court of the United Kingdom by the Constitutional Reform Act 2005.

8 The Judicial Committee of the Privy Council considers appeals from a number of countries in criminal cases but not those in the UK. Historically its decisions did not set precedent in England and Wales but in the case of *Attorney General for Jersey v. Holley (Jersey)* [2005] UKPC 23 it assumed that power. The power was recognised by the Court of Appeal in *R v. James* [2006] EWCA Crim 14. However, it only applies when the Committee is clearly deciding an issue of English Law.

9 This URL was checked on 30 March 2018.

may be useful to persons/organisations providing forensic science services to the CJS.

2.5.2 It is, however, the responsibility of those providing services to ensure they have an accurate understanding of the requirements of the CJS and to meet those requirements.

3. MODIFICATION

3.1.1 Parts of this document which have been altered significantly from the previous issue are highlighted in grey.

4. KEY JUDICIAL GUIDANCE

4.1 The Ikarian Reefer (1993; High Court - Cresswell J)

4.1.1 *National Justice Cia Naviera SA v. Prudential Assurance Co. Ltd (The Ikarian Reefer)* [1993] 2 Lloyd's Rep 68, 81- 82; [1993] F.S.R. 563; [1993] 37 E.G. 158; Times, March 5, 1993 (Cresswell J).

4.1.2 This case contains the classic and oft cited summary by Cresswell J of the duties of an expert witness in civil proceedings. It has subsequently been adopted as apposite to the duties of an expert witness in criminal proceedings: see *R v. Harris & Ors.*and *R v. Bowman* below.

a. [1993] F.S.R. 563 at p.565-566:

"The Duties and Responsibilities of Expert Witnesses

The duties and responsibilities of expert witnesses in civil cases include the following:

1. Expert evidence presented to the court should be, and should be seen to be, the independent product of the expert uninfluenced as to form or content by the exigencies of litigation: *Whitehouse v. Jordan* [1981] 1 W.L.R. 246 at 256, per Lord Wilberforce.

2. An expert witness should provide independent assistance to the court by way of objective, unbiased opinion in relation to matters within his expertise: *Polivitte Ltd. v. Commercial Union Assurance Co. plc* [1987] 1 Lloyd's Rep. 379 at 386, Garland J. and *Re J* [1990] F.C.R. 193, Cazalet J. An expert witness in the High Court should never assume the role of an advocate.

3. An expert witness should state the facts or assumptions upon which his opinion is based. He should not omit to consider material facts which could detract from his concluded opinion (*Re J*, supra).

4. An expert witness should make it clear when a particular question or issue falls outside his expertise.

5. If an expert's opinion is not properly researched because he considers that insufficient data is available, then this must be stated with an indication that the opinion is no more than a provisional one (*Re J*, supra). In cases where an expert witness, who has prepared a report, could not assert that the report contained the truth, the whole truth and nothing but the truth without some qualification, that qualification should be stated in the report: *Derby & Co. Ltd. and others v. Weldon and others*, The Times, 9 November 1990, per Staughton L.J.

6. If, after exchange of reports, an expert witness changes his view on a material matter having read the other side's expert's report or for any other reason, such change of view should be communicated (through legal representatives) to the other side without delay and when appropriate to the court.

7. Where expert evidence refers to photographs, plans, calculations, analyses, measurements, survey reports or other similar documents, these must be provided to the opposite party at the same time as the exchange of reports (see 15.5 of the Guide to Commercial Court Practice)."

4.2 R v. Harris & Ors. (2005; CA Crim Div)

4.2.1 *R v. Harris, Rock, Cherry & Faulder* [2005] EWCA Crim 1980: para 271 et seq:

"271 It may be helpful for judges, practitioners and experts to be reminded of the obligations of an expert witness summarised by Cresswell J. in the *National Justice Cia Naviera SA v Prudential Assurance Co Ltd (Ikarian Reefer)* [1993] 2 Lloyds Rep. 68 at 81. Cresswell J. pointed out amongst other factors the following, which we summarise as follows:

(1) Expert evidence presented to the court should be and seen to be the independent product of the expert uninfluenced as to form or content by the exigencies of litigation.

(2) An expert witness should provide independent assistance to the court by way of objective unbiased opinion in relation to matters within his expertise. An expert witness in the High Court should never assume the role of advocate.

(3) An expert witness should state the facts or assumptions on which his opinion is based. He should not omit to consider material facts which detract from his concluded opinions.

(4) An expert should make it clear when a particular question or issue falls outside his expertise.

(5) If an expert's opinion is not properly researched because he considers that insufficient data is available then this must be stated with an indication that the opinion is no more than a provisional one.

(6) If after exchange of reports, an expert witness changes his view on material matters, such change of view should be communicated to the other side without delay and when appropriate to the court.

272 Wall J., as he then was, sitting in the Family Division also gave helpful guidance for experts giving evidence involving children (see In *re AB (Child Abuse: Expert Witnesses)* [1995] 1 F.L.R. 181). Wall J. pointed out that there will be cases in which there is a genuine disagreement on a scientific or medical issue, or where it is necessary for a party to advance a particular hypothesis to explain a given set of facts. He added (see p.192):

"Where that occurs, the jury will have to resolve the issue which is raised. Two points must be made. In my view, the expert who advances such a hypothesis owes a very heavy duty to explain to the court that what he is advancing is a hypothesis, that it is controversial (if it is) and placed before the court all material which contradicts the hypothesis. Secondly, he must make all his material available to the other experts in the case. It is the common experience of the courts that the better the experts the more limited their areas of disagreement, and in the forensic context of a contested case relating to children, the objective of the lawyers and the experts should always be to limit the ambit of disagreement on medical issues to the minimum."

We have substituted the word jury for judge in the above passage.

273 In our judgment the guidance given by both Cresswell J. and Wall J. are very relevant to criminal proceedings and should be kept well in mind by both prosecution and defence. The new Criminal Procedure Rules provide wide powers of case management to the Court. Rule 24 and Para.15 of the Plea and Case Management form make provision for experts to consult together and, if possible, agree points of agreement or disagreement with a summary of reasons. In cases involving allegations of child abuse the judge should be prepared to give directions in respect of expert evidence taking into account the guidance to which we have just referred. If this guidance is borne in mind and the directions made are clear and adhered to, it ought to be possible to narrow the areas of dispute before trial and limit the volume of expert evidence which the jury will have to consider.

274 We see nothing new in the above observations." [10]

4.3 R v. Bowman (2006; CA Crim Div)

4.3.1 *R v. Bowman* [2006] EWCA Crim 417; para 174 et seq:

"Experts

174 In *R. v Harris and Others* [2006] 1 Cr.App.R. 5 (p.55) this court gave guidance in respect of expert evidence given in criminal trials (see p.55). The way that the expert reports have been prepared and presented for this appeal leads us to believe that it would be helpful to give some

[10] The quoted case of *Re AB (Child Abuse: Expert Witnesses)* now has the neutral citation [1994] EWHC Fam 5.

further guidance in order to underline the necessity for expert reports to be prepared with the greatest care.

175 On February 14, 2006 the Attorney-General, announcing the outcome of his review of Shaken Baby Syndrome cases published three papers including a booklet entitled “Disclosure: Expert's Evidence and Unused Material- Guidance Booklet for Experts”. The instructions contained in this booklet were “designed to provide a practical guide to disclosure for expert witnesses instructed by the Prosecution Team”. The booklet sets out three key obligations arising for an expert as an investigation progresses. The relevant steps are described as to retain, to record and to reveal. No doubt any expert instructed by the prosecution will, of course, comply with these guidelines. What follows applies equally to experts instructed by the prosecution and defence.

176 We desire to emphasise the duties of an expert witness in a criminal trial, whether instructed by the prosecution or defence, are those set out in *Harris*. We emphasise that these duties are owed to the court and override any obligation to the person from whom the expert has received instructions or by whom the expert is paid. It is hardly necessary to say that experts should maintain professional objectivity and impartiality at all times.

177 In addition to the specific factors referred to by Cresswell J. in the *Ikarian Reefer* [1993] 2 Lloyds Rep. 68 set out in *Harris* we add the following as necessary inclusions in an expert report:

1. Details of the expert's academic and professional qualifications, experience and accreditation relevant to the opinions expressed in the report and the range and extent of the expertise and any limitations upon the expertise.

2. A statement setting out the substance of all the instructions received (with written or oral), questions upon which an opinion is sought, the materials provided and considered, and the documents, statements, evidence, information or assumptions which are material to the opinions expressed or upon which those opinions are based.

3. Information relating to who has carried out measurements, examinations, tests etc and the methodology used, and whether or not such measurements etc were carried out under the expert's supervision.

4. Where there is a range of opinion in the matters dealt with in the report a summary of the range of opinion and the reasons for the opinion given. In this connection any material facts or matters which detract from the expert's opinions and any points which should fairly be made against any opinions expressed should be set out.

5. Relevant extracts of literature or any other material which might assist the court.

6. A statement to the effect that the expert has complied with his duty to the court to provide independent assistance by way of objective unbiased opinion in relation to matters within his or

her expertise and an acknowledgment that the expert will inform all parties and where appropriate the court in the event that his opinion changes on any material issues.

7. Where on an exchange of experts' reports matters arise which require a further or supplemental report the above guidelines should, of course, be complied with."

4.3.2 The requirements at point 3 in the list above have to be considered in light of the issues discussed at 8.9.

4.4 Codification of the Guidance

4.4.1 The provisions of Part 19 of the Criminal Procedures Rules (CrimPR)[11] [12] adopt much of the guidance set out in the above cases. The relevant provisions are discussed below.

4.4.2 The guidance above and the CrimPR are also reflected in the Practice Directions - Immigration and Asylum Chambers of the First-Tier Tribunal and the Upper Tribunal (amended by Sir Jeremy Sullivan Senior President of Tribunals on 13 November 2014). [13] [14]

4.5 Tribunal Guidance

4.5.1 In the case of *MOJ & Ors (Return to Mogadishu) Somalia CG* [2014] UKUT 00442 (IAC) the Upper Tribunal commented on the duties of expert witnesses.

"23. We consider it appropriate to draw attention to this subject, given the prevalence and importance of expert evidence in Country Guidance cases. Mindful that substantial quantities of judicial ink have been spilled on this subject, we confine ourselves to highlighting and emphasising what appear to us to be amongst the most important considerations. The general principles are of some vintage. In National Justice CIA Naviera SA v Prudential Assurance Company Limited [1993] 2 Lloyds Reports 68, Cresswell J stated, at pp 81 – 82:

"The duties and responsibilities of expert witnesses in civil cases include the following:

11 The Criminal Procedure Rules (S.I. 1490 of 2015) as amended by The Criminal Procedure (Amendment) Rules 2016 (S.I. 120 of 2016), The Criminal Procedure (Amendment No. 2) Rules 2016 (S.I. 705 of 2016), The Criminal Procedure (Amendment) Rules 2017 (S.I. 144 of 2017), The Criminal Procedure (Amendment No.2) Rules 2017 (S.I. 282 of 2017), The Criminal Procedure (Amendment No. 3) Rules 2017 (S.I. 755 of 2017), The Criminal Procedure (Amendment No. 4) Rules 2017 (S.I. 915 of 2017) and the Criminal Procedure (Amendment) Rules 2018 (S.I. 132 of 2018).

12 This abbreviation is defined in Part 2.3 of the Rules.

13 This is available at https://www.judiciary.gov.uk/wp-content/uploads/2014/11/revised-pd-3112014.pdf

14 The URL was accessed on 30 March 2018.

1. Expert evidence presented to the court should be, and should be seen to be, the independent product of the expert uninfluenced as to form or content by the exigencies of litigation ….

2. An expert witness should provide independent assistance to the Court by way of objective unbiased opinion in relation to matters within his expertise ….

An expert witness in the High Court should never assume the role of an advocate …

3. An expert witness should state the facts or assumption upon which his opinion is based. He should not omit to consider material facts which could detract from his concluded opinion. ….

4. An expert witness should make it clear when a particular question or issue falls outside his expertise.

5. If an expert's opinion is not properly researched because he considers that insufficient data is available, then this must be stated with an indication that the opinion is no more than a provisional one. In cases where an expert witness who has prepared a report could not assert that the report contained the truth, the whole truth and nothing but the truth without some qualification, that qualification should be stated in the report ….

6. If, after exchange of reports, an expert witness changes his view on a material matter having read the other side's expert's report, or for any other reason, such change of view should be communicated (through legal representatives) to the other side without delay and when appropriate to the Court."

This code was duly approved by the Court of Appeal: see [1995] 1 Lloyds Reports 455, at p496. It has been considered in a series of subsequent report cases: see, for example, Vernon v Bosley (No 2) [1997] 1 All ER 577, at page 601. In the latter case, Evans LJ stated, at page 603:

"…. Expert witnesses are armed with the court's readiness to receive the expert evidence which it needs in order to reach a fully informed decision, whatever the nature of the topic may be. But their evidence ceases to be useful, and it may become counter-productive, when it is not marshalled by reference to the issues in the particular case and kept within the limits so fixed."

Judicial condemnation of an expert who does not appreciate his responsibilities is far from uncommon: see, for example, Stevens v Gullis [2000] 1 All ER 527, where Lord Woolf MR at pp.532-533 stated that the expert in question had:

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"… demonstrated by his conduct that he had no conception of the requirements placed upon an expert under the CPR …..

It is now clear from the rules that, in addition to the duty which an expert owes to a party, he is also under a duty to the court."

24. The requirements of CPR 31 also featured in Lucas v Barking Hospitals NHS Trust [2003] EWCA Civ 1102, where the emphasis was on CPR 31 and CPR 35. These provide (inter alia) that:

(i) a party may apply for an order for inspection of any document mentioned in an expert's report which has not already been disclosed,

(ii) every expert's report must state the substance of all material instructions, whether written or oral, on the basis of which the report was written, and

(iii) such instructions are not privileged against disclosure.

Laws LJ made the following noteworthy observation:

> "[42] As it seems to me the key to this case …. is the imperative of transparency, a general theme of the CPR but here specifically applied to the deployment of experts' reports. Thus the aim of rule 35.10(3) and (4) is broadly to ensure that the factual basis on which the expert has prepared his report is patent."

25. Thus in the contemporary era the subject of expert evidence and experts' reports is heavily regulated. The principles, rules and criteria highlighted above are of general application. They apply to experts giving evidence at every tier of the legal system. In the specific sphere of the Upper Tribunal (Immigration and Asylum Chamber), these standards apply fully, without any qualification. They are reflected in the Senior President's Practice Direction No 10 (2010) which, in paragraph 10, lays particular emphasis on a series of duties. We summarise these duties thus:

(i) to provide information and express opinions independently, uninfluenced by the litigation;

(ii) to consider all material facts, including those which might detract from the expert witness' opinion ;

(iii) to be objective and unbiased;

(iv) to avoid trespass into the prohibited territory of advocacy;

(v) to be fully informed;

(vi) to act within the confines of the witness's area of expertise; and

(vii) to modify, or abandon one's view, where appropriate.

26. In the realm of expert testimony, important duties are also imposed on legal practitioners. These too feature in the aforementioned Practice Direction. These duties may be summarised thus:

(i) to ensure that the expert is equipped with all relevant information and materials, which will include information and materials adverse to the client's case;

(ii) to vouchsafe that the expert is fully versed in the duties rehearsed above;

(iii) to communicate, promptly, any alterations in the expert's opinion to the other parties and the Tribunal, and

(iv) to ensure full compliance with the aforementioned Practice Statement, any other relevant Practice Statement, any relevant Guidance Note, all material requirements of the Rules and all case management directions and orders of the Tribunal.

These duties, also unqualified in nature, are a reflection of the bond between Bench and Representatives which features throughout the common law world.

27. The interface between the role of the expert witness and the duty of the Court or Tribunal features in the following passage in the judgment of Wilson J in Mibanga v Secretary of State for the Home Department [2005], EWHC 367:

> "[24] It seems to me to be axiomatic that a fact finder must not reach his or her conclusion before surveying all the evidence relevant thereto….
>
> The Secretary of State argues that decisions as to the credibility of an account are to be taken by the judicial fact finder and that, in their reports, experts, whether in relation to medical matters or in relation to in-country circumstances, cannot usurp the fact finder's function in assessing credibility. I agree. What, however, they can offer is a factual context in which it may be necessary for the fact finder to survey the allegations placed before him; and such context may prove a crucial aid to the decision whether or not to accept the truth of them. ……
>
> It seems to me that a proper fact finding enquiry involves explanation as to the reason for which an expert view is rejected and indeed placed beyond the spectrum of views which could reasonably be held."

To this we would add that, as the hearing of the present appeals demonstrated, this Tribunal will always pay close attention to the expert's research; the availability of empirical data or other information bearing on the expert's views; the quality and reliability of such material; whether the expert has taken such material into account; the expert's willingness to modify or withdraw certain views or conclusions where other evidence, or expert opinion, suggests that this is appropriate; and the attitude of the expert, which will include his willingness to engage with the Tribunal. This is not designed to be an exhaustive list."

5. THE ROLE OF THE EXPERT WITNESS

5.1 Overriding Objective

5.1.1 The expert, as a participant in the CJS, must work to achieve the overriding objective set out in the CrimPR as follows:

"1.1 (1) The overriding objective of this procedural code is that criminal cases be dealt with justly.

(2) Dealing with a criminal case justly includes—

(a) acquitting the innocent and convicting the guilty;

…

(e) dealing with the case efficiently and expeditiously;"

5.1.2 The obligations on participants are set out in CrimPR 1.2:

"1.2 (1) Each participant, in the conduct of each case, must—

(a) prepare and conduct the case in accordance with the overriding objective;

(b) comply with these Rules, practice directions and directions made by the court; and

(c) at once inform the court and all parties of any significant failure (whether or not that participant is responsible for that failure) to take any procedural step required by these Rules, any practice direction or any direction of the court. A failure is significant if it might hinder the court in furthering the overriding objective.

(2) Anyone involved in any way with a criminal case is a participant in its conduct for the purposes of this rule."

5.1.3 The significance of this approach and the obligations on participants has been stressed.

a. *Director of Public Prosecutions, R (on the application of) v. Chorley Justices and Forrest* [2006] EWHC 1795 (Admin);

"In April 2005 the Criminal Procedure Rules came into effect…They have effected a sea change in the way in which cases should be conducted, … Rule 1.2 imposes upon the duty of participants in a criminal case to prepare and conduct the case in accordance with the overriding objective, to comply with the rules and, importantly, to inform the court and all parties of any significant failure, whether or not the participant is responsible for that failure, to take any procedural step required by the rules."

b. *Jones v. South East Surrey Local Justice Area* [2010] EWHC 916 (Admin);

"32 As the Criminal Procedure Rules make clear, the duties set out in the Overriding Objective, notably the efficient and expeditious handling of cases, are duties imposed on all participants in the criminal justice system. Each and every one must contribute to achieving that."

c. *R v. Henderson, Butler and Oyediran* [2010] EWCA Crim 1269;

"209. [*Reed*] also contains important observations as to Part 33 of what are now the Criminal Procedure Rules 2010. Those rules need to be deployed to ensure that the overriding objective to deal with criminal cases justly is achieved (1.1)" [15]

d. *R v. Penner* [2010] EWCA Crim 1155.

e. In *R v. Boardman* [2015] EWCA Crim 175, albeit in the different context of a case concerned with tardy disclosure by the Crown, Sir Brian Leveson P emphasised the importance of compliance with the Criminal Procedure Rules. He referred to the "Review of Efficiency in Criminal Proceedings" [2] (23 January 2015) [16] [17] in which the authors said (at para 199):

"Whatever we do, we must encourage a reduced tolerance for failure to comply with court directions along with a recognition of the role and responsibilities of the Judge in matters of case management. It cannot be right that a 'culture of failure' has developed in the courts, fed by an expectation that deadlines will not be met. …"

f. In *Hassani (R on the application of) v. West London Magistrates Court* [2017] EWHC 1270 (Admin) the court stressed the need for compliance with the Rules, robust case management and early identification of the issues in the case.

5.2 Case Management

5.2.1 Part 3 of the CrimPR provides the court with wide case management powers and corresponding duties actively to case manage so as to ensure the overriding objective is achieved. In particular it states:

"3.2.—(1) The court must further the overriding objective by actively managing the case.

(2) Active case management includes—

(a) the early identification of the real issues;

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15 Part 33 of the Rules in effect before 2015 became Part 19 in the 2015 issue of the Rules.

16 www.judiciary.gov.uk/wp-content/uploads/2015/01/review-of-efficiency-in-criminal-proceedings-20151.pdf.

17 URL checked on 30 March 2018.

(b) the early identification of the needs of witnesses;

(c) achieving certainty as to what must be done, by whom, and when, in particular by the early setting of a timetable for the progress of the case;

(d) monitoring the progress of the case and compliance with directions;

(e) ensuring that evidence, whether disputed or not, is presented in the shortest and clearest way;

(f) discouraging delay, dealing with as many aspects of the case as possible on the same occasion, and avoiding unnecessary hearings;

(g) encouraging the participants to co-operate in the progression of the case; and

(h) making use of technology.

(3) The court must actively manage the case by giving any direction appropriate to the needs of that case as early as possible."

5.2.2 Paragraph 3.3 of the CrimPR places an obligation on the parties to the case to assist the court in fulfilling its duty to further the overriding objective by actively managing the case.

5.2.3 Changes to the Criminal Procedure Rules in 2015 explicitly extend this duty to expert witnesses. The changes were described in the Ministry of Justice's Guide to the Criminal Procedure Rules 2015 [18] [19] in these terms:

"Rule 19.2 (Expert evidence; Expert's duty to the court) now requires an expert witness, as part of her or his duty to the court, to help the court in some of the same ways as a party to the case, by complying with directions (for example, as to the time by when a report must be served), and by warning the court of any significant failure to act as required by a direction (for example, by warning of substantial delay in the preparation of a report).

In response to observations by the Court of Appeal in its judgment in *R v. Reynolds, R v. Rosser [2014]* EWCA Crim 2205, and in response to reports by Rule Committee members of increasing difficulties in obtaining expert reports within the same times as before, the Committee agreed that an expert's implicit duty to the court to give a realistic estimate of the time within which expert evidence can be prepared, and to adhere to that estimate, should be made explicit."

5.2.4 The duties placed specifically on expert witnesses now include the duty to assist the court in its case management functions as an aspect of the expert's

[18] http://www.justice.gov.uk/courts/procedure-rules/criminal/docs/2015/criminal-procedure-rules-2015-guide.pdf

[19] This URL was checked on 30 March 2018.

duty to assist the court to achieve the overriding objective. CrimPR 19.2(1)(b) provides:

"19.2.—(1) An expert must help the court to achieve the overriding objective—

…

(b) by actively assisting the court in fulfilling its duty of case management under rule 3.2, in particular by—

(i) complying with directions made by the court, and

(ii) at once informing the court of any significant failure (by the expert or another) to take any step required by such a direction.

5.2.5 The duty under Part 19.2(1)(b)(ii) includes notification of the court. See 6.5 in relation to how the court may be notified.

5.3 Expert Evidence

5.3.1 The role of the expert is to provide expert evidence. This is clear from the law on the admissibility of expert evidence – see section 7 below. This point is reinforced in CrimPR 19.2 which states the expert's duty to the court is to give evidence "within the expert's area or areas of expertise".

5.3.2 This may appear an obvious statement but there are cases where the courts have commented on this issue.

a. *Wright (on the application of), R v. Crown Prosecution Service* [2015] EWHC 828 (Admin).
b. *R v. Reed & Ors* [2009] EWCA Crim 2698.
c. *R v. T* [2010] EWCA Crim 2439.
d. *Pora v. The Queen (New Zealand)* [2015] UKPC 9
e. *Hainey v. HM Advocate* [2013] HCJAC 47.
f. *Sinclair v. Joyner* [2014] EWHC 1800 (QB).
g. *Honeysett v The Queen* [2014] HCA 29.
h. *M (Care Proceedings: Finding of Fact Hearing: Fractures)* [2017] EWHFC B50.
i. *R v. Pabon* [2018] EWCA Crim 420.

5.3.3 The CrimPR requires, in Rule 19.2, the expert to state their area of expertise and make clear, in their oral evidence, when a matter falls outside that

expertise. CrimPR 19.4 imposes a similar requirement in relation to written evidence.

5.3.4 In *Pora* the Board noted that the truth was not something within the knowledge of the expert.

"The dangers inherent in an expert expressing an opinion as an unalterable truth are obvious."

5.3.5 In *Sinclair v. Joyner* [2014] EWHC 1800 (QB) the Court commented on the approach taken by the expert witness.

"49 As Stuart Smith LJ emphasised in Liddell, the reconstruction expert's role is to provide the judge with the necessary scientific criteria and assistance based upon his or her specific skills and experience, which the lay judge will not usually possess, to enable the judge to interpret the factual evidence. It is not, as Mr [N] described it in the witness box, "…to discover the facts and to use my expertise and experience to give an opinion as to what happened."

50 Unfortunately, this wholly erroneous view of the reconstruction expert's role led Mr [N] to express comments and opinions throughout his reports, adopted as his evidence in chief, as to the facts and as to his view of "the most likely scenario" on the evidence … which amount in any event to no more than assumptions or speculation on his part, unsupported by evidence. "[20]

5.3.6 In *M (Care Proceedings: Finding of Fact Hearing: Fractures)* [2017] EWHFC B50 the court, at paragraph 73, expressed the following view.

"I have to say I really struggled with Dr VS's evidence. I do appreciate that he has never been involved in court proceedings and thus does not have the court experience of the other experts in this case but even accounting for that it is very obvious that Dr VS strayed outside his area of expertise both in terms of the existence of and dating of these fractures. Having heard him give evidence, and noting the position adopted in the professionals meeting, I am driven to the conclusion that pride and over self-confidence is a real professional obstacle for him. I do not understand the repeated refusal to defer to obvious superior expertise. That is unusual and I regard it as unreasonable. It has contributed significantly to the muddying of waters in terms of identifying and dating the injuries. It has also contributed towards other professionals being implicated in causing injury to this child."

5.3.7 Not only does this quote refer to the need to stay within the area of expertise but also the need to recognise the views of those with more expertise.

5.3.8 While this document discusses the obligations placed on expert witnesses it is important to recognise others have obligations. Those instructing witnesses

[20] The case of *Liddell* is *Liddell v. Middleton* [1996] PIQR P36

have to ensure those witnesses are, in fact, experts. In *R v. Pabon* [2018] EWCA Crim 420, at paragraph 77, ths Court stated:

"Nonetheless, there is no room for complacency and this case stands as a stark reminder of the need for those instructing expert witnesses to satisfy themselves as to the witness' expertise and to engage (difficult though it sometimes may be) an expert of a suitable calibre"

5.4 Professional Witnesses

5.4.1 The term "professional witness" is often encountered and has led to some confusion.

5.4.2 The term has no universally accepted definition in the CJS. [21] [22] Generally it is used to refer to a witness, other than an expert witness, who provides evidence as part of his occupation and will, as a result, be paid.

5.4.3 The term has no legal significance and a professional witness has no status or ability above those of an ordinary witness.

5.5 Objectivity and Impartiality

5.5.1 The expert's duties are owed to the court and override any obligation to the person who instructs or pays the expert. The expert is to maintain professional objectivity and impartiality at all times.

a. Criminal Procedure Rules, 19.2;

i. Expert's duty to the court;

"19.2.—(1) An expert must help the court to achieve the overriding objective –

(a) by giving opinion which is—

(i) objective and unbiased; and

(ii) within the expert's area or areas of expertise.

(b) by actively assisting the court in fulfilling its duty of case management under rule 3.2, in particular by -

(i) complying with directions made by the court, and

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21 The term was defined by s21 of the Children, Schools and Families Act 2010 in relation to Family Court proceedings but that provision was repealed by the Crime and Courts Act 2013.

22 The term is employed in The Coroners Allowances, Fees and Expenses Regulations 2013 (S.I. 1615 of 2013) but these do not apply in the CJS.

(ii) at once informing the court of any significant failure (by the expert or another) to take any step required by such a direction.

(2) This duty overrides any obligation to the person from whom the expert receives instructions or by whom the expert is paid.

(3) This duty includes obligations—

(a) to define the expert's area or areas of expertise—

(i) in the expert's report, and

(ii) when giving evidence in person;

(b) when giving evidence in person, to draw the court's attention to any question to which the answer would be outside the expert's area or areas of expertise; and

(c) to inform all parties and the court if the expert's opinion changes from that contained in a report served as evidence or given in a statement."

b. *Harmony Shipping Co. SA v. Orri* [1979] 1 WLR 1380; [1979] 3 All E.R. 177; [1980] 1 Lloyd's Rep. 44 (CA); (CA Civ Div);

i. Lord Denning MR said at p.1387[23]:

"It is the primary duty of the courts to ascertain the truth: and, when a witness is subpoenaed, he must answer such questions as the court properly asks him. This duty is not to be taken away by some private arrangement or contract by him with one side or the other".

c. *Whitehouse v. Jordan* [1981] 1 WLR 246; [1981] 1 All E.R. 267; (1981) 125 S.J. 167 (HL); [1980] UKHL 12;

i. Lord Wilberforce at p.256-257:

"While some degree of consultation between experts and legal advisers is entirely proper, it is necessary that expert evidence presented to the court should be, and should be seen to be, the independent product of the expert, uninfluenced as to form or content by the exigencies of litigation. To the extent that it is not, the evidence is likely to be not only incorrect but self-defeating."

d. *Polivitte Ltd v. Commercial Union Assurance Co. Plc* [1987] 1 Lloyd's Rep 379 (Garland J.) (High Court Queens Bench Division);

[23] Page references herein are to the first cited of the case reports unless otherwise indicated.

i. An expert witness should provide independent assistance to the court by way of objective, unbiased opinion in relation to matters within his expertise.

ii. This case was cited by Cresswell J in *The Ikarian Reefer*.

e. In *Bristol City Council v. A Mother & Ors.* [2012] EWHC 2548 (Fam) the judge criticised forensic science suppliers that allowed commercial interests to affect their approach to the case.

f. *Re J* [1990] FCR 193 (Cazalet J.) (High Court Family Division)[24];

i. An expert witness in the High Court should never assume the role of an advocate.

ii. This case was cited by Cresswell J in *The Ikarian Reefer*.

g. *Medimune v. Novartis* [2011] EWHC 1669 (Pat), at paragraphs 105-114, discussed the responsibility of experts and those that instruct them to maintain objectivity and impartiality.

h. *National Justice Cia Naviera SA v. Prudential Assurance Co. Ltd (The Ikarian Reefer)* [1993] 2 Lloyd's Rep 68, 81- 82; [1993] F.S.R. 563; [1993] 37 E.G. 158; Times, March 5, 1993 (High Court - Cresswell J);

i. [1993] F.S.R. 563 at p.565 566:

> "The Duties and Responsibilities of Expert Witnesses
>
> The duties and responsibilities of expert witnesses in civil cases include the following:
>
> 1. Expert evidence presented to the court should be, and should be seen to be, the independent product of the expert uninfluenced as to form or content by the exigencies of litigation: *Whitehouse v. Jordan* [1981] 1 W.L.R. 246 at 256, per Lord Wilberforce.
>
> 2. An expert witness should provide independent assistance to the court by way of objective, unbiased opinion in relation to matters within his expertise: *Polivitte Ltd. v. Commercial Union Assurance Co. plc* [1987] 1 Lloyd's Rep. 379 at 386, Garland J. and *Re J* [1990] F.C.R. 193, Cazalet J. An expert witness in the High Court should never assume the role of an advocate."

i. *R v. Harris & Ors.* [2005] EWCA Crim 1980;

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[24] This case also appears to have been reported as *Re R (A Minor) (Experts' Evidence)* [1990] EWHC Fam 1; [1991] FLR 291.

i. Gage LJ:

"271 It may be helpful for judges, practitioners and experts to be reminded of the obligations of an expert witness summarised by Cresswell J. in the *National Justice Cia Naviera SA v Prudential Assurance Co Ltd (Ikarian Reefer)* [1993] 2 Lloyds Rep. 68 …

We have substituted the word jury for judge in the above passage.

273 In our judgment the guidance given by both Cresswell J. and Wall J. are very relevant to criminal proceedings and should be kept well in mind by both prosecution and defence. …"

j. *General Medical Council v. Meadow* [2006] EWCA Civ 1390;

i. Sir Anthony Clarke MR:

"21 In para 20 of his judgment the judge quoted what are now well known principles identified by Cresswell J in *National Justice Cia Naviera SA v Prudential Assurance Co Ltd (The Ikarian Reefer)* [1993] 2 Lloyd's Rep 68 , 81–82. Those principles were approved by Otton LJ in *Stanton v Callaghan* [2000] QB 75 and are now accepted and understood throughout what may be called the expert witness community. Cresswell J put them thus:

…

The judge added at the end of that quotation that in addition to those considerations, the expert witness will know that he must give evidence honestly and in good faith and must not deliberately mislead the court. He will not expect to receive protection if he is dishonest or malicious or deliberately misleading.

22 Those principles have recently been reflected and expanded in an important document entitled " Protocol for the Instruction of Experts to Give Evidence in Civil Claims" [see CPR r 35.16], which was prepared in the light of work done by the Expert Witness Institute and the Academy of Experts and others and which was approved by Lord Phillips of Worth Matravers MR. Paragraph 4 of the protocol (see CPR r 35.19) is entitled "Duties of experts" and includes the following:

"4.1. Experts always owe a duty to exercise reasonable skill and care to those instructing them, and to comply with any relevant professional code of ethics. However when they are instructed to give or prepare evidence for the purpose of civil proceedings in England and Wales they have an overriding duty to help the court on matters within their expertise (CPR r 35.3). This duty overrides an obligation to the person instructing or paying them. Experts must not serve the exclusive interest of those who retain them." (My emphasis.)"

k. *R v. Bowman* [2006] EWCA Crim 417;

"176 We desire to emphasise the duties of an expert witness in a criminal trial, whether instructed by the prosecution or defence, are those set out in *Harris*. We emphasise that these duties are owed to the court and override any obligation to the person from whom the expert has received instructions or by whom the expert is paid. It is hardly necessary to say that experts should maintain professional objectivity and impartiality at all times."

l. *R v. Henderson & Ors*. [2010] EWCA Crim 1269;

"219. … If the issue arises, a jury should be asked to judge whether the expert has, in the course of his evidence, assumed the role of an advocate, influenced by the side whose cause he seeks to advance. If it arises, the jury should be asked to judge whether the witness has gone outside his area of expertise. The jury should examine the basis of the opinion. Can the witness point to a recognised, peer-reviewed, source for the opinion? Is the clinical experience of the witness up-to-date and equal to the experience of others whose evidence he seeks to contradict?"

5.5.2 In *R v. Pabon* [2018] EWCA Crim 420 the court, at paragraph 54, expressed the view:

"… expert evidence is adduced to assist with matters likely to be outside their experience and knowledge. A partisan expert is quite incapable of furnishing such assistance, quite apart from the breach of ethical and legal duties thus entailed."

5.5.3 The rules and recent case law relating to civil proceedings also emphasise the fundamental importance of the expert's objectivity.

a. In *Wilkins-Shaw v. Fuller & Ors.* [2012] EWHC 1777 (QB) the court criticised the approach of an expert who focussed on attacking the inadequacies of the case of the non-instructing party. This must be seen as limited to the Civil Justice System but if an expert in the Criminal Justice System adopted such an approach to the exclusion of offering independent expert opinion he may be criticised.

"It is to be noted that he was not instructed until … there is force in the criticism advanced on behalf of the defendants that he would appear to have been instructed to trawl the evidence in search of 'failures and inadequacies' as he put it, that would support the claimant's case, rather than present his evidence "uninfluenced as to the form or content by the exigencies of litigation" (per Cresswell J in The *Ikarian Reefer* [1993] 2 Lloyd's Rep 68, at 81). Notwithstanding the preface at paragraph 1 of his report as to his duty as an expert, he did not appear to me fully to understand his obligation to give impartial and objective evidence."

b. Protocol for the Instruction of Experts to give Evidence in Civil Claims, 'Duties of Experts,' para. 4;

i. See citation in *Meadow* above.

c. Civil Procedure Rules (CPR) 35.3 [25];

i. 35.3— Experts—overriding duty to the court;

"(1) It is the duty of experts to help the court on matters within their expertise.

(2) This duty overrides any obligation to the person from whom experts have received instructions or by whom they are paid."

5.5.4 The requirement for objectivity also applies to scientific theories.

a. *A Local Authority v. S* [2009] EWHC 2115 (Fam);

"246 Dr [S]'s view is a legitimate one and an appropriate line of research. All agree that much remains unknown about [Shaken Baby Syndrome] and the triad. It is essential, however, that Dr. [S] and others engaged on such research avoid becoming … zealots with the consequence that scientific rigour is lost or sacrificed."

b. In *Re P, Q (Children: Care Proceedings: Fact Finding)* [2015] EWFC 26 (Fam), the court deprecated, amongst other things, the expert's dogmatic attachment to a theory of sexual abuse based on an unreliable indicator and the expert's failure to take adequate account of noteworthy contraindications. The court (at para 132) cited a passage in *Re U*; *Re B* [2004] EWCA Civ 567 in which it was said that:

"[T]he court must always be on guard against the over-dogmatic expert, the expert whose reputation or amour propre is at stake, or the expert who has developed a scientific prejudice." [26]

5.5.5 The requirement for independence and objectivity may make it inappropriate for an expert to act as an adviser to a party and a witness in the same case. See *Anglo Group plc, Winther Brown & Co Ltd v. Winter Brown &Co Ltd, BML (Office Computers) Ltd, Anglo Group plc, BML (Office Computers) Ltd* [2000] EWHC Technology 127.

5.5.6 The expert should not assume the role of the advocate:

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25 Civil Procedure Rules S.I. 3132 of 1998.

26 The term "amour proper" means self-esteem.

a. *National Justice Cia Naviera SA v. Prudential Assurance Co. Ltd (The Ikarian Reefer)* [1993] 2 Lloyd's Rep 68; (High Court)

i. Point 2:

"… An expert witness in the High Court should never assume the role of an advocate."

b. *R v. Harris & Ors.* [2005] EWCA Crim 1980;

i. Approving *The Ikarian Reefer.*

c. *General Medical Council v. Meadow* [2006] EWCA Civ 1390;

i. Approving *The Ikarian Reefer*.

d. *R v. Cleobury* [2012] EWCA Crim 17;

i. EWCA [2012] Crim 17 from para 21:

" 21 …. Despite his explanation, we are satisfied that the consequence of his approach to the appeal was that his report read more like a submission to the court rather than the report of an independent expert. …

…

26. … This comment by [C] quite apart from involving an expert in straying into matters of advocacy rather than providing an expert opinion…"

5.5.7 Where experts undertook intensive preparation anticipating intensive scrutiny of their evidence (in a retrial) it was held (in Scotland) that this did not cross the line into the impermissible role of 'advocating a cause': *Geddes v. HM Advocate* [2015] HCJAC 10 at para 116:

"… It cannot be a legitimate criticism that, in advance of the third occasion upon which they were obliged to give evidence, they revisited the literature to ensure proper preparedness. This is not advocating a cause. It is carrying out a professional obligation in what can be a stressful situation, knowing that the opinion which they have expressed and which may have a very important part to play in a criminal trial, may be correct but nevertheless be subjected to intense and prolonged scrutiny."

5.5.8 The expert should not assume the role of the jury:

a. *R v. Doheny and Adams* [1997] 1 Cr. App. R. 369; [1997] Crim. L.R. 669; Times, August 14, 1996; [1996] EWCA Crim 728;

i. [1997] 1 Cr. App. R. 369 at p.375:

> "When the scientist gives evidence it is important that he should not overstep the line which separates his province from that of the jury."

b. *R v. E* [2009] EWCA Crim 1370;

> "Experts should not used so as to usurp the function of a jury."

c. *Davie v. Edinburgh Magistrates* [1953] SC 34; 1953 S.L.T. 54; (Court of Session – Scotland)[27];

i. [1953] SC 34 at p.41:

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

d. *R v. Gilfoyle* [2001] 2 Cr. App. R. 5; [2001] Crim. L.R. 312; Times, February 13, 2001; [2000] EWCA Crim 81;

i. At Para 24-25:

> "… expert witnesses must furnish the court
>
> "with the necessary scientific criteria for testing the accuracy of their conclusions, so as to enable the judge or jury to form their own independent judgment by the application of these criteria to the facts proved in evidence" (per Lord President Cooper in *Davie v. Edinburgh Magistrates* 1953 S.C. 34 at 40; and see, also, the discussion at pages 521 to 523 in Cross and Tapper on Evidence (9th ed.)."

e. *R v. Dallagher* [2002] EWCA Crim 1903;

i. Citing, at para 31, *R v. Doheny*.

5.6 Honesty and Good Faith

General

5.6.1 The expert must give evidence honestly and in good faith, and must not deliberately mislead the court:

[27] The approach in this case has been approved in a number of cases – see, for example, *R v. Gilfoyle* [2000] EWCA Crim 81 and *R v. Luttrell & Ors.* [2004] EWCA Crim 1344.

a. *National Justice Cia Naviera SA v. Prudential Assurance Co. Ltd (The Ikarian Reefer)* [1993] 2 Lloyd's Rep 68; (High Court).

b. *General Medical Council v. Meadow* [2006] EWCA Civ 1390;

> "21 …
>
> The judge [Cresswell J in the *Ikarian Reefer*] added at the end of that quotation that in addition to those considerations, the expert witness will know that he must give evidence honestly and in good faith and must not deliberately mislead the court. He will not expect to receive protection if he is dishonest or malicious or deliberately misleading." [28]

5.6.2 The text above refers to deliberately misleading the court as that is the obligation set out in the case. It appears likely that the requirement goes beyond that and requires that the expert does not mislead the court as a result of recklessness or negligence. In *Squier v. General Medical Council* [2016] EWHC 2739 (Admin) the Court made clear an expert must not mislead the court; no reference was made to the act being deliberate.

Impugning Integrity

5.6.3 One aspect of good faith which has been stressed is that experts must not attack the integrity of other experts without a good evidential basis. In *R v. Broughton* [2010] EWCA Crim 549 Thomas LJ (as he then was) [29] stated:

> "38. … Whatever may be the position in other jurisdictions, it is the duty of an advocate and an expert in this jurisdiction not to embark upon an attack on the integrity of other experts unless there is an evidential basis for doing so. There was none in this case. The attack made on the integrity of … was without foundation and should never have been made. … This is a case where there is a proper disagreement between experts but the course taken by those giving evidence on behalf of the appellant went into matters for which there was no foundation. Not only was the attack on the good faith of the Crown's witness wholly deplorable and unwarranted, but it also was a great disservice to the appellant's case."

5.6.4 The judgment refers to an attack on the integrity of an expert because that was the nature of the attack made. The courts may take a similar view as to an attack on the competence of an expert.

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28 The text discusses where an expert witness may lose the protection of immunity. The discussion must be seen in that context and not as a statement of the extent of the expert's duty to the court. While negligence may not be sufficient to remove immunity it appears unlikely to meet the obligations of an expert. In *Squier v. General Medical Council* [2016] EWHC 2739 (Admin) the Court, at paragraph 34, made clear an expert must not misled the court; no reference was made to the act being deliberate.

29 Thomas LJ was appointed Lord Chief Justice of England and Wales, on 1 October 2013, adopting the name Lord Thomas of Cwmgiedd.

5.6.5 In *R v. E* [2009] EWCA Crim 1370 the court, while not directly criticising the experts involved, noted its displeasure with this type of behaviour.

"Unfortunately a degree of vitriol appeared to creep into the exchange of expert reports, which we found less than helpful."

5.6.6 In *F v Cumbria County Council and M (Fact-Finding No. 2)* [2016] EWHC 14 (Fam) the Court, at paragraph 56, noted that criticism of other experts does not assist the court.

"It is not an easy task to choose between the competing views of such experienced specialists. To compound matters, the pathology evidence revealed a world of small differences and strong feelings. This was most apparent in the evidence of Dr [C], who described Dr [A]'s evidence in one respect as irresponsible, in another as bordering on the ridiculous and in a third as a significant overcall. This aspect of the matter has not made the evidence easier to assess."

5.6.7 In *R v. Conaghan & Ors* [2017] EWCA Crim 597 the Court made clear that criticism of the work of another expert must be based on a proper consideration of the work of the expert. At paragraph 35 of the judgment the court stated:

"We are surprised that if Professor [J] has the expertise and the experience that he claims, he was prepared to criticise Ms Cornelius's findings to the extent that he did solely on the basis of a note of her evidence. His approach was unsatisfactory. We would have expected him at least to call for Ms Cornelius' notes of her analysis. Had he made a simple enquiry if any other expert had examined the samples, he would have discovered Dr Short's analysis. In short, he seems to have opined on the integrity of a fellow scientist without checking his facts."

Respect

5.6.8 There has also been criticism of expert witnesses for adopting a combative or dismissive attitude towards the views of other experts. In *R v. Burridge* [2010] EWCA Crim 2847 it was noted:

"68. … His reports … are … infused by arrogance, and quite unnecessarily combative and dismissive of other experts, including those in fields which are not his own. "

5.6.9 In *H-C (Children)* [2016] EWCA Civ 136 the Court, at paragraphs 21-22 of the judgment, noted that even when experts differ in their opinions the evidence must be presented in a professional manner.

Transparency

5.6.10 If an expert acts in a manner which the court considered underhanded or less than transparent their evidence may be ruled inadmissible and they may be subject to severe criticism. See *E (A Child), Re* [2018] EWCA Civ 550.

5.7 Reasonable Skill and Care

5.7.1 Experts always owe a duty to exercise reasonable skill and care to those instructing them, and to comply with any relevant professional code of ethics:

a. Protocol for the Instruction of Experts to give Evidence in Civil Claims, 'Duties of Experts,' para. 4, as approved in *General Medical Council v. Meadow* [2006] EWCA Civ 1390 at para 22. (See quotation above.)

i. See citation in *Meadow* above.

5.7.2 Experts need to prepare their reports with the greatest care:

a. *R v. Bowman* [2006] EWCA Crim 417;

"Experts

174 … The way that the expert reports have been prepared and presented for this appeal leads us to believe that it would be helpful to give some further guidance in order to underline the necessity for expert reports to be prepared with the greatest care …"

b. *A Local Authority v. S* [2009] EWHC 2115 (Fam);

i. Experts need to exercise great care in analysis and reporting.

"284 …In care proceedings the parents of the children concerned face allegations of the most serious type and they are therefore entitled to expect the experts commissioned to report to the court to be meticulous in both their analysis of the data and in their presentation to the court of their expert forensic opinion."

ii. Great care in the use of research papers.

"247 These Courts rely on the professionalism and rigor of the experts who come before them. That means not only drawing the Court's attention to research that is contrary to their view, but that the experts are rigorous in the use they make of research papers. "

iii. Care in the use of source material.

"260 However, it is of the utmost importance that all experts, whether mainstream or not, read all the papers and where they have to rely on raw data that they check its veracity and accuracy in the medical notes. A trial is first and foremost, a

forensic exercise and fairness to the parties demands, as a basic premise, that the experts will be accurate in their use of the source material."

c. *R v. Thomas* [2011] EWCA Crim 1295;

i. Experts need to understand the reports and material on which they rely.

d. *Squier v. General Medical Council* [2016] EWHC 2739 (Admin) the Court stressed the need for an expert to use reference material in a professional manner.

i. Research should not be quoted in a manner which is not a proper reflection of what the research indicates.

"34 … an expert must not cite the work of others as supporting her view when it does not. If it is capable of doing so, but only with significant qualification, she must say so"

ii. Research must not be quoted in a misleading manner.

"34 … One of the overriding duties of an expert is not to mislead. Baldly stating, without qualification, that a research paper is a proper foundation for the proposition that the expert is seeking to advance is justified if that is the conclusion of the research paper; but if it is not, it should not be cited, without qualification, as supportive."

iii. It is not acceptable to quote research and leave it to the other party to determine the aspects of the research which do not support the proposition being argued.

"34 …Sir Robert Francis submitted that, in a field such as NAHI in babies, the number of those able to give relevant evidence is small and those who are willing to do so smaller, so that all that it is necessary for an expert to do is to cite the research paper by name and date and leave it to others to point out the respects in which the paper does not support her view. I do not accept that proposition" [30]

iv. It is also important that any text which is provided as a quote is actually an accurate quote from the person or text – see *F (A Minor), Re* [2016] EWHC 2149 (Fam).

5.7.3 Experts need to present their evidence in a way which assists the jury.

[30] NAHI indicated "Non- Accidental Head Injury".

a. *R v. Smith* [2011] EWCA Crim 1296;

"61 …

viii) The presentation of the evidence to the jury made no attempt to use modern methods of presentation. The presentation to this court was similar; a large amount of time was wasted because of this. It was incomprehensible to us why digital images were not provided to the jury; the refusal of NAFIS (to which we have referred in paragraph 43) to permit a digital image to be supplied to the court was a further example of the lack of a contemporary approach to the presentation of evidence. The presentation to the jury must be done in such a way that enables the jury to determine the disputed issues."

5.8 Clarity

5.8.1 The expert's report should address the issues on which the court requires assistance – see *H (A Child : Hair Strand Testing)* [2017] EWFC 64.

5.8.2 The expert must also provide sufficient information that the manner in which conclusions are drawn is clear. Unsupported assertions may be discounted – see *R v. Chapman & Ors* [2017] EWCA Crim 319.

5.8.3 Where the report uses relative terms (e.g. low, high, medium) these should be explained to ensure the meaning is clear to the court and differences in the use of the terms by different experts is obvious. See *H (A Child : Hair Strand Testing)* [2017] EWFC 64.

5.9 Provision of Scientific Criteria

5.9.1 The expert should give the Court the necessary scientific criteria to test the accuracy of his conclusions:

a. *Davie v. Edinburgh Magistrates* [1953] SC 34; 1953 S.L.T. 54; (Court of Session – Scotland);

i. [1953] SC 34 at p.41:

" … Expert witnesses, however skilled or eminent, can give no more than evidence. They cannot usurp the functions of the jury or Judge sitting as a jury, any more than a technical assessor can substitute his advice for the judgment of the Court— *S.S. Bogota v. S.S. Alconda* . Their duty is to furnish the Judge or jury with the necessary scientific criteria for testing the accuracy of their conclusions, so as to enable the Judge or jury to form their own independent judgment by the application of these criteria to the facts proved in evidence. The scientific opinion

evidence, if intelligible, convincing and tested, becomes a factor (and often an important factor) for consideration along with the whole other evidence in the case, but the decision is for the Judge or jury. In particular the bare *ipse dixit* of a scientist, however eminent, upon the issue in controversy, will normally carry little weight, for it cannot be tested by cross-examination nor independently appraised, and the parties have invoked the decision of a judicial tribunal and not an oracular pronouncement by an expert. I refer to Best on Evidence, (12th ed.) p. 434 ff.; Phipson on Evidence, (9th ed.) p. 400 ff.; Dickson on Evidence, (1st ed.) vol. ii, sec. 1999; Wills on Circumstantial Evidence, (7th ed.) p. 176 , and to the many authorities cited in these works."[31]

b. *R v. Gilfoyle* [2001] 2 Cr. App. R. 5; [2001] Crim. L.R. 312; Times, February 13, 2001; [2000] EWCA Crim 81;

i. At para 24-25:

"… expert witnesses must furnish the court "with the necessary scientific criteria for testing the accuracy of their conclusions, so as to enable the judge or jury to form their own independent judgment by the application of these criteria to the facts proved in evidence" (per Lord President Cooper in *Davie v. Edinburgh Magistrates* 1953 S.C. 34 at 40; and see, also, the discussion at pages 521 to 523 in Cross and Tapper on Evidence (9th ed.).

25 In our judgment, although Professor [C] is clearly an expert in his field, the evidence tendered from him was not expert evidence of a kind properly to be placed before the Court, for a number of reasons. … Secondly, his reports identify no criteria by reference to which the Court could test the quality of his opinions: there is no data base comparing real and questionable suicides and there is no substantial body of academic writing approving his methodology …"

c. *R v. Broughton* [2010] EWCA Crim 549;

"47. Applying the approach in *Doheny* and *Bates*, the dangers inherent in evidence founded upon the analysis of less than 100 to 200pg of DNA make it particularly important that the jury are given sufficient guidance to enable them fully and properly to evaluate the evidence in relation to the components of the DNA profile where there is a disagreement about them. In this case the judge properly directed the jury that if they did not accept Ms [H] evidence as to the putative alleles 25 at locus D2 and 13 at D16, then that would, as he put it, destroy the match probability statistics relied upon by the Crown.

[31] The term "ipse dixit" means "he himself said it" and is used to indicate a base assertion unsupported by evidence.

48. However, in our judgment the judge then fell into error in directing the jury that, in those circumstances, they could reach their own conclusions on the DNA evidence. It is fair to say that the judge urged the jury to exercise caution and be very careful in arriving at firm conclusions because they were not experts in statistics. However, we believe that only served to emphasise the void in which they were left. They had no guidance from the experts and no guidance from the court to enable them to conduct an evaluation of the evidence for themselves. In this court, counsel for the Crown put the position graphically; if the jury rejected the interpretation of the components of the profile put forward by Ms [H], "the statistics provided went out of the window". But although the Crown appreciated this consequence, the Crown had not provided any alternative statistics in the event the jury did not accept Ms [H] evidence. It followed in our view, that if the jury did not accept her evidence on the interpretation of the components of the profile, then the jury should have been told to acquit, as there was no basis on which they could assess the match probabilities themselves. Of course, if there had been alternative statistics, then these would have been left to the jury and the jury been directed accordingly."

5.9.2 In *R v. Nicholson* [2012] EWCA Crim 1568 the court considered whether it was necessary to be able to attach a statistical evaluation to the evidence.

"42 … Mr MacDonald's argument was that without an appreciation of the statistical probability of coincidence the jury could have had no sound basis for reaching a conclusion based, even in part, upon that coincidence. He does not rely, in support of his argument, upon any principle of law or evidence approved in the cases but seeks to draw an analogy with the admission of DNA evidence. Juries, he submits, are permitted to consider DNA evidence only because the evidence is given meaning by the value of the probability that more than one person in the population may be found to have an identical profile.

43. In our judgment, Mr MacDonald's analogy is a false one. Any evidence capable of narrowing a range of relevant possibilities is likely to be admissible, e.g. the offender had dark hair, was left handed and walked with a limp. The evidence may establish circumstances which, when considered as a whole, have the effect of proving guilt. It is not the law that a statistical value must be placed upon any coincidence on the unlikelihood of which one of the parties to a criminal trial relies. DNA evidence is capable of being, together with other evidence in the case, such a potent source of identification that the prosecution is required to tender evidence of statistical probability (properly explained to the jury) so that it can be evaluated fairly. In some circumstances, even the absence of statistical precision will not prevent the jury considering DNA evidence provided that they understand its probative relevance and its limitations (see, e.g. *Bates* [2006] EWCA Crim 1395, particularly at paragraphs 29 - 31). The use of statistical evidence by expert forensic scientists does not imply that every time the prosecution relies upon the remote chance of coincidence it must prove the statistical probability of that coincidence. If that were the case the admission of such evidence, approved in *Freeman and Crawford* [2008]

EWCA Crim 1863, [2009] 1 Cr. App R 15, would be impermissible in the overwhelming number of prosecutions relying on circumstantial evidence for their potency, including the prosecution in Norris.

44. We recognise that there will be occasions on which the nature of the evidence is such that either the evidence will be excluded on the grounds of fairness or it will be the subject of warnings to the jury as to its limitations. The probative value of the evidence may be tenuous and for that reason its effect unfairly prejudicial or, while the evidence may have an enhanced probative value upon one or more issues, it may require a warning that it should not be overvalued. Such warnings are commonplace, for example, when propensity evidence is admitted. If the evidence is admitted, the requirements for directions in each case must depend upon the judgment of the trial judge as to the nature and effect of the evidence and the issues which the jury is being asked to resolve. These problems should always, we think, be the subject of discussion before speeches. It may be necessary for the judge to warn the jury against using the evidence for a purpose which would be unfair.

45. In the present case, the nature of the evidence was such that no statistical evaluation could realistically be attempted, not least because the precise circumstances of the complainants were not replicated in the research papers to which the experts referred. The experts were, in the main, reporting the clinical experience of themselves and their colleagues and comparing the available research with the present cases. As the judge pointed out these were circumstances which the jury was entitled to consider subject to the warnings given in his summing up. Since Mr MacDonald has no complaint to make of the judge's directions to the jury upon their approach to the evidence, it does not appear to us that the risk of unfair prejudice to the appellant's case is made out."

5.9.3 This matter was again considered in *R v. Dlugosz & Ors.* [2013] EWCA Crim 2 .

a. At paragraph 9;

"As is clear from the judgments in Atkins and Atkins (paragraph 23) and T (Footwear Mark Evidence) [2010] EWCA Crim 2439 (at paragraph 92) the fact that there is no reliable statistical basis does not mean that a court cannot admit an evaluative opinion, provided there is some other sufficiently reliable basis for its admission. As is clear from Reed and Reed and R v Weller [2010] EWCA Crim 1085, evaluative opinions were given in relation to the ways in which DNA could be transferred without there being any statistical database. We see no reason for concluding that evaluative evidence as to whether the profile can be attributed to a defendant or other person should be placed in a special category and should necessarily be excluded."

b. At paragraph 24;

"… it does seem to us that provided it is made clear to the jury the very limited basis upon which an evaluation can be made without a statistical database, a jury can be assisted in

its consideration of the evidence by an expression of an evaluative opinion by the experts."

c. At paragraph 104;

"As we have said, evaluative evidence is admissible provided that the judge is satisfied that the expert giving that evidence has a proper basis for giving the evaluative evidence based upon his or her experience and the features of the mixed profile enable this to be done."

5.9.4 The case of *R v. Purlis* [2017] EWCA Crim 1134 follows the above approach. As did R v. Mufty & Anor [2017] EWCA Crim 185.

5.9.5 There is a link to the need to explain an opinion – see 8.21 below.

5.10 Disclosure of Hypothesis and its Status

5.10.1 The expert may advance an opinion based on a hypothesis in developing or controversial areas but he should state that it is a hypothesis and, where applicable, that it is controversial and make appropriate disclosure:

a. See Part 6, Duty of Disclosure, Expert's personal duty in common law; and esp. *R v. Harris & Ors.* [2005] EWCA Crim 1980.

b. In *Kumar v. General Medical Council* [2012] EWHC 2688 (Admin) in the context of discussion a medical expert's performance stated;

"33. The expression of the view that Day had no intent to kill was not reckless although unprofessional … He knew that IED was not a recognised condition in ICD-10 and any diagnosis was controversial; he had been reckless in not explaining in his reports that the diagnosis was controversial, because that had created the unacceptable risk of his flawed opinion being accepted."

5.10.2 There is a link between these obligations and those related to the reliability of the evidence discussed at 8.12 below.

5.11 Preservation and Disclosure of Relevant Material and Facts

5.11.1 See Part 6 herein.

5.12 Role on Appeal

5.12.1 In *R v. Cleobury* [2012] EWCA Crim 17 Thomas LJ commented on the role of an expert in relation to an appeal.

"18. When an expert is asked to consider a case after a trial, it is essential that the expert presents his report as evidence within his sphere of expertise and not as an advocate's critique of what happened at the trial. If there are issues properly within the province of an expert, then the expert should write a report in relation to those issues …"

6. DUTY OF DISCLOSURE & PRESERVATION

6.1.1 Various statutes, rules and directions place duties on the parties to the case in relation to disclosure. Generally these duties do not directly apply to experts but experts are expected to assist the parties in meeting their obligations. The text below discusses situations where duties do apply directly to the expert.

6.2 Expert's Personal Duty in Common Law

6.2.1 There is an independent duty on an expert instructed by the prosecution to act in the cause of justice which requires the expert:

a. To disclose scientific evidence known to him which casts doubt on his opinion extending to anything which may arguably assist the defence regardless of whether the expert relies upon it for his opinions or findings;
b. To disclose the fact that a hypothesis is controversial; and
c. To make all his material available to the other experts.

6.2.2 See also Part 5 above as to propositions (b) and (c).

a. *R v. Ward* [1993] 1 W.L.R. 619; [1993] 2 All E.R. 577; (1993) 96 Cr. App. R. 1; (CA Crim Div);

i. (1993) 96 Cr.App. R 1 at p.53-54:

"… we have identified the cause of the injustice done to Miss Ward on the scientific side of the case as stemming from the fact that three senior forensic scientists at R.A.R.D.E. regarded their task as being to help the police. They became partisan. It is the clear duty of government forensic scientists to assist in a neutral and impartial way in criminal investigations. They must act in the cause of justice. That duty should be spelt out to all engaged or to be engaged in forensic services in the clearest terms. We trust that this judgment has assisted a little in that exercise. Secondly, we believe that the surest way of preventing the misuse of scientific evidence is by ensuring that there is a proper understanding of the nature and scope of the prosecution's duty of disclosure. … The new rules [Crown Court

(Advance Notice of Expert Evidence) Rules 1987[32]] are helpful. But it is a misconception to regard them as exhaustive: they do not in any way supplant or detract from the prosecution's general duty of disclosure in respect of scientific evidence. That duty exists irrespective of any request by the defence. It is also not limited to documentation on which the opinion or findings of an expert is based. It extends to anything which may arguably assist the defence. It is therefore wider in scope than the rule. Moreover, it is a positive duty, which in the context of scientific evidence obliges the prosecution to make full and proper enquiries from forensic scientists in order to ascertain whether there is discoverable material. Given the undoubted inequality as between prosecution and defence in access to forensic scientists, we regard it as of paramount importance that the common law duty of disclosure, as we have explained it, should be appreciated by those who prosecute and defend in criminal cases."

b. *R v. Harris & Ors.* [2005] EWCA Crim 1980;

i. Gage LJ:

"272 Wall J., as he then was, sitting in the Family Division also gave helpful guidance for experts giving evidence involving children (see In *re AB (Child Abuse: Expert Witnesses)* [1995] 1 F.L.R. 181). Wall J. pointed out that there will be cases in which there is a genuine disagreement on a scientific or medical issue, or where it is necessary for a party to advance a particular hypothesis to explain a given set of facts. He added (see p.192):

"Where that occurs, the jury will have to resolve the issue which is raised. Two points must be made. In my view, the expert who advances such a hypothesis owes a very heavy duty to explain to the court that what he is advancing is a hypothesis, that it is controversial (if it is) and placed before the court all material which contradicts the hypothesis. Secondly, he must make all his material available to the other experts in the case. It is the common experience of the courts that the better the experts the more limited their areas of disagreement, and in the forensic context of a contested case relating to children, the objective of the lawyers and the experts should always be to limit the ambit of disagreement on medical issues to the minimum."

We have substituted the word jury for judge in the above passage.

273 In our judgment the guidance given by both Cresswell J. and Wall J. are very relevant to criminal proceedings and should be kept well in mind by both prosecution and defence. …"

[32] Now superseded by the CrimPR.

c. *R v. Bowman* [2006] EWCA Crim 417; para 174 et seq:

"Experts

…

177 In addition to the specific factors referred to by Cresswell J. in the *Ikarian Reefer* [1993] 2 Lloyds Rep. 68 set out in *Harris* we add the following as necessary inclusions in an expert report:

1. Details of the expert's academic and professional qualifications, experience and accreditation relevant to the opinions expressed in the report and the range and extent of the expertise and any limitations upon the expertise.

2. A statement setting out the substance of all the instructions received (with written or oral), questions upon which an opinion is sought, the materials provided and considered, and the documents, statements, evidence, information or assumptions which are material to the opinions expressed or upon which those opinions are based.

3. Information relating to who has carried out measurements, examinations, tests etc and the methodology used, and whether or not such measurements etc were carried out under the expert's supervision.

4. Where there is a range of opinion in the matters dealt with in the report a summary of the range of opinion and the reasons for the opinion given. In this connection any material facts or matters which detract from the expert's opinions and any points which should fairly be made against any opinions expressed should be set out.

5. Relevant extracts of literature or any other material which might assist the court.

….

7. Where on an exchange of experts' reports matters arise which require a further or supplemental report the above guidelines should, of course, be complied with."

d. *A Local Authority v. S* [2009] EWHC 2115 (Fam);

"247. These Courts rely on the professionalism and rigor of the experts who come before them. That means not only drawing the Court's attention to research that is contrary to their view, but that the experts are rigorous in the use they make of research papers. "

e. *R v. Allsopp, Kelly, Wolf and West* [2005] EWCA Crim 703;

"63. As a matter of principle in our judgment, no witness expert or otherwise, is entitled to keep secret relevant information on the basis that it is confidential to him or his business. If it is relevant to the issues and, in the case of an expert, forms the basis or part of the basis for his opinion in our judgment it must be disclosed."

f. *R v. A* [2006] EWCA Crim 905.

g. See also the discussion of *Kumar v. General Medical Council* [2012] EWHC 2688 (Admin) at 5.10.

6.2.3 *R v. Asiedu* [2015] EWCA Crim 714. A peer review process at the Forensic Explosives Laboratory revealed concerns about the Crown's expert's report. That resulted in the expert drafting further statements amending some but not all of the opinions in question. However, the fact of the peer criticism was not disclosed to the defence. The Court of Appeal concluded that it should have been. Although the underlying rationale is not clearly articulated, it would appear to be based on the duty of the expert himself to disclose anything which may arguably assist the defence, i.e. the common law duty as explained in *R v. Ward*. As Lord Hughes, giving the judgment of the court, put it (at para 16), the expert in making the amendment statements:

"… said nothing about the errors having been drawn to [his] attention by others and to that extent did not provide the defence with the same potential ammunition that ought to have been available to them. And since [the expert] adhered to some conclusions about which the FEL critics had expressed doubt, there was in those cases no correction and therefore also neither acknowledgement nor disclosure of peer criticism."

6.2.4 This case involved a report which had been reviewed by scientists independent of the source of the report after its completion. As most reports are subject to a check or peer review, within the source organisation, before being released this raises a question as to the disclosure obligations raised by that process

6.2.5 Where, as part of a review process prior to the release of a report, significant issues are raised the following approach should be adopted.

a. Where those involved discuss the issues and they are either resolved or addressed in the report which is issued there is no need to disclose the fact the issues were raised.

b. Where those involved discuss the issues but they cannot be resolved or are not addressed in the report then the existence of the different views needs to be disclosed.

6.3 Disclosure of Underlying Data with Report

6.3.1 See Part 8 (Statement of and provision of literature and information relied on) herein.

6.4 Expert's 'Gatekeeper' Role to Retain, Record and Reveal

6.4.1 These are principles developed, in particular, in the context of Crown forensic pathologists. However, they have an impact by analogy wherever:

a. The expert has a role in guiding investigators as to the avenues pursued in a criminal investigation heavily reliant on forensic analysis;
b. The expert is a conduit for the transmission of samples or results from supplemental examinations by others;
c. The expert's first examination of material places him in a uniquely privileged position for example, because:
    i. The examination changes the material;
    ii. The material will thereafter deteriorate or be destroyed;
    iii. The opportunity to take samples or optimum samples will thereafter be lost.

6.4.2 The expert must record, disclose and explain all relevant information including information about matters out of the ordinary even if he discounts the information as being unlikely to have a bearing on the issue in question:

a. *R v. Clark* [2003] EWCA Crim 1020;

> "24. Having reached his conclusions, the pathologist will then prepare a report. That report should detail the information he received in advance of the examination, all the investigations that he has made either personally or by submission to a laboratory for report, his conclusions and an explanation for those conclusions. Where features out of the ordinary are found and the pathologist concludes that they are not relevant, he should explain why he discounts the finding. Thus by way of extreme example, a pathologist examining a man with a shot wound to the head might discover that he had a severe heart condition that could have killed him at any moment. He might nonetheless conclude that the shot wound was such that it would have killed instantaneously any person, however healthy, and that the heart condition can, therefore, have played no part. In such circumstances the clear duty of the pathologist would be to record the heart condition in his report but to explain that since death would have been instantaneous and since the victim was clearly alive when shot, his conclusion was that the heart condition played no part in the death.
>
> 25. We do not believe that any of the above would come as the slightest surprise to even an inexperienced pathologist.

26. Where a second post mortem examination was to be performed by a different doctor or where some other medical expert was to become involved in the case, we would expect the original pathologist to understand the need to share all information that he had obtained with the other doctors whether or not at the end of the day he had concluded that it provided an explanation for the cause of death. If he did not, he would deprive the other doctor of the opportunity to decide for himself whether that information was relevant or not. There are good reasons why this duty is such an obvious and important one. The first is that to which we have already referred, namely the fact that the carrying out of the initial post mortem may have caused changes to the body that obscure findings made during the course of that post mortem, or prevent the observation of other important features. The second is that there is a clear responsibility to avoid any interference with the body unless it is necessary to reach a proper understanding of the death. Thus repetition of the interference with the body, necessarily a part of a post mortem examination, should be limited to that which is truly necessary. It is because of these factors that in our experience, doctors quite rightly come to depend upon one another for the provision of any information available to the person carrying out the initial post mortem examination however unlikely it may seem to the first pathologist that it provides an explanation for the cause of death. To this end it is the normal practice for the first pathologist to attend a second post mortem examination, which has the added benefit that he can also see for himself anything found at the subsequent post mortem which he may not have noted or recorded for himself."

b. In *R v. Smith* [2011] EWCA Crim 1296 the Court noted, with some apparent concern, the lack of contemporaneous notes of an examination.

"61 …

v) No competent forensic scientist in other areas of forensic science these days would conduct an examination without keeping detailed notes of his examination and the reasons for his conclusions. That universal practice of other forensic scientists was not followed by the [N] Fingerprint Bureau. There may be reasons for this, but they were not explained to us.

vi) As neither the original examiner nor those who confirmed his examination made any notes of their reasons and did not identify the points of comparison contemporaneously on a chart, it was not possible to see whether their reasoning was the same. We were told that this was not done because those who made the subsequent identification should make that identification without knowing the views of those who had previously examined the print. Although we accept that identification by two other persons who do not know the conclusions of the original examiner or the other examiner form an important safeguard, we do not understand that reasoning. There would be nothing to prevent the earlier examiners sealing their conclusions until the completion of all the examinations.

> We do not know whether there is any other justification for examiners not making detailed contemporaneous notes that can be the subject of transparent examination in court where the identification of the mark is in issue."

6.4.3 The expert's duty to preserve, record and disclose is particularly acute where the expert's role as the first examiner of material places him in a privileged position as against subsequent examiners:

a. *R v. Clark* [2003] EWCA Crim 1020; at para 26;

   i. See passage quoted at para 6.4.2 herein.

b. *R v. Puaca* [2005] EWCA Crim 3001;

> "32 … A post-mortem report fulfils a number of functions. It guides the police in their investigations. It is likely that it will be considered in pre-trial proceedings and applications such as an application for bail or legal assistance. It is the basis of the expert's evidence at trial. As such the opinion of the pathologist must, as the Practice Guidelines of the Policy Advisory Board for Forensic Pathology make clear, be "objectively reached" and have "scientific validity". The duty of all pathologists, whoever instructs them, is, in our view, to comply with the obligations imposed on expert witnesses from the start. It is wholly wrong for a pathologist carrying out the first post-mortem at the request of the police or Coroner merely to leave it to the defence to instruct a pathologist to prepare a report setting out contrary arguments. The case law as to the duties and responsibilities of experts is clear. As Cresswell J said in a much cited passage in *National Justice Compania Naviera SA v. Prudential Assurance Co Ltd (The "Ikarian Reefer")* [1993] 2 Lloyd's Rep. 68:
>
> "3. An expert witness should state the facts or assumption on which his opinion is based. He should not omit to consider material facts which could detract from his concluded opinion.""

c. *R v. A* [2006] EWCA Crim 905;

> "We wish to emphasise, as was said in *R v Puaca* [2005] EWCA Crim 3001, that it is not sufficient for an expert to rely on an expert on the other side to point up such matters."

6.4.4 The expert's role may place him in a position to identify any issues related to the continuity of the evidence.

6.4.5 The expert's obligations during the investigation process are to retain, to record, and to reveal:

a. *R v. Bowman* [2006] EWCA Crim 417;

i. Para 175:

"On February 14, 2006 the Attorney-General, announcing the outcome of his review of Shaken Baby Syndrome cases published three papers including a booklet entitled "Disclosure: Expert's Evidence and Unused Material - Guidance Booklet for Experts". The instructions contained in this booklet were "designed to provide a practical guide to disclosure for expert witnesses instructed by the Prosecution Team". The booklet sets out three key obligations arising for an expert as an investigation progresses. The relevant steps are described as to retain, to record and to reveal. No doubt any expert instructed by the prosecution will, of course, comply with these guidelines. What follows applies equally to experts instructed by the prosecution and defence."

b. Disclosure: Expert's Evidence and Unused Material - Guidance for Experts, Attorney-General, 14.2.2006.

i. See citation in *R v. Bowman*.

ii. The new version of the document is the "Guidance Booklet for Experts" published by the CPS and Association of Chief Police Officers in England Wales and Northern Ireland (ACPO) [3].

c. The CPS Disclosure Manual.

6.5 Manner of Disclosure

6.5.1 An expert instructed by the prosecution will normally discharge their disclosure obligations by:

a. Incorporating relevant material in their report and/or statement;
b. Providing relevant material to the prosecution team; or
c. Addressing the issues in oral testimony.

6.5.2 It is not, normally, the responsibility of the expert to directly disclose material to other parties in the case or to the court. However, CrimPR 19.2 creates, in two circumstances, an obligation to provide information to the court and/or other parties.

6.5.3 There is no established process for experts instructed by the prosecution to communicate with the court or the other party. It is therefore recommended that any expert who is obliged, under either provision of CrimPR 19.2, to provide information to the court or other party writes to their instructing party setting out

the information and requesting that this be communicated to the court and the other parties.

6.5.4 In addition, where the expert is required (by the provisions of CrimPR 19.2(1)(b)(ii)) to notify the court the expert should take reasonable steps to identify an appropriate contact point at the court and provide the notification directly. This is because CrimPR 19.2(1)(b)(ii) refers to the notification being "at once".

6.6 The Defence

6.6.1 The discussion above makes clear that the issues surrounding disclosure have, most commonly, been considered in the context of the obligations on the prosecution, and those instructed by the prosecution, to disclose relevant information.

6.6.2 Traditionally it has been accepted that the obligations to disclose imposed on the defence, and those instructed by the defence, are limited. However, this position has been altered by the CrimPR. While there is no legal obligation for the "voluntary" disclosure of information (other than that linked to the credibility of the expert) related to expert evidence it is clear that the court may, as part of its case management powers, require a significant degree of disclosure. Further, the lack of "voluntary" disclosure may have an adverse impact on the defence.

6.6.3 *R v. Henderson & Ors.* [2010] EWCA Crim 1269;

"211. In the context of Part 33 [of the CrimPR] we should draw attention to the fact that defence experts are not obliged to reveal a previous report they have made in the case, still less to reveal adverse criticism made by judges in the past. But a failure to do so will not avail the defence. A judge may well be able to exercise his powers under the Criminal Procedure Rules to ensure that in advance of a trial a defence expert has made disclosure of any relevant previous reports and any adverse judicial criticism. Failure to do so would be contrary to the overriding objective and will achieve no more than to expose the expert to cross-examination on those points at trial. It is difficult to see how those acting on behalf of the defendant could permit an expert report to be advanced without satisfying themselves that previous reports have been disclosed and any adverse judicial criticism identified and disclosed. Failure to do so by either side will only cast suspicion upon the cogency of the opinion. A defence team which advances an expert without taking those precautions is likely to damage its client's case.

212. A case management hearing may often present an opportunity for concerns as to previous criticism of an expert and an expert's previous tendency to travel beyond their expertise to be aired. Whilst such history may not be a ground for refusing the admission of the evidence, it may well trigger second thoughts as to the advisability of calling the witness." [33]

6.6.4 The 2014 issue of the CrimPR introduced an obligation on both parties to disclose material which could undermine the credibility of any expert on which they wish to rely. This obligation is preserved in the 2015 issue, in CrimPR 19.3(3)(c). This is further discussed at 7.17 below.

7. THE ADMISSIBILITY OF EXPERT TESTIMONY

7.1 General Admissibility of Evidence

7.1.1 The admissibility of expert evidence is subject to specific considerations (see below). It is also (with certain exemptions) subject to the admissibility provisions which apply to all evidence. Consideration of these provisions is beyond the scope of this document but certain key points are important.[34]

a. Evidence is only admissible if it is relevant and reliable.

i. See *R v. Luttrell, Jheeta, Beagley, Keshwala, Shergil, Dhaliwal, Sahota, Dawson and Hamberger* [2004] EWCA Crim 1344.

ii. This issue of relevance was considered by Lord Bingham of Cornhill in *O'Brien (Respondent) v. Chief Constable of South Wales Police (Appellant)* [2005] UKHL 26:

"3. Any evidence, to be admissible, must be relevant. Contested trials last long enough as it is without spending time on evidence which is irrelevant and cannot affect the outcome. Relevance must, and can only, be judged by reference to the issue which the court (whether judge or jury) is called upon to decide. As Lord Simon of Glaisdale observed in *Director of Public Prosecutions v. Kilbourne* [1973] AC 729, 756, "Evidence is relevant if it is logically probative or disprobative of some matter which requires proof ….. relevant (ie. logically probative or disprobative) evidence is evidence which makes the matter which requires proof more or less probable."

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33 Part 33 of the Rules in effect before 2015 became Part 19 in the 2015 issue of the Rules.

34 The admissibility of expert evidence has been considered in a number of Commonwealth jurisdiction cases. See, for example, *ASIC v. Rich* [2005] NSWSC 149, *Makita (Australia) Pty Ltd v. Sprowles* [2001] NSWCA 305,*FGT Custodians PTY Ltd v. Fagenblat* [2003] VSCA 33. and *Honeysett v The Queen* [2014] HCA 29.

iii. The issue of reliability, while of general application, is the subject of specific considerations in the case of expert evidence. These are discussed below.

b. Evidence of opinion is, generally, not admissible.

c. Evidence of opinion is admissible where the judge and jury require the assistance of evidence which depends on the application of specialist skill or knowledge.

i. This was clearly stated in *R v. Cooper* [1998] EWCA Crim 2258;

> "An expert's opinion is admissible to furnish the court with scientific information which is likely to be outside the experience and the knowledge of a judge or jury. If, on the other hand, on the proven facts or on the nature of the evidence, a judge or jury can form their own conclusions without help, then the opinion of an expert is unnecessary."

ii. It was also noted in *R v. E* [2009] EWCA Crim 1370;

> "Some may think that the nature of the evidence put before us, in the final analysis, comes to little more than common sense. There was no reason to burden the jury, in our view, with conflicting evidence from experts on how much detail might be expected from a child of 10 trying to remember what happened when she was aged 4, 5, 6, 7 and 8".

7.2 Admissibility of Expert Evidence

Types of Evidence

7.2.1 It is common for an expert witness to give evidence of both fact and opinion. For example a scientist will provide evidence of the analyses performed and the results obtained, which are evidence of fact. The scientist may then provide evidence as to what these facts mean in the content of the case; this is opinion.

7.2.2 In many cases, such as that discussed above, the evidence of fact is only provided to form the basis for the opinion evidence. The test for admissibility to be applied would therefore be that for evidence of opinion.

7.2.3 In some cases the expert may provide evidence of facts, relevant to the case, which the expert has personally observed. The normal rules for admissibility of evidence apply.

7.2.4 There may be cases where an expert is asked to provide evidence of fact based on their expert knowledge or, perhaps, to collate the facts established by the evidence of others and present this to the court in a coherent manner.

7.2.5 In the case of *Kennedy (Appellant) v. Cordia (Services) LLP (Respondent) (Scotland)* [2016] UKSC 6, the Supreme Court commented on the requirements for admissibility of expert evidence. In doing so the Court differentiated between expert evidence of opinion and expert evidence of fact.

7.2.6 The *Kennedy* case was a Scottish civil case. So there is a question as to the extent to which the judgment will apply to criminal cases in England and Wales. However, the reasoning used by the Court was not specific to Scottish Civil Law and there are already indications in this jurisdiction that the approach has been applied.

Expert Evidence of Opinion

7.2.7 Expert evidence of opinion is admissible where:

a. The subject-matter is permissible in that a lay person would not be able to form a sound judgement without the expert's assistance;
b. The expert's field of expertise is sufficiently well established to pass the ordinary tests of relevance and reliability;
c. The expert's opinion, even if not shared by the majority in his field of expertise, has authority because of study and experience of matters outside the jury's knowledge; and
d. The witness has sufficient knowledge in the subject to render his opinion of value in resolving the issues before the court.

7.2.8 These requirements, based on the case of *R v. Bonython* [1984] 38 SASR 45, were restated by the Supreme Court in *Kennedy (Appellant) v. Cordia (Services) LLP (Respondent) (Scotland)* [2016] UKSC 6, at paragraph 44, as:

"(i) whether the proposed skilled evidence will assist the court in its task;

(ii) whether the witness has the necessary knowledge and experience;

(iii) whether the witness is impartial in his or her presentation and assessment of the evidence; and

(iv) whether there is a reliable body of knowledge or experience to underpin the expert's evidence."

7.2.9 The Court stated that all four requirements apply to expert evidence regardless of whether the expert evidence is of fact or opinion. In the case of opinion evidence the Court stressed that, in relation to the first of these, the test was one of necessity.

7.2.10 In *R v. Dlugosz & Ors.* [2013] EWCA Crim 2 the Court, at paragraph 11, the court expressed the view that:

"It is essential to recall the principle which is applicable, namely in determining the issue of admissibility, the court must be satisfied that there is a sufficiently reliable scientific basis for the evidence to be admitted."

7.2.11 This requirement is reflected in Rule 19.4(h) of the CrimPR and is quoted in section 19A.4 of the Criminal Practice Directions.

7.2.12 The weight to be attached to the expert evidence is a matter for the court.

a. *R v. Turner* 60 Cr. App. R. 80; [1975] Q.B. 834; [1975] 2 W.L.R. 56; [1975] 1 All E.R. 70 (CA Crim Div);

i. P.84-85:

" … Jurors do not need psychiatrists to tell them how ordinary folk who are not suffering from any mental illness are likely to react to the stresses and strains of life. It follows that the proposed evidence was not admissible to establish that the appellant was likely to have been provoked. The same reasoning applies to its suggested admissibility on the issues of credibility. The jury had to decide what reliance they could put upon the appellant's evidence. He had to be judged as someone who was not mentally disordered. This is what juries are empanelled to do. The law assumes they can perform their duties properly. The jury in this case did not need, and should not have been offered, the evidence of a psychiatrist to help them decide whether the appellant's evidence was truthful. …"

b. *R v. Bonython* [1984] 38 SASR 45; (Supreme Court – South Australia)[35];

i. King C.J., giving the principal judgment of the South Australia Supreme Court, said that there were two questions for the judge to decide:

[35] The approach set out in this case has been approved in a number of cases. See, for example, *R v. Reed, Reed and Garmson* [2009] EWCA Crim 2698.

"The first is whether the subject matter of the opinion falls within the class of subjects upon which expert testimony is permissible. This … may be divided into two parts: (a) whether the subject matter of the opinion is such that a person without instruction or experience in the area of knowledge or human experience would be able to form a sound judgment on the matter without the assistance of witnesses possessing special knowledge or experience in the area, and (b) whether the subject matter of the opinion forms part of a body of knowledge or experience which is sufficiently organized or recognized to be accepted as a reliable body of knowledge or experience, a special acquaintance with which by the witness would render his opinion of assistance to the court. The second question is whether the witness has acquired by study or experience sufficient knowledge of the subject to render his opinion of value in resolving the issues before the court.

An investigation of the methods used by the witness in arriving at his opinion may be pertinent, in certain circumstances, to the answers to both the above questions. If the witness has made use of new or unfamiliar techniques or technology, the court may require to be satisfied that such techniques or technology have a sufficient scientific basis to render results arrived at by that means part of a field of knowledge which is a proper subject of expert evidence … Where the witness possesses the relevant formal qualifications to express an opinion on the subject, an investigation on the *voir dire* of his methods will rarely be permissible on the issue of his qualifications. There may be greater scope for such examination where the alleged qualifications depend upon experience or informal studies … Generally speaking, once the qualifications are established, the methodology will be relevant to the weight of the evidence and not to the competence of the witness to express an opinion ….

If the qualifications of a witness to give expert evidence are in issue, it may be necessary to hear evidence on the voir dire in order to make a finding as to those qualifications. If there is an issue as to whether the subject matter upon which the opinion is sought is a proper subject of expert evidence, any disputed facts relevant to the determination of that issue should be resolved by the reception of evidence on the *voir dire*" (at pp. 46-48)."[36]

c. *R v. Robb* (1991) 93 Cr. App. R. 161 (CA Crim Div);

i. At p.167:

"… We have not found this an entirely easy question. We are alive to the risk that if, in a criminal case, the Crown are permitted to call an expert witness of some but

[36] The term "voir dire" refers to a "trial within a trial" – often a hearing in the absence of the jury - for example to determine the admissibility of evidence.

> tenuous qualifications the burden of proof may imperceptibly shift and a burden be cast on the defendant to rebut a case which should never have been before the jury at all. A defendant cannot fairly be asked to meet evidence of opinion given by a quack, a charlatan or an enthusiastic amateur. But we do not regard Dr. Baldwin as falling anywhere near these categories. He was entitled to be regarded as a phonetician well qualified by academic training and practical experience to express an opinion on voice identification. We do not doubt that his judgment, based on close attention to voice quality, voice pitch and the pronunciation of vowels and consonants, would have a value significantly greater than that of the ordinary untutored layman, as the judgment of a hand-writing expert is superior to that of the man in the street. Dr. Baldwin's reliance on the auditory technique must, on the evidence, be regarded as representing a minority view in his profession but he had reasons for his preference and on the facts of this case at least he was not shown to be wrong …"

d. *R v. Gilfoyle* [2001] 2 Cr. App. R. 5; (CA Crim Div);

   i. Para 25 (concluding that 'psychological autopsies' were not admissible as expert evidence):

   > "… there is no data base comparing real and questionable suicides and there is no substantial body of academic writing approving his methodology. … Fourthly, we very much doubt whether assessing levels of happiness or unhappiness is a task for an expert rather than jurors and none of the points which he makes about the "suicide" notes is outwith the experience of a jury."

e. In *R v. H* [2014] EWCA Crim 1555 the Court discussed the admissibility of expert evidence which amounted to comment on the credibility of the complainant.

f. *R v. Hodges (Kevin John)* [2003] EWCA Crim 290;

   i. Applying the *Bonython* test.

g. *Doughty v. Ely Magistrates' Court and the CPS* [2008] EWHC 522 (Admin);

   i. Applying the *Bonython* test.

   ii. Observations as to the distinction between weight and admissibility and competence:

   > "24 Whether the claimant is a good expert or not is neither here nor there. The quality of his report is neither here nor there. Whether he has overstepped the mark as regards the material deployed in his report is equally an irrelevant

question for present purposes. These matters are not a sufficient basis for having ruled the claimant to be simply not competent to give expert evidence at all."

h. *R v. Reed, Reed and Garmson* [2009] EWCA Crim 2698;

   i. Applying the *Bonython* test.

i. *R v. Dlugosz & Ors.* [2013] EWCA Crim 2, at paragraphs 11, 12 and 104, supported the position stated in *Reed*.

j. *R v. Broughton* [2010] EWCA Crim 549.

   i. Supporting the approach set out in *Reed*.

k. *R v. Hosie* [2017] NICA 9 supported the position in *Reed* but noted that the fact that expert evidence was not challenged did not prevent the judge from ruling it inadmissible.

l. *R v. Henderson & Ors.* [2010] EWCA Crim 1269;

   i. Applying the *Bonython* test.

   "206 … *Bonython* was cited by this court in *R v [Reed] & Ors* [2009] EWCA Crim 2698 [111(i)] with the qualification that it is important that the court acknowledges advances to be gained from new techniques and new advances in science. Reid is concerned with DNA evidence but the observations of the court in relation to the admissibility of expert evidence apply with equal force to cases concerning baby shaking as it applied to the developing science of DNA."

m. *Kennedy (Appellant) v. Cordia (Services) LLP (Scotland)* [2016] UKSC 6

   i. Applying the *Bonython* test but differentiating its application between evidence of fact and evidence of opinion.

n. Following *Kennedy* in the case of *PP v. The Home Office & Anor* [2017] EWHC 663 (QB), which is a civil case, the court noted the following requirements.

"It is clear from Kennedy at [44] that four particular considerations govern the admissibility of expert evidence. All four apply both to opinion evidence and to expert evidence of fact, where the expert witness draws on the knowledge and experience of others rather than or in addition to personal observation or its equivalent. In the case of the first consideration, the threshold for admissibility of opinion evidence is necessity. The four considerations are

i) whether the proposed expert evidence will assist the court in its task;

ii) whether the witness has the necessary knowledge and experience;

iii) whether the witness is impartial in his or her presentation and assessment of the evidence; and

iv) whether there is a reliable body of knowledge or experience to underpin the expert's evidence."

o. *R v. Weller* [2010] EWCA Crim 1085;

i. See para 7.8.2c herein for an example of a (DNA) case in which the court deprecated the use of an expert who relied solely on published papers without possessing the necessary practical experience and knowledge of relevant unpublished material – matters relevant in the case.

p. *R v. Cleobury* [2012] EWCA Crim 17:

i. The need for an expert to act only within his expertise is stressed.

"18. When an expert is asked to consider a case after a trial, it is essential that the expert presents his report as evidence within his sphere of expertise … If there are issues properly within the province of an expert, then the expert should write a report in relation to those issues."

ii. The expert was criticised for commenting on the judge's summing up at trial.

19. As we have noted … [C] also criticised the judge's summing up; we asked counsel, solicitors and [C] for an explanation of how the reports had come to contain these passages [C] as he stated in a letter written to the court, was in fact asked through the applicant's solicitors not only to report on the DNA evidence, but also "the way in which the judge referred to the DNA evidence in the summing up". He agreed to do so...

…

21. In his response to us [C] stated he had commented on the summing up as he was asked to do so and maintained that it was within his competence as a forensic scientist to comment on whether the summing up was consistent with the evidence given by the forensic scientists at trial. Although counsel should not have asked [C] to comment on the summing up in a report to be produced to the court and should have raised this with [C] once the draft had been produced, [C] was wrong in the view he expressed that he was entitled to make these comments. He should have known that he should not have done this …"

iii. The expert was also criticised for commenting on the importance of evidence. At paragraph 21;

"Nor should he have commented on the importance of the forensic evidence in the case."

q. *Pora v. R. (New Zealand)* [2015] UKPC 9.

i. The Judicial Committee of the Privy Council, similarly, drew a distinction between an expert's permissible analysis within his field of expertise (a clinical and forensic psychologist giving evidence on the reliability of a confession) and the expert's impermissible analysis of the evidence generally to support his hypothesis. At para 28, the Board stated that the expert:

" … conducts an extensive forensic review of the evidence assembled by police in the course of their investigations and refers to a number of matters which have no direct relevance to the question which it was legitimate for him to address, viz whether Pora was someone who might make a false confession because of some personality or psychological disorder. To take but two examples, he refers to Martha McLaughlin's mother contacting the police about Mr Pora's possible involvement in the murder and her later having admitted that she had falsely implicated him. He also refers to a detective having "dismissed Mr Pora as a suspect, citing false information and conspiracy by Mr Pora's aunties to implicate him". The Board considers that it is inappropriate for an expert witness to engage in this type of exercise."

ii. Where that type of analysis occurs, the report in its entirety is liable to be held to be inadmissible because the court cannot assess the extent to which the impermissible analysis taints the overall conclusion. (This case is also considered at para 7.14 below because the Board concluded that the expert, in addition, impermissibly opined on the ultimate issue of the reliability of the confession.) The Board said at para 34:

"… His conclusions depend on his overall consideration of the various aspects of the case that he has examined and the contribution which each of those has made to his decision cannot be safely identified. It is not possible to segregate those parts which are unobjectionable from passages which are not. The Board has concluded, therefore, that [the expert's] evidence cannot be admitted."

r. *R v. Clarke & Anor.* [2013] EWCA Crim 162 the court commented on the relevant expertise of witnesses.

"77. Secondly, we think that the judge was entitled to rule that Professor [F] did not have the expertise to give an opinion on the cause of death looking at the matter overall. The professor is distinguished in the field of osteoarticular pathology. He specialises in the process of fracture and the generalised disorders of bone known as metabolic bone disease. But he has never conducted a post-mortem when there is a suspicion that the cause of death is murder. Such post-mortems are reserved to Home Office pathologists precisely because they have higher qualifications such as the Diploma of Medical Jurisprudence and the experience of assisting with the post-mortems in suspected murder cases. In this very case the first post-mortem by Dr [C] had been abandoned because he suspected foul play and the post-mortem had been carried out by Dr Kolar, a Home Office pathologist. Professor [F] did not have the experience or expertise to consider all the possible causes of death apart from the fractures to the ribs in the way that Dr Kolar could in order to come to his overall conclusion that the cause of death was best regarded as "multiple injuries", where the likely mechanism for the multiple injuries was heavy punches or kicks."

7.2.13 When making an expert comparison, it is not sufficient for the expert to have expertise in but one of the fields relevant to the making of the comparison.

a. *R v. Barnes* [2005] EWCA Crim 1158;

"45. In all these cases, the making of the relevant comparison was itself treated as a matter to be undertaken by an appropriately qualified and skilled expert. Here, we are satisfied that Mr [M] has no experience or expertise in the relevant comparison; and indeed, as we have observed, Mr Kamlish does not put him forward as having this. Mr [M] does have expertise in identifying woodgrain in wood, including veneer, and also in doing so despite or making allowances for the presence of varnish. But he has no expertise in the interpretation of lifts, or in the identification of wood-grain on lifts. He himself said that he was relying on a fingerprint expert for an assumption that the striations in lift 6 reflected wood-grain. However, we are prepared to accept and to proceed on the basis that the striations which can be seen on lift 6 do derive from wood-grain. But the completeness and precision of the reflection depends on factors such as the quantity of powder and pressure used and the extent of any grease or other contaminants lifted. Mr [M] has no experience or expertise to enable him to judge the extent to which the striations which show on the lift are complete or do or may completely or precisely reflect the wood-grain evident on the door; we have already indicated why it appears that the striations are not and do not.

46. In those circumstances, we do not consider that any expert evidence that it is said that Mr [M] could give could afford any ground for regarding the jury's verdict as unsafe …"

7.2.14 So long as a field is sufficiently well-established to pass the ordinary tests of relevance and reliability, then no enhanced test of admissibility should be applied, but the weight of the evidence should be established by the same adversarial forensic techniques applicable elsewhere.

a. *R v. Dallagher* [2002] EWCA Crim 1903;

i. Para 29:

"… As is said in the current ninth edition of Cross and Tapper on Evidence at 523 after a reference to *Frye* —"The better, and now more widely accepted, view is that so long as the field is sufficiently well-established to pass the ordinary tests of relevance and reliability, then no enhanced test of admissibility should be applied, but the weight of the evidence should be established by the same adversarial forensic techniques applicable elsewhere. …"[37] [38]

b. *R v. Luttrell & Ors.* [2004] EWCA Crim 1344;

"37 Lip-reading evidence from a video, like facial mapping is, in our view, a species of real evidence (see per Steyn L.J. in *Clarke* at 429). Although at one time a more conservative approach had been adopted, the policy of the English courts has been to be flexible in admitting expert evidence and to enjoy "the advantages to be gained from new techniques and new advances in science": *Clarke* , at p.430. (It appears that there has been a similar trend elsewhere: see Cross and Tapper on Evidence (9th ed) p.523, but cf Ormerod, "Sounding out Expert Voice Identification" [2002] Crim. L.R. 771 at p.774, about the position in the USA) The preferred view, and in our judgment the proper view, is "that so long as a field is sufficiently well-established to pass the ordinary tests of relevance and reliability, then no enhanced test of admissibility should be applied, but the weight of the evidence should be established by the same adversarial forensic techniques applicable elsewhere": Cross and Tapper (*loc cit*)." [39]

c. In *Lundy v. The Queen (New Zealand)* [2013] UKPC 28 the approach to consideration of expert evidence was discussed.

"138 In R v J-L J [2000] 2 SCR 600 the Canadian Supreme Court endorsed the test formulated by the United States Supreme Court dealing with the approach to be taken to

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37 The quoted case of "Frye" refers to *Frye v. United States* 54 App. D. C. 46, 293 F. 1013.

38 The position set out in *Frye v United States* has been reconsidered in *Daubert v. Merrell Dow Pharmaceuticals* 509 U.S. 579 (1993).

39 The term "loc cit" indicates in the same, or earlier quoted, reference.

novel scientific theory or technique. At para 33 Binnie J referred approvingly to a number of factors which the US Supreme Court had listed in Daubert v Merrell Dow Pharmaceuticals Inc 509 U. S. 579 (1993) that could be helpful in evaluating the soundness of novel science. These were:

"(1) whether the theory or technique can be and has been tested:

Scientific methodology today is based on generating hypotheses and testing them to see if they can be falsified; indeed, this methodology is what distinguishes science from other fields of human inquiry.

(2) whether the theory or technique has been subjected to peer review and publication:

[S]ubmission to the scrutiny of the scientific community is a component of "good science," in part because it increases the likelihood that substantive flaws in methodology will be detected.

(3) the known or potential rate of error or the existence of standards; and,

(4) whether the theory or technique used has been generally accepted"

The Board considers that this list provides a useful template for the examination of the issue whether evidence based on a novel technique such as IHC (novel, at least, in the forensic setting of a criminal trial) should be admissible. But the debate as to whether the listed factors should operate to render inadmissible such evidence has not been engaged – at least, not to the extent that it can be resolved."

7.2.15 Where the field is not well established, the party seeking to rely on the evidence will have to establish that it should be admitted. In *Kennedy (Appellant) v. Cordia (Services) LLP (Respondent) (Scotland)* [2016] UKSC 6 the Court noted.

"55. In many cases where the subject matter of the proposed expert evidence is within a recognised scientific discipline, it will be easy for the court to be satisfied about the reliability of the relevant body of knowledge. There is more difficulty where the science or body of knowledge is not widely recognised. Walker and Walker [in The Law of Evidence in Scotland, 4th ed (2015)] at para 16.3.5 refer to an obiter dictum in Lord Eassie's opinion in *Mearns v Smedvig Ltd* 1999 SC 243 in support of their proposition that:

"A party seeking to lead a witness with purported knowledge or experience outwith generally recognised fields would need to set up by investigation and evidence not only the qualifications and expertise of the individual skilled witness, but the methodology and validity of that field of knowledge or science."

56. We agree with that proposition, which is supported in Scotland and in other jurisdictions by the court's refusal to accept the evidence of an expert whose methodology is not based on any established body of knowledge."

7.2.16 There is clearly a link between this requirement and the requirements of CrimPR 19.4 discussed at 8.12 below.

Expert Evidence of Fact

7.2.17 In *Kennedy (Appellant) v. Cordia (Services) LLP (Scotland)* [2016] UKSC 6 the Supreme Court discussed expert evidence of fact and the threshold test for its admissibility in the following terms.

"39. Skilled witnesses, unlike other witnesses, can give evidence of their opinions to assist the court. This gives rise to threshold questions of the admissibility of expert evidence. An example of opinion evidence is whether Miss Kennedy would have been less likely to fall if she had been wearing anti-slip attachments on her footwear.

40. Experts can and often do give evidence of fact as well as opinion evidence. A skilled witness, like any non-expert witness, can give evidence of what he or she has observed if it is relevant to a fact in issue. An example of such evidence in this case is Mr Greasly's evidence of the slope of the pavement on which Miss Kennedy lost her footing. There are no special rules governing the admissibility of such factual evidence from a skilled witness.

41. Unlike other witnesses, a skilled witness may also give evidence based on his or her knowledge and experience of a subject matter, drawing on the work of others, such as the findings of published research or the pooled knowledge of a team of people with whom he or she works. Such evidence also gives rise to threshold questions of admissibility, and the special rules that govern the admissibility of expert opinion evidence also cover such expert evidence of fact. There are many examples of skilled witnesses giving evidence of fact of that nature. Thus Dickson on Evidence, Grierson's ed (1887) at section 397 referred to Gibson v Pollock (1848) 11 D 343, a case in which the court admitted evidence of practice in dog coursing to determine whether the owner or nominator of a dog was entitled to a prize on its success. Similarly, when an engineer describes how a machine is configured and works or how a motorway is built, he is giving skilled evidence of factual matters, in which he or she draws on knowledge that is not derived solely from personal observation or its equivalent. An expert in the social and political conditions in a foreign country who gives evidence to an immigration judge also gives skilled evidence of fact."

7.2.18 Considering the admissibility of such expert evidence of fact, the Court explained that the test for admissibility cannot be one of strict necessity. Rather, the test is whether the 'skilled evidence of fact' would be likely to assist the court.

"46. Most of the Scottish case law on, and academic discussion of, expert evidence has focused on opinion evidence to the exclusion of skilled evidence of fact. In our view, the test for the admissibility of the latter form of evidence cannot be strict necessity as, otherwise, the court

could be deprived of the benefit of a skilled witness who collates and presents to the court in an efficient manner the knowledge of others in his or her field of expertise. There may be circumstances in which a court could determine a fact in issue without an expert collation of relevant facts if the parties called many factual witnesses at great expense and thus a strict necessity test would not be met. In Daubert v Merrell Dow Pharmaceuticals Inc (1993) 509 US 579, the United States Supreme Court referred to rule 702 of the Federal Rules of Evidence, which in our view is consistent with the approach of Scots law in relation to skilled evidence of fact. The rule, which Justice Blackmun quoted at p 588, states:

"If scientific, technical or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise."

47. The advantage of the formula in this rule is that it avoids an over-rigid interpretation of necessity, where a skilled witness is put forward to present relevant factual evidence in an efficient manner rather than to give an opinion explaining the factual evidence of others. If skilled evidence of fact would be likely to assist the efficient determination of the case, the judge should admit it."

7.2.19 *Kennedy* is a Scottish civil case. So there is a question as to whether this approach will be applied in criminal courts in England and Wales. There are, however, cases in which there are indications that this approach has already been applied.

a. *R v. Gardner* [2004] EWCA Crim 1639
b. *R v. Atkins and Atkins* [2009] EWCA Crim 1876.

7.3 Law Commission

7.3.1 In 2009 The Law Commission published "Consultation Paper No 190" entitled "The Admissibility of Expert Evidence in Criminal Proceedings in England and Wales: A New Approach to the Determination of Evidentiary Reliability".

7.3.2 In March 2011 the Commission published its report "Expert Evidence in Criminal Proceedings in England and Wales" [4].

7.3.3 HM Government published a response to the report [5]. Following this publication the Criminal Procedure Rules Committee agreed amendments, in

the 2014 edition of CrimPR, to address a number of the issue raised by the Commission. [40]

7.3.4 The alterations to the Criminal Procedure Rules were supported by changes to the Criminal Practice Directions.

7.4 Accreditation

General

7.4.1 There is no general legal requirement for an organisation, or individual, to be accredited to any national, or international, standard before results they generate are admissible as evidence.

7.4.2 The lack of accreditation, in an area where such accreditation might be expected, could contribute to material being ruled inadmissible upon consideration of the requirement for reliability (see paragraph 7.1).

7.4.3 Lack of accreditation could also have an impact on the weight which is attached to evidence. Lack of accreditation has been noted by the courts (see *R v. Reed & Ors.* [2009] EWCA Crim 2698 at paragraph 105).

7.4.4 Accreditation may be preferred or specified by those instructing the expert. See the discussion on quality standards at 7.5 below.

7.4.5 Accreditation may be a relevant matter when considering the reliability of the evidence. See 8.12 below.

Fingerprints and DNA

7.4.6 The European Union has adopted Council Framework Decision 2009/905/JHA on the accreditation of forensic service providers carrying out laboratory activities. This requires that laboratories providing DNA analysis services to the CJS be accredited to ISO 17025 [6 by December 2013. Fingerprint laboratories, providing services to the CJS, must be similarly accredited by December 2015.

7.4.7 The UK indicated its intention not to be bound by the provisions of this Decision [7. It subsequently opted-out of the provisions.

[40] The 2014 version of the CrimPR has now been superseded.

7.4.8 HM Government applied to join the Prüm Decisions and, as part of that process, rejoined the Framework Decision. By Commission Decision (EU) 2016/809 of 20 May 2016 the EU agreed to the application and, as a consequence, the provisions applied to the UK from May 2016.

7.4.9 HM Government is likely to transpose the provisions of the Framework Decision into domestic legislation.

7.5 Quality Standards

7.5.1 There is no specific legal requirement for work to have been completed in adherence to a given standard to be admissible as evidence. However, the general requirements for relevance and reliability have the effect of requiring the work to be done to appropriate quality standards. This can be seen in a number of judgments discussed in this document, the work of the Law Commission and the 2014 changes to the Criminal Practice Directions.

7.5.2 In the Scottish case of *Thomas Ross Young v. HM Advocate* [2013] ScotHC HCJAC 145 the Court, at paragraph 57 of the judgment, noted that the lack of agreed national or international standards for the type of evidence was a factor in deciding whether to admit the evidence.

7.5.3 In the case of *R v. McClenaghan* [unreported] the defence maintained that the quality standards appropriate to the work required accreditation to ISO 17025 [6] and, as a result, extensively cross examined the witness as to compliance with the provisions of that standards and the laboratory's quality processes. The issue of maintenance of appropriate standards was also noted by the appellate court.

7.5.4 The failure to comply with expected quality standards would be a matter which should be disclosed under the requirements of the CrimPR and Criminal Practice Directions. This is discussed sections 8.10 and 8.12. [41]

[41] References to the Criminal Practice Directions (Practice Direction (CA(Crim Div); Criminal Proceedings: General Matters) [2015] EWCA Crim 1567) should be taken to refer to the Directions as amended by the Criminal Practice Directions 2015 Amendment No. 1 [2016] EWCA Crim 97, the Criminal Practice Directions 2015 (Amendment No.2) [2016] EWCA Crim 1714, the Criminal Practice Directions 2015 (Amendment No.3) [2017] EWCA Crim 30, the Criminal Practice Directions 2015 (Amendment No.4) [2017] EWCA Crim 310, the Practice Direction ((CA Crim Div): Criminal Practice

7.6 Validation

7.6.1 In *R v. Hoey* [2007] NICC 49 validation was described, in paragraph 62, as follows.

> ""Validation" is defined in those guidelines as "the process whereby the scientific community acquires the necessary information to:
>
> - Assess the ability of a procedure to obtain reliable results.
> - Determine the conditions under which such results can be obtained.
> - Define the limitations of the procedure.
>
> The validation process identifies aspects of a procedure that are critical and must be carefully controlled and monitored."

7.6.2 This appears to have been a quote from the Scientific Working Group on DNA Analysis Methods – a US based body. It was also quoted in *R v. Duffy and Shivers* [2011] NICC 37. If it is read to mean that those undertaking the validation exercise acquire the information set out through the validation (and that this information would allow suitably qualified persons to assess the performance of the method), then this is a definition the Regulator can endorse. If the wording is interpreted as requiring the achievement of acceptance in the general scientific community, then the definition is less supportable as wider acceptance only occurs over time. The imposition of such a requirement could delay the availability of new methods to the CJS which is not supported by a number of judgments (see Parts 7.10 and 7.13 herein).

7.6.3 In *Hoey* the need for a clear protocol for validation was highlighted – see paragraph 64.

7.6.4 The requirements for validation are set out at Part 20 of the Codes of Practice and Conduct [8 and further discussed in guidance [9.

7.6.5 There is no legal requirement for a technique to be validated before results generated by it are admissible as evidence.

a. *R v. Harris & Ors.* [2005] EWCA Crim 1980;

Directions 2015: Amendment No.5) [2017] EWCA Crim 1076 and the Criminal Practice Directions 2015 Amendment No. 6 [2018] EWCA Crim 516.

> "270 … There is no single test which can provide a threshold for admissibility in all cases. As *Clarke* demonstrates developments in scientific thinking and techniques should not be kept from the Court. Further, in our judgment, developments in scientific thinking should not be kept from the Court, simply because they remain at the stage of a hypothesis. Obviously, it is of the first importance that the true status of the expert's evidence is frankly indicated to the court."

b. *R v. Reed & Ors.* [2009] EWCA Crim 2698; -Thomas LJ;

> "73 The Forensic Science Regulator … also made clear that he did not consider validation a necessary pre-condition for the admission of scientific evidence, provided the obligations under Rule 33.3(1) of the Criminal Procedure Rules were followed. In the light of the issues that emerged in these appeals and considerations set out in the next paragraph and paragraphs 111 and following, we see much force in that view". [42] [43]

7.6.6 The lack of validation could contribute to proposed evidence being ruled inadmissible upon consideration of the requirement for reliability (see paragraph 7.1).

7.6.7 Alternatively the lack of validation could affect the manner in which the court evaluates the evidence. In *Lundy v. The Queen (New Zealand)* [2013] UKPC 28 the Privy Council made the following comments.

> "81 It is important not to assume that well established techniques which are traditionally deployed for the purpose of diagnosis can be transported, without modification or further verification, to the forensic arena where the use to which scientific evidence is put is quite different from that involved in making a clinical judgment. Put simply, evidence that can properly be used to reach a confident medical verdict may not measure up to the more stringent requirements that arise in the setting of a criminal trial. While, of course, it is not always required that an individual item of scientific evidence proffered in support of a specific proposition will establish its correctness beyond reasonable doubt, the overall context in which scientific evidence adduced by the prosecution is presented is that it should constitute part of a case that will prove to the criminal standard the guilt of the accused.
>
> 82 Scientific proof such as fingerprint or DNA evidence is customarily given against the background of its having been theoretically tested in, if not laboratory conditions, at least empirical survey. The novelty of using, in a criminal trial, the type of evidence offered by Dr [M], especially when its reliability has not been subjected to such laboratory or empirical research,

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42 Part 33 of the Rules in effect before 2015 became Part 19 in the 2015 issue of the Rules.

43 The Regulator views validation of methods prior to use within the Criminal Justice System as a key feature of any quality system and an important safeguard. However, it is recognised there may be cases where, exceptionally, non-validated methods may be employed. In such cases the status of the method must be made clear.

does not necessarily make it inadmissible but it prompts caution as to its role in establishing guilt beyond reasonable doubt."

7.6.8 Where a technique/method is not validated the limitations in the technique should be made clear to the court (see Part 8 herein).

7.6.9 As noted in Part 8.12 the 2014 version of the CrimPR introduced a requirement, preserved in the 2015 version, for the witness to provide information relevant to the reliability of the evidence. Clearly the extent of validation will be relevant information.

7.7 Registration

7.7.1 There is no general requirement for an organisation, or individual, to be registered with any body before results they generate are admissible as evidence.

7.7.2 In certain areas there may be a registration requirement as a result of the work being undertaken (e.g. medical practitioners may need to be registered with the General Medical Council). This is, however, not a precondition to the admissibility of evidence, although it may have an indirect bearing on admissibility in so far as it is relevant to the court's evaluation of whether the expert has sufficient knowledge and experience of the field in question to render his opinion of value (see para 7.2.7 herein).

7.8 Work of Others Admissible in Informing Opinion on Primary Facts

7.8.1 The primary facts which form the basis of the expert's opinion (such as the assessment of the characteristics of a particular exhibit in the case) must be proved by admissible evidence, either as matters within the expert's personal knowledge or through evidence, independently proved in the proceedings, of the personal knowledge of others.

7.8.2 However, in evaluating the significance of the proven primary facts, the expert should consider any bank of relevant information available in his field of expertise (such as statistical information) and may take it into account (without the need for it to be independently proved) in forming his opinion. Where he does so, the expert should refer to the material in his evidence.

a. *R v. Abadom (Steven)* [1983] 1 W.L.R. 126; [1983] 1 All E.R. 364; (1983) 76 Cr. App. R. 48; [1983] Crim. L.R. 254 (CA Crim Div):

i. [1983] 1 W.L.R. 126 at p.129-132:

"… In the context of evidence given by experts it is no more than a statement of the obvious that, in reaching their conclusion, they must be entitled to draw upon material produced by others in the field in which their expertise lies. Indeed, it is part of their duty to consider any material which may be available in their field, and not to draw conclusions merely on the basis of their own experience, which is inevitably likely to be more limited than the general body of information which may be available to them. Further, when an expert has to consider the likelihood or unlikelihood of some occurrence or factual association in reaching his conclusion, as must often be necessary, the statistical results of the work of others in the same field must inevitably form an important ingredient in the cogency or probative value of his own conclusion in the particular case. Relative probabilities improbabilities must frequently be an important factor in the evaluation of any expert opinion and, when any reliable statistical material is available which bears upon this question, it must be part of the function and duty of the expert to take this into account.

However, it is also inherent in the nature of any statistical information that it will result from the work of others in the same field, whether or not the expert in question will himself have contributed to the bank of information available on the particular topic on which he is called upon to express his opinion. Indeed, to exclude reliance upon such information on the ground that it is inadmissible under the hearsay rule, might inevitably lead to the distortion or unreliability of the opinion which the expert presents for evaluation by a judge or jury. Thus, in the present case, the probative value or otherwise of the identity of the refractive index as between the fragments and the control sample could not be assessed without some further information about the frequency of its occurrence. If all glass of the type in question had the same refractive index, this evidence would have virtually no probative value whatever. The extent to which this refractive index is common or uncommon must therefore be something which an expert must be entitled to take into account, and indeed must take into account, before he can properly express an opinion about the likelihood or unlikelihood of the fragments of glass having come from the window in question. The cogency or otherwise of the expert's conclusion on this point, in the light of, inter alia, the available statistical material against which this conclusion falls to be tested, must then be a matter for the jury.

We therefore consider that Mr. Cooke's reliance on the statistical information collated by the Home Office Central Research Establishment, before arriving at his

conclusion about the likely relationship between the fragments of glass and the control sample, was not only permissible in principle, but that it was an essential part of his function as an expert witness to take account of this material.

… where an expert relies on the existence or non-existence of some fact which is basic to the question on which he is asked to express his opinion, that fact must be proved by admissible evidence: see *English Exporters (London) Ltd. v. Eldonwall Ltd.* [1973] Ch. 415, 421E per Megarry J. and *Reg. v. Turner (Terence)* [1957] Q.B. 834, 840B. Thus, it would no doubt have been inadmissible if Mr. Cooke had said in the present case that he had been told by somebody else that the refractive index of the fragments of glass and of the control sample was identical, and any opinion expressed by him on this basis would then have been based on hearsay. If he had not himself determined the refractive index, it would have been necessary to call the person who had done so before Mr. Cooke could have expressed any opinion based on this determination. … Secondly, where the existence or non-existence of some fact is in issue, a report made by an expert who is not called as a witness is not admissible as evidence of that fact merely by the production of the report, even though it was made by an expert: see for instance *Reg. v. Crayden* [1978] 1 W.L.R. 604607C.

These, however, are in our judgment the limits of the hearsay rule in relation to evidence of opinion given by experts, both in principle and on the authorities. In other respects their evidence is not subject to the rule against hearsay in the same way as that of witnesses of fact: see *English Exporters v. Eldonwall* [1973] Ch. 415, 420D and Phipson on Evidence, 12th ed. (1976), para. 1207. 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."

b. *R v. Terry Paul Jackson* [1996] 2 Cr. App. R. 420; [1996] Crim. L.R. 732; Times, May 21, 1996; [1996] EWCA Crim 414;

i. at p.424:

"… As a sole contribution to the scientific expertise relied upon by the Crown, the statement was prima facie fatally flawed. The point taken by Mr Hart in reliance on *Abadom* is well founded, as the Crown immediately recognised. Here the primary facts upon which Mr Whittaker's opinion was based were not proved by him: he had no personal knowledge of such and his expertise could not extend to establishing their existence. *Per contra*, in *Abadom* the primary facts were proved

by the expert and thereafter he was entitled (so it was held) to draw on the work of others as part of the process of arriving at this conclusion. …" [44]

c. *R v. Weller* [2010] EWCA Crim 1085; - Thomas LJ considered the use of unpublished reports etc.;

"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 [B]. But the real problem was that Dr [B] 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 [B] 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 [B], but we do hope that the courts

[44] The term "per contra" means on the contrary.

> 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. "

7.8.3 The position in *Weller* was supported in *R v. Thomas* [2011] EWCA Crim 1295. The Court suggested a need for the expert to be familiar with the unpublished work and should provide sufficient information for the defence to appreciate its significance.

> "38 … The difficulty about the simulation experiments in this case is not that they were unpublished but that Miss [C] seems to have known virtually nothing about them beyond the bare statement in the FSS manual that "Unpublished simulation experiments have shown that it is rare to observe all twenty alleles by chance". Taken by itself, that would provide an extremely thin basis for Miss [C]'s statement of opinion about the significance of the DNA results; and there is the added concern that, in the absence of any further information about the simulation experiments, the defence expert had no way of assessing their significance. Ultimately, however, it seems that Miss [C] based her opinion not just on the simulation experiments but on her own lengthy experience as a forensic scientist, which she said supported the findings of the experiments and agreed with the conclusion drawn from them; and in so far as she based herself on her own experience, she was plainly entitled to do so."

7.8.4 Section 127 Criminal Justice Act 2003 facilitates experts' relying on statements made by others in their evidence. It is important to note that the term 'statement' has the meaning given by s115 Criminal Justice Act 2003 which is wider than the normal interpretation within the CJS. [45]

7.9 Bayesian Statistics

7.9.1 The use of Bayesian Statistics been considered on a number of occasions. [46]

7.9.2 Bayesian analysis should not be applied to attach mathematical values to probabilities arising from non-scientific evidence adduced at the trial:

a. *R v. Adams (Dennis)* [1996] 2 Cr. App. R. 467; [1996] Crim. L.R. 898; Times, May 9, 1996; [1996] EWCA Crim 222;

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45 The definition is "A statement is any representation of fact or opinion made by a person by whatever means; and it includes a representation made in a sketch, photofit or other pictorial form".

46 Useful guidance on statistics in the Criminal Justice System is provided by the Royal Statistical Society [10-12].

i. Strong but not concluded view that Bayesian analysis should play no part in a jury trial. [1996] 2 Cr. App. R. 467 at p.481-483:

"It seems to us that the difficulties which arise in the present case stem from the fact that, at trial, the defence were permitted to lead before the jury evidence of the Bayes Theorem. No objection was taken by the prosecution. No argument on this point has been addressed to this Court. It would therefore be inappropriate for us to express a concluded view on the matter. But we have very grave doubt as to whether that evidence was properly admissible, because it trespasses on an area peculiarly and exclusively within the province of the jury, namely the way in which they evaluate the relationship between one piece of evidence and another. The Bayes Theorem may be an appropriate and useful tool for statisticians and other experts seeking to establish a mathematical assessment of probability. Even then, however, as the extracts from Professor Donnelly's evidence cited above demonstrate, the theorem can only operate by giving to each separate piece of evidence a numerical percentage representing the ratio between probability of circumstance A and the probability of circumstance B granted the existence of that evidence. The percentages chosen are matters of judgment: that is inevitable. But the apparently objective numerical figures used in the theorem may conceal the element of judgment on which it entirely depends. More importantly for present purposes, however, whatever the merits or demerits of the Bayes Theorem in mathematical or statistical assessments of probability, it seems to us that it is not appropriate for use in jury trials, or as a means to assist the jury in their task. In the first place, the theorem's methodology requires, as we have described, that items of evidence be assessed separately according to their bearing on the accused's guilt, before being combined in the overall formula. That in our view is far too rigid an approach to evidence of the type that a jury characteristically has to assess, where the cogency of (for instance) identification evidence may have to be assessed, at least in part, in the light of the strength of the chain of evidence in which it forms part. More fundamentally, however, the attempt to determine guilt or innocence on the basis of a mathematical formula, applied to each separate piece of evidence, is simply inappropriate to the jury's task. Jurors evaluate evidence and reach a conclusion not by means of a formula, mathematical or otherwise, but by the joint application of their individual common sense and knowledge of the world to the evidence before them. It is common for them to have to evaluate scientific evidence, both as to its quality and as to its relationship with other evidence. Scientific evidence tendered as proof of a particular fact may establish that fact to an extent which, in any particular case, may vary between slight possibility and virtual certainty. For example, different blood spots on an accused's clothing may, on testing, reveal a range of conclusions from "human blood" via "possibly the

victim's blood" to "highly likely to be the victim's blood". Such evidence is susceptible to challenge as to methodology and otherwise, which may weaken or even, in some cases, strengthen the impact of the evidence. But we have never heard it suggested that a jury should consider the relationship between such scientific evidence and other evidence by reference to probability formulas. That such a course would in any event be impossible of sensible achievement by a jury, at least so far as the use of the Bayes Theorem is concerned, is demonstrated by the practical application of the stage of that theorem's methodology that involves numerical assessment of the various items of evidence. Individual jurors might differ greatly not only according to how cogent they found a particular piece of evidence (which would be a matter for discussion and debate between the jury as a whole), but also on the question of what percentage figure for probability should be placed on that evidence. Since, as we have pointed out, the translation of an assessment of cogency into a percentage probability of guilt is entirely a matter of judgment and the conferring of a percentage probability of guilt upon one item of evidence taken in isolation is an essentially artificial operation, different jurors might well wish to select different numerical figures even when they were broadly agreed on the weight of the evidence in question. They could, presumably, only resolve any such difference by taking an average, which would truly reflect neither party's view; and this point leaves aside the even greater difficulty of how 12 jurors, applying Bayes as a single jury, are to reconcile, under the mathematics of that formula, differing individual views about the cogency of particular pieces of evidence. Quite apart from these general objections, as the present case graphically demonstrates, to introduce Bayes Theorem, or any similar method, into a criminal trial plunges the jury into inappropriate and unnecessary realms of theory and complexity deflecting them from their proper task."

b. *R v. Doheny & Adams* [1997] 1 Cr. App. R. 369; (CA Crim Div);

   i. Endorsing *R v. Adams (Dennis)* [1996] 2 Cr. App. R. 467.

c. *R v. Adams (Denis John) (No.2)* [1998] 1 Cr. App. R. 377; Times, November 3, 1997; [1997] EWCA Crim 2474 ;

   i. Bayesian analysis should not be applied to attach mathematical values to probabilities arising from non-scientific evidence adduced at the trial. (This suggests the possibility at least that a different approach may apply where the context is scientific evidence and the case has special features.) Here the context was the defence

adducing such evidence in response of statistical DNA evidence relied upon by the Crown. At p.385-386:

"In the light of the previous rulings on this matter in this Court, and having had the opportunity of considering the evidence in this case, we regard the reliance on evidence of this kind in such cases as a recipe for confusion, misunderstanding and misjudgment, possibly even among counsel, but very probably among judges and, as we conclude, almost certainly among jurors. It would seem to us that this was a case properly approached by the jury along conventional lines. That would involve them perhaps in asking themselves at the outset whether they accepted wholly or in part the DNA evidence called by the Crown. If the answer to that was "no", or uncertainty as to whether the answer was "yes" or "no", then that would be the end of the case. If, however, the jury concluded that they did accept the DNA evidence wholly or in part called by the Crown, then they would have to ask themselves whether they were satisfied that only X white European men in the United Kingdom would have a DNA profile matching that of the rapist who left the crime stain. It would be a matter for the jury, having heard the evidence, to give a value to X. They would then have to ask themselves whether they were satisfied that the defendant in question was one of those men. They would then go on to ask themselves whether they were satisfied that the defendant was the man who left the crime stain, bearing in mind on the facts of this case the obvious discrepancies between the victim's description of her assailant and the appearance of the appellant, the victim's failure to identify the appellant on the identification parade and the evidence of the appellant and the witnesses called by him. Consideration of this last question would of course involve the jury in assessing all the points made concerning the victim's opportunity to see her assailant, the likelihood of her description being accurate or inaccurate in all the circumstances, the significance of her failure to identify the appellant, the strength and weakness of the evidence given by the appellant and his witnesses, and all other matters relied on by the defence. Of course, it is a matter for the jury how they set about their task, and it is no part of this Court's function to prescribe the course which their deliberations should take. But consideration of this case along the lines indicated would in our judgment reflect a normal course for a properly instructed jury to adopt. It is the sort of task which juries perform every day, carefully and conscientiously, on the evidence, as they are sworn to do. We do not consider that they will be assisted in their task by reference to a very complex approach which they are unlikely to understand fully and even more unlikely to apply accurately, which we judge to be likely to confuse them and distract them from their consideration of the real questions on which they should seek to reach a unanimous conclusion. We are very clearly of opinion that in cases such as this,

lacking special features absent here, expert evidence should not be admitted to induce juries to attach mathematical values to probabilities arising from non-scientific evidence adduced at the trial."

7.9.3 In *R v. T* [2010] EWCA Crim 2439 the Court, on the basis of the cases above, stated:

"46. … It was submitted to the court the approach adopted was a Bayesian analysis which this court had robustly rejected for non-DNA evidence in a number of cases: *R. v Adams (Denis)* [1996] 2 Cr. App. R. 467 ; *R. v Adams (Denis) (No.2)* [1998] 1 Cr. App. R. 377 ; *R. v Doheny* [1997] 1 Cr. App. R. 369.

…

90. It is quite clear therefore that outside the field of DNA (and possibly other areas where there is a firm statistical base), this court has made it clear that Bayes theorem and likelihood ratios should not be used."

7.9.4 The former quotation should be read in the light of the latter. The Court accepted that, both on the authorities and on its own analysis, there was a place for a Bayesian or similar statistical analysis for determining evidential weight in appropriate cases. See para 7.9.6 below.

7.9.5 In *T* the Court was dealing specifically with footwear evidence (and made clear that it's judgment was restricted to that field) but made a number of more general comments about the use of mathematical models.

"76. We therefore turn to whether in the present state of knowledge it is permissible to use mathematical formulae and likelihood ratios based on statistics to arrive at that evaluative opinion in footwear make cases. We do not agree with the observations of the Regulator that a similar approach is justified in all areas of forensic expertise. Each area requires a separate analysis because of the differences that there are in the nature of the underlying data.

…

80. We cannot agree with this in so far as it suggests that a mathematical formula can be used. An approach based on mathematical calculations is only as good as the reliability of the data used. The acceptance of a mathematical approach to the calculation of a match probability in DNA cases is based on the reliability of the statistical database, though an element of judgment is required. It is therefore necessary to examine the evidence on the reliability of the data in relation to footwear.

…

86. In accordance with the approach to expert evidence we have set out at paragraph 70, we have concluded that there is not a sufficiently reliable basis for an expert to be able to express an opinion based on the use of a mathematical formula. There are no sufficiently reliable data on which an assessment based on data can properly be made for the reasons we have given. An attempt to assess the degrees of probability where footwear could have made a mark based on figures relating to distribution is inherently unreliable and gives rise to a verisimilitude of mathematical probability based on data where it is not possible to build that data in a way that enables this to be done; none in truth exists for the reasons we have explained. We are satisfied that in the area of footwear evidence, no attempt can realistically be made in the generality of cases to use a formula to calculate the probabilities. The practice has no sound basis.

87. … it cannot be right to seek to achieve objectivity by reliance on data which does not enable this to be done. We entirely understand the desire of the experts to try and achieve the objectivity in relation to evidence of footwear marks ….

…

90. It is quite clear therefore that outside the field of DNA (and possibly other areas where there is a firm statistical base), this court has made it clear that Bayes theorem and likelihood ratios should not be used …"

7.9.6 The general guidance to be derived from *T* on the principles and procedures to be applied in determining whether a Bayesian or similar statistical analysis or, alternatively, an evaluative approach may be deployed by an expert may be summarised as follows:

a. A Bayesian or similar statistical analysis for determining evidential weight is not legitimate unless there is a proper statistical basis. That requires reliable data. On one end of the scale is DNA data which is distinguished both by the fact that there is a solid statistical basis and that it relates to unchangeable characteristics. On the other end of the scale is the present state of the FSS's footwear database for which there are too many uncertainties and variables in the data.

b. (See esp. paras 78-87.)

   i. On the evidence before the Court, the FSS's footwear database represented footwear that came into the FSS laboratories rather than footwear for the population as a whole [para 42]; it omits data relating to notable producers of footwear [para 81]; it represents a small proportion of footwear sold annually [para 84]; there are variables

such as fashion, counterfeiting, distribution, and local availability which are not presently statistically measured [para 82]; the data changes rapidly [para 83].

ii. Note also the doubt expressed as to whether there was a sufficient database for a Bayesian or similar statistical analysis for determining evidential weight in the case of firearm discharge residue analysis, notwithstanding the observations in *R v. George* [2007] EWCA Crim 2722.

c. However, where a Bayesian or similar statistical analysis for determining evidential weight is not legitimate, the expert may nonetheless go beyond the expression of opinion based on "identifying characteristics" as to whether the particular footwear made the particular mark. He may, in an appropriate case where there is some other sufficiently reliable basis for its admission, make an "evaluative" assessment as to whether the footwear in question "could have made" the mark in question based solely on "class characteristics", for example the fact that the footwear was of an unusual size or pattern.

d. (See esp. paras 71-76 and 92.)

e. Where he does so;

i. No likelihood ratios or other mathematical formula should be used; and

ii. The opinion should be phrased to suggest that the mark "could have been made" by the footwear without the expert using the word "scientific".

iii. (See paras 92-96. See also para 8.24 herein below for further discussion of the use of the phrase "could have been made")

f. Where the expert seeks to adopt a Bayesian or similar statistical analysis for determining evidential weight or to express an evaluative opinion;

i. It is important that the expert complies with Part 19 CrimPR;

ii. The report should be balanced, clear, logical and transparent, setting out the factors which permit a more definitive evaluative opinion, including any data on which reliance is placed; and

iii. A pre-trial hearing may be employed to consider the report and make directions for the resolution of any challenge to the reliability of the basis for which an evaluative opinion is being given.

iv. (See paras 97 to 102).

7.9.7 The CPS has published guidance, dated 15 November 2010, on the impact of the case.

7.9.8 It is important to note that there are aspects of what may be seen as a Bayesian approach which are not criticised in *T*.

a. The adoption of a logical approach to the assessment of evidence.

b. The identification of two competing propositions.

i. The use of propositions has, after *T*, been discussed by the Court of Appeal in *R v. Otway* [2011] EWCA Crim 3. The use of such propositions was not in issue and was not subject to detailed argument. However, the Court did not criticise the approach.

c. An assessment of the probability of the evidence arising in the two propositions.

d. The conversion of that likelihood ratio into a statement of evidential weight – perhaps using a verbal scale of evidence.

i. See the discussion at para. 7.11 below.

7.9.9 The decision in *R v. T* has led to significant debate in both legal and scientific literature [13-15].

7.10 Future Research and Developing Areas

7.10.1 Expert opinions relating to fresh scientific developments are admissible provided that they have a proper foundation.

a. *R v. Clarke (RL)* [1995] 2 Cr. App. R. 425; Times, December 26, 1994; Independent, January 30, 1995 (CA Crim Div);

i. Commending the trial judge's comment;

> "One should not set one's face against fresh developments, provided they have a proper foundation …"";

ii. And approving his decision to admit evidence of facial mapping by video superimposition.

7.10.2 The possibility that future research may undermine the current accepted expert view does not normally provide a basis for rejecting the expert evidence:

a. *R v. Cannings* [2004] EWCA Crim 1;

i. Para 178:

> "Experts in many fields will acknowledge the possibility that later research may undermine the accepted wisdom of today. "Never say never" is a phrase which we have heard in many different contexts from expert witnesses. That does not normally provide a basis for rejecting the expert evidence, or indeed for conjuring up fanciful doubts about the possible impact of later research. …"

7.10.3 The need for caution when evaluating novel forms of evidence was highlighted in *Lundy v. The Queen (New Zealand)* [2013] UKPC 28. See the discussion in 7.6.7.

7.10.4 In the context of the developing area of unexplained infant deaths:

a. In a case founded solely on the basis of inferences drawn from coincidences (of multiple deaths within the same family), where a body of expert opinion concludes that natural causes, whether explained or unexplained, cannot be excluded as a reasonable (and not a fanciful) possibility, the prosecution of a parent or parents for murder should not be started, or continued, unless there is additional cogent evidence, extraneous to the expert evidence pointing to deliberate harm.

b. In a case involving a straightforward conflict of evidence between experts (and not founded solely on the basis of inferences drawn from coincidences), there is no such need.

i. *R v. Cannings* [2004] EWCA Crim 1 at para 178;

> "… With unexplained infant deaths, however, as this judgment has demonstrated, in many important respects we are still at the frontiers of knowledge. Necessarily, further research is needed, and fortunately, thanks to the dedication of the medical profession, it is continuing. All this suggests that, for the time being, where a full investigation into two or more sudden unexplained infant deaths in the same family is followed by a serious disagreement between reputable experts about the cause of death, and a body of such expert opinion concludes that natural causes, whether

explained or unexplained, cannot be excluded as a reasonable (and not a fanciful) possibility, the prosecution of a parent or parents for murder should not be started, or continued, unless there is additional cogent evidence, extraneous to the expert evidence, (such as we have exemplified in para 10) which tends to support the conclusion that the infant, or where there is more than one death, one of the infants, was deliberately harmed. In cases like the present, if the outcome of the trial depends exclusively or almost exclusively on a serious disagreement between distinguished and reputable experts, it will often be unwise, and therefore unsafe, to proceed."

ii. *R v. Kai-Whitewind* [2005] EWCA Crim 1092;

"84 In reality, the problem with the argument based on reading para.178 of *Cannings* outside its context is that, carried to its logical conclusion, the submission would mean that whenever there is a conflict between expert witnesses the case for the prosecution must fail unless the conviction is justified by evidence independent of the expert witnesses. Put another way, the logical conclusion of what we shall describe as the overblown *Cannings* argument is that, where there is a conflict of opinion between reputable experts, the expert evidence called by the Crown is automatically neutralised. That is a startling proposition, and it is not sustained by *Cannings*.

85 In *Cannings* there was essentially no evidence beyond the inferences based on coincidence which the experts for the Crown were prepared to draw. Other reputable experts in the same specialist field took a different view about the inferences, if any, which could or should be drawn. Hence the need for additional cogent evidence. With additional evidence, the jury would have been in a position to evaluate the respective arguments and counter-arguments: without it, in cases like *Cannings*, they would not.

…

89 In the context of disputed expert evidence, on analysis, what was required in this case was no different from that which obtains, for example, when pathologists disagree about the cause of death in a case of alleged strangulation. … Evidence of this kind must be dealt with in accordance with the usual principle that it is for the jury to decide between the experts, by reference to all the available evidence, and that it is open to the jury to accept or reject the evidence of the experts on either side."

iii. *R v. Henderson & Ors.* [2010] EWCA Crim 1269;

"2. … If a conviction is to be based merely on the evidence of experts then that conviction can only be regarded as safe if the case proceeds on a logically

justifiable basis. That entails a logically justifiable basis for accepting or rejecting the expert evidence (see *R v Kai-Whitewind* [2005] 2 Cr App R 31 [90]).”

iv. *R v. Burridge* [2010] EWCA Crim 2847 supports the position set out in *Kai-Whitewind*.

7.10.5 There is a special need for caution where the expert opinion involves a process of deduction where the scientific knowledge of the process or processes involved is, or may be, incomplete.

a. *R v. Holdsworth* [2008] EWCA Crim 971;

i. (Admitting fresh evidence providing a credible alternative explanation for a child murder on appeal);

“57. Conclusions of medical experts on the cause of an injury or death necessarily involve a process of deduction, that is inferring conclusions from given facts based on other knowledge and experience. But particular caution is needed where the scientific knowledge of the process or processes involved is or may be incomplete. As knowledge increases, today's orthodoxy may become tomorrow's outdated learning. Special caution is also needed where expert opinion evidence is not just relied upon as additional material to support a prosecution but is fundamental to it.”

7.11 Degrees of Support

7.11.1 Expressions of the degree of support provided by a forensic procedure are not, in principle, inadmissible provided that they have a proper factual basis and are presented in a way which does not mislead:

a. *R v. Shillibier* [2006] EWCA Crim 793;

“86 … Mr Glen took a point … to the effect that Professor Pye should not have been permitted to give in evidence his subjective assessment of the degree of match as 8 out of 10. He based this on observations made by the court in *R v Gray* [2003] EWCA Crim 1001 (as quoted in *R v Gardner* [2004] EWCA Crim 1639 at para 44) doubting whether expert witnesses in the field of facial mapping or imaging should ever express subjective opinions as to the degree of support that comparison of facial characteristics provided for the identification of a defendant as the offender. Those observations, however, were based on the absence, in the particular field of facial mapping or imaging, of any database or accepted mathematical formula from which such conclusions could safely be drawn. The court was not laying down any general rule against the giving of opinions of this kind by expert witnesses, though such opinions must of course always have a proper

factual basis to them and must be presented in a way that does not mislead the jury or cause undue weight to be attached to them. …"

7.11.2 The absence of an objective measure (such as a database or an agreed formula) does not prevent an expert from expressing an opinion as to the degree of support provided by the particular evidence. The expert is entitled to give an opinion based on his experience and should do so by use of conventional expressions, arranged in a hierarchy rather than allocating a numerical value to his opinion. However, the fact that the expression of opinion as to the degree of support provided by the particular evidence is a subjective opinion made in the absence of an objective measure should be made clear to the jury.

a. *R v. Atkins and Atkins* [2009] EWCA Crim 1876;

"23 On principle, we accept the caution with which any expression of conclusion in relation to evidence of this kind (and others) needs to be approached. We agree that the fact that a conclusion is not based upon a statistical database recording the incidence of the features compared as they appear in the population at large needs to be made crystal clear to the jury. But we do not agree that the absence of such a database means that no opinion can be expressed by the witness beyond rehearsing his examination of the photographs. An expert who spends years studying this kind of comparison can properly form a judgment as to the significance of what he has found in any particular case. It is a judgment based on his experience. A jury is entitled to be informed of his assessment.

…

31 We conclude that where a photographic comparison expert gives evidence, properly based upon study and experience, of similarities and/or dissimilarities between a questioned photograph and a known person (including a defendant) the expert is not disabled either by authority or principle from expressing his conclusion as to the significance of his findings, and that he may do so by use of conventional expressions, arranged in a hierarchy, such as those used by the witness in this case and set out in [8] above. We think it preferable that the expressions should not be allocated numbers, as they were in the boxes used in the written report in this case, lest that run any small risk of leading the jury to think that they represent an established numerical, that is to say measurable, scale. The expressions ought to remain simply what they are, namely forms of words used. They need to be in an ascending order if they are to mean anything at all, and if a relatively firm opinion is to be contrasted with one which is not so firm. They are, however, expressions of subjective opinion, and this must be made crystal clear to the jury charged with evaluating them."

b. Note: comments to the contrary in *R v. Gray (Paul Edward)* [2003] EWCA Crim 1001; were regarded by the Court in *R v. Atkins and Atkins* [2009] EWCA Crim 1876 as being made without the benefit of the citation of relevant authority and made in the particular and limited context of serious doubt about the expert in question.

7.11.3 The judgment in *R v. T* [2010] EWCA Crim 2439 commented on the wording of the verbal scale but did not criticise the use of such scales.

7.11.4 The position in *Atkins and Atkins* has been supported in *R v. Thomas* [2011] EWCA Crim 1295.

7.12 Enumeration of Range of Possible Explanations for Particular Events

7.12.1 Drawing upon his experience, an expert may enumerate a range of possible explanations for a particular event where the underlying science is sufficiently reliable and the circumstance of the particular case permit, provided that he makes any limitations on his evidence clear and does not taint the evaluation with the verisimilitude of scientific certainty.

a. *R v. Reed & Ors.* [2009] EWCA Crim 2698 considering the transfer of material which gave rise to DNA profiles;

> "119. It is common ground that it is permissible for the expert to enumerate the possibilities in most circumstances. Even though the scientific knowledge on transferability (which we summarised at [59] and [60] above) is plainly incomplete, we consider that the underlying science is sufficiently reliable for a range of possibilities to be enumerated as to the circumstances of transfer, including the mechanisms and timing, provided the limitations are made clear. Whether a forensic scientist can do so in any given case will depend on the circumstances, but in the present appeal the circumstances (including the quality of profile) were such that the possibilities could be enumerated.
>
> 120 It is also, in our view, clear that, as a witness can express an opinion on the possibilities with suitable caveats, then logic dictates that it will not only be possible to give some evaluation of each of the possibilities of the circumstances of transfer, but essential to do so when there is sufficient undisputed other evidence that enables this to be done. It seems to us that it is not logical, as was the essence of the evidence of…, to say that an expert could never give such evidence, once it is accepted that the possibilities can be enumerated. Indeed, as we have mentioned … accepted that a

forensic scientist could do this in relation to other areas of science. His reservation concerned unidentified cellular material, whatever the quantity.

121 However, in our view, a forensic science officer with scenes of crime experience such as … can properly use knowledge of the scene of the crime and the other agreed circumstances to evaluate those possibilities by reference to her experience and the scientific research that has been undertaken. However care must be taken to guard against the dangers of that evaluation being tainted with the verisimilitude of scientific certainty to which we referred at paragraph 101.

122 As … told us, it may well at the present time be uncommon for a forensic science expert to be able to give evidence which enumerates and evaluates the possibilities. However, we consider that the science is sufficiently reliable for it to be within the competence of a forensic science expert to give admissible evidence evaluating the possibilities of transfer in DNA cases where the amount is over 200 picograms and when there is a sufficient evidential basis from the profiles and other material, as there was in this appeal, for it to be done. As … rightly pointed out, it is difficult to envisage the circumstances being set out in a protocol or defined by a set of rules (as suggested by … and referred to in *R v Hoey*), because the circumstances in which such evidence can properly be given are likely to be so variable. It is therefore essential, as we emphasise at paragraphs 128 and following below, that the court exercise a firm degree of control over the admissibility of this type of evidence by reference to the principles to which we have referred. The evidence on the possibilities and the evaluation must be clearly set out in full in the terms in which it is to be given. Where there is a challenge to its admissibility, the court must rule on the issue of admissibility in advance, or at the outset of the trial, in the way we describe below." [47]

b. *R v. Weller* [2010] EWCA Crim 1085 supports the position set out in *Reed*.

7.13 No Closed Categories of Expert Evidence

7.13.1 There are no closed categories of expert evidence:

a. *R v. Clarke (RL)* [1995] 2 Cr. App. R. 425; Times, December 26, 1994; Independent, January 30, 1995 (CA Crim Div);

i. [1995] 2 Cr. App. R. 425, at p.431:

" … There are no closed categories where such evidence may be placed before a jury. It would be entirely wrong to deny to the law of evidence the advantages to be gained from new techniques and new advances in science."

[47] The quoted case of *R v. H*oey has neutral citation [2007] NICC 49.

b. *R v. Harris & Ors.* [2005] EWCA Crim 1980 supporting *Clarke*.

c. In *R v. Henderson & Ors.* [2010] EWCA Crim 1269 Moses LJ noted that the decisions of the courts as to admissibility of evidence must be seen in the context of the state of the scientific/medical knowledge at the time and the evidence presented in the case.

> "6. … But it is trite to observe that the conclusion of any court as to the medical evidence, whether at first instance or on appeal, is dependent upon the evidence before that court. No appellate jurisprudence could provide authority for a medical proposition. The strength of a proposition in medicine depends upon the strength of the medical evidence on which it is based.
>
> 7. We stress this problem because we feared that the medical profession may have looked to the courts to resolve medical controversy. "

7.14 The Ultimate Issue for the Court

7.14.1 An expert can give his opinion on the "ultimate issue" for determination by the court but where he does so, the court is not bound to accept the opinion (and a jury should be so directed).

a. *R v. Stockwell* (1993) 97 Cr. App. R. 260 (CA Crim Div);

i. P.266-267:

> "Whether an expert can give his opinion on what has been called the ultimate issue, has long been a vexed question. There is a school of opinion supported by some authority doubting whether he can … On the other hand, if there is such a prohibition, it has long been more honoured in the breach than the observance …
>
> The rationale behind the supposed prohibition is that the expert should not usurp the functions of the jury. But since counsel can bring the witness so close to opining on the ultimate issue that the inference as to his view is obvious, the rule can only be, as the authors of the last work referred to say, a matter of form rather than substance.
>
> In our view an expert is called to give his opinion and he should be allowed to do so. It is, however, important that the judge should make clear to the jury that they are not bound by the expert's opinion, and that the issue is for them to decide. …"

7.14.2 In general, an expert should only be called on to express an opinion on the "ultimate issue" where that is necessary in order that his evidence provide substantial help to the trier of fact: *Pora v. R. (New Zealand)* [2015] UKPC 9 at

para 27. In that case, the Judicial Committee of the Privy Council held that a clinical and forensic psychologist who gave evidence on the reliability of a confession should not have expressed the view that the confessions of the accused "are unreliable" but, rather, he should have expressed an opinion on "why, by reason of his psychological assessment… [the accused] might be disposed to make an unreliable confession" (para 24). Lord Kerr, giving the judgment of the Board, said this:

"[24] … It is the duty of an expert witness to provide material on which a court can form its own conclusions on relevant issues. On occasion that may involve the witness expressing an opinion about whether, for instance, an individual suffered from a particular condition or vulnerability. The expert witness should be careful to recognise, however, the need to avoid supplanting the court's role as the ultimate decision-maker on matters that are central to the outcome of the case …

[27] … As observed above, Professor [G] could have expressed an opinion as to how the difficulties that Pora faced might have led him to make false confessions. This would have allowed the fact finder to make its own determination as to whether the admissions could be relied upon as a basis for a finding of guilt, unencumbered by a forthright assertion from the expert that the confessions were unreliable. In this way it would be possible to keep faith with and preserve the essential independence of the jury's role, which is to evaluate all the relevant evidence, including both expert evidence and other evidence which the expert may have no special qualification to evaluate."

7.14.3 While there may be no legal prohibition on an expert commenting on the "ultimate issue" it is normally unwise to do so as the expert generally deals with only part of the evidence.

7.14.4 In *Mitchell v HM Advocate* [2017] HCJAC 60 the Court was critical of an expert witness who expressed views that addressed matters that were for the jury.

"That was a step too far. Asking the sergeant what was "his analysis of the situation" was an objectionable question. The witness's function was to help the jury to analyse the situation as presented in the evidence by explaining matters which were within his general experience but which would be likely to be outwith the jury's experience and, by doing so to enable the jury to form their own independent judgment by an application of that explanation to the facts proved in evidence (cf Davie v Magistrates of Edinburgh 1953 SC 34 at 40). His function was not to carry out that analysis and make a judgment himself. A witness cannot supplant the jury's role as ultimate decision-maker (cf Kennedy at para [49], under reference to Davie and Pora v R [2016] 1 Cr App R 3)."

7.14.5 It is clear that caution is advisable.

7.15 Conflict of Interest

7.15.1 A potential conflict of interest does not operate automatically to disqualify an expert from giving evidence (but it must be disclosed even if the view is taken that it is not material):

a. *Toth v. Jarman* [2006] EWCA Civ 1028;

> "100 We start with the point of principle. Does the presence of a conflict of interest automatically disqualify an expert? In our judgment, the answer to that question is no: the key question is whether the expert's opinion is independent. It is now well-established that the expert's expression of opinion must be independent of the parties and the pressures of the litigation.
>
> …
>
> 102 However, while the expression of an independent opinion is a necessary quality of expert evidence, it does not always follow that it is sufficient condition in itself. Where an expert has a material or significant conflict of interest, the court is likely to decline to act on his evidence, or indeed to give permission for his evidence to be adduced. This means it is important that a party who wishes to call an expert with a potential conflict of interest should disclose details of that conflict at as early a stage in the proceedings as possible.
>
> …
>
> 112. … We can understand that (in the absence of guidance from the court) a party who calls an expert witness at trial, or serves an expert's report in advance of trial, may be aware of a potential conflict of interest but consider that it is not material and that it therefore need not be disclosed. However, for the future, we do not consider that a party should take the course of non-disclosure. We say this because it is for the court and not the parties to decide whether a conflict of interest is material or not. The court may take a different view from that of the parties as to whether an expert has a conflict of interest which might lead the court to reject the independence of his opinion: see, for example, *Liverpool Roman Catholic Archdeacon Trustees Inc v Goldberg (No.2)* [2001] 1 W.L.R. 2337. Similarly, in the interests of transparency and of deflecting suspicion, the other party ought to have the information as soon as possible. We do not consider that the parties can properly agree that a conflict of interest which is otherwise disclosable need not be drawn to the attention of the court. A party who is in the position of wanting to call an expert with a potential conflict of interest (other than of an obviously immaterial kind)

should draw the attention of the court to the existence of the conflict of interest or possible conflict of interest at the earliest possible opportunity." [48]

b. Note: Although *Toth v Jarman* is a civil case, the same principles apply to criminal cases. See, for example, the Court of Appeal (Criminal Division) judgment in *R v. Stubbs* [2006] EWCA Crim 2312. See Part 8 herein.

7.15.2 See also the discussion, at paragraph 5.5.5, on acting as an adviser and expert witness in the same case.

7.16 Compromising Admissibility

7.16.1 There are actions which can compromise the admissibility of evidence. These include the following.

Continuity

7.16.2 See the discussion in Part 11.1 herein.

Training

7.16.3 See the discussion in Part 11.2 herein.

7.17 Disclosure

7.17.1 In *R v. Anderson* [2012] EWCA Crim 1785 the court stressed that lawyers seeking public funding to instruct an expert must disclose Court of Appeal judgments which would suggest the resultant evidence might be ruled inadmissible. [49]

"Any lawyer attempting to obtain public money with which to instruct experts has a duty to reveal to the funding authority decisions of the Court of Appeal Criminal Division which suggest such evidence may not be received"

7.17.2 Clearly an expert must assist the lawyers in meeting this responsibility.

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48 The quoted case of *Liverpool Roman Catholic Archdeacon Trust v. Goldberg* has the neutral citation [2001] EWHC Ch 396.

49 While there is a direct reference to the Court of Appeal (Criminal Division), presumably because it was the relevant court in this case, it would be reasonable to assume that this requirement applies to any court acting in an appellate capacity (e.g. the Supreme Court). It would be sensible to assume it applies to appellate courts in other jurisdictions (e.g. the Court of Appeal of Northern Ireland or the High Court of Justiciary). There may be an argument for the requirement to apply to courts outside the Criminal Justice System (e.g. Court of Appeal (Civil Division)).

7.17.3 In *R v. H* [2014] EWCA Crim 1555 (at paragraph 42) the Court noted concern that cases where an expert's evidence had been subject of adverse comment by the courts were not brought to the attention of the expert. The result that evidence, subject to the same criticism, was put before the court.

7.17.4 CrimPR 19.3(3)(c) requires disclosure by each party of any information which could undermine the credibility of any expert it intends to rely upon.

"Serve with the report notice of anything of which the party serving it is aware which might reasonably be thought capable of detracting substantially from the credibility of that expert"

7.17.5 It is important to note that this requirement relates to the credibility of the expert and not the evidence provided by the expert. Issues in relation to the evidence are addressed in separate provisions of the CrimPR.

7.17.6 Clearly the expert must assist the party instructing him in meeting this obligation.

7.17.7 The credibility attached to an expert witness is a result of the standing/reputation of the witness and, where relevant, the reputation of the organisation for which the witness works or with which the witness is associated.

7.17.8 Anything which lowers either of these is capable of detracting from the credibility of the expert. It is impossible to provide a comprehensive list of factors which could have this effect but it is possible to provide examples.

7.17.9 In relation to an expert the following factors would clearly be capable of detracting from credibility.

a. Adverse judicial comment.
b. Cases in which appeals had been allowed due to issues raised with the expert's evidence.
c. Criticism by a professional or regulatory body.
d. Criticism by a registration body (e.g. the Pathology Delivery Board in relation to forensic pathologists).
e. Criticism by the Forensic Science Regulator.
f. Conviction for a criminal offence which suggests:

i. A lack of care for, or understanding of, the interests of the CJS (e.g. perjury or acts tending to pervert the course of public justice);
ii. Dishonesty (e.g. theft or fraud); or
iii. A lack of integrity (e.g. corruption or sexual offences).

g. A record of quality failures or poor performance in proficiency tests.
h. The use of poor scientific methods.
i. Failure to maintain the quality standards expected in the scientific work performed – as set out by the Forensic Science Regulator or other relevant professional or regulatory body.
j. Failure to adhere to the obligations expected of an expert operating in the Criminal Justice System.

7.17.10 In relation to the organisation with which the expert works or is associated the following would undermine its reputation.

a. Adverse judicial comment.
b. Criticism by a professional or regulatory body.
c. Criticism by the Forensic Science Regulator.
d. Criticism of staff of the organisation which raises questions as to the quality of work undertaken by the organisation.
e. Lack of appropriate quality standards or accreditation where this would be expected.
f. A record of quality failures.

7.17.11 In cases where an expert or organisation has been criticised without a full investigation (e.g. perhaps in an adverse judicial comment) it would be reasonable for the expert organisation to also provide information of any independent investigation which provides a more considered view of events. In any case it would be reasonable for the expert/organisation to describe what steps have been taken to address any criticism and ensure the quality of the work.

8. FORM OF WRITTEN EXPERT EVIDENCE: MANDATORY REQUIREMENTS

8.1 Forms of Written Evidence

8.1.1 Experts can provide evidence to the CJS in a number of ways. These include, but are not limited to, the following.

a. Witness statements.
b. Reports.
c. Certificates. [50]
d. Streamlined forensic reports.

8.1.2 A simple view is that a statement is one form of report which is formatted to be admissible under the provisions of s9 Criminal Justice Act 1967. A report which is not formatted to be a statement is still admissible as evidence as a result of s30 Criminal Justice Act 1988.

8.1.3 The position with regards to certificates depends on the relevant statutory provisions. For the purpose of legal obligations certificates are not considered to be reports.

8.1.4 A level one streamlined forensic report is a summary of the expert's evidence which can be provided to the other party to seek an admission under CrimPR 19.3(1). [51] Such a report, as a result of CrimPR 19.3(3), does not have to comply with the provisions of CrimPR 19.4. A level two streamlined forensic report is intended to be used in evidence and must therefore comply with the provisions.

8.1.5 The following text will discuss requirements for reports (not level 1 streamlined forensic reports) including statements. The general principles are as follows.

a. The requirements for statements apply only to statements.
b. The requirements for reports apply to both reports and statements.

8.1.6 The CPS will wish to see expert evidence submitted in statement form so reports will have to meet all requirements for reports and statements.

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50 See for example the provisions of s16 Road Traffic Offenders Act 1988.

51 It is important that the report only contains a summary of the expert's evidence and no extraneous material.

8.2 Statutory Requirements

8.2.1 The content of witness statements is addressed in statute [52] and secondary legislation.

8.2.2 A statement must be signed by the author.

a. Section 9(2)(a) Criminal Justice Act 1967.

8.2.3 A statement must contain a declaration by the author to the effect that it is true to the best of his knowledge and belief and that he made the statement knowing that, if it were tendered in evidence, he would be liable to prosecution if he wilfully stated in it anything which he knew to be false or did not believe to be true.

a. Section 9(2)(b) Criminal Justice Act 1967.
b. A suitable wording for this declaration is set out in the CrimPR. [53]

8.2.4 Where the author is under eighteen years old the statement must include the age of the author.

a. Section 9(3)(a) Criminal Justice Act 1967.

8.2.5 Part 16.2 of the CrimPR requires that the name and, if under eighteen, age of the witness must be given at the start of the statement.

8.2.6 The requirement to state the age of authors aged under eighteen has led to the adoption of a convention that authors over eighteen include a statement to that effect in the statement. There is no legal requirement to do so.

<u>Header</u>

8.2.7 The Criminal Justice Act 1967, discussed above, does not require the Act be named in the statement or that there be any specific “header” to a statement.

8.2.8 It is, however, common practice to have such a header referring to the Act and the CrimPR.

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52 Previous versions of this document referred to s5B Magistrates’ Courts Act 1980. Section 5B was repealed by Schedule 37(4) paragraph 1 of the Criminal Justice Act 2003. The repeal was effected by the Criminal Justice Act 2003 (Commencement No. 31 and Savings Provisions) Order 2013 (SI 1103 of 2013). Section 5B applied in committal proceedings and the repeal was part of the changes to committal procedures.

53 The requirements are dealt with at Part 16.2 and the form of words is provided in the index of criminal procedure forms linked to that section. See also the discussion at paragraph 8.26.

8.2.9 The Criminal Practice Directions provide a form for such use.

8.2.10 Rule 5.1 of the CrimPR requires that the forms set out in the Criminal Practice Directions must be used – in accordance with the Directions.

8.2.11 The Directions, at paragraph 5A.1, state that the forms in Annex D (forms other than case management forms) "to the Consolidated Criminal Practice Direction of 8th July, 2002, [2002] 1 W.L.R. 2870; [2002] 2 Cr. App. R. 35, or forms to that effect, are to be used in the criminal courts, in accordance with CrimPR 5.1." There is therefore no absolute requirement to use the form or version of the header provided in the form.

8.3 Application of CrimPR 19

8.3.1 The provisions of CrimPR 19 only apply to opinion evidence (see CrimPR 19.1). Many of the requirements placed on expert witnesses arise from case law - including requirements which have been codified in the CrimPR. Many of these requirements are not specific to opinion evidence. Even when providing expert evidence of fact only the expert would be wise to comply, as far as practicable, with the requirements applying to opinion evidence – particularly the provisions of CrimPR 19.4.

8.3.2 The provisions of CrimPR 19 apply where expert evidence is to be introduced. Care must be taken when a report is prepared of fact only but it is possible the witness may be asked to offer opinion in oral testimony.

8.4 Requirements of CrimPR 19.2

8.4.1 Part 19.2 CrimPR imposes two obligations related to the report of an expert.

8.4.2 Part 19.2(3) in discussing the expert's duty to the court states:

"(3) This duty includes obligations—

(a) to define the expert's area or areas of expertise—

(i) in the expert's report, and

(ii) when giving evidence in person;"

…

(c) to inform all parties and the court if the expert's opinion changes from that contained in a report served as evidence or given in a statement.

8.4.3 The obligation under CrimPR 19.2(3)(c) required informing the court. See section 6.5 about notification of the court.

8.5 Requirements in CrimPR 19.4

8.5.1 Para 19.4 of the CrimPR sets out mandatory requirements as to the contents of an expert's report in criminal proceedings. These requirements apply when a report is employed in a manner set out in Rule 19.3 of the CrimPR. In essence these requirements apply when the report is to be used as evidence other than as material agreed between the parties. The requirements do not apply to reports produced within level 1 of the streamlined reporting process as these are not intended to be used in evidence.

8.5.2 To a large extent, they overlap with and are declaratory of the requirements developed in the common law. However, in certain respects, the common law requirements are more extensive. Save where the CrimPR provides a new procedural mechanism which defines the expectations of the experts and the parties (see 'Statement of and Provision of Literature and Information Relied On' below), the common law requirements remain undiminished notwithstanding that they are not reflected in the Rules.

8.5.3 CrimPR 19.4 provides:

19.4. Where rule 19.3(3) applies, an expert's report must—

(a) give details of the expert's qualifications, relevant experience and accreditation;

(b) give details of any literature or other information which the expert has relied on in making the report;

(c) contain a statement setting out the substance of all facts given to the expert which are material to the opinions expressed in the report, or upon which those opinions are based;

(d) make clear which of the facts stated in the report are within the expert's own knowledge;

(e) where the expert has based an opinion or inference on a representation of fact or opinion made by another person for the purposes of criminal proceedings (for example, as to the outcome of an examination, measurement, test or experiment)—

(i) identify the person who made that representation to the expert,

(ii) give the qualifications, relevant experience and any accreditation of that person, and

(iii) certify that that person had personal knowledge of the matters stated in that representation;

(f) where there is a range of opinion on the matters dealt with in the report—

(i) summarise the range of opinion, and

(ii) give reasons for the expert's own opinion;

(g) if the expert is not able to give an opinion without qualification, state the qualification;

(h) include such information as the court may need to decide whether the expert's opinion is sufficiently reliable to be admissible as evidence;

(i) contain a summary of the conclusions reached;

(j) contain a statement that the expert understands an expert's duty to the court, and has complied and will continue to comply with that duty; and

(k) contain the same declaration of truth as a witness statement."

8.5.4 The importance of Part 19 has been stressed in a number of cases (with reference to its predecessor Part 33 of the previous versions of the Rules).

a. *R v. Reed & Ors.* [2009] EWCA Crim 2698.
b. *R v. Weller* [2010] EWCA Crim 1085.
c. *R v. Henderson & Ors.* [2010] EWCA Crim 1269.

8.6 Statement of Qualifications and Experience

8.6.1 It is a mandatory requirement by CrimPR 19.4(a) above to provide these details. This is related to the CrimPR 19.2 requirement to set out the area of expertise – see 8.4 above.

8.6.2 It follows the key judicial guidance referred to in Part 4 herein. See, in particular:

a. *R v. Bowman* [2006] EWCA Crim 417; para 174 et seq:

> "177 In addition to the specific factors referred to by Cresswell J. in the *Ikarian Reefer* [1993] 2 Lloyds Rep. 68 set out in Harris we add the following as necessary inclusions in an expert report:
>
> Details of the expert's academic and professional qualifications, experience and accreditation relevant to the opinions expressed in the report and the range and extent of the expertise and any limitations upon the expertise. …"

8.6.3 In providing this information it is important that a properly balanced view is provided.

a. *SD (expert evidence) Lebanon* [2008] UKAIT 00078;

"In general terms, we would say that, where an expert refers the Tribunal to cases in which his expertise has been accepted or acknowledged or in which he has received praise, he must, at the same time, refer to the Tribunal to any cases which he is aware of and which may detract from what is said about him in the cases he has referred to. In other words, failure to place before the Tribunal such material in an even-handed way may reflect on the weight to be given to the evidence which the subject matter of the expert's report(s)."

b. *R v. Henderson & Ors.* [2010] EWCA Crim 1269;

"211. In the context of Part 33 [of the CrimPR] we should draw attention to the fact that defence experts are not obliged to reveal a previous report they have made in the case, still less to reveal adverse criticism made by judges in the past. But a failure to do so will not avail the defence. A judge may well be able to exercise his powers under the Criminal Procedure Rules to ensure that in advance of a trial a defence expert has made disclosure of any relevant previous reports and any adverse judicial criticism. Failure to do so would be contrary to the overriding objective and will achieve no more than to expose the expert to cross-examination on those points at trial. It is difficult to see how those acting on behalf of the defendant could permit an expert report to be advanced without satisfying themselves that previous reports have been disclosed and any adverse judicial criticism identified and disclosed. Failure to do so by either side will only cast suspicion upon the cogency of the opinion. A defence team which advances an expert without taking those precautions is likely to damage its client's case.

212. A case management hearing may often present an opportunity for concerns as to previous criticism of an expert and an expert's previous tendency to travel beyond their expertise to be aired. Whilst such history may not be a ground for refusing the admission of the evidence, it may well trigger second thoughts as to the advisability of calling the witness." [54]

c. In *R v. H* [2014] EWCA Crim 1555 there was concern that previous judgments of the courts which noted issues with the experts evidence were not brought to the attention of the court.

d. See the CPS requirements set out at paragraph 8.31.

e. This obligation should also apply to the disclosure required by *R v. Anderson* [2012] EWCA Crim 1785. (see paragraph 7.17)

8.6.4 In *R v. Dlugosz & Ors.* [2013] EWCA Crim 2 the court considered a situation where the scientist was providing an expert based on experience as opposed to

[54] Part 33 of the Rules in effect before 2015 became Part 19 in the 2015 issue of the Rules.

statistical calculation. It stressed the need for the experience to be fully and clearly stated.

"24. … it does seem to us that provided it is made clear to the jury the very limited basis upon which an evaluation can be made without a statistical database, a jury can be assisted in its consideration of the evidence by an expression of an evaluative opinion by the experts. We consider that on the materials with which we have been provided, there may be a sufficiently reliable scientific basis on which an evaluative opinion can be expressed in cases, provided the expert has sufficient experience (which must be set out in full detail in the report) and the profile has sufficient features for such an opinion to be given.

…

28. We therefore conclude that, provided the conclusions from the analysis of a mixed profile are supported by detailed evidence in the form of a report of the experience relied on and the particular features of the mixed profile which make it possible to give an evaluative opinion in the circumstances of the particular case, such an opinion is, in principle, admissible, even though there is presently no statistical basis to provide a random match probability and the sliding scale cannot be used."

8.6.5 This requirement is clearly linked to the provisions of Rule 19.3(3)(c) of the CrimPR discussed in section 7.17.

8.6.6 The requirement relates to the accreditation of the expert as opposed to the organisation for which he works for. In this jurisdiction it is not normal for experts to have accreditation so this provision is not normally relevant. The accreditation of the organisation is, however, a relevant factor. See section 7.4 above.

8.7 Statement of and Provision of Literature and Information Relied On

8.7.1 It is a mandatory requirement by CrimPR 19.4(b) above to provide these details.

8.7.2 It follows the key judicial guidance referred to in Part 4 herein. See, in particular:

a. *R v. Bowman* [2006] EWCA Crim 417; para 174 et seq:

"177 In addition to the specific factors referred to by Cresswell J. in the *Ikarian Reefer* [1993] 2 Lloyds Rep. 68 set out in Harris we add the following as necessary inclusions in an expert report:

…

2. A statement setting out the substance of all the instructions received (with written or oral), questions upon which an opinion is sought, the materials provided and considered,

and the documents, statements, evidence, information or assumptions which are material to the opinions expressed or upon which those opinions are based.

…"

8.7.3 Provision of reports which do not properly set out the sources of information has been criticised. See paragraph 68 of the judgment in *R v. Burridge* [2010] EWCA Crim 2847.

8.7.4 Failure to provide a proper analysis of the material has also been criticised. In *R v. E* [2009] EWCA Crim 1370

"Suffice it to say that we were surprised at the paucity of the material relied upon by [C] and upon his failure to provide, a proper analysis of the material which forms the very cornerstone of his report"

8.7.5 Note that the common law duty extends to a requirement to provide the material to the opposite party at the same time as the exchange of reports:

a. *National Justice Cia Naviera SA v. Prudential Assurance Co. Ltd (The Ikarian Reefer)* [1993] 2 Lloyd's Rep 68; (High Court);

   i. Point 7 in the summary by Cresswell J of an expert's duty:

   "7. Where expert evidence refers to photographs, plans, calculations, analyses, measurements, survey reports or other similar documents, these must be provided to the opposite party at the same time as the exchange of reports (see 15.5 of the Guide to Commercial Court Practice)."

b. *R v. Harris & Ors.* [2005] EWCA Crim 1980;

   i. Approving *The Ikarian Reefer*.

c. *General Medical Council v. Meadow* [2006] EWCA Civ 1390;

   i. Approving *The Ikarian Reefer*.

8.7.6 CrimPR 19. 3 addresses the issue and can be taken to have modified the requirement in criminal proceedings so that it is only triggered by a request to provide. Further, it would appear that a reasonable opportunity to inspect may be offered in the alternative to the provision of the material, presumably where the circumstances are such that it would not be reasonable or proportionate to provide a copy.

8.7.7 CrimPR 19.3 provides:

"19.3.—(1) A party who wants another party to admit as fact a summary of an expert's conclusions must serve that summary—

(a) on the court officer and on each party from whom that admission is sought;

(b) as soon as practicable after the defendant whom it affects pleads not guilty.

(2) A party on whom such a summary is served must—

(a) serve a response stating—

(i) which, if any, of the expert's conclusions are admitted as fact, and

(ii) where a conclusion is not admitted, what are the disputed issues concerning that conclusion; and

(b) serve the response—

(i) on the court officer and on the party who served the summary,

(ii) as soon as practicable, and in any event not more than 14 days after service of the summary.

(3) A party who wants to introduce expert evidence otherwise than as admitted fact must—

(a) serve a report by the expert which complies with rule 19.4 (Content of expert's report)on—

(i) the court officer, and

(ii) each other party;

(b) serve the report as soon as practicable, and in any event with any application in support of which that party relies on that evidence;

(c) serve with the report notice of anything of which the party serving it is aware which might reasonably be thought capable of detracting substantially from the credibility of that expert;

(d) if another party so requires, give that party a copy of, or a reasonable opportunity to inspect—

(i) a record of any examination, measurement, test or experiment on which the expert's findings and opinion are based, or that were carried out in the course of reaching those findings and opinion, and

(ii) anything on which any such examination, measurement, test or experiment was carried out.

(4) Unless the parties otherwise agree or the court directs, a party may not—

(a) introduce expert evidence if that party has not complied with paragraph (3);

(b) introduce in evidence an expert report if the expert does not give evidence in person."

8.7.8 In *Kumar v. General Medical Council* [2012] EWHC 2688 (Admin) the court stated;

"36. He was reckless… in not mentioning that he had not read the witness statements; the reference to not having the complete CPS file was not a substitute."

8.7.9 The requirement to state information relied on cannot be taken to mean all information known to the expert which may have factored into the process of consideration. That would be impractical as experts rely on a very large amount of knowledge. It must be interpreted as information which was specifically used and of significance in that case.

8.7.10 It is not practical to state all of the material which has not been considered. However, where the parties may legitimately expect an expert to have considered certain information, and this has not happened, it would be wise to clearly state this in the report.

8.8 Statement of Facts and Assumptions

8.8.1 It is a mandatory requirement by CrimPR 19.4(c) above to give a statement of the facts relied upon.

8.8.2 It is a mandatory requirement by CrimPR 19.4(d) above to make clear which of the facts stated in the report are within the expert's own knowledge. This is the equivalent of the common law requirement to state the assumptions on which the opinion is based.

8.8.3 The CrimPR follows the key judicial guidance referred to in Part 4 herein. See, in particular, as to the requirement to make clear the assumptions on which the opinion was based:

a. *R v. Bowman* [2006] EWCA Crim 417;

   i. See para 271(3).

b. *Re J* [1990] FCR 193 (Cazalet J.) (High Court Family Division);

   i. An expert witness should state the facts or assumptions upon which his opinion is based.

   ii. This case was cited by Cresswell J in *The Ikarian Reefer*.

8.9 Declaration and Particulars as to Assistance and Reliance on Others

8.9.1 Where an expert relies on a representation of fact or opinion made by a different person it is a mandatory requirement by CrimPR 19.4(e) above to :

a. Identify the person who made that representation to the expert,

b. Give the qualifications, relevant experience and any accreditation of that person, and

c. Certify that that person had personal knowledge of the matters stated in that representation.

8.9.2 This requirement is related to the operation of s127 Criminal Justice Act 2003 which facilitates the admissibility of material generated by assistants.[55]

8.9.3 These issues may be addressed in guidance [1].

8.9.4 The CrimPR follows the key judicial guidance referred to in Part 4 and Part 7 (Work of Others Admissible in Informing Opinion on Primary Facts) herein. See, in particular:

a. *R v. Bowman* [2006] EWCA Crim 417; para 177;

i. Para 3 of the list in para 177:

> "3. Information relating to who has carried out measurements, examinations, tests etc and the methodology used, and whether or not such measurements etc were carried out under the expert's supervision."

b. *R v. Abadom (Steven)* [1983] 1 W.L.R. 126; [1983] 1 All E.R. 364; (1983) 76 Cr. App. R. 48; [1983] Crim. L.R. 254 (CA Crim Div):

i. [1983] 1 W.L.R. 126 at p.132:

> "… Once the primary facts on which their [experts] 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."

8.9.5 The comments in *Bowman* must be viewed in light of the fact the CrimPR initially adopted this position but, in 2018, amended the requirements.

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[55] Section 127 refers to a 'statement' but this must be viewed in the content of the definition of that term in s115 Criminal Justice Act 2003.

8.10 Statement of Range of Opinions and Detracting Points

8.10.1 It is a mandatory requirement by CrimPR 19.4(f) above, where there is a range of opinions on the matters dealt with in the report, to summarise that range and give reasons for the expert's own opinion. The reference to a range of opinions must be taken to refer to the range of reputable scientific opinion within the relevant field of expertise.

8.10.2 The CrimPR follows the key judicial guidance referred to in Part 4 herein.

8.10.3 The importance of this provision has been stressed.

a. *R v. Reed & Ors.* [2009] EWCA Crim 2698;

> "129 … First, we agree with the views of Professor Caddy (to which we referred at paragraph 73) as to the importance of Rule 33.3 (1) in providing a very important safeguard. This requires at sub-paragraphs (f) and (g) each expert to identify where there is a range of opinion on the matters dealt with in his report. In such a case, the expert must summarise the scope of opinion and give reasons for his own opinion. If the expert cannot give his opinion without qualification, he must state the qualification. Compliance with this obligation will identify for the other party an area where there is a range of opinion; it is particularly important that this rule is followed in the expert report obtained by the Crown." [56]

8.10.4 Note, however, that the common law expressly sets out what is arguably implicit in this requirement but is, in any event, an extremely important principle: that any material points which detract from the expert's opinion and which should be fairly made against the expert's opinion, should be set out. See, in particular:

a. *National Justice Cia Naviera SA v. Prudential Assurance Co. Ltd (The Ikarian Reefer)* [1993] 2 Lloyd's Rep 68; (High Court)

   i. Principle 3 citing *Re J* [1990] FCR 193;

   > "… He should not omit to consider material facts which could detract from his concluded opinion …"

b. *R v. Harris & Ors.* [2005] EWCA Crim 1980;

   i. Para 271(3), summarising *The Ikarian Reefer*;

c. *R v. Bowman* [2006] EWCA Crim 417;

[56] Rules 33.3(1)(f) and 33.3(1)(g) were, as a result of restructuring, altered to 33.4(f) and 33.4(g) in the 2014 version of the Rules. As a result of changes in 2015 these are now in Part 19 CrimPR.

i. Para 177(4), summarising *The Ikarian Reefer* and *R v. Harris;*

d. See also Part 6 (Duty of Disclosure and Preservation) herein and especially the references therein to *R v. Puaca* [2005] EWCA Crim 3001.

8.10.5 These provisions may now be considered to fall within the provisions of CrimPR 19.4(h) (discussed at 8.12 below).

8.10.6 There may be a more general requirement to set out the manner in which the expert's opinion has been formed.

8.10.7 In *R v. T* [2010] EWCA Crim 2439 the Court was concerned that the logic employed to form the expert's opinion was not set out in the reports, statements or evidence. It stated:

"97. The importance of an expert complying with his duties under Part 33 of the Criminal Procedure Rules has been emphasised by this court in *Reed & Reed* and in *R v Henderson* [2010] EWCA Crim 1269. As was made clear by Mr [R] in his evidence to us, it is also important that besides being balanced, clear and logical, it is essential that an expert report is transparent. Where the mark could have been made by the footwear, the factors that enable the expert to express a more definite evaluative opinion must be set out, including any data on which reliance is placed.

98. The report can be considered by the court at a pre-trial hearing and, if there is a challenge to reliability of the basis on which an evaluative opinion is being given, the court can make directions as to the resolution of the issue of its admissibility.

99. The justification advanced in the evidence in this appeal for not including in the reports the use of the formula and statistics was that it might confuse the jury. No doubt this was a reaction to the perceived consequences of the views of this court expressed in Adams and subsequent cases. The justification advanced can, however, be no justification, as a court must know what is being done. The report is in any event not put before the jury. If the way in which the opinion on the footwear mark evidence had been reached in this case had been put into the report and been available to the Recorder … then in the light of Adams, we have no doubt that the argument that has taken place on this appeal would have taken place at the trial. The decision of this court in *Abadom* as long ago as 1982 explained the importance of referring to all the material so that the cogency and probative value of the conclusions can be tested and evaluated by reference to it.

…

108. …

ii) The process by which the evidence was adduced lacked transparency … it is simply wrong in principle for an expert to fail to set out the way in which he has reached his conclusions in his report.

iii) …the practice of using a Bayesian approach and likelihood ratios to formulate an opinions placed before a jury without that process being disclosed and debated is contrary to the principles of open justice." [57]

8.10.8 Where an opinion is subjective there may be a requirement to make this clear in the report. In *R v. T* [2010] EWCA Crim 2439 the Court noted:

"96 It is essential, if the expert examiner of footwear expresses a view which goes beyond saying that the footwear could or could not have made the mark, that the report makes clear that this is a view which is subjective and based on his experience. For that reason we do not consider that the word "scientific" should be used, as, if that phrase is put before the jury, it is likely to give the impression to the jury of a degree of precision and objectivity that is not present given the state of this area of expertise."

8.10.9 The above quote also suggests that the term "scientific" should not be used to describe subjective opinions.

8.10.10 This issue was considered in relation to DNA evidence in *R v. Dlugosz & Ors.* [2013] EWCA Crim 2. It was stated that when the evidence was not based on statistics this must be made clear.

8.10.11 At paragraph 24;

"… it does seem to us that provided it is made clear to the jury the very limited basis upon which an evaluation can be made without a statistical database, a jury can be assisted in its consideration of the evidence by an expression of an evaluative opinion by the experts. We consider that on the materials with which we have been provided, there may be a sufficiently reliable scientific basis on which an evaluative opinion can be expressed in cases, provided the expert has sufficient experience (which must be set out in full detail in the report) and the profile has sufficient features for such an opinion to be given. If the admissibility is challenged, the judge must, in the present state of this science, scrutinise the experience of the expert and the features of the profile so as to be satisfied as to the reliability of the basis on which the evaluative opinion is being given. If the judge is satisfied and the evidence is admissible, it must then be made very clear to the jury that the evaluation has no statistical basis. It must be emphasised that the opinion expressed is quite different to the usual DNA evidence based on statistical match probability. It must be spelt out that the evaluative opinion is no more than an opinion based upon [the

[57] Part 33 of the Rules in effect before 2015 became Part 19 in the 2015 issue of the Rules.

expert's] experience which should then be explained. It must be stressed that, in contrast to the usual type of DNA evidence, it is only of more limited assistance."

8.10.12 At paragraph 28;

"We therefore conclude that, provided the conclusions from the analysis of a mixed profile are supported by detailed evidence in the form of a report of the experience relied on and the particular features of the mixed profile which make it possible to give an evaluative opinion in the circumstances of the particular case, such an opinion is, in principle, admissible, even though there is presently no statistical basis to provide a random match probability and the sliding scale cannot be used. We have therefore reached the same conclusion as was reached in R v Ashley Thomas."

8.10.13 At paragraph 53;

"As we have set out at paragraph 28 above, we appreciate that juries could attach a false weight to DNA evidence where statistical evidence cannot be given. However, such a risk is no reason for excluding the evidence, providing that the nature of the evaluative opinion is clearly explained to the jury and it is made clear to them that the opinion is an evaluative one based on experience and not on statistics."

8.10.14 The approach in *Dlugosz* was commented on in *R v. Walsh* [2015] NICA 46.

8.10.15 The issue was also discussed in *R v. Bernard* [2014] EWCA Crim 2513.

8.10.16 In *R v. South* [2011] EWCA Crim 754 the court indicated the subjective nature of the evidence could be determined from the evidence itself rather than requiring a specific statement.

"29 In connection with this point, Mr Claxton referred us to statements of Thomas LJ in *R v T* (Footwear mark evidence) [2011] 1 Cr App R 9 at paras 73 and 74 in particular. Thomas LJ, giving the reserved judgment of the court, stated that if a footwear examiner expressed a view that went beyond saying that the footwear could or could not make the mark concerned, the report should make it clear that the view is subjective and based on experience of the examiner, so that words such as "scientific" used in making evaluations should not in fact be used because they would, before a jury, give an impression of a degree of precision and objectivity which is not present given the current state of expertise. The factors that the expert does use should, however, be set out and explained.

30. In the present case, the evidence was that Mr Jones had worked as a scientist in this area since 1982 and had been involved in numerous cases concerned with footwear analysis and comparison of footprints. His evidence was that this footprint was in agreement with the size, pattern, detailed alignment and degree of wear with the trainer of the appellant that had been seized from him upon arrest. The zigzag bar pattern and the curved tramline were similar, and

the trainers, which were size 9, were consistent with the footprint which was of size 9 or 8 but not size 10. Mr Jones' evidence was that he encountered the type of footwear seized from the appellant in only 2 per cent of cases that he dealt with as a forensic examiner of footwear and footprints. He also said that burglars frequently used sports trainers.

31. In our view, the evidence of the expert did not transgress in any way the guidelines set down by this court in *R v T*. Mr Jones' evidence was based on his experience, and he gave his evidence in a manner which enabled the jury to make a decision on whether or not they were sure that those footprints were made by the appellant's trainers."

8.10.17 Where the expert's work would be expected to have conformed to certain standards (e.g. because the standards were specified by the Regulator) and those standards were not maintained that would clearly be a matter to be disclosed as potentially detracting from the evidence.

8.11 Statement of Any Qualifications to Opinion

8.11.1 It is a mandatory requirement by CrimPR 19.4(g) above to state any qualification to the expert's opinion where the expert is not able to give his opinion without one.

8.11.2 It is analogous to and to some extent overlaps with the requirement to state matters which detract from the expert's opinion and to state when an opinion is a provisional one and when a declaration of truth is subject to a qualification.

8.12 Reliability

8.12.1 The requirement for reliability is a key factor in determining the admissibility of evidence.

8.12.2 In the Scottish case *Thomas Ross Young v. HM Advocate* [2013] Scot HC HCJAC 145 the Court commented on the reliability of the evidence.

"[54] Evidence about relevant matters which are not within the knowledge of everyday life reasonably to be imputed to a jury or other finder of fact may be admissible if it is likely to assist the jury or finder of fact in the proper determination of the issue before it. The expert evidence must be relevant to that issue (and so not concerned solely with collateral issues), and it must be based on a recognised and developed academic discipline. It must proceed on theories which have been tested (both by academic review and in practice) and found to have a practical and measurable consequence in real life. It must follow a developed methodology which is explicable and open to possible challenge, and it must produce a result which is capable of being assessed and given more or less weight in light of all the evidence before the finder of

fact. If the evidence does not meet these criteria, it will not assist the finder of fact in the proper determination of the issue; rather, it will risk confusing or distracting the finder of fact, or, worse still, cause the finder of fact to determine the crucial issue on the basis of unreliable or erroneous evidence. For this reason, the court will not admit evidence from a "man of skill" or an "expert" unless satisfied that the evidence is sufficiently reliable that it will assist the finder of fact in the proper determination of the issue before it. We agree with, and adopt, the general observations of the court with regard to evidence from a person claiming specialist knowledge and expertise which were made by the court in Hainey v HM Advocate [2013] HCJAC 47 particularly at paragraph [49].

[55] There are countless examples of evidence about such matters which are routinely regarded as based on sufficiently developed theories, which have sufficiently developed and certifiable methodologies, and produce results which have a practical effect and which may be weighed and assessed by a finder of fact that such evidence is admissible in court. So, scientific evidence about DNA comparisons, fingerprint evidence, evidence of medical practitioners or pathologists is evidence based on a sufficiently clear and reliable basis that it may assist the finder of fact, and will be admitted as evidence for the finder of fact to consider. It does not of course follow that the finder of fact will accept the evidence, in whole or in part - there may be conflicting evidence, or the finder of fact may not be satisfied by the evidence. But in order to be admissible, the evidence must have a sufficiently reliable foundation to be capable of assisting the finder of fact in the proper determination of the issue before it.

[56] Having considered the evidence of both Professor Canter and Dr Woodhams we have little difficulty in reaching the conclusion that CLA evidence, in its present state of development, does not possess the necessary qualities to render it admissible in court, either before a jury or in appellate proceedings. It is an area of academic research which is still in its infancy - it is an aspect of behavioural science which has only been actively pursued since the 1980s, and Dr Woodhams stated that there were only six research papers analysing potentially linked murders, and about twelve papers analysing potentially linked rapes. While the underlying theories of behavioural consistency and behavioural distinctiveness appear to have some foundation in general experience, the application of these theories in the context of criminal behaviour, and CLA in particular, is not yet tested."

8.12.3 These views were endorsed in a subsequent hearing in the same case - *Reference from the SCCRC by Thomas Ross Young against Her Majesty's Advocate* [2014] ScotHC HCJAC 113.

8.12.4 The 2014 version of the CrimPR introduced a requirement, at 33.4(h), preserved in Part 19 of the 2015 version, that the experts report must:

> "include such information as the court may need to decide whether the expert's opinion is sufficiently reliable to be admissible as evidence;"

8.12.5 This was part of the response to the Law Commission report (see Part 7.3).

8.12.6 This requirement has been supported by amendments to the Criminal Practice Directions [2014] EWCA Crim 1569 preserved in the 2015 version (Practice Direction (CA(Crim Div); Criminal Proceedings: General Matters) [2015] EWCA Crim 1567.

8.12.7 The 2015 version of the Directions included the following text.

> "19A.1 Expert opinion evidence is admissible in criminal proceedings at common law if, in summary, (i) it is relevant to a matter in issue in issue in the proceedings; (ii) it is needed to provide the court with information likely to be outside the court's own knowledge and experience; and (iii) the witness is competent to give that opinion.
>
> 19A.2 Legislation relevant to the introduction and admissibility of such evidence includes section 30 of the Criminal Justice Act 1988, which provides that an expert report shall be admissible as evidence in criminal proceedings whether or not the person making it gives oral evidence, but that if he or she does not give oral evidence then the report is admissible only with the leave of the court; and CrimPR Part 19, which in exercise of the powers conferred by section 81 of the Police and Criminal Evidence Act 1984 and section 20 of the Criminal Procedure and Investigations Act 1996 requires the service of expert evidence in advance of trial in the terms required by those rules.
>
> 19A.3 In the Law Commission report entitled 'Expert Evidence in Criminal Proceedings in England and Wales', report number 325, published in March, 2011, the Commission recommended a statutory test for the admissibility of expert evidence. However, in its response the government declined to legislate. The common law, therefore, remains the source of the criteria by reference to which the court must assess the admissibility and weight of such evidence; and CrimPR 19.4 lists those matters with which an expert's report must deal, so that the court can conduct an adequate such assessment.
>
> 19A.4 In its judgment in *R v Dlugosz and Others* [2013] EWCA Crim 2, the Court of Appeal observed (at paragraph 11): "It is essential to recall the principle which is applicable, namely in determining the issue of admissibility, the court must be satisfied that there is a sufficiently reliable scientific basis for the evidence to be admitted. If there is then the court leaves the opposing views to be tested before the jury." Nothing at common law precludes assessment by the court of the reliability of an expert opinion by reference to substantially similar factors to those the Law Commission recommended as conditions of admissibility, and courts are encouraged actively to enquire into such factors.
>
> 19A.5 Therefore factors which the court may take into account in determining the reliability of expert opinion, and especially of expert scientific opinion, include:

(a) the extent and quality of the data on which the expert's opinion is based, and the validity of the methods by which they were obtained;

(b) if the expert's opinion relies on an inference from any findings, whether the opinion properly explains how safe or unsafe the inference is (whether by reference to statistical significance or in other appropriate terms);

(c) if the expert's opinion relies on the results of the use of any method (for instance, a test, measurement or survey), whether the opinion takes proper account of matters, such as the degree of precision or margin of uncertainty, affecting the accuracy or reliability of those results;

(d) the extent to which any material upon which the expert's opinion is based has been reviewed by others with relevant expertise (for instance, in peer-reviewed publications), and the views of those others on that material;

(e) the extent to which the expert's opinion is based on material falling outside the expert's own field of expertise;

(f) the completeness of the information which was available to the expert, and whether the expert took account of all relevant information in arriving at the opinion (including information as to the context of any facts to which the opinion relates);

(g) if there is a range of expert opinion on the matter in question, where in the range the expert's own opinion lies and whether the expert's preference has been properly explained; and

(h) whether the expert's methods followed established practice in the field and, if they did not, whether the reason for the divergence has been properly explained.

19A.6 In addition, in considering reliability, and especially the reliability of expert scientific opinion, the court should be astute to identify potential flaws in such opinion which detract from its reliability, such as:

(a) being based on a hypothesis which has not been subjected to sufficient scrutiny (including, where appropriate, experimental or other testing), or which has failed to stand up to scrutiny;

(b) being based on an unjustifiable assumption;

(c) being based on flawed data;

(d) relying on an examination, technique, method or process which was not properly carried out or applied, or was not appropriate for use in the particular case; or

(e) relying on an inference or conclusion which has not been properly reached."

8.12.8 This Directions, in parts 19A.5 and 19A.6, sets out factors which the court should consider when determining the admissibility of expert evidence. This

indirectly creates requirements for the content of the expert's report. The information required to satisfy the court of the reliability of the evidence should be relatively easy to produce where the method has been validated.

8.12.9 In *Wright, R (On the application of) v. Crown Prosecution Service* [2015] EWHC 628 (Admin) the court made clear the provisions of the Directions, and by implication the CrimPR, apply to anyone giving expert evidence.

"20 So far as the witness [F] is concerned, he was not an expert witness in the usual sense. It seems to me to be important to remember what an expert is. An expert is someone who gives evidence in breach of what would otherwise be the hearsay rule.

…

24 … There are types of evidence which fall outside the classic definition of expert evidence and are relied upon by the Crown"

8.12.10 While recognising that every issue raised in the Directions may not be relevant in every case the Court stressed the need to comply with the Directions.

"25 …One cannot allow the proper questions which are posed by the Practice Direction to be waived away simply because he is not an expert in the fullest sense. I accept that many of the questions may not be relevant in a case such as this but, in my judgment, some in this case were particularly apt."

8.12.11 Where quality standards would be expected to apply to the work (e.g. where the Regulator had specified such standards) and those standards have not been maintained this would be a matter which should be made clear in the report/statement to ensure compliance with sections 19A.5(h) and 19A6.(d).

8.12.12 The information should be provided in a concise form and might be dealt with in Q&A format. This material could be incorporated in the report/statement or produced as a separate annex. It may be simplest to produce a standard text covering the generic method and providing any additional information required, due to case specific deviation from the generic method, in the body of the report/statement.

8.12.13 This approach supports the CPS requirement for a Q&A style document illustrating the strengths and weaknesses of the scientific procedures offered. Direction 19A.5 effectively outlines questions that require answering.

8.12.14 It is notable that, even before the revised sections of the Directions were published their importance was stressed by the Court of Appeal – see paragraph 43-44 of the judgment in *R v. H* [2014] EWCA Crim 1555.

8.13 Summary of Conclusions

8.13.1 This is a mandatory requirement by CrimPR 19.4(i) above.

8.14 Statement of Compliance with Duty to Court

8.14.1 It is a mandatory requirement by CrimPR 19.4(j) above to provide these details.

8.14.2 The CrimPR follows the key judicial guidance referred to in Part 4 herein. See, in particular:

a. *R v. Bowman* [2006] EWCA Crim 417;

> "177 In addition to the specific factors referred to by Cresswell J. in the *Ikarian Reefer* [1993] 2 Lloyds Rep. 68 set out in Harris we add the following as necessary inclusions in an expert report:
>
> 6. A statement to the effect that the expert has complied with his duty to the court to provide independent assistance by way of objective unbiased opinion in relation to matters within his or her expertise and an acknowledgment that the expert will inform all parties and where appropriate the court in the event that his opinion changes on any material issues."

8.14.3 As to the nature of those duties, see Part 5 (The Role of the Expert) herein.

8.14.4 A form of words which may be used to meet the obligations of CrimPR 19(4)(j) and 19(4)(k) is provided in Part 19.B of the Criminal Practice Directions.

'I (name) DECLARE THAT:

1. I understand that my duty is to help the court to achieve the overriding objective by giving independent assistance by way of objective, unbiased opinion on matters within my expertise, both in preparing reports and giving oral evidence. I understand that this duty overrides any obligation to the party by whom I am engaged or the person who has paid or is liable to pay me. I confirm that I have complied with and will continue to comply with that duty.

2. I confirm that I have not entered into any arrangement where the amount or payment of my fees is in any way dependent on the outcome of the case.

3. I know of no conflict of interest of any kind, other than any which I have disclosed in my report.

4. I do not consider that any interest which I have disclosed affects my suitability as an expert witness on any issues on which I have given evidence.

5. I will advise the party by whom I am instructed if, between the date of my report and the trial, there is any change in circumstances which affect my answers to points 3 and 4 above.

6. I have shown the sources of all information I have used.

7. I have exercised reasonable care and skill in order to be accurate and complete in preparing this report.

8. I have endeavoured to include in my report those matters, of which I have knowledge or of which I have been made aware, that might adversely affect the validity of my opinion. I have clearly stated any qualifications to my opinion.

9. I have not, without forming an independent view, included or excluded anything which has been suggested to me by others including my instructing lawyers.

10. I will notify those instructing me immediately and confirm in writing if for any reason my existing report requires any correction or qualification.

11. I understand that:

(a) my report will form the evidence to be given under oath or affirmation;

(b) the court may at any stage direct a discussion to take place between experts;

(c) the court may direct that, following a discussion between the experts, a statement should be prepared showing those issues which are agreed and those issues which are not agreed, together with the reasons;

(d) I may be required to attend court to be cross-examined on my report by a cross-examiner assisted by an expert.

(e) I am likely to be the subject of public adverse criticism by the judge if the Court concludes that I have not taken reasonable care in trying to meet the standards set out above.

12. I have read Part 19 of the Criminal Procedure Rules and I have complied with its requirements.

13. I confirm that I have acted in accordance with the code of practice or conduct for experts of my discipline, namely [identify the code].

14. [For Experts instructed by the Prosecution only] I confirm that I have read guidance contained in a booklet known as Disclosure: Experts' Evidence and Unused Material which details my role and documents my responsibilities, in relation to revelation as an expert witness. I have followed the guidance and recognise the continuing nature of my responsibilities of disclosure. In accordance with my duties of disclosure, as documented in the guidance booklet, I confirm that:

(a) I have complied with my duties to record, retain and reveal material in accordance with the Criminal Procedure and Investigations Act 1996, as amended;

(b) I have compiled an Index of all material. I will ensure that the Index is updated in the event I am provided with or generate additional material;

(c) in the event my opinion changes on any material issue, I will inform the investigating officer, as soon as reasonably practicable and give reasons.

I confirm that the contents of this report are true to the best of my knowledge and belief and that I make this report knowing that, if it is tendered in evidence, I would be liable to prosecution if I have wilfully stated anything which I know to be false or that I do not believe to be true.'

8.14.5 The Criminal Practice Directions requires that the above wording or a substantially similar wording is used. There is, therefore no requirement to use this exact wording.

8.14.6 The wording set out above does not address all issues which can be addressed in declarations within a statement.

8.14.7 Section 13 of the text set out above refers to a "code of practice or conduct" but does not specify what that document is. There have been discussions with relevant stakeholders and it has been agreed that, within most areas covered by the Forensic Science Regulator, it is sensible to change the reference to "the Code of Conduct published by the Forensic Science Regulator".

8.14.8 The Regulator has issued guidance on this matter [1].

8.14.9 Witnesses signing declarations must take the utmost case that they understand those declarations and comply with them. In *R v. Pabon* [2018] EWCA Crim 420 the Court, at paragraph 58, criticised an expert on this basis.

8.15 Declaration of Truth

8.15.1 This is a mandatory requirement by CrimPR 19.4(k) above.

8.15.2 A suitable wording of the statement is provided in the form associated with CrimPR 16.2.

8.15.3 This is also addressed in Part 19B of the Criminal Practice Directions see 8.14 above.

8.15.4 The common law adds a gloss. Where an expert cannot, without some qualification, assert that the report contains the whole truth and nothing but the

truth as to those matters about which he opines, the qualification must be stated in the report:

a. *Derby & Co. Ltd v. Weldon*, The Times, 9 November 1990 (CA Civ Div);

i. Staugton LJ:

> "There may of course be cases where an expert witness, who has prepared a report, could not go into the witness-box and assert that his report contained the truth, the whole truth and nothing but the truth without some qualification. In that case it may well be that the substance of his evidence has not been disclosed and that the qualification ought to have been either in the report or disclosed separately. In my experience no reputable expert would sign such a report without putting the qualification in it. But I do not think that an expert witness, or any other witness, obliges himself to volunteer his views on every issue in the whole case when he takes an oath to tell the whole truth. What he does oblige himself to do is to tell the whole truth about those matters which he is asked about. …".

b. *National Justice Cia Naviera SA v. Prudential Assurance Co. Ltd (The Ikarian Reefer)* [1993] 2 Lloyd's Rep 68, 81- 82; [1993] F.S.R. 563; [1993] 37 E.G. 158; Times, March 5, 1993 (High Court - Cresswell J);

i. Principle 5:

> " … In cases where an expert witness, who has prepared a report, could not assert that the report contained the truth, the whole truth and nothing but the truth without some qualification, that qualification should be stated in the report: *Derby & Co. Ltd. and others v. Weldon and others*, The Times, 9 November 1990, per Staughton L.J".

c. *General Medical Council v. Meadow* [2006] EWCA Civ 1390;

i. Citing *The Ikarian Reefer*.

8.16 Statement of Limitations on Expertise or Opinion

8.16.1 This requirement is not expressly stated in CrimPR 19.4 above although it might be said to flow from the requirements therein for the expert to state his qualifications etc and any qualification to his opinion.

8.16.2 The report should refer to the range and extent of the expertise and any limitations on the expertise. The expert should make it clear when a question or

issue falls outside his expertise. See the key judicial guidance referred to in Part 4 herein and, in particular:

a. *National Justice Cia Naviera SA v. Prudential Assurance Co. Ltd (The Ikarian Reefer)* [1993] 2 Lloyd's Rep 68, 81- 82; [1993] F.S.R. 563; [1993] 37 E.G. 158; Times, March 5, 1993 (High Court - Cresswell J);

   i. Principle 4:

   "4. An expert witness should make it clear when a particular question or issue falls outside his expertise."

b. *R v. Harris & Ors.* [2005] EWCA Crim 1980;

   i. Para 271(4), summarising *The Ikarian Reefer*.

c. *R v. Bowman* [2006] EWCA Crim 417;

   i. Para 177, summarising *The Ikarian Reefer* and *R v. Harris & Ors.*

d. *Kumar v. General Medical Council* [2012] EWHC 2688 (Admin);

"49. In a criminal trial, the lawyers and judge should identify what is admissible or not, and it is for the legal representatives to confine an expert to those matters which fall within his expertise. Cross-examination should not lure an expert beyond his expertise, and the judge should keep the expert within his limits. The expert should however know his limits, and be alert to them notwithstanding that in the trial process that was not always easy."

8.17 Provisional Opinions

8.17.1 This requirement is not expressly stated in CrimPR 19.4 above although it might be said to flow from the requirements therein for the expert to state any qualification to his opinion.

8.17.2 If the expert's opinion is not properly researched due to insufficient data, then that must be stated with an indication that the opinion is provisional. See the key judicial guidance referred to in Part 4 herein and, in particular:

a. *National Justice Cia Naviera SA v. Prudential Assurance Co. Ltd (The Ikarian Reefer)* [1993] 2 Lloyd's Rep 68, 81- 82; [1993] F.S.R. 563; [1993] 37 E.G. 158; Times, March 5, 1993 (High Court - Cresswell J);

   i. Principle 4:

> "4. An expert witness should make it clear when a particular question or issue falls outside his expertise."

b. *R v. Harris & Ors.* [2005] EWCA Crim 1980;

   i. Para 271(5), summarising *The Ikarian Reefer*;

c. *R v. Bowman* [2006] EWCA Crim 417;

   i. Para 177, summarising *The Ikarian Reefer* and *R v. Harris & Ors.*

d. *Kumar v. General Medical Council* [2012] EWHC 2688 (Admin) the court, discussing the conduct of a medical expert witness, noted the following.

> "38. But he was reckless in not making clear the provisional nature of the report … He knew that by not highlighting this, he created an unacceptable risk that those instructing him would assume that the report was complete, not provisional, and would then rely on its contents."

8.18 Declaration to Inform Parties and Court of Any Change of Interpretation

8.18.1 This requirement is not expressly stated in CrimPR 19.4. The duty to so inform (as opposed to the declaration of intended compliance with it in the report) is stated in CrimPR 19.2.

8.18.2 The report should state that the expert will inform all parties and where appropriate, the Court, if his opinion changes on any material issues.

a. *R v. Bowman* [2006] EWCA Crim 417; Para 177(6),

> "177 In addition to the specific factors referred to by Cresswell J. in the *Ikarian Reefer* [1993] 2 Lloyds Rep. 68 set out in Harris we add the following as necessary inclusions in an expert report:
>
> 6. … an acknowledgment that the expert will inform all parties and where appropriate the court in the event that his opinion changes on any material issues".

8.18.3 This requirement is, in part, addressed by the declaration provided in Part 19B of the Criminal Practice Directions see 8.14 above.

8.19 Application of Guidance to Further/Supplementary Reports

8.19.1 This requirement is not expressly stated in CrimPR 19.4.

8.19.2 Where further or supplementary reports are required, the same guidelines on reports applicable to the first report should be followed:

a. *R v. Bowman* [2006] EWCA Crim 417;

"177… (7) Where on an exchange of experts' reports matters arise which require a further or supplemental report the above guidelines should, of course, be complied with."

8.20 Communication Without Delay to the Parties and Court of Change of Opinion

8.20.1 This requirement is not expressly stated in CrimPR 19.4. The duty to so inform (as opposed to the compliance with it without delay) is stated in CrimPR 19.2.

8.20.2 See the key judicial guidance referred to in Part 4 herein and, in particular:

a. *National Justice Cia Naviera SA v. Prudential Assurance Co. Ltd (The Ikarian Reefer)* [1993] 2 Lloyd's Rep 68, 81- 82; [1993] F.S.R. 563; [1993] 37 E.G. 158; Times, March 5, 1993 (High Court - Cresswell J);

i. Principle 6.

"If, after exchange of reports, an expert witness changes his view on a material matter having read the other side's expert's report or for any other reason, such change of view should be communicated (through legal representatives) to the other side without delay and when appropriate to the court."

b. *R v. Harris & Ors.* [2005] EWCA Crim 1980;

i. para 271(6), summarising *The Ikarian Reefer*.

8.20.3 This requirement is, in part, addressed by the declaration provided in Part 19B of the Criminal Practice Directions see 8.14 above.

8.21 Explanation of Opinion

8.21.1 This requirement is not expressly stated in CrimPR 19.4 but could be regarded as a necessary consequence of the requirements stated in that provision.

8.21.2 The expert must explain the basis of his opinion in order for it to have any value or weight at all.

8.21.3 In *Kennedy (Appellant) v. Cordia (Services) LLP (Scotland) [2016] UKSC 6* the Supreme Court stressed the need for en expert to explain their opinion.

48. An expert must explain the basis of his or her evidence when it is not personal observation or sensation; mere assertion or "bare ipse dixit" carries little weight, as the Lord President (Cooper) famously stated in Davie v Magistrates of Edinburgh 1953 SC 34, 40. If anything, the

suggestion that an unsubstantiated ipse dixit carries little weight is understated; in our view such evidence is worthless. Wessels JA stated the matter well in the Supreme Court of South Africa (Appellate Division) in Coopers (South Africa) (Pty) Ltd v Deutsche Gesellschaft für Schädlingsbekämpfung mbH 1976 (3) SA 352, 371:

"[A]n expert's opinion represents his reasoned conclusion based on certain facts or data, which are either common cause, or established by his own evidence or that of some other competent witness. Except possibly where it is not controverted, an expert's bald statement of his opinion is not of any real assistance. Proper evaluation of the opinion can only be undertaken if the process of reasoning which led to the conclusion, including the premises from which the reasoning proceeds, are disclosed by the expert."

As Lord Prosser pithily stated in Dingley v Chief Constable, Strathclyde Police 1998 SC 548, 604: "As with judicial or other opinions, what carries weight is the reasoning, not the conclusion."

8.22 Disclosure of Potential Conflict of Interest

8.22.1 This requirement is not expressly stated in CrimPR 19.4.

8.22.2 A potential conflict of interest must be disclosed even if the view is taken that it is not material:

a. *Toth v. Jarman* [2006] 4 All E.R. 1276 (CA Civ Div);

i. See Part 7 (The Admissibility of Expert Evidence, Conflict of Interest) herein.

8.22.3 This requirement is, in part, addressed by the declaration provided in Part 19B of the Criminal Practice Directions see 8.14 above.

8.23 Joint Reports

8.23.1 Part 19C of the Criminal Practice Directions creates requirements for certain declarations in the case of joint reports between experts.

8.24 Opinion as to Consistency and Inconsistency

8.24.1 This requirement is not expressly stated in CrimPR 19.4.

8.24.2 Caution is required in expressing opinions as to the "consistency" of a given fact with a hypothesis because whereas "inconsistency" is often probative, the fact of consistency is quite often of no probative value at all; and where an opinion

of consistency is given, it should be made very clear (where it is the case) that it does not assist in reaching a conclusion.

a. *R v. Puaca* [2005] EWCA Crim 3001;

> "42 Mr Coker submitted that an expert is entitled to say what he has found is consistent with something and that has probative value. Whereas "inconsistency" is often probative, the fact of consistency is quite often of no probative value at all. In this case his evidence of consistency had no probative value, assuming the correctness of this answer in re-examination. We consider that there is a very real danger in adducing before a jury dealing with a case such as the present evidence of matters which are "consistent" with a conclusion, at least unless it is to be made very clear to them that such matters do not help them to reach the conclusion. If it is introduced in evidence, and particularly if it is given some emphasis, a jury may well think that it assists them in reaching a conclusion : for why otherwise are they being told about it? …".

8.24.3 In *R v. T* [2010] EWCA Crim 2439 the Court suggested the term "could have" was a suitable wording for a conclusion. See:

> "73. …The use of the term "could have made" is a more precise statement of the evidence; it enables the jury to better understand the true nature of the evidence than the more opaque phrase "moderate [scientific] support. "

8.24.4 The use of the phrase "could have been made" may appear to raise similar issues to those noted in relation to the phrase "consistent with": given the burden and standard of proof in criminal cases, a phrase suggesting the mere possibility of an adverse inference does not appear probative of anything. There is, however, a logical distinction. In *Puaca* the word "consistent" was used by the expert to describe whether an observation was explicable in terms of a particular hypothesis as to how it had been caused and was therefore too weak an expression to be probative. In *T*, however, the phrase "could have been made" was envisaged by the Court as being used to describe a match between a mark at the scene and a questioned item of footwear: given the likelihood of being able to exclude a questioned item from making most marks, the fact that it could have made the mark in question is likely to be probative.

8.24.5 The Court's disapproval in *T* of the use of the phrase "moderate scientific support" is, at first blush, difficult to reconcile with the approval of the use of a hierarchy of expressions to denote the strength of a subjective opinion in *R v. Atkins & Atkins* [2009] EWCA Crim 1876 (at paragraph 23) and *R v. Gilfoyle*

[2000] EWCA Crim 81 (at paragraph 24). However, the context for the comments in *T* was the deprecation by the Court of the expression by the expert of an opinion suggesting scientific precision in circumstances in which the underlying data did not permit such precision and, moreover, had not been disclosed. It should not be read as precluding the use of a hierarchy of expressions to denote the strength of a subjective opinion where the circumstances justify that approach and the position is made transparent.

8.24.6 In *R v. Thomas* [2011] EWCA 1295 the Court did not criticise evidence of a witness called by the prosecution who stated the DNA provided support to the prosecution hypothesis but could not quantify the level of support. However, it is clear that the cross examination allowed the issues surrounding the evidence to be considered in detail. It should not, therefore, be considered as setting a general principle.

8.24.7 A similar position was adopted in *R v. Martin* [2012] NICA 7. In this case Morgan LCJ stated:

"31. … Where such DNA evidence is admitted it is the duty of the court to ensure that the jury has sufficient guidance to enable it fully and properly to evaluate the evidence. In many cases the expert may be able to provide match probabilities and the task of the court will be to ensure that the jury are alert to the meaning of those statistics. Non-statistical opinion evidence can be admissible whether or not this is referable to any informal scale of probability if relevant and reliable. In appropriate cases it may be necessary to warn the jury not to attempt to carry out any statistical analysis of their own."

8.24.8 The lack of ability to determine the value of the evidence has resulted in exclusion - see *R v. Karen Walsh (DNA Evidence)* [2011] NICC 32.

8.25 Identifying Points of Agreement and Disagreement with Other Experts

8.25.1 Where directed, experts should agree points of agreement or disagreement with a summary of reasons:

a. *R v. Harris & Ors.* [2005] EWCA Crim 1980;

i. Para 273.

"… The new Criminal Procedure Rules provide wide powers of case management to the Court. Rule 24 and Para.15 of the Plea and Case Management form make provision for experts to consult together and, if possible, agree points of agreement

or disagreement with a summary of reasons. In cases involving allegations of child abuse the judge should be prepared to give directions in respect of expert evidence taking into account the guidance to which we have just referred. If this guidance is borne in mind and the directions made are clear and adhered to, it ought to be possible to narrow the areas of dispute before trial and limit the volume of expert evidence which the jury will have to consider."

b. *R v. Reed & Ors.* [2009] EWCA Crim 2698;

"129. Part 33 of the Criminal Procedure Rules has, since its making and bringing into force on 8 November 2006, set out the procedure through which the court controls expert evidence in the developing science of DNA. First, we agree with the views of Professor Caddy (to which we referred at paragraph 73) as to the importance of Rule 33.3(1) in providing a very important safeguard. This requires at sub-paragraphs (f) and (g) each expert to identify where there is a range of opinion on the matters dealt with in his report. In such a case, the expert must summarise the scope of opinion and give reasons for his own opinion. If the expert cannot give his opinion without qualification, he must state the qualification. Compliance with this obligation will identify for the other party an area where there is a range of opinion; it is particularly important that this rule is followed in the expert report obtained by the Crown.

…

131 In cases involving DNA evidence:

…

… (vi) If the order as to the provision of the statement under r.33.6 is not observed and in the absence of a good reason, then the trial judge should consider carefully whether to exercise the power to refuse permission to the party whose expert is in default to call that expert to give evidence. In many cases, the judge may well exercise that power. A failure to find time for a meeting because of commitments to other matters, a common problem with many experts as was evident in this appeal, is not to be treated as a good reason." [58]

c. *R v. Weller* [2010] EWCA Crim 1085;

"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

[58] Part 33 of the Rules in effect before 2015 became Part 19 in the 2015 issue of the Rules.

court made clear in *Reed and Reed* [2009] EWCA Crim 2698, such a review was essential in each case." [59]

d. *R v. Henderson & Ors*. [2010] EWCA Crim 1269;

"210.Generally, it will be necessary that the court directs a meeting of experts so that a statement can be prepared of areas of agreement and disagreement (33.6.2(a) and (b)). Such a meeting will not achieve its purpose unless it takes place well in advance of the trial, is attended by all significant experts, including the defence experts, and a careful and detailed minute is prepared, signed by all participants. Usually it will be preferable if others, particularly legal representatives, do not attend. Absent a careful record of the true issues in the case, it is difficult to see how the trial can be properly conducted or the jury properly guided as to the rational route to a conclusion. The court may be required to exercise its important power to exclude evidence from an expert who has not complied with a direction under [33.6(2), 33.6(4)]. The court should bear in mind the need to employ single joint experts where possible (33.7)." [60]

e. Note also the power in CrimPR 19 for the court to direct:

i. The pre-hearing discussion of expert evidence (19.6; Pre-hearing discussion of expert evidence

"Pre-hearing discussion of expert evidence

19.6.—(1) This rule applies where more than one party wants to introduce expert evidence.

(2) The court may direct the experts to—

(a) discuss the expert issues in the proceedings; and

(b) prepare a statement for the court of the matters on which they agree and disagree, giving

their reasons.

(3) Except for that statement, the content of that discussion must not be referred to without the court's permission.

(4) A party may not introduce expert evidence without the court's permission if the expert has not complied with a direction under this rule."

ii. That evidence is to be given by a single expert (CrimPR 19.7) and for multiple instructions to be given to a single expert (CrimPR 19.8).

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59 Part 33 of the Rules in effect before 2015 became Part 19 in the 2015 issue of the Rules.

60 Rules 33.3(1)(f) and 33.3(1)(g) were, as a result of restructuring, altered to 33.4(f) and 33.4(g) in the 2014 version of the Rules. As a result of changes in 2015 they are now in Part 19 CrimPR

8.26 Other CrimPR Requirements

8.26.1 As noted in 8.2 a statement must contain a declaration of truth. A wording for that declaration is provided in the CrimPR.

8.26.2 The wording contains reference to the total number of pages in the statement. This requirement does not appear in statute or in the main body of the CrimPR but, given its occurrence in the relevant form, it appears (if not mandatory) at least advisable to adopt this approach.

8.26.3 While care should be taken to avoid making any error in a statement an error in the number of pages is unlikely to affect the admissibility of the statement. In *Wood v. Director of Public Prosecutions* [2010] EWHC 1769 (Admin) Mitting J said:

"In determining whether or not the erroneous reference to two rather than three pages undermined the validity of the declaration made on the first page, it is necessary to have in mind exactly what Parliament provided that the declaration must contain. The provision is that "the statement contains a declaration by that person to the effect that it is true to the best of his knowledge and belief etc". This statement contained exactly that provision. The fact that it misidentifies the number of pages in the statement is neither here nor there. There is no doubt whatever what statement the declaration referred to. It referred to a statement contained in a document of three pages, each of which was signed by Mr Downing. No one would have any difficulty in ascertaining what statement Mr Downing was making, the truth of which he was certifying. For that simple reason there is no force in Mr [L]'s second point."

8.27 Certainty

8.27.1 Expert witnesses are not required to provide the court with statements of absolute certainty in their evidence. The court, and the jury, can evaluate the expert evidence in the context of the other evidence.

8.27.2 In *R v. Dawson* (1985) 81 Cr. App. R. 150 the Court of Appeal (Criminal Division) approved the following extract from the judge's direction on expert evidence.

"The doctors gave their evidence to you as experts. Their standard is the standard of medical science. So when they say in effect, in my opinion it is highly probable that Mr Black's death was caused by the shock of the attempted robbery but I cannot rule out the possibility that it was caused by an episode of heart disease unconnected with the attempted robbery, you may think that it is in the context of medical science that they are using the phrases "highly probable"

and "cannot rule out the possibility". The doctors' opinions do not necessarily oblige you to say that you cannot be sure … Of course, the doctors' opinions are of the utmost importance in this case and you will take full account of them. But when you have done so make up your own minds on the whole of the evidence."

8.27.3 In *R v. Bracewell* (1979) 68 Cr. App. R. 44 the Court of Appeal (Criminal Division) drew a distinction between "scientific proof" and "legal proof".

8.28 Margin of Uncertainly in Measurement.

8.28.1 The 2014 Criminal Practice Directions introduced factors, preserved in the 2015 version, which the court may take into account in determining the reliability of expert opinion. One of the factors is if the expert's opinion relies on the results of the use of any method (for instance, a test, measurement or survey), whether the opinion takes proper account of matters, such as the degree of precision or margin of uncertainty, affecting the accuracy or reliability of those results.

8.28.2 Accuracy is a specific term referring to obtaining the true value for the quantity measured. It implies that a true value is known, perhaps using certified reference material to calibrate the result. Precision is synonymous with reproducibility or repeatability, which can mean it is possible for a measurement to be precise as the method gives consistent results but in the absence of calibration it may not be accurate.

8.28.3 Uncertainty in measurements is often described in terms of plus or minus a calculated figure or occasionally convention in reporting presents a conservative figure which accounts for the degree of precision (e.g. quoted blood alcohol usually already have a deduction made to the analytical result).

8.29 Units of Measurement

8.29.1 European Union Directive 80/181/EEC set out obligations on Member States to implement legal requirements with regard to the use of units of measurement. [61]

8.29.2 The Directive requires, as a general principle, the use of SI units (also known as metric) of measurement (or units derived from SI units) when dealing with measurements. These are set out in Chapter 1 of the Annex to the Directive.

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61 The Directive has, largely, been transposed into domestic legislation by the Units of Measurement Regulations S.I. 1082 of 1986 (as amended).

8.29.3 Statements and reports should, therefore, comply with the following requirements.

8.29.4 Where the statement/report discusses matters set out in Chapter 2 of the Annex to the Directive it is acceptable to use the units set out in that Chapter. The relevant provisions are, summarised, as follows.

a. When discussing road traffic signs, distance and speed measurement it is acceptable to use the following units.

i. Mile.
ii. Yard.
iii. Foot.
iv. Inch.

b. When discussing the dispensing of draught beer and cider; milk in returnable containers to use the following units.

i. Pint.

8.29.5 In all other cases the report should use units set out in Chapter 1 to the Annex to the Directive (i.e. SI Units).

8.29.6 It is acceptable to use “supplementary indications” (e.g. imperial units). It is therefore acceptable to use measurements not specified in Chapter 1 of the Annex to the Directive. The use of such “supplementary indications” should meet the following requirements.

a. Values quoted in units not contained within Chapter 1 of the Annex to the Directive should:

i. Appear after values quoted in units contained in Chapter 1 of the Annex;
ii. Not be more prominent that the values quoted in units contained in Chapter 1 of the Annex.

8.29.7 Where the expert has to compare results to a statutory provision the results must be provided (either as a primary or supplementary indication) in the units employed in the statute.

8.29.8 The application of these provisions has been addressed in Home Office Circulars. [62]

a. HOC 53/1995 (of 9 October 1995) dealt with the application to the CJS.

b. HOC 5/1996 (of 6 March 1996) dealt with the application to the coronial justice system.

8.30 Length

8.30.1 The requirements with regard to content do not assist in producing concise and focussed reports. However, that should be the aim when drafting the report.

8.30.2 In *IA (a Child) (Fact finding, Welfare, Single Hearing, Expert reports), Re* [2013] EWHC 2499 (Fam) the judge criticised the trend for experts to produce "absurdly lengthy reports". These comments must be interpreted in light of the requirements and practices of the Family Division of the High Court. However, other courts are likely to have the same concerns.

8.30.3 In *Geddes v. HM Advocate* [2015] HCJAC 10 at paras 98-99, the High Court of Justiciary, the court considered that the words of one of the experts had resonance in the case, namely: that "the ever increasing amount of complex technical detail contained in the various reports … is tending to obscure the bigger picture". These remarks by the court are directed at both the style and content of expert reports and also the approach taken by the advocates to the presentation of the evidence to the jury in criminal proceedings.

8.30.4 The CrimPR 3.2(e) requirement to further the overriding objective by actively managing the case includes "(e) ensuring that evidence, whether disputed or not, is presented in the shortest and clearest way". CrimPR 19.2(1)(b) now requires the expert to assist the court in that regard. (See para 5.2 above). The combination of those rules, similarly, points to the need to keep reports concise and to the point.

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62 The Directive (and the related domestic legislation) has been amended on a number of occasions since the Circulars were issued.

8.31 Crown Prosecution Service Requirements

8.31.1 The CPS has established a number of requirements that apply to those instructed by the prosecution. Key requirements are set out The Disclosure Manual and in the CPS/ACPO "Guidance Booklet for Expert Witnesses" [3. These include the following requirements:

a. To record, retain and reveal all material required to ensure the prosecution can meet its disclosure obligations.
b. To disclose any convictions or adverse judicial comment through the use of the "Expert Witness Self Certificate" set out in Annex C of the guidance booklet.
c. To incorporate a confirmation of their understanding of their disclosure obligations and that they have complied with those obligations. The wording of the confirmation is provided in Annex B of the guidance booklet.

8.31.2 The CPS requirements are addressed by the declaration provided in Part 19B of the Criminal Practice Directions see 8.14 above.

9. CORONERS COURTS SYSTEM

9.1.1 The obligations imposed on expert witnesses acting in the Coroners Courts System have not been the subject of significant consideration by the higher courts. It is, therefore, not possible to provide guidance based on clear statements from those courts. It is, however, possible to make some general suggestions.

9.1.2 It is suggested that the position set out below is correct.

a. Those obligations which arise as a result of legislation specific to the CJS do not apply to an expert in relation to a coroner's investigation or inquest. However, some legislation (e.g. parts of the Criminal Procedure Rules) reflects obligations previously imposed by the Courts.
b. Those obligations which arise as a result of judgments of the Courts as to the obligations on expert witnesses should be viewed as applying to an expert in relation to a coroner's investigation or inquest. In some cases the

nature of the obligation may need to be adjusted to reflect the law applicable to coroners' courts.

c. Those obligations which are imposed by those CJS bodies instructing the expert (e.g. the Crown Prosecution Service disclosure requirements) do not apply to an expert in relation to a coroner's investigation or inquest. Clearly the coroner may impose obligations.

9.1.3 Where an expert produces a report satisfying all of the requirements of the CJS this should be admissible in a coroner's court. Where evidence is likely to be used in both the CJS and the coroner's court it therefore appears, subject to the views of the coroner with jurisdiction, sensible to prepare one statement complying with all of the CJS requirements.

10. GUIDANCE ON PARTICULAR TYPES OF EVIDENCE

10.1 DNA Evidence

10.1.1 A conviction can be based on DNA evidence alone but it has been recognised that this is an approach which can present serious difficulties. [63]

a. *R v. Adams (Dennis)*; [1996] EWCA Crim 222; (1996) 2 Cr.App.R. 467.
b. *R v. Adams (Dennis) (No. 2)*; [1997] EWCA Crim 2474; (1998) 1 Cr.App.R. 377.
c. *R v. Lashley* [2000] EWCA Crim 88.
d. *R v. Ogden* [2013] EWCA Crim 1294.

10.1.2 In *R v. FNC* [2015] EWCA Crim 1732 the Court considered whether an application of "no case to answer" should have succeeded when the prosecution case was based primarily on DNA evidence. The judgment suggested the Court may reconsider the position set out in the cases above. In *R v. Tsekiri* [2017] EWCA Crim 40 the Court suggested more reliance could be placed on DNA evidence. In *R v. Bech* [2018] EWCA Crim 448 the Court showed a degree of reservation on relying too heavily on DNA evidence. The matter has since been considered in *R v. Lewis* [2018] EWCA Crim 1101.

[63] These difficulties have been highlighted in a number of reports published by the Regulator [16-18].

10.1.3 It also important to recognise the DNA evidence may not provide sufficient evidence in the circumstances of the case – see *R v. Grant* [2008] EWCA Crim 1890.

10.1.4 The "prosecutor's fallacy" explained: confusing the probability of the evidence arising given the assumption of guilt with the probability of guilt given the evidence. [64]

a. *R v. Deen*, The Times, 10 January 1994, (CA Crim Div).

i. From the Times Report:

"Strong criticism was made of the statistical evaluation of the match claimed by Mr Davey and of the judge's summing up on that issue. The figures he gave, even assuming them to be correct, were known to statisticians as the match probability.

But it was fallacious to confuse the match probability with what was known as the likelihood ratio.

There were two distinct questions:

1 What was the probability that an individual would match the DNA profile from the crime sample given that he was innocent?

2 What was the probability that an individual was innocent, given that he matched the DNA profile from the crime sample?

The "prosecutor's fallacy" consisted of giving the answer to the first question as the answer to the second. It was accepted on behalf of the Crown that, certainly at one point in his evidence Mr Davey fell into the trap and was guilty of the prosecutor's fallacy, albeit in answer to a leading question."

b. *R v. Doheny and Adams* [1997] 1 Cr. App. R. 369; (CA Crim Div);

i. At p.373-374:

""The Prosecutor's Fallacy"

It is easy, if one eschews rigorous analysis, to draw the following conclusion:

1. Only one person in a million will have a DNA profile which matches that of the crime stain.

2. The defendant has a DNA profile which matches the crime stain.

[64] Useful guidance on statistics in the Criminal Justice System is provided by the Royal Statistical Society [10-12].

3. Ergo there is a million to one probability that the defendant left the crime stain and is guilty of the crime.

Such reasoning has been commended to juries in a number of cases by prosecuting counsel, by judges and sometimes by expert witnesses. It is fallacious and it has earned the title of “The Prosecutor's Fallacy”. The propounding of the prosecutor's fallacy in the course of the summing-up was the reason, or at least one of the reasons, why the appeal against conviction was allowed in *Deen*. The nature of that fallacy was elegantly exposed by Balding and Donnelly in “The Prosecutor's Fallacy and DNA Evidence” [1994] Crim.L.R. 711. It should not, however, be thought that we endorse the calculations on pp. 715 and 716 of that article.

Taking our example, the prosecutor's fallacy can be simply demonstrated. If one person in a million has a DNA profile which matches that obtained from the crime stain, then the suspect will be 1 of perhaps 26 men in the United Kingdom who share that characteristic. If no fact is known about the Defendant, other than that he was in the United Kingdom at the time of the crime the DNA evidence tells us no more than that there is a statistical probability that he was the criminal of 1 in 26.

The significance of the DNA evidence will depend critically upon what else is known about the suspect. If he has a convincing alibi at the other end of England at the time of the crime, it will appear highly improbable that he can have been responsible for the crime, despite his matching DNA profile. If, however, he was near the scene of the crime when it was committed, or has been identified as a suspect because of other evidence which suggests that he may have been responsible for the crime, the DNA evidence becomes very significant. The possibility that two of the only 26 men in the United Kingdom with the matching DNA should have been in the vicinity of the crime will seem almost incredible and a comparatively slight nexus between the defendant and the crime, independent of the DNA, is likely to suffice to present an overall picture to the jury that satisfies them of the defendant's guilt.

The reality is that, provided there is no reason to doubt either the matching data or the statistical conclusion based upon it, the random occurrence ratio deduced from the DNA evidence, when combined with sufficient additional evidence to give it significance, is highly probative. As the art of analysis progresses, it is likely to become more so, and the stage may be reached when a match will be so comprehensive that it will be possible to construct a DNA profile that is unique and which proves the guilt of the defendant without any other evidence. So far as we are aware that stage has not yet been reached.”

c. *R v. C* [2011] EWCA Crim 1607 involved the judge at the initial trial employing the prosecutor's fallacy in his summing up. This was not sufficient to overturn the conviction.

10.1.5 Guidance on the procedure to be adopted by experts in DNA cases:

a. Disclosure should be made of the DNA comparison, the expert's calculation of the random occurrence ratio, details of the calculations, (if requested) the databases upon which the calculations are based;

b. The expert should explain to the jury: the matching DNA characteristics between the DNA in the crime stain and the DNA in the sample taken from the defendant; the random occurrence ratio; and it may be appropriate for him then to say how many people with the matching characteristics are likely to be found in the United Kingdom or in a more limited relevant sub-group;

c. The expert should not be asked nor give his opinion on the likelihood that it was the defendant who left the crime stain.

d. *R v. Doheny and Adams* [1997] 1 Cr. App. R. 369; (CA Crim Div);

i. At p.375:

"The role of the expert

Mr Alistair Webster Q.C., on behalf of Doheny, has made the following suggestions as to the procedure which should be followed in relation to DNA evidence:

1. The scientist should adduce the evidence of the DNA comparisons together with his calculations of the random occurrence ratio.

2. Whenever such evidence is to be adduced, the Crown should serve upon the defence details as to how the calculations have been carried out which are sufficient for the defence to scrutinise the basis of the calculations.

3. The Forensic Science Service ("F.S.S.") should make available to a defence expert, if requested, the databases upon which the calculations have been based.

It seems to us that these suggestions are sound, and we would endorse them. We would add that it is important that any issue of expert evidence should be identified and, if possible, resolved before trial and this area should be explored by the court in the pre-trial review.

When the scientist gives evidence it is important that he should not overstep the line which separates his province from that of the jury.

> He will properly explain to the jury the nature of the match ("the matching DNA characteristics") between the DNA in the crime stain and the DNA in the blood sample taken from the defendant. He will properly, on the basis of empirical statistical data, give the jury the random occurrence ratio—the frequency with which the matching DNA characteristics are likely to be found in the population at large. Provided that he has the necessary data, and the statistical expertise, it may be appropriate for him then to say how many people with the matching characteristics are likely to be found in the United Kingdom—or perhaps in a more limited relevant sub-group, such as, for instance, the caucasian, sexually active males in the Manchester area.
>
> This will often be the limit of the evidence which he can properly and usefully give. It will then be for the jury to decide, having regard to all the relevant evidence, whether they are sure that it was the defendant who left the crime stain, or whether it is possible that it was left by someone else with the same matching DNA characteristics.
>
> The scientists should not be asked his opinion on the likelihood that it was the defendant who left the crime stain, nor when giving evidence should he use terminology which may lead the jury to believe that he is expressing such an opinion."

10.1.6 As to the use of Bayesian analysis, see Part 7 herein.

10.1.7 There was no reason why evidence based on a partial profile should not be admissible, provided that the jury were made aware of its limitations and were given sufficient explanation to enable them to evaluate it.

a. *R v. Bates* [2006] EWCA Crim 1395.

10.2 Low Template DNA

10.2.1 The use of Low Template DNA[65] (LTDNA) was considered in *R v. Reed & Ors.* [2009] EWCA Crim 2698 [66];

a. At paragraph 74;

"74. On the evidence before us, we consider we can express our opinion that it is clear that, on the present state of scientific development:

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65 The term Low Template DNA is used to describe analyses where the sample contains such a low level of DNA that stochastic effects are likely. Initially this was considered to relate to samples which contained less than 200pg of human DNA. The limit is, of course, dependant on the sample and the chemistries employed for the analysis.

66 The case *R v. Reed & Ors*., and the use of LTDNA, was discussed in the New Zealand case of *R v. Wallace* [2010] NZCA 46.

i) Low Template DNA can be used to obtain profiles capable of reliable interpretation if the quantity of DNA that can be analysed is above the stochastic threshold – that is to say where the profile is unlikely to suffer from stochastic effects (such as allelic drop out mentioned at paragraph 48) which prevent proper interpretation of the alleles.

ii) There is no agreement among scientists as to the precise line where the stochastic threshold should be drawn, but it is between 100 and 200 picograms.

iii) Above that range, the LCN process used by the FSS can produce electrophoretograms which are capable of reliable interpretation. There may, of course, be differences between the experts on the interpretation, for example as to whether the greater number of amplifications used in this process has in the particular circumstances produced artefacts and the effect of such artefacts on the interpretation. Care may also be needed in interpretation where the LCN process is used on larger quantities than that for which it is normally used. However a challenge to the validity of the method of analysing Low Template DNA by the LCN process should no longer be permitted at trials where the quantity of DNA analysed is above the stochastic threshold of 100-200 picograms in the absence of new scientific evidence. A challenge should only be permitted where new scientific evidence is properly put before the trial court at a Plea and Case Management Hearing (PCMH) or other pre-trial hearing for detailed consideration by the judge in the way described at paragraphs 129 and following below.

iv) As we have mentioned, it is now the practice of the FSS to quantify the amount of DNA before testing. There should be no difficulty therefore in ascertaining the quantity and thus whether it is above the range where it is accepted that stochastic effects should not prevent proper interpretation of a profile.

v) There may be cases where reliance is placed on a profile obtained where the quantity of DNA analysed is within the range of 100-200 picograms where there is disagreement on the stochastic threshold on the present state of the science. We would anticipate that such cases would be rare and that, in any event, the scientific disagreement will be resolved as the science of DNA profiling develops. If such a case arises, expert evidence must be given as to whether in the particular case, a reliable interpretation can be made. We would anticipate that such evidence would be given by persons who are expert in the science of DNA and supported by the latest research on the subject. We would not anticipate there being any attack on the good faith of those who sought to adduce such evidence."

b. At paragraph 114;

"114 As regards this appeal,

i) It is now established that the underlying science for Low Template DNA analysis is sufficiently reliable to produce profiles, where the amount analysed is above the stochastic threshold of between 100 and 200 picograms.

ii) It has been long established that an expert can give evidence as to match probabilities and it must follow that such evidence can now be given where the LCN process is used for quantities above the stochastic threshold."

10.2.2 The matter was further considered in *R v. Broughton* [2010] EWCA Crim 549.

a. The effect of the stochastic threshold noted above was considered.

"30. The appellant's contention was that the judge erred in declining to exclude the DNA evidence altogether, alternatively that he erred in leaving to the jury the existence or otherwise of the stochastic threshold, and that he insufficiently emphasised the unreliability of DNA profiling techniques when dealing with DNA below quantifiable levels. It was argued that in the light of the decision of this court in *Reed & Reed* which, it is said, recognises the existence of a stochastic threshold of between about 100 and 200pg of DNA and, by implication, the inherent unreliability, and hence inadmissibility, of profiling evidence derived from the analysis of any smaller quantity of DNA.

31. The appellant's submission is, we conclude, founded upon a misunderstanding of the decision in *Reed & Reed*. This court recognised that in the current state of technology there is a stochastic threshold between 100 and 200 pg above which LTDNA techniques, including the LCN process used by the Forensic Science Service (FSS), can be used to obtain profiles capable of reliable interpretation. Specifically, the court observed that above this threshold a challenge to the validity of the method of analysing LTDNA by the LCN process should not be permitted in the absence of new scientific evidence. However, the court did not hold or make any observation to the effect that below the stochastic threshold DNA evidence is not admissible. "

b. The general admissibility was also considered.

"34. It is apparent from the foregoing that there is now a considerable body of opinion from respected independent scientists and the Forensic Science Regulator that LTDNA techniques, including those used to generate the profiles relied upon by the Crown in this case, are well understood, have been properly validated and are accepted to be capable of generating reliable and valuable evidence. At these very low levels of DNA, the dangers presented by the possibility of stochastic effects, including allelic drop-out, drop-in and stutter are very real and must be fully appreciated, but they may often be addressed by repeating the process a number of times, as Professor Caddy recognised.

35. There will of course be occasions where profiles generated from less than 200pg are wholly and obviously unreliable. We anticipate that the Crown would never seek to adduce such profiles in evidence. If it put forward such a profile, then the unreliability

would be pointed out in the report of the defence expert and, if not accepted by the Crown's expert in the exchange that must take place under Part 34 of the Criminal Procedure Rules, the judge would have to consider the dispute; if they were unreliable, he would exclude them.

36. There will be other occasions where the probative value of the profiles is more debatable. In such cases the evidence may properly be adduced and it must then be addressed and its weight established by adversarial forensic techniques. But we do not accept that these are reasons for ruling out LTDNA evidence altogether. In our judgment, the science of LTDNA is sufficiently well established to pass the ordinary tests of reliability and relevance and it would be wrong wholly to deprive the justice system of the benefits to be gained from the new techniques and advances which it embodies, in cases where there is clear evidence (adduced in the manner discussed) that the profiles are sufficiently reliable."[67]

10.2.3 The position in relation to DNA quantity limits, discussed in *Broughton*, was supported in *R v. C* [2010] EWCA Crim 2578.

10.3 DNA Methods

10.3.1 In 2014 there was a change to the methods employed for DNA profiling in the UK – the introduction of new DNA chemistries.

10.3.2 When considering any judgment related to DNA which was published before the new chemistries were introduced it must be borne in mind that:

a. The analytical method has changed and as a result any references to factors such as thresholds, likelihood of inhibition and even amplification cycle numbers may not reflect current practice; and

b. The interpretation of the evidence may also have changed as the sensitivity of the techniques is different and, as result, the evaluation of issues such as transfer, persistence and contamination will be different.

10.4 Ear Prints

10.4.1 Expert ear print comparisons are admissible in law:

a. *R v. Dallagher* [2002] EWCA Crim 1903.

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[67] The reference to Part 34 CrimPR seems to be a mistake. It should be a reference to Part 33. Part 33 became Part 19 from the 2015 issue.

10.4.2 However, where minutiae cannot be identified and matched, a match based solely on gross features will only be admissible where it is precise.

a. *R v. Kempster (No.2)* [2008] EWCA Crim 975.

> "27 It is clear, particularly from the evidence of Dr Ingleby, that ear print comparison is capable of providing information which could identify the person who has left an ear print on a surface. That is certainly the case where minutiae can be identified and matched. Where the only information comes from the gross features, we do not understand him to say that no match can ever be made, but there is likely to be less confidence in such a match because of the flexibility of the ear and the uncertainty of the pressure which will have been applied at the relevant time. Miss McGowan still remains of the view that gross features are capable of providing a reliable match.
>
> 28 On the basis of the evidence that we have heard, we are of the view that the latter can only be the case where the gross features truly provide a precise match. We have no doubt that evidence of those experienced in comparing ear prints is capable of being relevant and admissible. The question in each case will be whether it is probative. In the present case, having heard both Dr Ingleby and Miss McGowan, and in particular having seen the various prints from which comparisons have been made, we are struck by the gross similarity of the shape and size of the ear prints used for the comparison, and by the close similarity of the notch and the nodule on each. This, in our view, establishes that the ear print at the scene is consistent with having been left by the appellant. But having examined the comparisons of the gross features, it is also apparent to us that they do not provide a precise match. The differences may well be explicable by differences in pressure, or movement, but the extent of the mismatch is such as to lead us to the conclusion that it could not be relied on by itself as justifying a verdict of guilty. …".

10.5 Facial Mapping

10.5.1 Facial mapping evidence [68], including facial mapping by video superimposition, is admissible:

a. *R v. Stockwell* (1993) 97 Cr. App. R. 260; (CA Crim Div);

b. *R v. Clarke (RL)* [1995] 2 Cr. App. R. 425; Times, December 26, 1994; Independent, January 30, 1995 (CA Crim Div);

i. Commending the trial judge's comment;

[68] Guidance on the use of facial mapping has been issued by the Metropolitan Police in partnership with the Forensic Science Regulator, The National Crime Agency and the CPS.

> "One should not set one's face against fresh developments, provided they have a proper foundation …'" and approving his decision to admit evidence of facial mapping by video superimposition."

10.5.2 See part 7.11 herein as to the permissibility of expressions as to the strength of the match.

a. *R v. Gray (Paul Edward)* [2003] EWCA Crim 1001.

b. *R v. Gardner (Trevor Elton)* [2004] EWCA Crim 1639;

   i. Opinion evidence given by reference to studies which the expert had seen but which a jury had not seen were admissible;

c. *R v. Atkins & Atkins* [2009] EWCA Crim 1876;

> "23 On principle, we accept the caution with which any expression of conclusion in relation to evidence of this kind (and others) needs to be approached. We agree that the fact that a conclusion is not based upon a statistical database recording the incidence of the features compared as they appear in the population at large needs to be made crystal clear to the jury. But we do not agree that the absence of such a database means that no opinion can be expressed by the witness beyond rehearsing his examination of the photographs. An expert who spends years studying this kind of comparison can properly form a judgment as to the significance of what he has found in any particular case. It is a judgment based on his experience. A jury is entitled to be informed of his assessment. The alternative, of simply leaving the jury to make up its own mind about the similarities and dissimilarities, with no assistance at all about their significance, would be to give the jury raw material with no means of evaluating it. It would be as likely to result in over-valuation of the evidence as under-valuation. It would be more, not less, likely to result in an unsafe conclusion than providing the jury with the expert's opinion, properly debated through cross-examination and, if not shared by another expert, countered by contrary evidence."

10.6 Body Mapping

10.6.1 The High Court of Australia has held that 'body mapping' evidence from an anatomist, who compared CCTV images of the robbery and images of the appellant taken while he was in custody, was inadmissible as expert evidence: *Honeysett v. The Queen* [2014] HCA 29. In that case, the opinion evidence was "not based on anthropometric measurement or statistical analysis" and the expert "explained that his examination of images does not differ from that of a lay observer save that he is an experienced anatomist and he has a good

understanding of the shape and proportions of details of the human body" (para 18).

10.6.2 The position might be otherwise in this jurisdiction if the "body mapping" involved genuine scientific methodology in making a comparison (e.g. by reference to a reliable database or statistics) or, less ambitiously, in merely describing relevant findings rather than making an identification. (There are some English cases referring to 'body mapping' evidence but the precise nature of the evidence and its context is unclear from the judgments). [69]

10.7 Fingerprints

10.7.1 A person may be identified by fingerprints alone:

a. *R v. Castleton (Thomas Herbert)* (1910) 3 Cr. App. R. 74. (Court of Criminal Appeal).

10.7.2 Identification is a matter for the opinion and expertise of fingerprint experts (rather than being dependent upon the number of matching ridge characteristics);

a. *R v. Buckley (Robert John)* (1999) 163 J.P. 561; (1999) 163 J.P.N. 672; (1999) 96(23) L.S.G. 34; Times, May 12, 1999 (CA Crim Div);

i. (1999) 163 J.P. 561 at p.568:

> "If there are fewer than eight similar ridge characteristics, it is highly unlikely that a judge will exercise his discretion to admit such evidence and, save in wholly exceptional circumstances, the prosecution should not seek to adduce such evidence. If there are eight or more similar ridge characteristics, a judge may or may not exercise his or her discretion in favour of admitting the evidence. How the discretion is exercised will depend on all the circumstances of the case, including in particular: (i) the experience and expertise of the witness; (ii) the number of similar ridge characteristics; (iii) whether there are dissimilar characteristics; (iv) the size of the print relied on, in that the same number of similar ridge characteristics may be more compelling in a fragment of print than in an entire print; and (v) the quality and clarity of the print on the item relied on, which may involve, for example, consideration of possible injury to the person who left the print, as well as factors such as smearing or contamination.

[69] *R v. Clark Anthony McAulay, James Miller* [2015] EWCA Crim 1318; *R v. Earl St John Michael Clarke, Sounaynah Morabir* [2013] EWCA Crim 162.

> In every case where fingerprint evidence is admitted, it will generally be necessary, as in relation to all expert evidence, for the judge to warn the jury that it is evidence opinion [sic] only, that the expert's opinion is not conclusive and that it is for the jury to determine whether guilt is proved in the light of all the evidence"

10.7.3 The Court of Appeal considered the approach to fingerprint evidence in *R v. Smith* [2011] EWCA Crim 1296 and highlighted a number of issues. These include the following.

a. The availability of recognised experts available for instruction by the defence.
b. The presentation of evidence (see 5.7.3).
c. The requirement to keeps records of examinations (see 6.4.2).

10.8 Lip Reading

10.8.1 Evidence of lip-reading from a video is admissible as a species of real evidence.

a. *R v. Luttrell & Ors.* [2004] EWCA Crim 1344;

> "37 Lip-reading evidence from a video, like facial mapping is, in our view, a species of real evidence (see per Steyn L.J. in *Clarke* at 429). Although at one time a more conservative approach had been adopted, the policy of the English courts has been to be flexible in admitting expert evidence and to enjoy "the advantages to be gained from new techniques and new advances in science": *Clarke* , at p.430. (It appears that there has been a similar trend elsewhere: see Cross and Tapper on Evidence (9th ed) p.523, but cf Ormerod, "Sounding out Expert Voice Identification" [2002] Crim. L.R. 771 at p.774, about the position in the USA) The preferred view, and in our judgment the proper view, is "that so long as a field is sufficiently well-established to pass the ordinary tests of relevance and reliability, then no enhanced test of admissibility should be applied, but the weight of the evidence should be established by the same adversarial forensic techniques applicable elsewhere": Cross and Tapper (*loc cit*)." [70]

10.9 Psychological Autopsies

10.9.1 The existing academic standing of psychological autopsies was not sufficient to allow their admittance as expert evidence:

a. *R v. Gilfoyle* [2001] 2 Cr. App. R. 5; [2001] Crim. L.R. 312; Times, February 13, 2001 (CA Crim Div).

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[70] The term "loc cit" indicates in the same, or earlier quoted, reference.

11. GUIDANCE ON PARTICULAR ISSUES

11.1 Continuity

11.1.1 As discussed above, evidence is only admissible if it is relevant and reliable. To be relevant it must be possible to prove that the evidence arises from exhibits from the case. To be reliable there must be confidence that the evidence has not arises as a result of contamination or interference.

11.1.2 Together these requirements are often described as the requirement for continuity.

11.1.3 In *R v. Hoey*, at paragraph 46, the requirements for continuity were described as follows.

> "The Defence submit, correctly in my judgment, that it is for the prosecution to establish the integrity and freedom from possible contamination of each item throughout the entirety of the period between seizure and any examination relied upon. They contend, and I accept the contention, that the court must be satisfied by the prosecution witnesses and supporting documents that all dealings with each relevant exhibit have been satisfactorily accounted for from the moment of its seizure until the moment when any evidential sample relied upon by the prosecution is taken from it and that by a method and in conditions that are shown to have been reliable. This means that each person who has dealt with the item in the intervening period must be ascertainable and be able to demonstrate by reference to some proper system of bagging, labelling, and recording that the item has been preserved at every stage free from the suspicion of interference or contamination. For this purpose they must be able to demonstrate how and when and under what conditions and with what object and by what means and in whose presence he or she examined the item. Only if all these requirements have been satisfactorily vouched can a tribunal have confidence in the reliability of any forensic findings said to have been derived from any examination of the item."

11.1.4 The requirement for continuity has also been considered in the document Legal Issues in Forensic Pathology and Tissue Retention [19.

11.2 Training

11.2.1 The training of persons who are to act as expert witnesses is a common feature of the development of forensic scientists. Such training routinely covers the role and responsibility of expert witnesses and practical issues surrounding that role (e.g. statement writing and presentation of evidence). However, great care must be taken to ensure the training does not amount to training/coaching in relation

to a particular active case (or group of cases). Training and/or coaching with regard to active cases could be considered an abuse of process and lead to potentially admissible evidence being excluded.

11.2.2 The issue was considered by the Court of Appeal (Criminal Division) in *R v. Momodou* [2005] EWCA Crim 177 by Judge LJ (then Deputy Chief Justice of England and Wales). [71] Whilst the case dealt with non-expert evidence the points made are still relevant.

a. He quoted, with apparent approval, the comments of the trial judge as follows.

> "There is no place for witness training in our country, we do not do it. It is unlawful."

b. He then went on to say:

> "61. There is a dramatic distinction between witness training or coaching, and witness familiarisation. Training or coaching for witnesses in criminal proceedings (whether for prosecution or defence) is not permitted. This is the logical consequence of well-known principle that discussions between witnesses should not take place, and that the statements and proofs of one witness should not be disclosed to any other witness. (See *Richardson* [1971] CAR 244; *Arif*, unreported, 22nd June 1993; *Skinner* [1994] 99 CAR 212; and *Shaw* [2002] EWCA Crim 3004.) The witness should give his or her own evidence, so far as practicable uninfluenced by what anyone else has said, whether in formal discussions or informal conversations. The rule reduces, indeed hopefully avoids any possibility, that one witness may tailor his evidence in the light of what anyone else said, and equally, avoids any unfounded perception that he may have done so. These risks are inherent in witness training. Even if the training takes place one-to-one with someone completely remote from the facts of the case itself, the witness may come, even unconsciously, to appreciate which aspects of his evidence are perhaps not quite consistent with what others are saying, or indeed not quite what is required of him. An honest witness may alter the emphasis of his evidence to accommodate what he thinks may be a different, more accurate, or simply better remembered perception of events. A dishonest witness will very rapidly calculate how his testimony may be "improved". These dangers are present in one-to-one witness training. Where however the witness is jointly trained with other witnesses to the same events, the dangers dramatically increase. Recollections change. Memories are contaminated. Witnesses may bring their respective accounts into what they believe to be better alignment with others. They may be encouraged to do so, consciously or unconsciously. They may collude deliberately. They

[71] He was later appointed Lord Chief Justice of England and Wales.

may be inadvertently contaminated. Whether deliberately or inadvertently, the evidence may no longer be their own. Although none of this is inevitable, the risk that training or coaching may adversely affect the accuracy of the evidence of the individual witness is constant. So we repeat, witness training for criminal trials is prohibited.

62. This principle does not preclude pre-trial arrangements to familiarise witness with the layout of the court, the likely sequence of events when the witness is giving evidence, and a balanced appraisal of the different responsibilities of the various participants. Indeed such arrangements, usually in the form of a pre-trial visit to the court, are generally to be welcomed. Witnesses should not be disadvantaged by ignorance of the process, nor when they come to give evidence, taken by surprise at the way it works. None of this however involves discussions about proposed or intended evidence. Sensible preparation for the experience of giving evidence, which assists the witness to give of his or her best at the forthcoming trial is permissible. Such experience can also be provided by out of court familiarisation techniques. The process may improve the manner in which the witness gives evidence by, for example, reducing the nervous tension arising from inexperience of the process. Nevertheless the evidence remains the witness's own uncontaminated evidence. Equally, the principle does not prohibit training of expert and similar witnesses in, for example, the technique of giving comprehensive evidence of a specialist kind to a jury, both during evidence-in-chief and in cross-examination, and, another example, developing the ability to resist the inevitable pressure of going further in evidence than matters covered by the witnesses' specific expertise. The critical feature of training of this kind is that it should not be arranged in the context of nor related to any forthcoming trial, and it can therefore have no impact whatever on it.

63. In the context of an anticipated criminal trial, if arrangements are made for witness familiarisation by outside agencies, not, for example, that routinely performed by or through the Witness Service, the following broad guidance should be followed. In relation to prosecution witnesses, the Crown Prosecution Service should be informed in advance of any proposal for familiarisation. If appropriate after obtaining police input, the Crown Prosecution Service should be invited to comment in advance on the proposals. If relevant information comes to the police, the police should inform the Crown Prosecution Service. The proposals for the intended familiarisation programme should be reduced into writing, rather than left to informal conversations. If, having examined them, the Crown Prosecution Service suggests that the programme may be breaching the permitted limits, it should be amended. If the defence engages in the process, it would in our judgment be extremely wise for counsel's advice to be sought, again in advance, and again with written information about the nature and extent of the training. In any event, it is in our judgment a matter of professional duty on counsel and solicitors to ensure that the trial judge is informed of any familiarisation process organised by the defence using outside

agencies, and it will follow that the Crown Prosecution Service will be made aware of what has happened.

64. This familiarisation process should normally be supervised or conducted by a solicitor or barrister, or someone who is responsible to a solicitor or barrister with experience of the criminal justice process, and preferably by an organisation accredited for the purpose by the Bar Council and Law Society. None of those involved should have any personal knowledge of the matters in issue. Records should be maintained of all those present and the identity of those responsible for the familiarisation process, whenever it takes place. The programme should be retained, together with all the written material (or appropriate copies) used during the familiarisation sessions. None of the material should bear any similarity whatever to the issues in the criminal proceedings to be attended by the witnesses, and nothing in it should play on or trigger the witness's recollection of events. As already indicated, the document quoted in paragraph 41, if used, would have been utterly flawed. If discussion of the instant criminal proceedings begins, as it almost inevitably will, it must be stopped. And advice given about precisely why it is impermissible, with a warning against the danger of evidence contamination and the risk that the course of justice may be perverted. Note should be made if and when any such warning is given.

65. All documents used in the process should be retained, and if relevant to prosecution witnesses, handed to the Crown Prosecution Service as a matter of course, and in relation to defence witnesses, produced to the court. None should be destroyed. It should be a matter of professional obligation for barristers and solicitors involved in these processes, or indeed the trial itself, to see that this guidance is followed."

c. These statements must be interpreted in relation to training with regard to an active case.

11.2.3 The issue was further considered by in *R v. Salisbury* [2005] EWCA Crim 3107. While the issue on appeal had been restricted to disclosure of matters related to a training course Phillips LCJ quoted, with approval, the judge at trial who said:

"27. There is, in my view, a difference of substance between the process of familiarisation with the task of giving evidence coherently and the orchestration of evidence to be given. The second is objectionable and the first is not.

28. The course was delivered by a member of the Bar I judge to have been well aware of the implications. She took pains to ensure that any witnesses who attended her courses knew of the possible consequences of collusion and she forbade it. No attempt was made to indulge in application of the facts of this case, or anything remotely resembling them. True it is that witnesses would have undergone a process of familiarisation with the pitfalls of giving evidence and were instructed how best to prepare for the ordeal. This, it seems to me, was an exercise

any witness would be entitled to enjoy were it available. What was taking place was no more than preparation for the exercise of giving evidence. No-one engaged in special pleading with a view to gaining any expertise beyond the application of sound common sense.

29. I do not accept that this training, if that is the correct description, was capable of converting a lying but incompetent witness into a lying but impressive witness. Having considered the course content in some detail it seems to me the witnesses can have gained only a rudimentary understanding of what was to come and received no coaching in how to lend a specious quality to their evidence. What they would have received was knowledge of the process involved. It was lack of knowledge and understanding which created demand for support in the first place. Acquisition of knowledge and understanding has probably prepared them better for the experience of giving evidence. They will be better able to give a sequential and coherent account. None of this gives them an unfair advantage over any other witness. Although ease of manner or confidence in the witness box, if it exists, may be a matter for consideration by a jury, it does not seem to me that the ultimate judgment whether the witness is credible or reliable will depend upon such considerations. In so far as they may, Mr Birkett now has available all the material he needs to warn the jury against complacency. In my judgment, the process of the trial itself will deal satisfactorily with any disadvantage to which the defendant has been put."

11.2.4 Also note the discussion of preparation from *Geddes v. HM Advocate* [2015] HCJAC 10 in section 5.5.7.

12. SECONDARY SOURCES OF GUIDANCE OR PROFESSIONAL OBLIGATION

12.1.1 Experts practising in a specialty in which they are subject to professional rules of practice or conduct or guidance are expected to comply with them in the discharge of their functions as an expert, e.g. forensic pathologists are bound by the relevant Codes of Practice; registered doctors are bound by the General Medical Council's guidance including Good Medical Practice guidance.

12.1.2 The duty to comply with relevant codes of ethics is set out in:

a. Paragraph 4 of the Protocol for the Instruction of Experts to Give Evidence in Civil Claims, entitled "Duties of experts", cited in *General Medical Council v. Meadow* [2006] EWCA Civ 1390 at para 22:

"4.1. Experts always owe a duty to exercise reasonable skill and care to those instructing them, and to comply with any relevant professional code of ethics …"

b. That Protocol has now been replaced by the "Guidance for the instruction of experts in civil claims" issued by the Civil Justice Council [72] [73]. Para 9 of that document contains the same passage as that cited in the *Meadow* case. This guidance is referred to in the 'Civil Procedure Rules Practice Direction 35 – Experts and Assessors' at para 1. That paragraph also refers to the further guidance on experts contained in Annex C to the Practice Direction (Pre-Action Conduct) [74] [75], which emphasises, at paragraph 9, that expert evidence should only be used to the extent that it is necessary and proportionate to do so.

c. The standards established by the Policy Advisory Board for Forensic Pathology were noted in; [76]

   i. *R v. Puaca* [2005] EWCA Crim 3001;

   ii. *Lannas, R (On the Application Of) v. Secretary of State for the Home Department* [2003] EWHC 3142 (Admin); and

   iii. *Heath, R (on the application of) v. The Home Office Policy and Advisory Board for Forensic Pathology* [2005] EWHC 1793 (Admin).

13. GUIDELINES

13.1.1 Relevant Guidelines include:

a. "Disclosure: Expert's Evidence and Unused Material - Guidance Booklet for Experts".

   i. Referred to in *R v. Bowman* [2006] EWCA Crim 417 at para 175.

   ii. A new edition [3], of May 2010, produced by the CPS and ACPO, is to be found in The CPS Disclosure Manual. [77] [78] [79] [80]

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72 https://www.judiciary.gov.uk/wp-content/uploads/2014/08/experts-guidance-cjc-aug-2014-amended-dec-8.pdf

73 URL checked on 30 March 2018.

74 https://www.justice.gov.uk/courts/procedure-rules/civil/rules/pd_pre-action_conduct

75 URL checked on 30 March 2018.

76 Those standards have now been superseded by standards issued by the Forensic Science Regulator in partnership with others.

77 https://www.cps.gov.uk/sites/default/files/documents/legal_guidance/Disclosure%20Manual_0.pdf

78 The URL was checked on 24 May 2018.

79 https://www.cps.gov.uk/sites/default/files/documents/legal_guidance/Guidance_for_Experts_-_2010_edition.pdf

80 This URL was checked on 24 May 2018.

b. CrimPR 19

i. See Part 8 herein.

c. "Guidance for the instruction of experts in Civil Claims" issued by the Civil Justice Council.

14. ACKNOWLEDGEMENTS

14.1.1 The Forensic Science Regulator acknowledges the invaluable assistance of the following in the preparation of this document.

a. Mr Paul Ozin QC (barrister of 23 Essex Street).
b. The members of the Regulator's End User Specialist Group (now merged with the Quality Standards Specialist Group).
c. The members of the Regulator's Quality Standards Specialist Group.

15. REVIEW

15.1.1 This document is subject to review at regular intervals.

15.1.2 If you have any comments please send them to the address or e-mail set out on the Internet at URL: https://www.gov.uk/government/organisations/forensic-science-regulator.

16. REFERENCES

1 Expert Report Guidance; Forensic Science Regulator; GDR-G-200

2 Review of Efficiency in Criminal Proceedings; The Rt Hon Sir Brian Leveson (President of the Queen's Bench Division); January 2015.

3 Guidance Booklet for Experts - Disclosure: Experts' Evidence, Case Management and Unused Material. Published by the Crown Prosecution Service and the Association of Chief Police Officers of England Wales and Northern Ireland, May 2010.

4 Expert Evidence in Criminal Proceedings in England and Wales, The Law Commission, Report LAW COM No 325, March 2011.

5 The Government's response to the Law Commission report: "Expert evidence in criminal proceedings in England and Wales" (Law Com No 325), Ministry of Justice, 2013.

6 BS EN ISO/IEC 17025:2005, General Requirements for the Competence of Testing and Calibration Laboratories. Now being transitioned to EN ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories.

7 Decision Pursuant to Article 10 of Protocol 36 to the Treaty of the Functioning of the European Union, Command Paper 8671, July 2013.

8 Forensic Science Regulator, Codes of Practice and Conduct for forensic science providers and practitioners in the Criminal Justice System.

9 Forensic Science Regulator, Validation Guidance, Document FSR-G-201.

10 Aitken C, Roberson P and Jackson G, Fundamentals of Probability and Statistics in Criminal Proceedings (Practitioner Guide No. 1), Royal Statistical Society.

11 Puch-Solis R, Roberts P, Pope S and Aitken C, Assessing the probative value of DNA evidence (Practitioner Guide No. 2), Royal Statistical Society.

12 Roberts P and Aitken C, The Logic of Forensic Proof: Inferential Reasoning in Criminal Evidence and Forensic Science (Practitioner Guide No. 3), Royal Statistical Society.

13 Aitken C et al, Expressing Evaluative Opinions: A Position Statement, Sci. Just., 2011, 51, 1-2.

14 Berger CEH, Buckleton J, Champod C, Evett IW and Jackson G, Evidence Evaluation: A Response to the Court of Appeal Judgment in R v.T, Sci. Just., 2011, 51, 43-49.

15 Robertson B, Vignaux CH and Berger CH, Extending the Confusion About Bayes, Modern Law Review, 2011 74(3), 444-455.

16 The Performance of Cellmark Forensic Services R v. [S], FSR-R-625.

17 The Performance of Bedfordshire Police and Key Forensic Services Re Bedfordshire Submission [A], Forensic Science Regulator; FSR-R-628.

18 Report into the circumstances of a complaint received from the Greater Manchester Police on 7 March 2012 regarding DNA evidence provided by LGC Forensics, Forensic Science Regulator; FSR-R-618.

19 Forensic Science Regulator, Legal Issues in Forensic Pathology and Tissue Retention; Forensic Science Regulator; FSR-G-203.

17. ABBREVIATIONS

Abbreviation	Meaning
AC	Law Reports Appeal Cases
ACPO	Association of Chief Police Officers in England Wales and Northern Ireland
Admin	In conjunction with EWHC indicates the Administrative Court
All E.R.	All England Law Reports
App. D.C.	Court of Appeals for the District of Columbia
ASIC	Australian Securities and Investment Commission
BS	British Standards
CA Civ Div	Court of Appeal Civil Division
CA Crim Div	Court of Appeal Criminal Division
CAR	Criminal Appeal Reports
Ch	Law Reports (Chancery Division)
Ch	Chancery Division of the High Court
CJ	Chief Justice
CJS	Criminal Justice System
CLA	Case Linkage Analysis
Co	Company
CPR	Civil Procedure Rules
CPS	Crown Prosecution Service
Cr. App. R.	Criminal Appeal Reports
Crim. L.R.	Criminal Law Review
CrimPR	Criminal Procedure Rules
D	Dunlop, Bell and Murray's Reports

Div	Division
DNA	Deoxyribonucleic Acid
Ed	Edition
EEC	European Economic Community
E.G.	Estates Gazette
EN	European Standard
EWCA Civ	England and Wales Court of Appeal Civil Division in a neutral citation
EWCA Crim	England and Wales Court of Appeal Criminal Division in a neutral citation
EWHC	England and Wales High Court
Fam	In conjunction with EWHC indicates the Family Division of the High Court
F.C.R.	Family Court Reporter
FEL	Forensic Explosives Laboratory
F.L.R.	Family Law Reports
F.S.R	Fleet Street Reports
FSS	Forensic Science Service
HCA	High Court of Australia
HCJAC	Scottish Court of Criminal Appeal (High Court of Justiciary Appeal Court)
HL	House of Lords
HM	Her Majesty's
HOC	Home Office Circular
IAC	Immigration and Asylum Chamber
ICD	International Classification of Diseases
IEC	International Electrotechnical Commission
IED	Intermittent Explosive Disorder
IHC	Immunohistochemical
ISBN	International Standard Book Number
ISO	International Organization for Standardization
J	Justice of the High Court
JA	Judge of Appeal
JHA	Justice and Home Affairs
J.P.	Justice of the Peace
J.P.N.	Justice of the Peace

LCJ	Lord Chief Justice
LCN	Low Copy Number
LJ	Lord Justice of Appeal
Lloyd's Rep.	Lloyds Law Reports
L.S.G.	Law Society Gazette
Ltd	Limited
LTDNA	Low Template DNA
mbH	Limited Liability Company (mit beschränkter Haftung in German)
MP	Member of Parliament
MR	Master of the Rolls
NAFIS	National Automated Fingerprint Identification System
NAHI	Non-Accidental Head Injury
NHS	National Health Service
NICA	Northern Ireland Court of Appeal
NICC	Northern Ireland Crown Court
NSWCA	New South Wales Court of Appeal
NSWSC	New South Wales Supreme Court
NZCA	Court of Appeal of New Zealand
Ors.	Others
P	President
Pat	Patents Court
PCMH	Plea and Case Management Hearing
pg	Pico gram
PIQR	Personal Injuries and Quantum Reports
PLC	Public Limited Company
Pty	Proprietary Company
Q.B.	Law Reports (Queen's Bench)
QB	Queen's Bench Division of the High Court
QC	Queen's Counsel
R	Regina
RARDE	Royal Armament Research and Development Establishment
Reg	Regina
QC	Queen's Counsel
SA	South African Law Reports

SA	Anonymous Company (Société Annonyme in French or Sociedad Anónima in Spanish)
S.A.S.R.	South Australian State Reports
S.C.	Session Cases
SCCRC	Scottish Criminal Cases Review Commission
ScotHC	Scottish High Court of Justiciary
S.C.R.	Canada Law Reports Supreme Court
S.I.	Statutory Instrument – in relation to legislation
S.I.	International System of Units (from the French “le Système international d’unités”) – in relation to measurement units
S.J.	Scottish Jurist
S.L.T.	Scottish Law Times
SS	Steam Ship
UK	United Kingdom
UKAIT	United Kingdom Asylum and Immigration Tribunal
UKHL	United Kingdom House of Lords
UKPC	United Kingdom Privy Council
UKSC	United Kingdom Supreme Court
UKUT	United Kingdom Upper Tribunal
URL	Uniform Resource Locator
US	United States Supreme Court Reports
USA	United States of America
VSCA	Supreme Court of Victoria
WLR	Weekly Law Reports

18. TABLE OF AUTHORITIES

18.1.1 The following tables set out the authorities employed in the main text of the document – but not the Executive Summary.

18.1.2 Only references to specific provisions of the CrimPR have been indexed. In quotes from cases the index is to the current version of the Rule referred to.

Cases

Statutes

Other Authorities

Rules

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