

Tuesday, 7th July 2009

1

2 (10.00 am)

3 **HENRY WOODS BELL (continued)**

4 MISS CARMICHAEL: Sir, I think Mr Holmes was about to
5 cross-examine Mr Bell. That was where we closed on
6 Friday.

7 **Cross-examined by MR HOLMES**

8 Q. Mr Bell, you will recall on Friday that there were a
9 couple of matters that I'd expressed an interest in
10 asking you questions about. Hopefully I shouldn't take
11 up too much of your time.

12 The first is about the American experts that were
13 employed by the defence in Ms McKie's case. You say in
14 your statement that you had concerns about the quality
15 of the American experts. Can you explain what you meant
16 by that?

17 A. They'd obviously been involved in the trial and at the
18 conclusion of the trial of McKie there was some enquiry
19 made as to their background and we couldn't establish
20 their integrity in relation to their experience of
21 fingerprints. I think that related to Mr Wertheim in
22 particular.

23 Q. Is that in relation to his qualifications or in relation
24 to work that he had undertaken?

25 A. I think a combination of both. I don't think we could

1 establish courses or his degree of experience; whereas
2 in Scotland it was, I think, five years at that
3 time that we qualified individuals at. I think he had
4 been a traffic policeman, if I recall correctly, and
5 thereafter he had completed at least one course that we
6 knew of, a very short one. Thereafter it's a bit fudged
7 as to exactly what he did.

8 Q. You mentioned the presentation skills of the American
9 experts. I think you said that they were out of the
10 witness box and walking up and down in front of the
11 jury. So is it fair to say that your concerns related
12 to the substance of their evidence rather than to
13 presentation?

14 A. Yes.

15 Q. By contrast with that, the criticisms that have been
16 made of the Scottish experts, particularly immediately
17 following Ms McKie's trial related purely to
18 presentation and not to their ability to compare
19 fingerprints; is that correct?

20 A. That's quite correct, yes.

21 Q. You personally I think you said in your evidence caused
22 the work of the original four experts who identified Y7
23 to be independently checked for, I think you said, a
24 period of a year before the identification of Y7 and a
25 year after. Is that correct?

1 A. That's correct, yes.

2 Q. Who was the independent checker that carried that out?

3 A. We were engaging with PSNI fingerprint experts and also

4 Metropolitan experts and I think some from maybe

5 Manchester, I can't recall exactly now, but it was one

6 of these groups that actually took on or at least a

7 combination of groups of these people that took on these

8 checks.

9 Q. When you're speaking about a two-year period can we take

10 it that there are a large number of identifications

11 involved over that time?

12 A. Yes, indeed. There would be a large number of

13 examinations to be compared.

14 Q. And the findings of the independent checkers you engaged

15 were that there was 100 per cent accuracy for the year

16 before and the year after; is that correct?

17 A. Indeed, that was correct.

18 Q. Did those findings of themselves cause you to be

19 suspicious that there were two purported mistakes within

20 one case?

21 A. Well, certainly if there had been a series of procedural

22 problems I would have expected it to show up somewhere

23 in other cases.

24 So it did concern me that, one, we had an

25 identification which had been challenged and disputed

1 quite fiercely and then came the second one with Asbury.
2 That became a challenge too. So I was concerned that
3 the only focus are these two fingerprints.

4 Q. Was it ever suggested to you that any other fingerprints
5 in this case were being challenged?

6 A. If I recall correctly there was potentially only one
7 other print of substance and that was found at the front
8 door on a Christmas tag and that hadn't been challenged,
9 if I rightly remember.

10 Q. Your evidence I think has been to the effect that the
11 documentary, Frontline Scotland documentary, may have
12 been the catalyst for the questioning of Q12.

13 Have I got that right?

14 A. If Q12 is the Asbury print, yes, that would be the way
15 of it.

16 Q. Do you recall claims that were made during that
17 documentary that Mr Wertheim in particular identified or
18 rather excluded Ms McKie as the donor of Y7 particularly
19 quickly?

20 A. Yes. He dismissed it as if he could do that from first
21 thought, from first glance at the print he could readily
22 dismiss it as hers.

23 Q. He gave a time during the documentary of something like
24 60 or 90 seconds; do you recall?

25 A. I can't recall that in particular but I do recall the

1 fact that he was in a position to put over that he
2 dismissed it readily.

3 Q. Having seen your own experts work, what do you make of
4 claims like that?

5 A. I think they would have detailed to the court or to the
6 Inquiry their method of approach and how they view the
7 print before they even go into examining anything in
8 detail and it's an art, it's a skill and it's an
9 approach that in the manner they do it's the same
10 approach all the time, visual and then looking for
11 detail. So it would be a lot longer than anything
12 Mr Wertheim referred to.

13 Q. So even a suitably qualified expert looking at a
14 fingerprint form for them to come to a conclusion in
15 that short a space of time would you say that's
16 careless?

17 A. I wasn't fully aware of his overall skill factor. I'm
18 not convinced that he had that ability to do that at
19 that time and if it had been one of the experts from
20 SCRO that had been able to discard it as quickly as
21 that, I would have been concerned. I think there has
22 been reference made here to the test that's carried out
23 under Mr Ferry when he was the Director and some of the
24 experts who were asked to look at the print found that
25 they weren't saying it wasn't there but they were more

1 willing to look at it under controlled conditions the
2 following day. So they weren't prepared to look at it
3 and just venture an opinion.

4 Q. Do you have any knowledge aside from Mr Wertheim's own
5 qualifications, do you have any knowledge of the
6 facilities or the materials that he was provided with
7 when making a comparison of Y7?

8 A. I wasn't there at the time so I really would just be
9 talking third-hand on that. He would be given access to
10 the same material as the experts at SCRO would be
11 looking at, I believe. I believe he took his own
12 photographs and made his own examination of potentially
13 the door post.

14 Q. According to Mr Kent's letter to you, Mr Wertheim also
15 claimed that the scene security at the house was so
16 tight that Ms McKie -- it would have been impossible for
17 her to enter. We've heard a great deal of evidence and
18 whichever witness you choose to accept, that simply is
19 not the case.

20 Is it fair to say this is yet another example of an
21 exaggerated claim by Mr Wertheim?

22 A. Well, I don't see how he could be in a position to make
23 that comment. It's not something that I would expect
24 from a fingerprint expert about a crime scene. They may
25 well look at a crime scene to get an understanding of

1 the layout and the setup but I don't see that they would
2 venture that type of an opinion about the security of a
3 **loci**.

4 Q. You have referred in your own letter to the Chief
5 Constables to disinformation. Is this the kind of thing
6 that you were speaking about at the time?

7 A. That coupled with the fact that there were statements
8 being made that there was not one other expert in the
9 world who believed it was Shirley Ms McKie's print when
10 it was quite clear that individuals who were making
11 these statements understood that there were at least two
12 independent defence experts, as I understood it to be,
13 who had formed that opinion, plus I had spoken to a
14 third person who had confirmed to me that it was her
15 print -- verbally.

16 Q. If I can move on to the training and the working
17 practices of the Scottish experts, in 1997 I think you
18 have mentioned the training period for an expert was
19 five years at SCRO. Is that correct?

20 A. It was five years when I joined in 1998. I presume it
21 was the same in 1997, yes.

22 Q. And that's a period of full-time training?

23 A. Yes.

24 Q. That is before any expert is ever allowed to give
25 evidence in court?

1 A. Indeed, yes.

2 Q. After that training period is over it doesn't end there,
3 there is continuing assessment; is that correct?

4 A. Could you repeat that, sorry?

5 Q. There's continuing assessment after that training period
6 is over; is that correct?

7 A. Yes.

8 Q. During the training period itself of course there would
9 be examinations?

10 A. Yes.

11 Q. And obviously there would be peer review of the work
12 simply by nature, by its very nature because you've got
13 more than one expert checking any one identification; is
14 that fair?

15 A. That's the constant theme of it, yes.

16 Q. Are you aware of whether SCRO was on its way to being
17 ISO accredited when you joined in 1998?

18 A. It's when we looked to establish a Scottish Fingerprint
19 Service and we brought in the Head of the
20 Scottish Fingerprint Service we were working towards
21 that through Mr Dunbar and Mr Mackenzie and we
22 subsequently achieved that, yes.

23 Q. Do you know when that was?

24 A. Some time after 2001, potentially.

25 Q. With all of that in mind, Sheriff Crowe in his statement

1 has expressed a view that since civilians were brought
2 in the service has become de-professionalised. That
3 can't be right, can it?

4 A. Well, I don't know what context he's actually meaning
5 that in. Beforehand there had been police officers
6 involved in the fingerprint exam and, in my opinion, it
7 was right to separate the roles and to concentrate on
8 people closely focusing on these skills entirely ie the
9 policeman doing the policeman's job and the expert doing
10 a fingerprint expert job, not doing a Scenes of Crime
11 role or a dual role responsibility.

12 Q. Bearing in mind about the concerns you voiced about the
13 American experts, with what you were able to discover
14 about Mr Wertheim's training and that he had attended,
15 as far as you were aware, one very short course how does
16 that stack up against the experts employed at SCRO at
17 the time?

18 A. Well, if that's the comparison that could be made, then
19 he didn't compare with experts at SCRO.

20 Q. As to the actual working life of an SCRO expert, you
21 were read during your evidence on Friday a letter which
22 apparently has been written by a Mr Luckcraft.

23 Do you recognise any of the Glasgow Bureau in what
24 was said in that letter?

25 A. No.

1 Q. Did junior experts during their working lives question
2 senior experts?

3 A. My understanding -- I wasn't in charge of the SCRO
4 Fingerprint Bureau. I was Director of the whole
5 organisation. So I didn't have a day-to-day role to
6 play within the bureau. That was a Chief Inspector and
7 Robert Mackenzie as deputy.

8 Again, I keep coming back to say that my
9 understanding is that experts are trained on the basis
10 that they have to speak to what they see and if an
11 expert, junior, trainer or whatever had a view I'm quite
12 confident they would express their view. Whether it was
13 right or not they would be given guidance on but the
14 whole ethos was to give your view on what you found.

15 Q. So from what you're saying experts -- and that would
16 include the most junior of experts -- were expected to
17 and were encouraged to maintain their independence?

18 A. Yes, that was an important aspect of the process, I
19 believe.

20 Q. Can I ask what were relations like between the Glasgow
21 Bureau and the other fingerprint bureaux in the UK?

22 A. It was quite strained even before this case. I think
23 I've already said that it was looked upon that the
24 Glasgow Bureau, the SCRO Glasgow Bureau, was located in
25 Pitt Street in Glasgow within Police Headquarters at

1 Strathclyde and that was seen as that SCRO Fingerprint
2 Bureau was a department within Strathclyde and when
3 Mr Hamilton's report via Leishman was starting to get
4 aired, they were looking towards an A4 standard group
5 plus looking towards a Scottish Fingerprint Service.

6 I chaired some of the meetings and I did visit some
7 of these bureaux and it's quite clear that they were not
8 wanting to engage openly with the Glasgow Bureau. They
9 wanted to remain independent, in my mind. But they were
10 to go down that path. That was a path that the Chief
11 Constables, the SCRO committee had agreed on and
12 ultimately they came together and whether they were
13 happy with it or not they were at least making under the
14 auspices of the head of the Scottish Fingerprint Service
15 with a view to forming a true Scottish Fingerprint
16 Service.

17 Q. The officers that identified Y7 or of the officers who
18 were suspended in this case, I think you have said they
19 were unhappy about their suspension and were very keen
20 to get back to work?

21 A. That's correct, yes.

22 Q. You have said in your statement that their families were
23 put under pressure as well. Can you expand on that?

24 A. Well, I think with the media -- I think everybody that
25 was involved in this case was under pressure and that

1 transferred itself to everyone's family to a higher or
2 lesser degree.

3 There is no doubt that the four Fingerprint Officers
4 who were suspended went through a trauma. There is no
5 doubt that the two officers who were suspended from
6 operational duties found that very hurtful and I'm sure
7 their families did too.

8 Q. When you say the two officers who were taken off
9 operational duties, which two officers are you --

10 A. Mr Mackenzie and Mr Dunbar.

11 Q. So can you confirm that neither of those officers were
12 actually suspended from work they were simply taken off
13 operational duties?

14 A. They were never suspended from work, no.

15 Q. The Black Report I think you said recommended that all
16 of these officers be returned to full operational
17 duties. Is that correct?

18 A. Yes.

19 Q. Was that 2000?

20 A. I would be struggling to give you a date. It was some
21 time around then.

22 Q. But in any event that was not something that ever
23 happened?

24 A. That they were returned ... no, that's something that
25 didn't happen, no.

1 Q. One final question I have to ask about any pressure that
2 might have been put on these officers is in relation to
3 outside pressure. Was there ever an incident reported
4 to you after the Tulliallan conference?

5 A. Sorry after the ...?

6 Q. The meeting at Tulliallan attended by Mr Mackenzie and
7 Mr Dunbar?

8 A. I think Mr Mackenzie spoke to me. I think he had some
9 conversation with one of the foreign experts outwith the
10 actual formal meeting and there may have been some sort
11 of words there but the detail I quite honestly can't
12 remember but if that's what you're referring to ...

13 Q. So you don't recall the detail of that incident?

14 A. Robert Mackenzie, if that's the incident, did tell me
15 about it but at this moment in time I'd need to be
16 reminded of the conversation.

17 Q. There's just a couple of further matters that I'd like
18 to clear up. The first relates to the fingerprint known
19 as QD2.

20 Were you ever informed that that was being
21 challenged?

22 A. I think again it's difficult to recall all this time
23 back when I learned of that but I think it may well have
24 just come out in one of the BBC programmes, but I could
25 be wrong in that.

1 Q. If you're not aware of when you learned of it you won't
2 be aware of when the officers themselves were informed
3 that there was a third fingerprint being challenged.

4 A. I can't give you any exact detail on that, no.

5 Q. In relation to Y7, you have already said in your
6 evidence that there was good reason in your view not to
7 invite any further speculation about the mark. Is that
8 correct?

9 A. Yes. It was on the basis that we had four experts who
10 were getting challenged and I didn't see the benefit in
11 other experts within the bureau or within the Scottish
12 Fingerprint Service at that time looking at it. If they
13 come out with a view that it was Shirley Ms McKie's I
14 doubt that would be accepted; they would just be
15 contaminated.

16 If you look at the situation, I was dealing with
17 this as it developed. First of all, we'd a case not
18 proven -- a not guilty verdict. I held a meeting. It
19 developed along that stages until such times as the
20 HMCIC came and then it moved on to another arena.

21 Q. What then was your view when you learned in Mr Kent's
22 letter that Mr Wertheim was, in fact, distributing his
23 own photographs of Y7?

24 A. Well, again that fitted in with what was appearing on
25 the Internet and I did understand a photograph of

1 Wertheim's had a mark on it which was not in the
2 original productions. It looked like -- well, it was
3 put to me it could be a brush mark and that this could,
4 in fact, cause some damage to some areas that had been
5 looked at.

6 Q. So is it fair to say that inviting views from others on
7 the basis of his own photographs is yet more unhelpful
8 speculation?

9 A. Yes, it certainly didn't help. It didn't help, the fact
10 it was on the Internet, it didn't help the fact it
11 appeared to be different photographs, it didn't help the
12 fact it appeared the photograph was damaged or had been
13 marked.

14 MR HOLMES: That is all I would like to ask. Thank you very
15 much, Mr Bell.

16 THE CHAIRMAN: I did ask on Friday if there were any other
17 applications. I take it there is no change to that
18 position.

19 MISS GRAHAME: There is no change.

20 MR MACPHERSON: No, thank you.

21 MR SMITH: Sir, I wonder if, arising from questions that
22 have just been asked, I can ask two matters. I realise
23 it is unusual but it will be appreciated that --

24 THE CHAIRMAN: What are they?

25 MR SMITH: They are relating to the question of

1 qualifications and experience of other experts. There
2 has been a fairly pointed attack on Pat Wertheim's
3 qualifications and I wanted to ask --

4 THE CHAIRMAN: On Mr Wertheim?

5 MR SMITH: On Mr Wertheim's qualifications. I wanted to ask
6 the witness quite simply whether any investigation was
7 made relating to the other expert, Mr David Grieve, and
8 the second matter is the question of the ability to
9 comment within a short space of time whether he is aware
10 of the position of Mr David Ashcroft who I also
11 understand examined the print and came to a conclusion
12 very quickly.

13 THE CHAIRMAN: Perhaps we can just clarify so that if you
14 would like to ask those two questions.

15 **Further cross-examined by MR SMITH**

16 Q. Mr Bell, just these two matters. You aware Mr David
17 Grieve, an American, also gave evidence in Shirley
18 McKie's trial and we understand for many years has
19 worked in the Chicago Police Department, I think.

20 Was any investigation carried out to find out what
21 his qualifications and experience were?

22 A. It's my recollection that he was known and his
23 credibility within the fingerprint world was known, but
24 the detail of that I can't recall at this time. But he
25 was certainly a name that was known in the fingerprint

1 world, yes.

2 Q. But to the extent any suggestion of Pat Wertheim -- we
3 will no doubt come back to that with other witnesses --
4 but to the extent there was any suggestion that Pat
5 Wertheim was ill-qualified, there was no suggested
6 whatsoever that David Grieve wasn't qualified to make a
7 comment there wasn't a match between Y7 and Shirley
8 McKie's print, was there?

9 A. I personally wouldn't challenge Mr Grieve's
10 qualifications. The experts still had a concern as to
11 why he was not identifying it, but I understand your
12 question. Mr Grieve's credibility and standing seemed
13 to be quite sound.

14 Q. Thank you.

15 The other question is how quickly the view was
16 reached by Pat Wertheim that there was not a match
17 between Y7 and Shirley McKie's fingerprint.

18 I would like to ask you this: are you aware of the
19 name David Ashbaugh?

20 A. Sorry?

21 Q. David Ashborn.

22 A. I've heard the name, yes.

23 Q. He's written a book on ridgeology, hasn't he? He is a
24 highly respected fingerprint analyst with the Royal
25 Canadian Mounted Police, you are aware of that?

1 A. I'm aware he's in the position, yes.

2 Q. If we are subsequently to hear evidence that David
3 Ashborn was provided with a copy of Y7 and a copy of
4 Shirley McKie's print and in poor lighting, having, in
5 his words, consumed at least two pints of beer without
6 any equipment available to him he was able, within a
7 couple of minutes, to conclude that there was no match
8 between Y7 and Shirley McKie's fingerprint. I take it
9 that is something you wouldn't be able to comment on?

10 A. The only thing I would venture there is if one of my
11 experts said that they've looked at this fingerprint in
12 poor lighting and have consumed two pints of beer, I
13 would be asking them to look at it again or get someone
14 else. I'm not taking away from what you're saying about
15 the individual's credibility but I can't agree with
16 someone saying, "I do it in poor lighting and I do it
17 under the influence of alcohol". I don't think that's
18 the proper approach that should be taken.

19 Q. I think you can take it he checked it subsequently and
20 his initial view was one he adhered to so if you accept
21 that from me all I am trying to point out here is if
22 someone is looking for a difference between two marks
23 they may see a difference very, very quickly. Now would
24 you accept that from me?

25 A. I would accept the second version your giving me that in

1 good lighting and sobriety he's able to turn round and
2 give an opinion based on his experience. I would accept
3 that, yes.

4 MR SMITH: Thank you, Mr Bell.

5 THE CHAIRMAN: At various stages in your evidence you were
6 asked about your attitude towards the integrity of those
7 working under you who of course were the fingerprint
8 experts and I want to just get it quite clear what your
9 attitude was, because I can appreciate when you arrived
10 you felt morale was not good because the pay scales
11 weren't right and various matters like that and I
12 imagine that morale was not improved by all this about
13 Y7 and so on.

14 When you speak about the integrity, I can understand
15 that as meaning that I accept that those experts
16 honestly believe in the result that they've achieved.

17 A. Yes.

18 THE CHAIRMAN: You could also take the view that I believe
19 that these people are right and everybody else is wrong
20 who takes a contrary view.

21 What was your position personally -- and I
22 appreciate you may have had to, as it were, stand up for
23 the people under you or felt obliged to -- but what was
24 your own personal position?

25 A. My personal position was in the first instance I was not

1 a fingerprint expert.

2 THE CHAIRMAN: I appreciate that.

3 A. I was new into SCRO, as a new director. I'd never
4 worked with or met any of these people really
5 beforehand. I had seen them in the building in passing.
6 If there was something amiss or wrong when I came in,
7 then I looked to me being the person that could
8 potentially look at that and sort it, and I didn't
9 detect that. I found that, yes, morale was low but
10 there was reasons for all of these things. But I
11 certainly would not say that the integrity dropped in
12 any shape or form because of the surrounding factors.
13 These people, if they had anything, would stand by an
14 identification that they had made correctly. They
15 wouldn't be influenced by -- I was satisfied with that.
16 I looked for these things. I looked on the basis that I
17 was an experienced detective officer and I never
18 detected any of that approach at all.

19 With Mr Wertheim finding on the fingerprint and his
20 qualifications which were being alluded to, it didn't
21 concern me when other fingerprint experts in Scotland
22 couldn't find the mark was the same as Shirley McKie's
23 but by that time, as I said before progressions -- I had
24 dealt with the initial impact of a not guilty case, a
25 challenge of fingerprints, meeting with the Crown,

1 putting the reports to the Chief Constables and SCRO
2 Executive Committee to explain my actions and the thing
3 progressed at that stage.

4 I'll come back to say to you that when I dealt with
5 that, I was aware that there was at least three other
6 experts, independent outside SCRO, who agreed with their
7 findings. So I had a, sort of, cover in that side of
8 things, that the integrity should be reasonably sound or
9 sound on the basis of that. I hadn't engaged them. The
10 defence had engaged at least two of them was my
11 understanding.

12 THE CHAIRMAN: Is the position that you had no reason to
13 believe that your experts were other than right in the
14 decision that they reached --

15 A. Yes.

16 THE CHAIRMAN: -- with regard to these two prints.

17 A. My understanding of the case was that the SCRO experts
18 had identified Shirley McKie not to incriminate her but
19 to eliminate her from the Inquiry and subsequent action
20 taken resulted in her ending up in the High Court, was
21 taken outwith their opinion. It was based albeit on the
22 fingerprint evidence -- I understand that -- but there
23 was all these other surrounding factors that Shirley
24 McKie had been at the **loci**, without rehearsing them all
25 again but these were the factors I considered. I didn't

1 just make it on the basis these are SCRO fingerprint
2 experts so they will be right. There were sound factors
3 and circumstances that supported the conclusions that I
4 came to and that's what I fed back to the Chief
5 Constables.

6 THE CHAIRMAN: Thank you very much and thank you for coming
7 back again this morning. I am sorry, you had to return.

8 **(The witness withdrew)**

9 Just before we move to the next witness we obviously
10 have quite a lot of business to get through, we hope,
11 this week and I would be very keen that the notice of
12 questions is given in a timely way, that lines of
13 questioning that you want to pursue are given to the
14 Inquiry team in good time and, secondly, the other point
15 is that any documents must be given to the Inquiry in
16 advance so that they can be properly catalogued and not
17 just brought in, if you can avoid it, **ad hoc**.

18 I appreciate in exceptional circumstances I have to
19 bend it slightly but I don't want it to become a habit
20 that documents are handed in just at the last minute.

21 So now we now proceed to the next witness.

22 MR MOYNIHAN: Yes, sir, the next witness is Mr Kent who's in
23 the hall just now.

24 **TERENCE KENT (affirmed)**

25 THE CHAIRMAN: And your full name?

1 A. Is Terence Kent.

2 THE CHAIRMAN: Take a seat please, Mr Kent.

3 **Examination-in-chief by MR MOYNIHAN**

4 Q. Good morning, Mr Kent.

5 A. Good morning.

6 Q. Mr Kent, you have provided the Inquiry with a statement.

7 Do you have a copy of that statement?

8 A. Indeed, yes.

9 Q. That is a statement you have had an opportunity to

10 revise?

11 A. Yes.

12 Q. And to sign as being a correct account of your evidence?

13 A. Correct, yes.

14 Q. If, as we progress, there are any inaccuracies in your

15 statement please feel free to correct them as we

16 proceed.

17 A. Okay.

18 Q. What I want to do is to start with a topic just to ask

19 your opinion about and that's the use of powders in

20 Scenes of Crime examination.

21 We understand that there is a manual or was in 1997

22 a manual of fingerprint development techniques and that

23 you were responsible for that manual?

24 A. That's correct, yes.

25 Q. One of the questions that we have been asked to address

1 with the evidence here is whether there was a recognised
2 proper order of application of powders, in particular
3 aluminium and black powder, and witnesses have referred
4 to the Home Office guidance on the subject.

5 Would that be the manual I just referred to?

6 A. So far as I'm aware, yes. Certainly the Home Office
7 itself didn't issue any other guidelines. Obviously
8 there might be Force orders or local instructions but
9 the only Home Office advice would have come from my
10 research team at Sandwich, yes.

11 Q. At the time in 1997, would you have understood there to
12 be a regimented instruction in relation to the correct
13 order in which powders were applied at scenes of crimes?

14 A. No.

15 Q. What was your understanding at that time of the
16 guidance?

17 A. Because of limited statistical data on the performance
18 of powders, although in other areas of fingerprint
19 chemistry, if you like, we did issue very rigid
20 instructions but with powders, because of the lack of
21 data, we actually made some, if you like, rather vague
22 guidelines. We indicated that we thought that metallic
23 flake powders such as aluminium and bronze, we thought
24 those to be more sensitive than granular black powder
25 and we indicated that where sensitivity was important

1 that aluminium was probably the powder of choice. But
2 we certainly didn't give a very firm recommendation and
3 it was really left to local Scenes of Crime departments
4 to make their own decisions because there are other
5 issues, depending on their photographic equipment and
6 expertise and light sources and training. It was really
7 left to local individuals and heads of scene of crime
8 to, if you like, to make that final decision.

9 Having said that, I would suggest that probably in
10 the UK most police forces at that time were using
11 aluminium as the first powder at a crime scene provided
12 that there were no other problems, no other issues with
13 regard to that scene. There were certain types of
14 surface, for example, if you were examining, let's say,
15 a kitchen where there was a lot of grease film over the
16 surfaces aluminium would tend to smear all over the
17 surfaces so quite often a SOCO would say, "Well, I'm
18 going to use a granular powder rather than aluminium
19 powder at this particular situation".

20 There were at that time I think probably three or
21 four police forces that, as a preference, used black
22 powder and I think there were still one or two police
23 forces that used white powder as a preference at the
24 time. So if that answers the question ...

25 Q. The reason for the aluminium being, from your point of

1 view, the powder of choice, what was the reason for it
2 being the powder of choice?

3 A. Sorry?

4 Q. Why was aluminium preferred by you or --

5 A. Because despite the fact I said there was limited data,
6 we had carried out small in-house laboratory experiments
7 and it did indicate that -- or the results of the odd
8 pieces of work we'd done over the years indicated that
9 the aluminium flake was more sensitive at detecting
10 fainter deposits, fainter fingerprint deposits.

11 This was something that made quite a lot of sense
12 from a physical interpretation point of view because the
13 black powder is granular, it's quite a large spherical,
14 vaguely spherical, powder which can brush off the
15 surface whereas the aluminium flake, the individual
16 particles were something like 100th of the size of the
17 black powder and, being flat, once they stuck to the
18 surface they tended to stay there. So the theory seemed
19 to fit with the results of our experimental data. But
20 at that time, as I say, there wasn't a huge amount of
21 data so our instructions and advice were not rigorous.

22 Q. Without going into too much detail, has research
23 subsequently confirmed what that rough data initially
24 was suggesting?

25 A. Yes. I mean, with fingerprints it's difficult to be

1 absolutely categoric because the chemistry of individual
2 fingerprints varies between individuals day-to-day,
3 hour-to-hour so it's very difficult to say precisely
4 what technique will work under any possible
5 circumstance, so we have to look at statistically
6 analysed data and yesterday I reminded myself by looking
7 back at some work that I had initiated before I left the
8 Home Office and there was a report put out by Helen
9 Bandy and Andrew Gibson from the Home Office in, I
10 think, 2006 when they specifically looked at the
11 efficacy of aluminium and black powder and a number of
12 other powders on painted wooden surfaces and, very
13 roughly, if we look at fingerprints one day old
14 aluminium was detecting about twice as many fingerprints
15 as black powder. If we look at fingermarks a week old
16 we get roughly a two to one ratio, roughly twice as many
17 marks developed with aluminium, so that endorsed really
18 what I'd said in my original statement.

19 Q. Before we go on to a question of looking at combinations
20 of powder if we just stick with aluminium powder,
21 assuming that Scenes of Crime Officers have decided to
22 use it first, would the manner of correct application
23 perhaps involve multiple applications of aluminium
24 powder?

25 A. Well, not so much multiple but a sort of continuous

1 development. Our advice with aluminium is to use
2 preferably a glass fibre brush that's fairly lighted
3 loaded with aluminium and gradually lightly brush the
4 surface and build up any deposit using a strong light to
5 detect any ridge detail that came up and being careful
6 not to overdevelop by getting too much aluminium on the
7 surface.

8 Of course, it very much depends on how much
9 fingerprint deposit you've got there and the nature of
10 the background, how quickly the contrast might appear or
11 disappear.

12 Q. We have heard some evidence that the Scenes of Crime
13 Officers would begin by an initial application of
14 aluminium powder and then if there was an area of
15 suspicion for the presence of a fingerprint they might
16 in that area build up the deposit slowly. Would that be
17 consistent with --

18 A. Yes, absolutely, yes.

19 Q. Would it therefore follow conversely if on the initial
20 dusting there was no apparent evidence of a fingerprint
21 that the Fingerprint Officers would be correct in not
22 building up further in the area there was no initial
23 evidence?

24 A. Well, bearing in mind that at any scene of crime there
25 are time constraints. If you've got, literally, perhaps

1 hundreds of square metres of surface to powder, there's
2 only a certain amount of time that you would devote to
3 any square centimetre, if you like, and it's a matter of
4 fine judgment, really, as far as the SOCO is concerned,
5 how much time he spends building up that treatment on
6 the surface.

7 Q. Moving on then to the question of black powder, would it
8 be consistent with guidance and your understanding of
9 the practice at the time also that there might be a
10 scenes of crimes examination where there is a sequential
11 application of different powders?

12 A. Certainly a number of people do carry out that practice
13 and have done over the years. I wouldn't like to
14 comment actually on the success rate. I have had people
15 tell me they've found better fingerprints after using
16 black powder after aluminium and vice versa even. But
17 it's not something that a significant amount of research
18 has been done.

19 There is a proposal, I understand, at the Home
20 Office now to look at sequential treatment but we don't
21 have any real hard data on that, I'm afraid.

22 Q. So you've no data but at least anecdotally you have
23 heard examples of people using black after aluminium and
24 saying that they discovered a print?

25 A. Well, that they've discovered better -- had better

1 results. I'm not absolutely sure -- I mean, I've never
2 seen any photographic proof of this effect.

3 Q. If we move then to what you describe in your own
4 statement you were given the piece of wood on which Y7
5 was found, you were also given some statements by some
6 of the Scenes of Crime Officers to understand the
7 sequence of the examinations?

8 A. That's right, yes .

9 Q. You understood that the Scenes of Crime Officer said
10 they had started initially with aluminium powder and
11 then progressed to the application of black powder?

12 A. That's correct, yes.

13 Q. You describe in paragraph 13 of your statement, if you
14 could have a look at paragraph 13, you describe a
15 feeling of unease on your examination of the piece of
16 wood in particular because you couldn't find much trace
17 of aluminium powder. Is that the case?

18 A. Well, yes, I was certainly I surprised. I think in most
19 cases, if I had seen an exhibit in the past that had
20 been examined with aluminium powder, I would normally
21 expect to see some traces. I would normally see some
22 traces on it and I did look at the area of Y7 with a
23 microscope. I didn't see any obvious signs of powder
24 but there may be a number of potential reasons for that.

25 Q. You say you didn't see obvious signs of powder, do you

1 mean obvious signs of aluminium --

2 A. Aluminium powder, sorry, yes.

3 Q. Can you explain what the reasons might be for the
4 absence of evidence of aluminium powder in that area?

5 A. Well, bearing in mind that -- I mean, I wasn't using a
6 particularly sensitive way of detecting the aluminium.
7 There are more sophisticated electro-microscopy one
8 could use to determine whether there was any trace of
9 aluminium. I was using a simple optical microscope
10 expecting to see some reflective aluminium particles.

11 Now, I mean, there are a number of possible reasons
12 for not observing aluminium. In no particular order
13 there is possibly applying the black powder brushed
14 off any aluminium powder; possibly applying black powder
15 obscured the aluminium powder; possibly there wasn't
16 very much aluminium powder on the surface anyway, and
17 possibly the surface had not been aluminium powdered for
18 one reason or another.

19 It could happen purely by accident, of course, a
20 busy crime scene with people examining, more than one
21 SOCO examining different areas of the **locus**, then it's
22 not impossible that an area is missed. Somebody says to
23 somebody else, "Oh, I powdered the doorframe", and they
24 mean they powdered in inside of the doorframe but not
25 the outside of the door frame. Of course powdering

1 a doorframe is really inside, outside and then the
2 doorjamb so you have effectively three surfaces to
3 treat.

4 Anyway, so they are the sort of three or four
5 possible scenarios.

6 Q. If I take what I think was the third one, the
7 possibility that there may not have been much in the way
8 of aluminium powder in that area, one of the Scenes of
9 Crime Officers, Mr Hunter, suggested that one of the
10 reasons that black powder was used sequentially after
11 the aluminium is because the aluminium powder appeared
12 not to have taken in this area and that's again the
13 Scenes of Crime Officer describing the matter.

14 Would that be consistent with what you observed?

15 A. It's a possibility, yes, and as I indicated earlier
16 because substrates and fingerprints vary, it's not
17 impossible, for example, that there was some
18 contamination on the surface or that the surface was
19 exceptionally clean so that when the aluminium was
20 applied, very little or none of it adhered to the
21 surface.

22 Q. If I add in looking at the circumstances what we know of
23 the particular area where Y7 was found, first of all, it
24 was on the doorjamb at the entry to the bathroom and,
25 therefore, perhaps subject to condensation and the likes

1 and, secondly, in very close proximity, a matter of feet
2 away from the door into the kitchen of the house so that
3 there might be the possibility of residue from the
4 kitchen.

5 Would those be factors that again might explain the
6 inability of the aluminium powder to take?

7 A. I think I would probably be foolish to speculate in
8 those sort of circumstances. If you have a kitchen
9 nearby you might expect more contamination so you might
10 expect more aluminium to stick to the surface, but there
11 are other issues. For example, if the doorframe had
12 been washed or wiped recently, that would almost
13 certainly reduce the amount of powder that would stick
14 to the surface -- aluminium powder.

15 But of course I suppose the most surprising thing
16 from my point of view is that there was a fingerprint
17 deposit there that was developed by the black powder and
18 quite a nice fairly intense black powder mark appeared
19 but for some reason the aluminium powder didn't stick to
20 that deposit. That's what I was puzzled about.

21 Q. Can you explain why you were puzzled there had been such
22 an apparently fine development of a print with black
23 powder that had not been developed by using aluminium?

24 A. Simply because the physical adhesion of powder to an
25 essentially fatty fingerprint deposit is a fairly simple

1 physical process and, you know, it's not obvious why the
2 deposit should be so substantial that these granular
3 black powder particles adhered to it but the fine
4 aluminium powder didn't.

5 Q. That led you in the report that we are just about to
6 turn to to conclude that, in a sense, the likelihood was
7 that the Y7 print had been first deposited after the
8 aluminium dusting.

9 A. Well, that was a possibility. But, obviously, there
10 were other possibilities, one being that it hadn't been
11 aluminium powdered.

12 Q. Or that the aluminium powder had, for whatever reason
13 not taken --

14 A. Yes, or it had been obscured and was, in fact, still
15 there underneath the black powder.

16 Q. One of the other things you mentioned would be also the
17 possibility that the light source just wasn't good
18 enough to detect the faint initial tracings with
19 aluminium powder?

20 A. That's another possibility but we were talking earlier
21 about building up the fingerprint and the expert would
22 fairly quickly go over the surface, normally with a
23 strong light and if they observed any ridge detail
24 appearing they would then stop in that area and
25 concentrate on building up that fingerprint.

1 If, as they scanned past, they hadn't got enough
2 light or it was in an awkward position and they didn't
3 spot the tiny traces of aluminium appearing on the
4 surface they may have missed it. It may be that the
5 next day when it was treated with the black powder that
6 the SOCO might fortuitously have spent more time
7 brushing that area and developed up the latent print
8 that was still there. I wouldn't want to be
9 categoric -- it's impossible to be categoric about that.

10 Q. You have also for the purposes of this Inquiry been told
11 that we understand that at the same time as the Scenes
12 of Crime Officers found Y7 with black powder they also
13 found some other prints of the deceased, again with
14 black powder that hadn't developed using aluminium
15 powder.

16 Again to be strictly simplistic about it, it's
17 unlikely the deceased's prints got on to the surfaces
18 after her death, after the aluminium powder. Does the
19 fact that there were some of the deceased's prints found
20 at the same time with black powder simply come back to
21 your puzzlement it should be the black that finds these
22 and not the aluminium?

23 A. Yes, it does puzzle me. It's something that would bear
24 further investigation. I've never seen those marks I
25 don't believe so I don't know if they are as strong as

1 Y7 and if very faint marks came up that might be more
2 readily explained than this quite strong fingerprint of
3 Y7 but I don't know what those marks were like of the
4 deceased.

5 Q. I will pick that particular point up in the context of
6 your report if I may and if I turn then to ask you about
7 your report, if I could have brought up please on to the
8 screen HO0053.

9 If I tell you that this is a letter taken from your
10 file.

11 A. Yes, I recognise it.

12 Q. Given to us by the Home Office. I do actually have your
13 file here in the hall if you require access to it.

14 A. No, there's no problem. I recognise it.

15 Q. You recognise this as the letter of instruction that
16 came to you from the Procurator Fiscal Service?

17 A. I do, yes.

18 Q. Before the letter of instruction, do you recollect what
19 contact there had been with you?

20 A. Well, I can't be precise because, you know, at that time
21 I was getting lots of phone calls from lots of people
22 around the country asking for advice, but from memory at
23 the time the person that I probably had most contact
24 with in Strathclyde was Iain Hogg who I think was the
25 Chief Inspector, head of Scenes of Crime.

1 It was somebody who knew me that rang up and said
2 did I know anything about planted fingerprints and went
3 on to ask me whether I would be prepared to look at this
4 exhibit. I suspect it was probably Iain Hogg but I
5 couldn't be absolutely sure, and subsequently of course
6 we arranged for the exhibit to be brought down to me and
7 at some stage I received this letter.

8 Q. Is the subject of planting something of which you had
9 professional experience?

10 A. No. There are very few people round the world who have
11 actually seen very many planted fingerprints and I did
12 make it clear in my conversations that all I could do is
13 actually look at the fingerprint and knowing a bit about
14 what sort of artefacts one might expect in a synthesised
15 or copied or moulded fingerprint, I could look to see if
16 there was anything, if you like, unnatural about the
17 fingerprint. But I certainly couldn't have given a
18 guarantee that it was genuine and I did explain that in
19 discussion.

20 I mean, I was familiar with a number of papers, Pat
21 Wertheim had published some papers, I was in contact
22 with a researcher in Israel who had been collecting data
23 on forged fingerprints. There were a couple of cases in
24 the US of forged fingerprints that had been reported.

25 So I thought I knew roughly what sort of things to

1 look for and it's a question really of there being
2 nobody else that had any more experience, to be honest.

3 Q. So when the exhibit, if I call it that, or that piece of
4 wood was provide to you, did you understand that what
5 you were being asked to do was to give advice in
6 relation to the possibility of planting within the
7 limitations that you just explained?

8 A. Yes.

9 Q. Did you have any appreciation at that time that your
10 advice was being sought on other matters?

11 A. No.

12 Q. If we look at the letter of instruction that has come
13 from your file, it is dated 12th March 1998, I see that
14 in paragraph 10 of your statement -- if we could bring
15 up paragraph 10 -- you say in the first sentence:

16 "I do not recall any discussions as to the identity
17 of the donor of the fingerprint Y7. Identification
18 falls outside my areas of expertise. I'm looking at my
19 letter of instruction now and I'm slightly puzzled by
20 points 5 and 6 within that letter."

21 Do you see that?

22 A. Yes.

23 Q. If we could have highlight please 1 to 6. What I
24 actually want to do is just to discuss with you the
25 understanding of the various points and the exercise you

1 were being asked to undertake.

2 Plainly point number 1, a narration of your
3 expertise in relation to fingerprints is asking for a
4 CV, which I think you provided?

5 A. Yes.

6 Q. An analysis of fingerprint planting and manufacture; is
7 that consistent with the task that you thought you were
8 undertaking?

9 A. Yes.

10 Q. Point number 3, how would you have construed point
11 number 3, the quality of the fingerprint Y7?

12 A. Looking back at it now I would assume that both 3 and 4
13 were really asking whether there was anything about the
14 mark that made me think that it was other than a natural
15 fingerprint. That would be my interpretation of it but
16 whether that was the intention, I'm not absolutely sure.

17 Q. What I am actually more interested in is your
18 interpretation of the instruction. We will come back
19 and ask about other conversations. So would I be
20 correct, therefore, in understanding that you would have
21 perceived paragraphs 2, 3 and 4 to go together?

22 A. Yes. Yes I think so.

23 Q. Paragraph number 5: any comment that you may wish to
24 make on the SCRO 16-point comparison of fingerprints and
25 the statistical basis for duplication of fingerprints.

1 What did you understand by that at the time?

2 A. I have to say that I can't remember exactly what my
3 actions were, which is why I've indicated as such in my
4 statement. However, I do know what I would have done.

5 At the time I assume there would have been some
6 breakdown in communication between, let's say, Iain
7 Hogg, who contacted me originally, and the Fiscals'
8 Office and, you know, I had no experience of -- I didn't
9 know the person who had written to me, I don't think I
10 had any communication with them. So I thought somehow
11 they got hold of the wrong end of the stick, basically,
12 and they got the idea that I was a fingerprint expert
13 and could express an opinion.

14 Now, I'm quite sure what I would have done under
15 these circumstances -- and it wasn't the first time --
16 is I would have picked up the phone and said, "Look, I
17 can do 1, 2, 3 and 4. I can't do 5 and 6", and I would
18 have probably said something like, "If you want advice
19 on the statistics of 16-point comparison you need to
20 talk to Christophe Champod in Lausanne", who was the
21 only person at the time doing any sort of research in
22 that area and I would have said, "You need to find
23 another fingerprint expert to give you an opinion on
24 identity because I wouldn't be recognised in either an
25 English or Scottish court". But I don't remember having

1 that conversation but I must have had it because I would
2 not have ignored two requests in that letter.

3 Q. Would you have a recollection of with whom you would
4 have had that conversation? Could it have been Mr Hogg?
5 Could it have been the individual, Mrs Greaves or do you
6 not know?

7 A. I would automatically have phoned up the author of the
8 letter.

9 Q. If I bring up then your report and if I can leave on the
10 left-hand side of the screen perhaps points 1 and 6 and
11 then also bring up alongside it CO3876, paragraph 9. So
12 we will start there to begin with. That is 3876.03.

13 This picks up the point that we have just been
14 discussing earlier on about the aluminium powder, black
15 powder and your conclusion in the report was:

16 "From the above it would seem likely that the
17 fingerprint was deposited after any application of
18 aluminium powder."

19 A. Yes.

20 Q. Then I leap over much of the discussion which was
21 related to planting and then take you on the right-hand
22 side of the screen please to the next page and if we
23 could on the next page, please, highlight paragraph 33,
24 which is the second last paragraph.

25 What you say in paragraph 33 is:

1 "I am not qualified to comment on the identity of
2 the fingerprint but it is quite clear and contains a
3 number of well defined characteristics which I would
4 expect to be sufficient for an identification to be
5 made."

6 That was the limit of what you actually said?

7 A. Yes.

8 Q. That, at least if one is being pedantic, one might think
9 is dealing with point 6 in the list or did you see
10 points 5 and point 6 as really being taken together?

11 A. Well, I mean, I think my point 33 actually could be
12 interpreted and probably was meant to be answering
13 question 4 -- sorry, question 3 -- about the quality of
14 the fingerprint.

15 Q. So you did not in the written report, if that is
16 correct, deal at all with points 5 and 6?

17 A. No.

18 Q. And would that be because you would recollect that you
19 had a telephone call with someone to say that you were
20 not the person to ask points 5 and 6?

21 A. It's because I simply did not regard myself as qualified
22 to answer those questions. I would never have done
23 that. I mean, I may have had views but I would not
24 consider myself an expert to give evidence in court.

25 Q. It may be just simply me but the way that it's been

1 understood so far -- and again this may be transferring
2 from what you intended as the author to what people may
3 have read -- that at least reading paragraph 33
4 individuals read you as clearly saying that you could
5 not answer paragraph 6?

6 A. Sorry, I'm not quite clear what you're getting at. In
7 33 I'm saying I'm not qualified to comment on identity
8 but there are characteristics which I would expect but I
9 don't know. I'm not saying that I know because I
10 haven't counted the number of characteristics, I'm not
11 an expert. I had dealt in the past with far worse
12 fingerprints although there were other issues which we
13 may come on to as to whether it was one fingerprint or
14 two fingerprints or some sort of double-touch or
15 something.

16 So there were other issues. Perhaps I was a little
17 too confident there indicating it was identifiable.

18 Q. I think we may be at crossed purposes. What I am
19 suggesting to you is that someone reading your report,
20 looking at paragraph 33, because you used the
21 phraseology you cannot comment on the identity, you
22 cannot comment on the identity of the fingerprint, would
23 see that as mapping point 6 of the instructions which
24 asked you to comment on the identity of the fingerprint?

25 A. Yes, okay.

1 Q. So, therefore, what one might see is you very clearly
2 saying in your report that you cannot because of your
3 lack of experience in the field, you cannot answer
4 point 6. Is that a fair reading?

5 A. Yes.

6 Q. But in any event what you tell us is you did not regard
7 yourself as appropriately qualified to answer points 5
8 and 6?

9 A. That's right, yes.

10 Q. We have heard and I have said to you that I will come
11 back to the sequence of the powders and the fact the
12 deceased's prints were found at the same time.

13 Do you have a recollection of anyone coming back to
14 you after your report was produced to ask you any
15 supplementary questions at all?

16 A. I really don't, no.

17 Q. Because we have seen some correspondence among the
18 Fiscals or between Fiscals where one Fiscal -- that's
19 the prosecutor -- had observed that the deceased's
20 prints were found at the same time as Y7 and, therefore,
21 questioned whether it could truly be the case that this
22 catalogue of prints came on only after the aluminium
23 dusting. So a question was raised about that but you've
24 no recollection of any of that?

25 A. I'm afraid I don't recall that, no.

1 Q. If I can move on in relation to this same topic, you
2 tell us and the first reference I have is paragraph 47
3 of your statement and you are going to June 2000, you
4 had been carrying out some testing yourself at about
5 this time.

6 Was that related to the question of image quality?
7 Paragraph 47, page 16.

8 What you said in paragraph 33 of your report -- and
9 I take your point you weren't studying it for this
10 reason -- you thought there was sufficient detail in the
11 image of Y7 to admit of identification by a fingerprint
12 expert.

13 Is that something that at this time you have been
14 studying what level of detail required to be in an image
15 before fingerprints officers could actually make a
16 comparison?

17 A. No, that wasn't the purpose of trial. What we were
18 looking at was what quality of image a fingerprint
19 expert needed to be able to, let's say, resolve an
20 individual characteristic. We weren't concerned with
21 how many characteristics they needed to make an
22 identification, which is a rather different issue.

23 The thrust of the work was in the move from using
24 film to digital cameras. We needed to know, if you
25 like, in simple terms how many pixels per inch were

1 needed to capture the scene of crime mark at to record
2 all of the data that the expert would then use in their
3 interpretation. So, no, I mean at no time were we
4 measuring the number of characteristics needed for an
5 identification. We were measuring the quality of the
6 image needed to give the expert let's say unequivocal
7 information or the best information to see a
8 characteristic if it was there.

9 Q. So you were trying to in effect have a quality check.
10 If you were moving from film to digital images, what
11 quality of image would give fingerprint experts in
12 effect the material they require for their purposes?

13 A. Yes, indeed.

14 Q. If I take you really just to paragraph 57 of your
15 statement, do you encapsulate when the test was analysed
16 what was found was for any one scene of crime
17 fingerprint there was a range of observations by
18 fingerprint experts?

19 A. Yes, that's correct.

20 Q. Just again for the avoidance of any doubt, you were not
21 asking fingerprint experts to compare a known mark and
22 an unknown mark?

23 A. No, we were not, no.

24 Q. You were simply asking them to examine an image of a
25 mark and to report to you how many characteristics they

1 could observe in the mark?

2 A. That's correct.

3 Q. What you found on that test was the range that you
4 indicate in paragraph 57 of observations by fingerprint
5 practitioners.

6 A. Yes.

7 Q. Plainly the object of this test was to decide on the
8 quality of digital image and I assume you reached
9 conclusions in relation to that?

10 A. We did, yes.

11 Q. But did the observations in this trial cause you any
12 sort of deeper or other concern about the fingerprint
13 process?

14 A. Yes, it did. I mean, it actually reinforced doubts that
15 I'd had probably for a decade or more. That trial was
16 actually done in '95/96 and the original analysis done
17 in '96 solely revolved around the image quality issue.
18 It wasn't until some time later -- and I'm not sure when
19 it was, perhaps round about 1998 -- that because I was
20 having discussions with ACPO and with the National
21 Fingerprint Board, who were then considering or
22 proposing removing the 16-point standard, that I then
23 asked my colleague to re-analyse the data in a different
24 way so that we could see the variability of expert
25 interpretation rather than the variability with respect

1 to image quality.

2 But, I mean, it was useful to me because it was a
3 well-controlled experiment that we'd managed ourselves
4 but it really only added to my concerns which had been
5 triggered by other events and, of course, in 1989 I
6 think the Evett and Williams Report had illustrated a
7 wide variation in opinion and interpretation under
8 rather different circumstances where experts were
9 actually asked to make an identification.

10 Q. I want to spend just a little bit of time looking at
11 this. What do you mean by the "interpretation" by
12 experts? What do you mean by that term?

13 A. Well, in the case of a fingerprint identification really
14 there are two primary issues that can affect the
15 accuracy of that identification. One is how many
16 characteristics are found in the scene of crime
17 fingerprint and the statistics of fortuitously finding
18 those in the suspect print or somewhere else in the rest
19 of the population. So that's, if you like, a fairly
20 straightforward, but not easy, statistical calculation.

21 The second, and much more subjective and at the
22 moment rather woolly issue, is the interpretation of the
23 scene of crime mark and deciding how many
24 characteristics there are actually in that mark and
25 that's where we don't have any proper sort of metrics,

1 we don't have any guidelines. It's very much left to
2 the expert.

3 The trial that we carried, out we didn't give the
4 experts the print. We only gave them an image of the
5 scene of crime mark. So they had to work out where the
6 characteristics were. In the situation that you have in
7 a typical UK Fingerprint Bureau where you're making an
8 identification against a suspect, the expert has the
9 suspect's print in front of them and they can then, if
10 you like, work backwards what Evett and Williams call
11 "teasing out" the characteristics or "teasing out" the
12 points. So you don't have a purely objective setup
13 where the expert is interpreting the latent image, they
14 have the, if you like, facility to look at a print and
15 then decide whether certain marks, dots, features or
16 whatever in the print -- sorry, in the mark and tie up.
17 Then of course they can mark up -- if they are going to
18 mark up, they can mark up their chart.

19 I think that that's the other big unknown area. We
20 don't fully understand it. There's research going on
21 now in a number of countries around the world to look at
22 this interpretation and see if we can't make it more
23 objective. But there are those two separate issues
24 which I would call interpretation and the statistical
25 model.

1 Q. If I can deal with them separately, first of all, in a
2 sense is the statistical model the question is at the
3 end of this process; in other words, if an individual
4 fingerprint officer has observed let's say 10
5 characteristics in the mark and 10 characteristics in
6 the print, the question is what is the statistical
7 likelihood of those 10 characteristics being present
8 uniquely in the known mark as opposed to those 10
9 characteristics perhaps being a chance occurrence that
10 one would find in a sample of the population.

11 Is that the question?

12 A. That's correct, yes.

13 Q. Other than identifying that as the question for us, you
14 don't feel qualified to express any opinion on that
15 particular question?

16 A. No, certainly not. I'm not a statistician, no.

17 Q. The name that you mentioned at least as in 1997 as the
18 person to whom such a question could be directed would
19 be Professor Champod?

20 A. Yes. There is work going on elsewhere now in Holland
21 and elsewhere. There's some work in the UK as well in
22 the Forensic Science Service with Cedric Neumann. He I
23 think worked with Christophe Champod. I think he
24 graduated in Lausanne and is now working for the
25 Forensic Science Service. So there are probably four or

1 five centres around the world where people are tackling
2 this problem.

3 Q. Perhaps for all our benefits if you could spell
4 Mr Neumann's name for us, please.

5 A. I think it's N-E-U-M-A-N(sic) -- I'm sure he'll accept
6 my apologies if I get it wrong.

7 Q. There are some names that are slightly easier than
8 others to spell.

9 A. I think the other person that you should record is
10 Didier Meuwly in the Netherlands.

11 Q. Sorry, I wasn't listening then. The other name, sorry?

12 A. Didier Meuwly -- M-E-U-W-L-Y -- working for the National
13 Forensic Institute in the Netherlands who is carrying
14 out quite a large scale statistical study.

15 Q. I am very grateful to you. If I leave that as a
16 question that you entertained but you don't know the
17 answer to, why was that at least a question with your
18 scientific mind when you were looking at fingerprints,
19 why was that a question that was prominent to you at
20 this time in relation to fingerprint evidence?

21 A. I guess what brought it to a focus was the attempts by
22 ACPO to remove the 16-point standard. There had been a
23 review in 1988 the Touche Ross Review of scientific
24 support and Scenes of Crime in England, I think -- or
25 England and Wales -- and one spin-off from that was the

1 idea that there were a number of what were deemed to be
2 partial identifications that weren't being taken to
3 court because they were sub the 16-point standard and
4 ACPO latched on to this as being a way of increasing the
5 number of identifications and over the next ten years,
6 through various mechanisms, attempted to and eventually
7 did remove that standard.

8 THE CHAIRMAN: But not to replace it with any objective
9 standard?

10 A. Sadly, no. That was my concern. If I'd seen it being
11 replaced with something that was better than, I would
12 have been delighted.

13 MR MOYNIHAN: I may be breaking this down, Mr Kent, into too
14 many subordinate parts but just simply looking at what
15 we have discussed so far, namely the absence of
16 statistical evidence for the uniqueness on one hand or
17 chance occurrence in a sample of the population, what
18 bearing did that question have on its own in relation to
19 your attitude to a move from the 16-point standard to
20 the so called non-numeric system?

21 A. Well, it wasn't clear quite what practices might involve
22 in bureaux if the 16-point standard was removed and
23 talking to experts there were -- there was a wide range
24 of views. There were some people that said privately,
25 well, we'll still keep to 16 points. There were other

1 people that said, well, we've confident if we see 10
2 characteristics so we'll probably have an unofficial
3 standard of 10. There were others that indicated they
4 might go lower than 10. I felt that we just simply
5 didn't know enough about the distribution, the
6 statistical distribution of these characteristics and
7 the probability of fortuitous or adventitious matches
8 that I thought it was foolish to move to a situation
9 where we didn't give experts some pretty clear
10 guidelines. I just don't think it's realistic to expect
11 a fingerprint expert from his own experience of looking
12 at perhaps tens or hundreds of thousands of
13 fingerprints. He's not going to know intuitively how
14 many other people in the population have got a
15 particular subset of characteristics. It's expecting
16 too much.

17 Q. If I can move to a slightly different aspect of this and
18 maybe we will come back to that question. The other
19 aspect which picks up your own study is before one
20 thinks about the chance of recurrence or uniqueness of
21 a particular combination of characteristics, one has to
22 start with the first question what characteristics are
23 in fact observed by the officer and, first of all, just
24 what characteristics are observed in the scene of crime
25 mark and, separately, also what characteristics are

1 observed in the fingerprint of the known individual, for
2 example, the suspect.

3 Do I take it that one of the concerns you had was
4 that your study was suggesting a significant variation
5 in observation of characteristics by apparently equally
6 qualified individuals?

7 A. Yes.

8 Q. Can you explain what the significance of that was as
9 casting doubt on a move from the 16-point standard to
10 any other system?

11 A. Well, if we take the situation I referred to earlier
12 where the expert is presented with a print of a suspect,
13 the question then is when they are looking for those
14 matching characteristics in the scene of crime mark how
15 clear does the detail need to be, how much information
16 do they need to have in that scene of crime mark for
17 them to come to a conclusion that it is a
18 characteristic?

19 I mean, I have seen charts marked up where a single
20 dot on a scene of crime mark is interpreted as being a
21 ridge ending on the periphery of a print. I mean, I
22 would argue probably that that's not sufficient
23 information to make that decision. But it's an area --
24 I mean, I'm not offering any simple solution to this. I
25 simply think that the whole issue needs to be

1 professionally assessed and what we didn't need to do
2 was just abandon the standard and not replace it with
3 anything.

4 Q. Forgive me if I use the unfortunate term to tease out
5 when you say the whole issue needs to be studied what do
6 you think is the issue that required to be studied
7 before the change was made?

8 A. I think -- well, as I said there isn't a simple
9 solution. First of all, we need to get the statistical
10 side out of the way. We need to know how many good
11 characteristics we need in a fingerprint to give us a
12 reliable identification. That is, if you like, the
13 second part. But the first part is we need to know how
14 experts interpret images. I think we would probably
15 need to carry out some sort of study with a number of
16 experts, independently interpreting images and then
17 going back and measuring how accurate their
18 interpretation was.

19 One of the suggestions that I did make to the
20 Fingerprint Project Board was that we had some sort of
21 standard image set. At the moment, there were no
22 regulations, there was no guidance as to what sort of
23 quality of photograph or image could be presented in
24 court.

25 I think a set of images, if you like, graded from

1 excellent to awful and perhaps graded with some sort of
2 description about how much detail is visible, how noisy
3 they are, et cetera, and then some sort of break point
4 and say we're not going to submit images below a certain
5 image quality because we are then doubtful about how
6 reliable the data is in there.

7 Q. I will try and put it in this way and be simplistic:
8 let's assume that, first of all, as you say, you need
9 the statistical information, how prevalent a particular
10 combination of features is in the population. Let's
11 assume we have the statistical information for a
12 particular set, a combination of 10 characteristics,
13 that particular combination is unique.

14 If I understand it correctly, what you're saying is
15 that two other questions beyond that statistical one.
16 The first one is is the image that's someone is using in
17 court sufficiently detailed to admit of a reliable
18 identification of those 10 characteristics. Is that
19 correct?

20 A. That's correct, yes. How confident are we that they are
21 10 genuine characteristics.

22 Q. Then over and above that, even if the image is
23 sufficiently detailed, there is then the third question
24 which is the observational ability of the individual
25 fingerprint practitioner accurately to identify those 10

1 characteristics?

2 A. That is another variable, yes.

3 Q. Is it the combination of those three issues that had led
4 to your concern about the move away from the 16-point
5 standard?

6 A. Yes, yes.

7 Q. May I take it that, just to finish this particular
8 point, that this concern would not be unique to the move
9 to the non-numeric system, these same three issues would
10 underpin a questioning of the reliability of even the
11 application of the 16-point standard?

12 A. Absolutely, yes.

13 MR MOYNIHAN: Sir, that might be an appropriate point to
14 stop.

15 THE CHAIRMAN: What we do, Mr Kent, is we take a short break
16 during the morning because we have one stenographer who
17 probably doesn't need a break at all but we give her one
18 for 20 minutes. So we will sit again at 11.50.

19 **(11.30 am)**

20 **(A short break)**

21 **(11.50 am)**

22 MR MOYNIHAN: Mr Kent, what I would like to do is develop
23 what we were talking about before the break in two
24 different respects. The first one is if I combine now
25 three variables. You have indicated the first variable

1 would be the statistical incidence of a particular
2 combination of characteristics can vary and, therefore,
3 the concrete number of characteristics, be it 8, 6, 10
4 or 16, doesn't tell you in isolation very much; is that
5 fair?

6 A. Not without a statistical model that has yet to be fully
7 developed.

8 Q. The second thing you have mentioned as a variable is the
9 variability of the image and that's not just
10 photographic techniques, that relates to how partial
11 and, indeed, distorted the impression is of the mark?

12 A. Yes.

13 Q. Then the third variability is the interpretation skill
14 of the fingerprint officer?

15 A. Correct.

16 Q. If I combine those three variables and ask you this: can
17 it be said, having regard to that combination of three
18 variables, that simply to apply a 16-point standard and
19 other countries, for example, use 12 or less that the
20 United Kingdom had a higher standard for testing
21 fingerprint evidence?

22 A. No. I mean, that interpretation was put on the issue by
23 a number of people and I think this was one of the
24 implications in the report but it doesn't take into
25 account what individual countries have by way of quality

1 control and what their procedures are with regards the
2 interpretation of a scene of crime fingerprint.

3 I mean, one example that springs to mind is I
4 understand that in the Netherlands the expert is
5 expected to interpret the image, the scene of crime mark
6 and mark characteristics on it that he can see before he
7 has the opportunity to then do a comparison chart with
8 the suspect. So it would be quite a lot more
9 objectivity, if you like, or one assumes more
10 objectivity in the actual identification process.

11 Certainly, in my experience, in discussions with
12 experts from the Netherlands they would not accept some
13 of the poorer images that we've been accepting in the UK
14 courts.

15 So purely to think in terms of numbers, it's not
16 that simple. You would need to look more into the depth
17 of actually what quality control there was and what
18 types of image were being submitted.

19 Q. The UK -- we're talking in 1997 through to 1999 -- had a
20 16-point standard. What standard did the Netherlands
21 have at that time? Do you know?

22 A. I'd rather not be quoted but I think it was 12 but I'm
23 really not sure. There have been several surveys done
24 of countries around the world and there are tables
25 published and there are countries that operate standards

1 or supposed standards from round about 8 up to, I think
2 at one time, 18.

3 Q. May I take it then from what you are discussing that
4 simply to talk in terms of one variable, the number of
5 characteristics, let us say the Netherlands has 12 and
6 the UK has 16, simply to look at that one variability
7 does not tell you which country had the higher quality
8 assurance standards from the point of view of evidence
9 in court?

10 A. Certainly not, no.

11 Q. If I can, again, further move that on to develop it, I
12 have brought up on the screen to prepare for this two
13 documents, at least digital documents HO0128 is on the
14 left and HO0130 on the right.

15 I understand these to be part of a presumably
16 PowerPoint presentation that you yourself presented. Is
17 that correct?

18 A. Yes.

19 Q. The only reason for the sheet on the left is so that we
20 can actually see when and to whom this was presented.
21 So it was presented on 24th/25th November 2000 to an
22 ACPO Crime Committee. Would that be correct?

23 A. That's correct.

24 Q. If I, therefore, drop the left image and on the
25 right-hand side if I could have the middle and bottom

1 pages highlighted please, the bottom two slides, do
2 those relate to the trial you have already told us
3 about?

4 A. Yes.

5 Q. With on the right-hand box a graph representing the
6 distributions of observations that you have told us
7 about?

8 A. Yes, for two of the particular images that we had.

9 Q. What I would like to do is if I drop those two as
10 matters we've covered and just highlight the middle two
11 boxes please, what I want to do is just discuss the
12 middle two boxes.

13 On the right-hand side you have discussion of a term
14 that I myself have used about unique identification and
15 uniqueness. Are you in that box cautioning against the
16 use of such a term?

17 A. Yes, because I think it's generally misused in this
18 context.

19 Q. Can you please explain why you are of the view it's
20 misused?

21 A. Quite commonly fingerprint experts when giving evidence
22 will talk about uniqueness of fingerprints. I would
23 argue as a physicist that most things are different to
24 most other things. If I take a 1p coin from my pocket
25 and another 1p coin from my pocket they will be

1 different because they will have different
2 micro-scratches, even when they came from the Mint they
3 would be different so you could regard them as being
4 unique although we don't know whether there are
5 somewhere another 1p coin that has exactly the same
6 pattern of scratches.

7 The particular problems that I have with fingerprint
8 experts use of the term, though, is rather different
9 because even if we assume or accept that fingers are
10 unique, that your finger is different to mine, of course
11 fingerprint experts are not comparing fingers. They
12 never compare fingers. What they compare is images,
13 usually on a piece of paper or on a screen, and usually
14 that image will be a third, fourth or fifth generation
15 copy of something that happened at some stage in the
16 past and we don't know how much data there is in that
17 third or fourth generation that relates to the original
18 object.

19 So if, for example, you know, we have a fingerprint
20 from a crime scene that's developed with powder, it may
21 be on a rough surface; it may be on a smooth surface; it
22 may be on a surface that has a pattern on it. We have
23 an application of powder, the powder may be quite coarse
24 and granular which may obscure some of the detail so
25 that you won't see all of the fine detail in the

1 fingerprint, the Scene of Crime Officer will then either
2 take a photograph or use lifting tape to lift the
3 fingerprint and bring it back to his, perhaps, studio
4 and photograph the fingerprint on a camera that may have
5 a lens that introduces some distortion, he may over
6 expose it or underexpose it. It would then be
7 printed -- okay these days most things are digital.

8 But what I'm getting at is if my finger touches the
9 surface and then subsequently that surface is powdered
10 and we produce a photograph, we need to know how much of
11 the image information, the topographic information from
12 my finger has been relayed on to that surface. And, of
13 course, the first thing that happens is my
14 three-dimensional finger gets distorted into a two
15 dimensional surface when it's placed on the surface. So
16 we're not comparing like with like. We're not comparing
17 a finger with a finger we're comparing an image from a
18 scene of crime with an image that has been taken of a
19 suspect and probably ink and paper or by some sort of
20 live scan system.

21 So there's immediately a reduction in the amount of
22 information you have. If I look at my finger I can see
23 a huge amount of data there. I can see every pore,
24 every flake of skin, every crease. A lot of that is not
25 relayed into the final scene of crime image and that's

1 where the whole concept of uniqueness becomes a bit of a
2 nonsense.

3 Q. The other point that maybe relates to what you are
4 saying is in right-hand box, the second bullet point,
5 you are saying, in the first, in fact, looking at any
6 physical object sufficiently microscopically you would
7 detect variances where no two things could be thought to
8 be unique but then the next question is whether that
9 variance is, in fact, discernible in operational
10 circumstances and one of the points you are making is
11 that some of the detail that dictates the uniqueness of
12 an object may be lost in the transmission through the
13 various generations of that image?

14 A. Indeed, yes, and we don't have criteria for how much
15 information we need to make that decision or
16 identification.

17 Q. If I can move then to the left-hand of those middle two
18 boxes and we will concentrate on that for a moment,
19 going down through this, first of all, the heading is
20 what are the real problems with fingerprint evidence
21 standards.

22 Does this box represent a helpful way of progressing
23 through your thinking of what the problems are with
24 conventional fingerprint evidence?

25 A. Well, to be honest, it was just obviously a small subset

1 of my thoughts. I only had a very small time slot in
2 the agenda to just raise a few issues and I focused on
3 some things that I thought might get people thinking.
4 It's not meant to be a comprehensive analysis of the
5 identification process and problems.

6 Q. Again, with apologies on much the same basis as we have
7 a limited amount of time available we'll see if we can
8 pick out the essential ones. If I leave for the moment
9 the first bullet point and go directly to the second,
10 you wrote:

11 "Most [that's fingerprint experts] seem to want to
12 maintain the absolutism of identification without any
13 logical basis for this."

14 Can you explain what you mean by that?

15 A. Because in most areas of human observation we can be
16 sure of something, we can be totally unsure and we can
17 be somewhere in the middle. You know, if we think we
18 recognise somebody, if I see you and I know you then I
19 can recognise you absolutely. If I see a man half a
20 mile away then I'm not sure if it's you, but it might
21 be. If you are 100 yards away and I know you fairly
22 well, I may think it's probably you.

23 The fingerprint experts generally, almost
24 exclusively, will only go into court and say this is
25 identical because it meets their own subset, their own

1 criteria. At some point they are not prepared to do
2 that. They are not prepared to go in and say it's
3 probably John Smith's; they just won't present evidence
4 at all. I maintain that let's supposing there are 16
5 clear points and 16 is our standard, if there are
6 15 points, there is a very high probability that it's
7 John Smith and I think the experts should be going into
8 court and saying there is a high probability it's John
9 Smith, instead of not presenting that evidence.

10 Q. So in a sense there would be a role for some evidence at
11 a lower probability than 100 per cent but let's look
12 at --

13 A. Well, sorry, that presupposes that 16 points is 100
14 per cent. It might be 99.99.

15 Q. That is what I was going to ask you. The absolutism
16 based on the three variables we discussed just before
17 the break and immediately after, how comfortable would
18 you be with the absolute position of a fingerprint
19 expert in court, that having observed a set number of
20 characteristics that he, that expert, can be
21 100 per cent certain that that fingerprint is
22 Mr Moynihan's fingerprint and no-one else's? Do you
23 have a view on that?

24 A. Well, as a scientist I think inevitably I've got to go
25 down the route and say I think probably fingerprint

1 evidence will go in the same direction as DNA evidence
2 and in the future we will be saying the probability of a
3 fortuitous match is 1 in 10 million or 100 million or
4 something. I don't think we will be able to maintain
5 this absolute identification. This might have worked a
6 century ago when fingerprint experts were looking at a
7 bundle of 200 fingerprints of their local burglars and
8 people weren't travelling.

9 We've now got technology and databases that enable
10 us to search one fingerprint potentially against
11 100 million fingerprints. What we don't know is at what
12 stage we're going to start to find similar patterns
13 emerging and similar distributions of characteristics.

14 So I think the time will come probably sooner rather
15 than later that we will need to or experts will need to
16 give statistically-based evidence.

17 Q. Do you have a view, again speaking of the absolutism of
18 identification, on the acceptability of a fingerprint
19 experts saying it's either 100 per cent a unique
20 identification or I'm making no identification at all
21 what that tells us about the way they are trained to
22 think?

23 A. Well, I think they are reflecting entirely the way they
24 are trained. I mean, I don't mean anything I say today
25 or any other time to criticise fingerprint experts. I

1 think they do the best job they can with respect to the
2 training and support they are provided with. I think
3 it's our job to provide them with more support, more
4 training and better standards to work to.

5 Q. So, again, without criticising in any respect any
6 individual fingerprint practitioner in what he does,
7 what do you say are the shortcomings of the training or
8 the support that's provided to that profession?

9 A. Well, I think perhaps I should say that, I mean, I've
10 devoted a huge amount of my life to fingerprints. I
11 think it's one of the most reliable forms of evidence
12 and I think let's say 99.9 per cent of fingerprints are
13 absolutely of the highest quality identifications and
14 it's the most valuable form of evidence. So my concern
15 is about the small, I think probably fairly small,
16 numbers of poor quality fingerprints that may be being
17 presented.

18 One of the problems that I have is that there has
19 never been, as far as I'm aware, a thorough review of
20 the quality of fingerprints being presented in court. I
21 would like to see, for example, 1,000 fingerprints and
22 look at the average image quality. I haven't had that
23 opportunity. So, I mean, that's where my concerns lie,
24 is what -- how far do fingerprint experts go in
25 interpreting poor quality images and finding

1 characteristics that may not be there. Does that ...

2 Q. It was trying to understand what you were saying about

3 requiring support or training. What is it that you

4 think is required to meet this --

5 A. Sorry, it is this guidance, as I mentioned earlier,

6 about poorer quality images, what should we be allowing

7 into court. What is an acceptable image quality to be

8 able to interpret characteristics reliably? That is one

9 issue and the other issue is how many characteristics

10 should we be requiring for them to make an

11 identification.

12 Q. You do actually in later bullets points cover the

13 matters we have already covered. If I can ask you to

14 look at the third and subsequent bullet points, is there

15 anything else you would want to highlight from them that

16 we haven't already discussed?

17 A. Sorry?

18 Q. If I look at the third bullet point you are talking

19 about the absence of a scientific basis and in

20 particular removing the 16-point standard removes any

21 pretence of a uniformity of interpretation, is that you

22 something you feel you have covered adequately already

23 or did you mean more by that than what you have already

24 said?

25 A. No, obviously it's a complex subject and I don't think a

1 further analysis here would help very much.

2 Q. Because you then say that in the next bullet point most
3 bureaux did actually have working guidelines on the
4 numbers of characteristics, 12, 16 or whatever and the
5 non-numeric basis removes those and we discussed the
6 implications of that. Would that be correct? Is there
7 anything you wish to add in relation to that particular
8 bullet point?

9 A. A number of countries say they have no standards but
10 actually have working guidelines. So I think that's a
11 recognition of the fact that it's actually quite
12 difficult to genuinely not have a standard and we have
13 found that in England now that, despite theoretically an
14 expert can go into court with any number of
15 characteristics, in practice they have to work to some
16 sort of numerical guideline.

17 Q. In relation to that do you know what the guideline is in
18 England at the present time?

19 A. I wouldn't like to be drawn on that to be honest.

20 Q. The penultimate bullet point is one of the main points
21 that you have been talking, namely about building up a
22 statistical model of fingerprints, and then the final
23 one you are indicating that in America there were at
24 that time initiatives and, indeed, you have confirmed
25 that in continental Europe at the present there is some

1 further supplementary research being carried out that we
2 can tap into. Is that fair?

3 A. Yes, the US Department of Justice actually, I think
4 currently is funding some research in this area.

5 Q. The final one I overlooked initially was the first
6 bullet point:

7 "Fingerprint experts cannot decide whether
8 identification is an art or a science."

9 Would you like to expand on what you were meaning by
10 that as a problem?

11 A. Well, I don't want to get into the semantics of defining
12 an art or a science but a number of people in recent
13 years have tried to argue that fingerprint evidence is
14 scientific. They've come up with things like the ACE-V
15 which you have probably come across from America,
16 (Analysis Comparison Evaluation and Verification, simply
17 documenting a process doesn't make it a science. Unless
18 you've got some metrics or some test methodology, as far
19 as I'm concerned, it's not a science and I'm not aware
20 of anybody other than those carrying out statistical
21 studies, I'm not aware of anybody that's shown that the
22 current way of fingerprint experts working is
23 scientific.

24 Q. If I can move beyond that to more abstract, more
25 generalist points, you mention one particular case,

1 MacNamee. You mention that at paragraph 32 of your
2 statement.

3 A. Sorry, where is it in the statement?

4 Q. Paragraph 32. I will give you a chance just to refresh
5 your memory of paragraph 32. What I was wanting to ask
6 about was the final sentence in that paragraph and I
7 will give you a chance to read the context.

8 A. Yes, sure.

9 Q. We can read as an unreported decision the decision of
10 the Court of Appeal in **MacNamee**. What I was wanting to
11 understand was what you meant by the last sentence where
12 you say you were:

13 "... becoming, at that time, concerned about the
14 standards of fingerprint evidence undermining this most
15 important form of evidence."

16 What was your concern at the time of **MacNamee**?

17 A. One of the problems that I alluded to earlier is that,
18 you know, I said I would quite like to see 1,000
19 fingerprints. Unfortunately, over the years a number of
20 questionable identifications have been produced but the
21 Fingerprint Service has not been forthright really in
22 disclosing this evidence. I mean, it would have been
23 good if we had had an opportunity to examine
24 fingerprints that were contentious in a wider, not
25 necessarily public forum but in a wider forum.

1 So, as a result, even though I work quite closely
2 with fingerprint experts around the country, it was only
3 occasionally that I would have sight of something that I
4 thought was problematic. So although I was concerned
5 about the campaign to dispense with the 16-point
6 standard, I didn't have much hard evidence to back-up my
7 case.

8 The **MacNamee** case was something that -- it was
9 concrete, it was in my hands, somebody sent me that
10 image. Peter Swann sent me that image so I had a copy
11 of the evidence that had been material in convicting
12 somebody of a serious crime and it was to me of such
13 poor quality it never should have been presented in
14 evidence. So that, simplistically, that's the point.

15 Q. When you say it was of such poor quality you are not
16 entering the field of a fingerprint expert to express an
17 opinion. What you are commenting on is the amount of
18 detail in the image itself?

19 A. Let's say the overall image quality because there was so
20 much noise in the background patterning and disturbance
21 that I thought it would be extremely difficult to
22 extract visually the ridge pattern from that.

23 Q. As I say, from the instruction that you were given by
24 the Crown Office some parts of it you were unable to
25 answer because it was outwith your area of expertise.

1 You did attend the McKie case as a witness?

2 A. Yes.

3 Q. And you have been very clear in your statement that
4 before you attended to give evidence, you had not
5 appreciated there was any question mark over the
6 identification.

7 A. No.

8 Q. So that any concern you had in **MacNamee** hadn't been
9 sufficiently triggered in relation to the McKie case?

10 A. No, I didn't even dream -- I hadn't even bothered to
11 look at the mark in any detail and, no, I had no
12 suspicion. I mean, I had no reason to. I had plenty of
13 other things to do.

14 Q. We have had some evidence from the prosecutor,
15 Mr Murphy, that he did have a conversation with you of a
16 fairly generalised nature during the course of the
17 trial.

18 Do you remember that conversation?

19 A. I'm afraid I don't.

20 Q. The concerns --

21 A. I think the only thing I have a vague memory of, I do
22 think that before I went into court somebody said that
23 it was unlikely to be contested, my evidence. But, I
24 mean, I didn't put anything to that, I didn't know what
25 the defence was. There could have been any number of

1 potential defences in a case like this.

2 Q. The evidence that you had been giving of your concerns
3 that are still on the screen are November 2000, which
4 post date the trial.

5 A. Yes.

6 Q. The trial was May 1999 so I have to adjust the
7 time-frame.

8 A. Yes.

9 Q. The concerns that you had about fingerprint evidence
10 that you have spoken about today, you did not mention
11 those concerns to any of the prosecution team at the
12 time of the McKie case?

13 A. I honestly don't know. I mean, over the years there
14 have been so many discussions with so many people ... I
15 mean, it is possible. I mean, at that time I was, as I
16 said, generally concerned about the quality of
17 fingerprint evidence so it may be that it arose in
18 discussion but certainly not in connection with this
19 case.

20 Q. If I take it from the various witnesses we have heard
21 that they have no recollection of you having raised any
22 of these concerns, would that be possible, that you
23 would not have voiced them to them?

24 A. I wouldn't necessarily have voiced them and, in fact, I
25 wasn't up here in Glasgow for very long, I don't think,

1 so there may not have been opportunity for long
2 discussions. But, having said that, I mean, I had
3 raised it in other fora.

4 There had been meetings of fingerprint experts some
5 time in the '90s where there was a discussion about the
6 abolition of the standard and on numerous occasions I
7 had formally and informally expressed my concerns.

8 Q. Can I ask you -- again I am going to now concentrate on
9 the trial itself -- can I ask you a point of detail in
10 relation to paragraph 7 of your witness statement on
11 page 3. It flows, in fact, from paragraph 6 towards the
12 end where you remember having a conversation with Chief
13 Inspector Hogg principally and we have covered that.

14 In paragraph 7 you say that person told you that Pat
15 Wertheim was likely to give evidence that the relevant
16 fingerprint in the case had been planted.

17 Do you have a clear recollection of that? The
18 reason I ask that is I may be wrong but as I understand
19 it Mr Wertheim was not instructed until March 1999. I'm
20 looking around to see if that's -- I'm having some
21 people nod. So is it possible that there's a mistake in
22 your recollection here of having been told that
23 Mr Wertheim would give evidence of planting?

24 A. It's possible but, I mean, I did associate the two, the
25 suggestion that it had been planted and Pat Wertheim's

1 name and Pat Wertheim had written a number of papers on
2 the planting of fingerprints. But I could be wrong, yes
3 but -- and that surprises me and I don't have a simple
4 explanation for that.

5 Q. Again, you would be aware, if one looks at your file,
6 one of the items you had was an article by Mr Wertheim
7 in relation to planting.

8 A. Yes.

9 Q. It may be that has been the source of some confusion, if
10 I can put it this way, that you had an article that was
11 by Mr Wertheim on planting, the initial belief was
12 planting was going to be the subject and, in fact,
13 ultimately, Mr Wertheim did give evidence, albeit on a
14 different subject, you could be simply reading all these
15 three together now?

16 A. Well, possibly. You know, I'm sure that when somebody
17 originally contacted me and asked me to look at the
18 exhibit they said they thought the defence was going to
19 be that it had been planted and that was the basis on
20 which I undertook the examination. It may be that I am
21 subsequently associating the two.

22 Q. If I then move on from that to another matter, if I tell
23 you that you gave evidence on 6th May, you just need to
24 accept that from me. I have checked. You gave evidence
25 on 6th May -- do you want to write this down because we

1 may need the dates -- and that Mr Wertheim and Mr Grieve
2 gave evidence between the 11th and the 13th, those dates
3 separated by a weekend, over the course of that gap you
4 were in contact with Mr Meagher of the FBI; is that
5 correct? If I show you the particular document to give
6 you the date, if you have a look please at HO --

7 A. I remember being in contact with Steve Meagher. I
8 thought it was subsequent to Pat Wertheim's evidence.

9 Q. I will just show you. If I go to HO0109.5?

10 A. So that's 12th May, so it is after Pat's evidence.

11 Q. Sorry, I must have the wrong page. If I could move on
12 to page 6. Sorry, it is a question of translating from
13 numbering I had to a PDF. You will see this is an
14 e-mail dated 7th May, the Friday.

15 A. Yes, okay. So that's prior to Pat's evidence then.

16 Q. If I give you Mr Wertheim's evidence, SG0531, if we
17 proceed down just until we get the opening of the
18 transcript we see this is a transcript of Tuesday 11th
19 May. Do you see that?

20 A. Yes.

21 Q. And then if we go to the next page. We will see, so far
22 as the transcript is concerned, that Mr Wertheim's
23 evidence began on the 11th. So that was my reason --

24 A. Yes, okay.

25 Q. If I can go back then to HO01096 -- that is the

1 e-mail -- can you explain why it was that you were in
2 contact with Mr Meagher at the FBI?

3 A. Something must have happened on that Friday or the
4 Thursday to make me believe that there was a questioned
5 identification. I'm afraid I can't remember what it
6 was. If it wasn't Pat, then it must have been somebody
7 speaking to me from SCRO or whoever and telling me that
8 there was a question mark.

9 Q. What was your purpose in contacting Mr Meagher?

10 A. The Home Office had an MOU (a memorandum of
11 understanding) with the FBI so we were able to exchange
12 highly classified documents. So I had no doubt about
13 what would happen to anything I sent.

14 I had, I think, earlier that year or possibly the
15 year before talked through the MacNamee mark with Steve
16 Meagher at an international meeting and he had expressed
17 concern over the quality of it and I think at the time
18 it just occurred to me as being the quickest way of
19 getting, if you like, an independent view of the
20 identification.

21 Q. Why is there a witness to this case, and by then you had
22 given evidence on 6th May, why were you wanting to take
23 a view on the identification in the McKie case?

24 A. Well, for a start, it would be one of relatively few
25 documented mis-identifications which of course were very

1 relevant to my interest over the quality of fingerprint
2 evidence.

3 Q. You say this in the statement, that you did not in fact
4 get a response from Mr Meagher?

5 A. No.

6 Q. And I think the preceding page, if I go back to .5 you,
7 in fact, recalled the images from him; is that fair?

8 A. I ... sorry?

9 Q. Maybe this is the wrong document. You did in the event
10 recall the documents from Mr Meagher?

11 A. I asked him to destroy the images.

12 Q. What is on the screen just now and what you have
13 mentioned a little earlier you refer to Mr Wertheim as
14 Pat.

15 Is he someone who was known to you at this time?

16 A. Yes.

17 Q. Had you had any professional involvement with him?

18 A. I used to fairly regularly go to the International
19 Association of Identification Conferences in the States
20 and I've met Pat Wertheim, I guess, probably half a
21 dozen times. He'd been in the UK a few times and I
22 think I may have met him over here as well. So, yes.

23 Q. What did you understand to be his standing in the
24 fingerprint community at that time?

25 A. I really don't think it would be fair of me to comment

1 on that. I mean, I have read his CV that, at least
2 superficially, looks quite impressive. The only
3 criticism I've heard third party -- perhaps I shouldn't.
4 It depends whether you want third party ...?

5 Q. I am not necessarily wanting you -- I am not necessarily
6 inviting you to criticise him?

7 A. I don't have an opinion.

8 Q. The next question I wanted to ask you in relation to the
9 evidence that was led at the trial is you comment in
10 your statement about your own impression of the mark Y7
11 as a double touch as opposed to a single touch.

12 If I take you to paragraph 15 of your statement you
13 say that your own initial impression when unpacking the
14 door stop was that Y7 was not a clear continuous
15 fingerprint.

16 If I take you to paragraph 27 you are very clear
17 there that you had no view of identification of Y7
18 during his inspection:

19 "... because until Pat Wertheim went into court to
20 give evidence the possibility that the Scottish experts
21 had made a mistake in identifying Y7 had never even
22 crossed my mind."

23 So I think we will have to readjust that slightly?

24 A. Indeed. It must have been the Thursday or Friday that
25 something happened to make me realise that ... yes.

1 Q. What I am interested in is you go on in that paragraph
2 to say that you think the mark Y7 was a double touch,
3 two superimposed marks or one mark with movement, as
4 there were two distinct areas within the mark.

5 Then in paragraph 30 you comment on Mr Wertheim
6 using a very simplistic argument and are you yourself
7 indicating in your statement that you had doubts, having
8 listened to Mr Wertheim's evidence, about the view that
9 Y7 could be interpreted as simply a single touch?

10 A. Yes. I wasn't questioning Pat Wertheim's view that Y7
11 wasn't Shirley McKie's mark. That's a different issue.
12 It was his interpretation it was one simple continuous
13 fingerprint that I was questioning.

14 THE CHAIRMAN: One thing I haven't got quite clear, a double
15 touch does that mean two different fingers or does it
16 mean the same finger touching twice?

17 A. I think most people would interpret it as being the same
18 finger touching twice, but with this I mean, it's not
19 impossible that's it's actually two separate
20 fingerprints fortuitously coinciding.

21 THE CHAIRMAN: So the phrase could mean either.

22 A. It could be either, yes, or it could be one touch and
23 then a movement, a sliding or a skewing and then a
24 further impression.

25 MR MOYNIHAN: I showed you this morning before you started

1 evidence we have some of the photographic original
2 documents and it may be that now is the appropriate
3 point to pass across to you an item which is called
4 defence production number 2, which can be brought up on
5 the screen as DB0172 and also from your own file some
6 other tracings HO0106.

7 Just for clarity, I've got up on the screen digital
8 versions of the photographs. The reason for giving you
9 the originals is just to be satisfied that we have an
10 acceptable quality of image for the conversation we're
11 about to have.

12 Just to be clear, for the avoidance of any doubt, if
13 I ask you to begin with Mr Wertheim's production (that
14 is the one in the manilla folder), if you peel back the
15 acetates do we see the underlying image is one one might
16 recognise as a Mr Wertheim image of Y7?

17 A. Yes.

18 Q. With striation across.

19 A. Yes, broadly, yes, that's the discriminating point, yes.

20 Q. So it is a Mr Wertheim image?

21 A. I think so, yes.

22 Q. And the one on the right-hand side, I brought up just a
23 particular version with some acetate markings. Is the
24 underlying image -- perhaps if we could go through it.
25 Try .01 to see if that is the correct direction to go

1 through --

2 Is what I've brought up on screen the most basic

3 image in the bundle I have just provided you with of

4 your own copy? Yes?

5 A. Sorry, are you saying that's my photograph?

6 Q. That's the question: are these markings and tracings

7 done in relation to this on one of your own photographs?

8 A. I think so.

9 Q. So I think what we should be conscious of, because there

10 are a variety of images of Y7 available to us, the

11 particular exercise we're about to do has the limitation

12 that we are using a Mr Wertheim image on one hand and

13 one of your images on the other but nonetheless --

14 A. Sorry, I should say that I wouldn't necessarily

15 recognise the tracings. I mean, if you're telling me

16 these are the ones that the Home Office supplied you

17 from my file then I am very happy to accept them but

18 other than that there's not very much that would

19 distinguish them.

20 Q. If I tell you that HO0106 -- HO is initials of the Home

21 Office -- so, yes, these were found in your file.

22 A. Yes.

23 Q. So if you accept that from me, it would therefore follow

24 that it is likely that the base image used in this is

25 one of your own images?

1 A. The only thing that surprises me is some of my images
2 have an exhibit label, don't they, a signed exhibit
3 label.

4 Q. It may help if you look at your own bundle.

5 A. That's right, yes. So this must have been printed from
6 one without a label. But if it's from the same series,
7 that's fine.

8 Q. So what I want to do is if I go then back to putting on
9 the screen what we started with, if I understand it
10 correctly, what you were indicating in your paragraph is
11 that having listened to Mr Wertheim, whose evidence was
12 it was a single touch, it differed from your own
13 personal view of a double touch and you were then
14 inquisitive as to how this difference of opinion could
15 have arisen?

16 A. Yes.

17 Q. You spoke to, among others, one of your friends who was
18 a fingerprint expert and asked him to do some tracings?

19 A. Actually, that was some considerable time later.

20 Q. Do you know in what we are looking at, HO0106, if you
21 look at the originals, a series of tracings done by you
22 or a series of tracings done by your friend? Do you
23 recollect?

24 A. To be honest, they could be either but they would be
25 some time after the trial -- I mean, probably a couple

1 of years after the trial or a year after the trial.

2 Q. Let's then begin with just your tracing and I happen to
3 have brought up the one that I think is top-most now, it
4 is before you in the original. I will just check. Yes.
5 Orientate it properly for your own benefit and tell me
6 if I am indeed using the top-most acetate.

7 A. Sorry, you want to know the author of these?

8 Q. No, no. Forgive me.

9 What I want to do is to ask you by reference to any
10 one of the acetates you have in front of you what the
11 exercise was you were undertaking and what conclusions
12 you draw.

13 It so happens that what I have done is brought up on
14 the screen for everyone else to follow one of the
15 acetates and I believe it to be the top-most one in the
16 original and I'm just wanting you to confirm that that
17 is, indeed, the case.

18 A. Yes. Well, actually we're seeing, on the right-hand
19 side of the screen we're seeing two superimposed
20 tracings, aren't we, which I think is the pair that I
21 have here.

22 Q. So, therefore, what we're looking at on the right-hand
23 side is at the bottom there is an image of Y7 with some
24 red markings and then to produce the image we have on
25 the right-hand side we're looking at a whole series of

1 acetates laid on top. Is that correct?

2 A. Yes.

3 Q. It may be that others will want to actually look at this
4 themselves but perhaps I don't know if you, sir, wish to
5 have a look at a particular bundle just now or leave
6 it ...

7 A. I mean, to be honest, I think the individual tracings
8 are a bit of a red herring. I think it's actually the
9 philosophy behind the exercise that is more important to
10 probably explain.

11 Q. Please. The only reason that I have brought these
12 images up is I find it a little easier to look at an
13 image than study philosophy books but if you can explain
14 to me what the philosophy is of what you were trying to
15 demonstrate.

16 A. What I am getting at is it might be clearer if we looked
17 at an original adulterated image, if you like, then I
18 could explain the principle I was trying to establish.

19 Q. I think there may be a slight difficulty.

20 A. I think something like the one that was shown to me a
21 little while ago with my signature on it would be quite
22 good.

23 Q. If you give me just a second. I will just make an
24 enquiry. Unfortunately, the image of my choice -- which
25 is one we are going to use with other witnesses -- is

1 too large in data terms to put on the screen. In that
2 case if you give me just a second, please.

3 A. I mean, I think any image without tracing would be
4 adequate.

5 Q. If you give me just a second we will get a reference for
6 an image. **(Pause)**

7 Mr Kent, if we could start by having HO0070. I am
8 sorry, they are not on the Core Participants' database.

9 **(Pause)**

10 DB0138. If you proceed through that ...

11 A. That will do.

12 Q. Will that do?

13 A. Yes.

14 Q. If I just tell everyone for that purpose it's DB0138,
15 PDF page 3. This has your name on it so it's,
16 therefore, one of your images?

17 A. I'm prepared to accept that.

18 Q. Using your image -- and you have the ability I think to
19 operate the touch screen in front of you -- if there's
20 any area you want to highlight for us, please do so.

21 A. Let me, first of all, perhaps try and -- my mouse
22 doesn't seem to be working, I'm afraid.

23 Broadly, if we look at this area ... the area that
24 I've highlighted on the right-hand side which as you
25 normally look at the mark would be at the top, I think,

1 the way you have presented the other images, that
2 appeared to be of a higher density and darker than this
3 part of the fingerprint. Unfortunately, with the
4 highlighter I can only show a crude rectangular -- but
5 just to give you a rough idea.

6 Q. If we just go back, because what we will have to do is
7 to try to capture the images. First of all, could you,
8 again highlight for us the area that you regarded as a
9 darker --

10 A. Sorry.

11 Q. First of all, can we rotate the image so the "T Kent" is
12 down the left-hand side?

13 A. That's better, so it matches the others ones you have
14 been looking at.

15 Q. So if you begin by highlighting for us, please, the area
16 of greater density?

17 A. Okay my mouse is not working. I'll use the stylus.
18 Broadly something like that (**indicated**). My two areas
19 will probably overlap but it indicates generally.

20 Q. If we could you capture that image. That's done. So
21 that's the area of greater density.

22 The second area is what?

23 A. Are you happy with that?

24 THE CHAIRMAN: Yes, we can see it now.

25 A. The second area is ... the second area is something like

1 that (**indicated**).

2 MR MOYNIHAN: Again, could we just capture that. Just
3 before we, in fact, progress too far, could we put that
4 image to the right-hand side, please, and bring up
5 PS0002.

6 I don't know -- maybe in relation to the mark itself
7 if we can enlarge the area. In relation to those two
8 pictures PS0002 and DB0138 is there a difference for
9 your purposes, a preference to use one image rather than
10 the other for this particular exercise?

11 A. Yes, because the one on the left-hand side is very
12 coarsely digitised and we haven't got the detail, I'm
13 afraid.

14 Q. If we drop PS0002 then and just use your DB0138, first
15 of all, what is the significance in the fact of the
16 different areas of density that you have highlighted?

17 A. Well, it may indicate a double touch of some sort.
18 Obviously with any fingerprint you can get a variation
19 in density across it when it develops for a whole
20 variety of reasons, but there seemed to be a sort of
21 delineating line between these two areas.

22 There were also some other differences in the actual
23 appearance of the ridge detail and I don't know if I
24 can -- can we enlarge it possibly more than that?

25 Q. We can try.

1 A. Okay. Unfortunately, it's starting to degrade a bit but
2 let me see if I can indicate ... can we get rid of the
3 highlighting?

4 Q. Can we get rid of the yellow?

5 A. What I wanted to indicate was if we look -- I'm trying
6 to use the pointer ...

7 If we look down here, here we have some ridge detail
8 coming up from the bottom left to the top right. If you
9 look at that ridge, it's a sort of dark line with a hole
10 in it effectively, which is probably a pore.

11 Q. Sorry, Mr Kent, if you could move your microphone just
12 to your left so it actually makes it a little easier to
13 hear you.

14 A. Okay. Is that better?

15 Q. That's better. Thank you very much.

16 A. The effect I want to show you is fairly subtle but if we
17 look at where the red arrow is pointing, there is a dark
18 line going from the bottom left to the top right and
19 it's got a white space in it which is most likely a
20 pore. Now, if we look at another part of the image, at
21 the top --

22 Q. If we could capture that first image, the single arrow,
23 please. And then perhaps clear that arrow and then you
24 are going to refer to another area?

25 A. Yes, yes. If we look at the ridge detail at the top,

1 this is a ridge but it appears to consist of two dark
2 lines on the outer edges with a lighter gray area in the
3 middle also with a white dot slightly below the point in
4 the arrow.

5 Now, to me, that looks rather like a different
6 style, if you like, or there's something different about
7 the fingerprint and depending on the contamination on a
8 finger, sometimes you'll get this continuous central
9 line and sometimes you'll get what some experts refer to
10 as "tram lining". You can get both in the same print
11 but it does visually give me the impression of being
12 possibly different. But more importantly --

13 Q. Sorry --

14 A. Did you want to capture that?

15 THE CHAIRMAN: I think we just want to capture --

16 A. Shall I do it again?

17 MR MOYNIHAN: We've done it.

18 A. The most crucial issue really is can we trace the
19 pattern of ridges through from the lower half of the
20 fingerprint through to the upper half if indeed it is
21 the same print and, I mean, I would strongly suggest
22 that ... sorry, how have I managed that? Was that me?

23 I'm suggesting there's an area broadly going from
24 this arrow to somewhere over here ...

25 MR MOYNIHAN: If you give me just a second because on the

1 right-hand side we now have three arrows where we
2 require only one.

3 A. Let me get rid of those. Let me try and get one arrow.
4 Okay. What I'm suggesting is that something odd is
5 happening between there and if I put another arrow over
6 here somewhere. It's not clear to me that there's a
7 consistent flow of ridges. So essentially I designed an
8 experiment where I effectively mask off -- have you
9 captured those?

10 What I proposed is an experiment, and in fact I
11 can't do this precisely, but the experiment I wanted to
12 do was to mask off the top part, mask off the bottom
13 part and not show the fingerprint expert those areas and
14 ask them to trace what was happening in that central
15 part of the image. There are dangers I think if you
16 present the fingerprint expert with a set of ridges here
17 and a set of ridges there that they will simply join
18 them up in some way, but if you don't give them the
19 clues we will need to know actually what the
20 interpretation is of that central area.

21 So that was the whole point of my experiment really,
22 was to produce a set of images, mask them off, get a
23 number of experts to look at them and trace where they
24 thought the ridges went and then subsequently we would,
25 if you like, superimpose those number of experts'

1 tracings and see whether they did superimpose,
2 indicating that we had some confidence about where the
3 ridges went, or if everybody interpreted it a different
4 way I think we could reasonably say, "Well, we don't
5 have a consistent view of what is happening in that area
6 of the mark".

7 Q. If i put that image to either side -- and I am conscious
8 of the time -- could we just go back to what we were
9 looking at earlier on, the HO image. So HO0106.

10 A. Yes.

11 Q. If you go to number 4 on that acetate, what we see in
12 the right-hand image is tracings in particular of the
13 bottom section, tracings of the top of ridges going
14 side-to-side; whereas in the middle area there is a
15 blank.

16 A. Yes.

17 Q. What was the significance of that blank?

18 A. Well, whoever did the tracings -- and I suspect that I
19 did the first one and I think one or more fingerprint
20 experts probably did the others -- it indicates that
21 certainly we couldn't confidently say what happened in
22 that area, and we didn't -- none of us thought there
23 clear ridge detail.

24 Q. If I then go to Mr Wertheim DB0172.8, along with HO0106,
25 please look at the originals to just satisfy yourself.

