

JUSTICE 1 COMMITTEE

Wednesday 7 June 2006

Session 2

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JUSTICE 1 COMMITTEE

22nd Meeting 2006, Session 2

CONVENER

*Pauline McNeill (Glasgow Kelvin) (Lab)

DEPUTY CONVENER

*Stewart Stevenson (Banff and Buchan) (SNP)

COMMITTEE MEMBERS

*Marlyn Glen (North East Scotland) (Lab)

*Mr Bruce McFee (West of Scotland) (SNP)

*Margaret Mitchell (Central Scotland) (Con)

*Mrs Mary Mulligan (Linlithgow) (Lab)

*Mike Pringle (Edinburgh South) (LD)

COMMITTEE SUBSTITUTES

Brian Adam (Aberdeen North) (SNP)

Bill Aitken (Glasgow) (Con)

Karen Gillon (Clydesdale) (Lab)

Mr Jim Wallace (Orkney) (LD)

*attended

THE FOLLOWING ALSO ATTENDED:

Mr Kenneth Macintosh (Eastwood) (Lab)

Des McNulty (Clydebank and Milngavie) (Lab)

Alex Neil (Central Scotland) (SNP)

THE FOLLOWING GAVE EVIDENCE:

Jim Aitken (Scottish Fingerprint Service Edinburgh Bureau)

Allan Bayle

Herman Bergman

Ken Clacher (Scottish Fingerprint Service Dundee Bureau)

John McGregor (Scottish Fingerprint Service Aberdeen Bureau)

David Russell

Peter Swann

Pat Wertheim

Arie Zeelenberg (Dutch National Police Force)

CLERK TO THE COMMITTEE

Callum Thomson

SENIOR ASSISTANT CLERKS

Euan Donald

Douglas Wands

ASSISTANT CLERK

Lewis McNaughton

LOCATION

Committee Room 1

Scottish Parliament

Justice 1 Committee

Wednesday 7 June 2006

[THE CONVENER *opened the meeting at 09:30*]

Item in Private

The Convener (Pauline McNeill): Good morning and welcome to the 22nd meeting of the Justice 1 Committee this year. I would be grateful if committee members and everyone in the public gallery would ensure that mobile phones and anything else that could interfere with our sound system are switched off. We will be making use of radio microphones and mobile phones will interfere with the sound.

So that I can see the presentations, I am not sitting in my usual seat, but I can still see everyone and will move back to my usual seat when we go to the round-table discussion.

All committee members are present, and I welcome once again our adviser, Jim Fraser, and legal advisers Rob Marr and Catriona Hardman. I also welcome the three MSPs who have been joining us for this inquiry—Des McNulty, Ken Macintosh and Alex Neil.

Item 1 is to ask members whether they agree to take item 4 in private. As usual, that is just to allow us to discuss what we will hear in evidence during the meeting. Do members agree to take item 4 in private?

Members *indicated agreement.*

Scottish Criminal Record Office

09:31

The Convener: Item 2 is our inquiry into the Scottish Criminal Record Office. As at all other meetings, I will make an opening statement.

This is the fourth oral evidence session in the Justice 1 Committee's inquiry into the Scottish Criminal Record Office. It is a parliamentary inquiry; it is not a judicial inquiry. No witnesses who appear before the committee are on trial, but the committee expects all witnesses to co-operate fully, to focus on the lines of questioning, to answer questions in good faith and to the best of their knowledge, and to answer questions truthfully.

Although I have the power to require witnesses to take an oath, I do not intend to use that power. However, if the committee considers that witnesses have not given us their full co-operation in answering our questions truthfully, the committee can recall them. In such circumstances, I will use the power that I have under standing orders, in relation to section 26 of the Scotland Act 1998, to require witnesses to give evidence under oath.

The overriding aim of the inquiry must be to help to restore public confidence in the standards of fingerprint evidence in Scotland. I expect that the report that the committee will produce at the end of the inquiry will contribute to that process.

I will outline what will happen this morning. We will have a presentation from Arie Zeelenberg, whose presentation will be published on the web on Friday, followed by one from Peter Swann. There will then be two separate round-table discussions. I will introduce those when we come to them.

Once again, I formally welcome Mr Zeelenberg and his colleague Herman Bergman to the Justice 1 Committee. You offered to make a presentation and we took you up on your offer. The committee appreciates that you would have liked to have more time for the presentation, but time is very tight. We want to get through everything this morning, so we will try to squeeze the presentation into 45 minutes to allow time for questions. Without further ado, I invite Mr Zeelenberg to make his presentation.

Arie Zeelenberg (Dutch National Police Force): Thank you. I would like to start by reading out a short statement.

I regret being here today, in a position in which I have to expose my fellow experts. It has, however, become inevitable after so many years of mismanagement of the problem. From the

beginning, I have stressed that the resolution should be quick—in the interests of the people involved, including the experts, and for the sake of the profession. That was my position with Her Majesty's chief inspector of constabulary and it was the underlying reason for the Tulliallan meeting.

My activities to instigate a resolution have always been within the professional circle or—when things have happened in the public domain—as an invited independent expert in the inspection by HMCIC, the inquiries that followed, the court cases, the panel for the action plan, and now the parliamentary inquiry. I have always restrained myself from making public appearances; on the rare occasions when I have appeared in public, it has been in relation to the inquiries that I have just mentioned. I have consistently broadcast one message: admit the mistake, apologise, learn from it, and move on.

The suggestion that was made to the committee last week that I have criticised the SCRO in public is therefore untrue. I have rejected what was done in a particular case by particular experts but I have no personal problem with the SCRO or any individual. In fact, I am confident that in the SCRO there are people of integrity who have considerable experience and knowledge, and that there are experts who know that a mistake was made and who are waiting to be part of a better future. That future should whole-heartedly embrace transparency and accountability and should make room for a mature manner of handling differences. A culture that is open to the admission of mistakes is essential to that.

Although it is not the subject of today's meeting, I will share an example. It was recently alleged that the SCRO had made a misidentification. On the basis of the material that was presented to me—on this matter I also speak on Allan Bayle's behalf—I am confident that that allegation was wrong. I firmly believe that an expert who acknowledges a mistake is a better expert from that day onwards. To be able to recognise fallibility is an important commodity in any expert. I know that because I have to tell myself daily that I am fallible. It is never too late to join the club.

I will cover a few topics. First, I must explain some basics of fingerprint analysis and comparison. I will go over the material and I will go over print Y7, which has been discussed. I will scrutinise the SCRO's presentations, including the Tulliallan presentation. I will try to address the matter of opinion and I will consider the management of the case from several angles. After that, I will make closing remarks, if the convener will let me.

Here is the first chapter. We can regard a fingerprint as a regular system of papillary ridges.

There are events such as ending ridges and bifurcations. The properties of fingerprints dictate that an ending ridge, minutia, characteristic or event cannot really be ignored because it is the result of a whole ending ridge. We would have to alter the whole pattern to weed that out.

The next slide is about how comparisons are made. It shows two different fingerprints from the same person. They are not identical, but I will use them to try to illustrate the comparison process. The clusters are a little bit similar, so we look in the immediate surroundings for other similarities. The one marked in blue is a minutia and the yellow ones are not there, so we immediately find many discrepancies. The broader the scope becomes, the more differences there are. We could question whether one yellow point is in the same position. To do that, we draw a line and make a ridge count. When we do that, we see immediately that one count is eight and the other is seven. That is another discrepancy.

The next slide is on tracing. If we have a difficult blurred area, such as that which is shown in the circle, we can still follow the lines and establish that, for example, there is no in-between line here and no in-between line there, so we know that on both something is stopping.

A fingerprint is an image of a regular system of parallel papillary ridges. A characteristic is an event that disturbs that regularity. Identification is the establishment by an expert of sufficient coinciding coherent characteristics in sequence—the sequence is what is important—in combination with the detail of the ridges and the absence of even one single discrepancy. One single discrepancy stops the identification process.

I will skip forwards to save time. The images on the internet have been raised with the committee several times. There is no such thing as an "internet". There are secure websites where things are posted. In this case, the image was from Pat Wertheim and was from the original latent fingerprint from the door frame. In this case, there are no lifts—there are only images. We must keep it in mind that the case is primarily about exclusion and not about identification. Members will appreciate that, typically, we use the original image—the original stuff—in a court case, but today the reality is that photography has been replaced by digital photography. Throughout the world, livescan images are used in the automatic fingerprint recognition process to send fingerprints from Interpol. That is today's reality.

The issue of which is the original image relates much more to the chain of custody than to the comparison process, so I return to the original crime scene. The comparison process is based on images. I would not use a charting personal computer, the quality of which has been described

as appalling, to look at the original image. Use of a fingerprint comparator, when photographs are reproduced by projecting them onto matt glass, is not the same as looking at an original image.

The issue is not so much origin as authentication. In the famous Mayfield case, the first identification was made from digital images from a CD-ROM. The international review committee that delved into the case agreed that

“the quality of the images that were used to make the erroneous identification was not a factor.”

Importantly, it concluded that

“subsequent examinations were incomplete and inaccurate. To disagree was not an expected response.”

The same thing may have happened in the SCRO case—it relates to culture. Digital images are not the issue—the issue is authentication. We are looking at something that is a good and real representation of the truth.

The images from SCRO, Sandridge and Pat Wertheim that I have not yet shown are from the same latent. The image from Pat Wertheim is a true representation of the latent as it was seen in Tulliallan, on the door frame, with brush marks. Returning to the court case, we are looking at the image with brush marks. If someone else has another image, he has a problem, but it is an image of one and the same latent. The images were authenticated by the court, HMCIC, Pat Wertheim, David Grieve, Torger Rudrud and me. I will show the committee today that those internet images were used and authenticated by the SCRO itself.

Members can see the image from Pat Wertheim. It was taken by Dr Terry Kent of the scientific research and development branch in Sandridge. I obtained it at the Tulliallan meeting. I have rotated the image and improved the contrast for the committee. You can see clearly that the two images are very similar—they are of one and the same object. The second image is not far apart from the image from Pat Wertheim that was used by SCRO in the Tulliallan presentation, with a bit more contrast. Nothing has been altered in principle.

While visiting Fife constabulary, I looked at the original material. I was given a fingerprint comparator with which, for a number of reasons, I could not work. I could not preserve what I was doing there, nor could I take it away or handle it. I could only view it with one person, and the quality was degraded. I asked for a larger image, which was not available. Fife constabulary then scanned the 1:1 photo. This is a new scan—a 1200 dots per inch scan. At the time, the scans from which I had to work were only 300DPI. I could not work from them, so I looked at the original material, decided that the image from Pat Wertheim was a

true representation of the same thing, and worked from that. I think that Torger Rudrud did the same and satisfied himself that he was looking at the same image.

Before I go over print Y7, we need to consider whether it is a single print or a double setting. First, we must examine the circumstances and location. Secondly, we must consider the properties of the fingerprint. We must keep in mind that the fingerprint was found in isolation, in an uncommon location—not in a shop or on a door handle. There are a limited number of users or donors, and the chance of an undiscernible double placing is remote. The properties do not indicate that there is a double setting, because the lines never cross. If we look at the properties and phenomena, we see that there is a high tip, with pressure—the broader lines tell you that—and the colour is darker. Everything indicates that there is pressure. The downward bend of the ridges also shows that there is pressure from the tip downwards.

09:45

In the animation on the screen, members can see that the finger is put down with pressure, bending the skin down, and that the lower part is then printed, so that you get that kind of image. That is a typically normal flow of the ridges—it is a normal print from the same thumb, only it is reversed because you are now looking at the print. You can see the downward-bent lines that were caused by the pressure, and that is what the latent Y7 looks like. The conclusion that is to be drawn from that is that it is a subsequent placing by the same finger—a single touch.

Now I move to the identification of the prints. This is the evidence that Torger Rudrud and I used in our report after we were asked by Her Majesty's inspectorate of constabulary to scrutinise the identification. I must stress that there are points to discuss. Mr Swann has said that our evidence was flawed because we had marked dissimilar points, which is an interesting view. We stated fairly clearly in our report that one point for discussion was the fact that there were many dissimilarities. It will be interesting to learn which dissimilarities Mr Swann has seen, because they are there on the screen now. I have zoomed in a little to facilitate members' view. You all have the same picture in front of you and you can flip back and forth between the slides. Now we will look into the detail of it. It may be cumbersome, because we are trying to compare an elephant with a rhinoceros—they are not the same.

There is a cluster of green points that are similarish—that is probably not good English, but that is the best way for me to express it. They look a bit alike. Those green points are what I call the

stepping stone. I went to a professional drawing bureau to get the overlay made, because I found that hand-eye co-ordination on a palette with my computer was very difficult. I went to the professional drawing bureau and asked, "Can you draw this latent?" The artist had never seen one in his life before, but he drew it and I made small corrections to it, so what we are looking at now is what a layman can see in the print, and I must say that it is proper. You can now see the other overlay on the screen; we will go back and forth between the images.

Let us first look at points 14, 4 and 3. At point 14, what we see in the original on the right-hand side is clearly a bifurcation, or maybe an ending ridge to the right. If we move to the latent, you can see an area where there is a clear ending ridge with a white space. Taking into account that the pressure was downwards, it should have joined here, most likely, but it did not, so it stands out as an ending ridge. If we follow the line downwards, on the left side there is an ending ridge. It could be a bifurcation, because the line is parallel, but if it is not a bifurcation it is an ending ridge to the left. If we move from that line downwards, it is clearly an ending ridge to the right, not to the left. It is almost on the same spot, but the detail is still off. Then we move two lines to the right, where there is an upcoming ridge, although we can clearly see that point 3 is more likely to be a bifurcation, which means that the lines merge together to make a fork, rather than an ending ridge. Here, we see an ending ridge on the right side, not a bifurcation. So, although those three points are similarish, the detail tells you already that a few things are wrong. If we look at the rectangular image, we can also see that one point is a little bit lower. I have to be honest and say that I had to mark it a little bit higher, but it is still lower than the other point.

Let us move to points 5 and 6. This is difficult and cumbersome, but the red points are the points where they really are. There is an ending ridge and the white spot is the spot where there should be one in the comparison print. If we make a ridge count from here to here—one to four—we see one to three: it is one ridge count off. That is a discrepancy. Ridge counting is very important in comparing fingerprints. The same goes for point 6. In the latent, one could see a point there, but it is not on this one. On the supposed original, it is one line closer and it should be there. That is another ridge count that is off.

Let us move to point 8. Points 1 to 16 were used by SCRO in production 189. We copied those and we added numbers to it. Point 8 is an ending ridge over the top, and there could be something like that at the point here—although, if this is an ending ridge, this line has to continue down here, and then there is another ending ridge there. They kind of provoke each other. If point 8 is true—I am

pointing at point 8—then this line is ending and end point 17 is a discrepancy. I cannot see point 7. I am simply unable to see it, so I will not mark it. The same goes for points 11, 12 and 13—I cannot see them. I will show members later that SCRO was not able to see them, either. I have considered the matter and I have counted three real discrepancies—apart from the detail, there are already three discrepancies. Any identification process should be stopped at this point.

Let us move to points 9 and 10. They are in the comparison print, but I could not find them in the latent, and this is why. If we project them over each other, points 9 and 10 are outside the contour of the latent.

Point 15 is a similar kind of point. It is at about the same location—I accept that. Point 1 is an upcoming ending ridge that is at about the same location, and this point could be similar. However, point 2 is not there. Let us look at the overlay. There is no ending ridge or anything because the whole system of lines would have to be different. That is another discrepancy. There are five differences here, and I have not counted points 7, 9, 10, 11, 12 and 13 as differences. This may be a difference of opinion, but I will come back to that later. With five discrepancies, it is impossible to make an identification.

For points 18 and 21, I used the tracing method. If we follow the lines here, we end up at this point; if we follow this other line, we end up here. As you can see, on the way, two lines stop—that is very clear. If you do the same trick in the latent, you count two ridges here and two ridges here, so nothing is stopping—there are no two points there—another two discrepancies. Follow the lines; there is no room for one line to end there.

Let us move to points 19, 20 and 25—the clear and distinct incoming ending ridge that Mr Wertheim also talked about. On the other print, there is a clear and distinct ending ridge from the other side—that is impossible. Those are two distinct differences: the count is at 10.

I ask for members' attention on point 20, as I will come back to it. This distinct point comes in from the left to the right.

Let us move to points 26 and 27. There are an upcoming ridge, a short ridge and spaces made by the line I am indicating, so there is a real thing here. There is nothing like that in the latent. That represents two distinct discrepancies. The number of differences is now 12.

On points 22, 23 and 24, if we go to the overlay, there are ridge endings in the comparison print here—two lines. There is no disagreement about that. If we look at the latent, there is no such thing there—there are three distinct discrepancies, which makes 15 differences.

There is another point, in the centre, that was not used by the Scottish Criminal Record Office in its presentation. I will show it to you. It looks similar, with the ridge ending upwards, almost in the same location. However, if you follow this line here, it comes from the right side here and ends here, it goes on the other side. And if we make a control ridge count to this distinct point, the ridge count is three there and the other one is four. It is another discrepancy—I did not even count it.

Let us move upwards now to the three incoming lines in the tip. The red dots are very clear—if we put the acetate over it, you will see them. There is no such thing in the tip of Shirley McKie's fingerprint. There are two incoming lines from the other side that are not in the latent. There are five distinct discrepancies that are noticeable straight away.

There are more than 20 differences. If we made up the balance, there are the last 20 different Galton points. I could have made it 25. There are numerous differences in ridge detail and there are invented points that are marked by SCRO. That is what you might expect from fingerprints that have come from different sources.

We have to look at the relative magnitude of the mistakes. We can see that there is a great difference in the overall appearance of the ridge flow, particularly around the tip and the core area. There are more than 20 discrepancies in what I call dactyloscopic points. The nature of some of those, such as points 19 and 20, makes them stand out.

There are a number of differences of third-level detail and there is an absence of confirmation by third-level detail. You always look for confirmation of detail on the third level, but it is not there in this case; indeed, there is a low number of similar points. That is one of the problems that might be generated by the print. In the latent, there are few points. However, if you take a known sample and try to interpret it, you go wrong because there is nothing that tells you there is something wrong there, particularly in relation to this print.

It is possible to have commonalities between prints from different sources. We know that there are look-alikes. However, this is not a look-alike. In the report of 10 April 1997, Hugh Macpherson and Charles Stewart both state:

"For the past 26 years I have been engaged in the identification of persons by the means of finger and palm prints and I have never known impressions made by different digits or palms to agree in the sequence of the ridge characteristics."

The reverse of that is that, if ridge characteristics are out of sequence, it means that the prints are from a different origin.

In a report of 27 March 1997, Hugh Macpherson and Charles Stewart said:

"We have no doubt that the aforementioned photographed impression was made by the person whose fingerprints are shown on the elimination form and palm print form in the name of Shirley Caldwell".

Was there no doubt? Let us look at the presentations of the SCRO. First, we move to the court session of 2004. When asked about the way of presenting, the rebuttal was that it was not the whole print that was shown but only the material part. Is the material part the part that you like or is it the part that you do not like?

The rebuttal was that the

"Extent is determined by presentational considerations"

and that it

"Fit standard sized photo production booklet".

Let us turn to cropping. There are no written rules for cropping. If I have a big palm print, I might be forced to take out a piece for demonstration purposes, but I would say that I had done that. If there are no written rules, you have to go by general rules of transparency, fairness and logic. Of course, you have to bear in mind that you must be able to demonstrate what you say you see and to tell people if there is something wrong. You have to explain that.

Let us turn to the Tulliallan meeting. Look at pages 12 and 13 of the minutes—I did not make them; they were made by an independent clerk. Dr Bramley, the chief scientist who was appointed as the convener, stated that:

"from the conversations at lunchtime it would appear that there is some agreement. If the scene mark is considered to be a single finger impression it is more likely to be that of a right thumb and not that of Shirley McKie."

Mr Dunbar stated that he accepted if it was one piece it was not that of Shirley McKie."

That notion was also noted by Mr Mackay:

"They did state, or indeed concede, that if it was proved conclusively to be a single mark then it could not have been made by Shirley McKie."

The minutes show that the matter was not brought up again after that. I will come back to the importance of that later.

What is the normal way in which one would think of presenting things? The committee can see from the slide that one presentation has a ratio of 3:4 and the other is more rectangular. That would be the natural way to make one's presentation, but the SCRO did it in the way that is shown on the next slide. Yes, the images are rectangular, but just on the opposite. Why? On presentation 180, points 19 and 20—the big ones—are conveniently out of sight. As I said, the difference must be explained.

10:00

The next slide shows productions 189 and 152 and the following slide shows those productions with overlays. Are they the same size? Is there one standard size? No—the aspect ratio is different. You can see that, on production 189, more than a third of the box is not used. The next slide shows the latent. If they had presented it properly they could have almost demonstrated the whole issue in the same box.

There is another remarkable thing. If we look at productions 180 and 152 from the charting PC, we can see that the two experts used exactly the same location of the points at pixel level. The slide shows the minutiae that you could not see. On the minutiae that you could see, the charting is off. The line stops here, but it should be there. The points were copied from each other. Within the booklet there is enough space to enlarge the box; the boxes are not standard size; the latent fits almost completely in the used box; and within the box there were zoom possibilities.

I conclude that the presentation of the productions was not professional, transparent or honest. It was misleading and wrong. There are a large number of discrepancies.

If we go back to the used comparison prints, we can see that they all used the same points. That is strange because a number of the points were not visible. That might lead us to conclude that the process was that which was signalled by Mr Ian Evett in his collaborative study, where he makes a remarkable statement. Mr Evett is a distinguished forensic scientist who did a survey in 1996 or the year before. He makes a statement that was not provoked by anybody. He says:

"Probably because of the sixteen points standard, a practice has grown in the U.K. service which the team did not find in the other countries visited. A fingerprint expert will generally reach an inner conviction about the correctness of an identification long before he has found 16 points. His or her subsequent activity will center on establishing that features which are clearly visible in the print can also be seen in the poorer quality mark. The print is used as a guide for scrutinizing the mark. This is called, in some quarters, 'teasing the points out'."

That is a clue. You heard the evidence last week: "If I think it's him, I don't care about a tip." Conviction comes before the process.

You want to know what went wrong. I read Mr Swann's submission and I will give you a clue. On 26 February he stated:

"I recall one particular Chart of the disputed Mark, which was not too clear, and probably a second or third generation copy. In my examination of that Chart, I identified 16 ridge characteristics, which were in agreement. I was satisfied that it was a positive identification."

Remember, that is the chart that did not show at least 10 discrepancies. It is the chart without the

tip. Mr Swann states:

"On 2 March, 1999 ... We entered a very small room, containing Exhibits. The door standard was propped up against one wall ... I examined Exhibit 102, being the door standard, a Fingerprint Form in the name of Shirley Jane McKie, an actual size photograph of the Mark on Exhibit 102 and other Exhibits connected with the Case. I am able to produce my sketch and notes. As a result of that inspection, I confirmed"—

directly and without further investigation—

"that the Mark was the left thumb print of Shirley McKie with at least 16 ridge characteristics in agreement in both detail and position."

Then he has his encounter with McKie. Again, this is his submission—I did not make it up. He makes his report on 16 March. Much later, there is a knock on Mr Swann's door, and we have the encounter with Tayside police. Mr Swann states:

"That would have been in the Autumn of 1999."

Actually, it must have been 2000. He states:

"However, at the time of making my Statement to the Tayside Police, I had still not resolved one issue, which concerned certain characteristics at the top of the Crime Scene Mark. Irrespective of that fact, the position remained that there were in excess of 20 ridge characteristics in sequence and agreement in the area below, so as to fully satisfy me as to the Identification. It was after the meeting with the Tayside Police that I resolved the issue of the characteristics at the top of the Mark".

He then starts to rotate the mark by 66°. His statement continues:

"Latent print distortion is a problem that can easily deceive the inexperienced Expert or Examiner and cause even the most knowledgeable Expert to take a second look."

One and a half years later, Mr Swann takes his second look, and explains it with reference to a distortion of 66°. What happens if we rotate a print by 66°? We might find some similarities—I do not know either way—but other similarities will be off, as in the slides. Mr Kasey Wertheim, a forensic scientist, carried out a study in 2004. He made a map of the whole thumb of Shirley McKie. He drew all the points, and tried to rotate the map as much as he could. However, the cluster of minutiae in the latent, as shown in the map on the slide before you, are not there—not at 66° and not at 90°.

Let us move on to the Tulliallan presentation. Members may refer to pages 11 and 12 of the booklet that has been submitted. As you will see, the mark is on the left, and the comparison print on the right. This is the presentation that was used for the Association of Chief Police Officers—to convince the chiefs of police that the SCRO was right. Forty-five points of agreement were found, so the staff involved did their utmost.

Please look at the detail on page 11. You will see the contour of the latent. A point has been marked totally outside the contour. That is a

groove in the wood. There is no regular system of lines. Let go of the fact that there has been an event that has disturbed the regularity. What you can see here are grooves in the wood. When I compare the Tulliallan booklet and the booklet that was the court production as laid down in February 2006, I note one distinct dissimilarity, at point 4. There is something added there:

[“Due to brush mark, six ridge characteristics that were used in court case productions have effectively been erased.”]

Let us move to the next page. I think that this is pages 35 and 36. You will see that they have marked the points in the erased area so that it is possible to see them. Let us turn to the production and look at the area where the staff used the good photograph and marked 45 points. They did not see them. They did not mark points 10, 11, 12 or 13. I could not see them, and they could not see them at the place where they were looking at the grooves in the wood. Those points are not there.

I turn now to the internet images. Look at pages 37 and 38 of the booklet, and at pages 6 and 7 of the Tulliallan minutes. I will not read it all out, but the internet image is discussed and there is mention all over that the SCRO used the internet images of the comparison prints. My conclusion is that the SCRO used the internet image of the comparison prints and so was able to mark up points in the brush mark.

It gets worse. Edgeoscopy is the science of the edges of the ridges, which are supposed to be unique. There is a problem with printing because the detail never prints the same. Let us look at an overlay that was produced by the SCRO. It is at the end of the booklet—I do not think that it has a number. An acetate was overlaid over part of the print and was used to further identify the mark as being that of Shirley McKie. There is a ridge ending at point 4 that is not present at point 3. There is no way that edgeoscopy can override the use of Galton points. The detail is just not there; it is made up.

I move on to the so-called internet mark from Pat Wertheim, which shows some distinct detail. For example, it is possible to see a house or tent-like shape and a horseshoe shape, which are visible in the SCRO's image. The white space that is visible was caused by the brush mark. At one point, you can even see the brush mark. The SCRO has used the internet image to prove edge detail, which it has used to further identify the mark as being that of Shirley McKie. In so doing, the SCRO authenticates the images on Ed German's website and confirms that those images are superior to its own. The detail that I mentioned is the end product of making a photograph, scanning it and putting it somewhere. It is not in the other images from the SCRO.

Let us move on to the slide on which 45 points are marked. Remember that point 38—which the SCRO sees at last—is point 20 in my production. If you look at “31/32 SCRO” at the bottom of the slide, you will notice that point 38 has moved. It is no longer where it should be. If you look at page 11, you can see that the SCRO moved it to page 31 and rotated it by 45° so that it fits.

You will note that points 38 and 45 are marked on the left side of the image on pages 11 and 12, but not on the right side. I was struck by that and wondered why it was the case. The reason is that the SCRO used points 26 and 43, 27 and 44 and 28 and 41 as doubles. That would not look good on pages 11 and 12.

There are 45 points in five different clusters. I have put the SCRO's clusters in a single image. Fingerprint detail must be in sequence; that is the essence of it. It is clear that two clusters are already out of sequence. All the other clusters are totally out of sequence. If one accepts the claim that all the various parts of the mark are from Shirley McKie, the conclusion must be that she planted her fingerprint five times. We are talking about an area that is 1cm². It is a latent print—the person who made it could not see what they were doing. There is no indication of a double print. If Shirley McKie was able to do that, she should be awarded the Nobel prize because it is impossible to do. Therefore, the tip is from someone else.

I will make an analogy. Let us assume that you do not know which country is shown in this satellite photo. You can see that an expert has marked it as North America, but let us imagine that we had such a problem and we went to a scientist. The scientist compares the question country with the samples in his database. The two pictures are a little bit different, but the expert says that he can explain the differences. If we accept that, we accept that we are in Denmark now. Is it the truth? No. Is it honest? No. Is it ridiculous? Yes.

If Mr Swann presents the same minutiae in the same sequence, we might have an argument. Otherwise, this is the recipe: take some minutiae, ignore a few, stir a little, take some distortion sauce and again it is Shirley McKie's print. That is what happened.

I move to the opinion matter.

10:15

The Convener: Mr Zeelenberg, you have only a few minutes left.

Arie Zeelenberg: I will speed up.

I will skip the next slide. On the issue of opinion, let me make one remark. If there is sufficient information to identify a fingerprint—45 points-plus—there is certainly sufficient information to

exclude a fingerprint. A difference of opinion cannot stand in this case.

I will talk about the managing of the case before wrapping up. If, as a manager, you are confronted with such a problem, you need to manage the situation. You need to manage the conflict and the people and stay out of the professional debate. The experts swam like fish into a trap and they cannot swim back. The management should have stepped in, but managers did not manage the situation. Instead, they took a position in a debate. They should have learned from the Mayfield case, in which things were handled very differently.

Why did that happen? I think that the management took its position in a Pavlovian reaction. We are dealing with an expert organisation and a police organisation. Police organisations close ranks. That is a good commodity in a riot situation or in an army. People close ranks, identify the enemy and never give up. Last week, the experts said that the issue will all blow over. That is also an odd attitude. Expert organisations say, "We make no mistakes, so stay out of what you do not know." These two attitudes merged together fatally. Then people found the arguments and excuses for the position that they had taken. They said that the issue is an opinion matter and they questioned the use of internet images.

I have some questions. For the court ruling—and at the invitation of the Parliament—I gave my opinion, which was accepted. If people do not accept that opinion, they can ask another thousand experts. That is fine with me. The Minister for Justice declared in 2000 and 2006 that there had been a mistake. HMIC asked for transparency and accountability. On what authority did the management change a mistake into a difference of opinion? If people truly believed the opinion argument, why did they not act accordingly? Did they induce or promote further discussions? Were all opinions allowed? Why did they not seek further independent advice from the Federal Bureau of Investigation, New Scotland Yard, the Bundeskriminalamt and the Sûreté nationale? Why did they covertly ask for advice and put it in a drawer when they did not like it? They got advice from 171 experts worldwide, which they ignored. That could have been the moment to change their minds and to look further.

I have other questions. The position of the management implies that both parties could be right, but we all deny that. We cannot both be right. Why do they not act accordingly? If both can be right, they should treat Shirley McKie as innocent. Did they say in her court case that they could be right or wrong? Did they say in the Asbury trial that they could be right or wrong?

The flip-side of the opinion matter is this. If Scotland accepts that diametrically opposed

conclusions are contributed to, and left as, a matter of opinion, will we say that in court? Is fingerprint evidence that is currently put before courts presented as evidence that could be opposed by others in Scotland?

I come to the most compelling questions, which will take about one minute. Did the management pursue accountability and transparency? Did the police management pursue justice and truth? Those are my questions.

Members all know the story of King Solomon and the disputed baby. One baby had been killed and two mothers were fighting over the living boy. King Solomon knew that there was no middle ground. When he challenged the mothers and said, "Cut the baby in half," the lying mother exposed herself and the true mother said, "Please save the child."

I accept that the Parliament has a responsibility to discuss and negotiate the best judicial system along party lines and in view of society. That is members' job. However, my message to members is that justice is not a partisan issue and the truth is not negotiable. I wish members the wisdom and decisiveness of King Solomon.

The Convener: Thank you for your presentation. I am sure that all members agree that justice is not partisan, and I hope that you will agree that we will not tackle the inquiry in such a way.

There are 10 minutes for questions, so I ask members to be brief and to the point. We have strictly 10 minutes, because we need to be fair to all presenters and to the discussion panel.

Arie Zeelenberg: If members have questions about QD2, I have three relevant images. We will have to leave the set-up as it is if members want me to show them later.

The Convener: That is up to the committee, but 10 minutes is all the time that we have.

Pat Wertheim said that it took him 90 seconds to make an identification. From the presentation that you have just given us and all that you have said, I think that someone cannot possibly make an identification in 90 seconds.

Arie Zeelenberg: Yes, they can. However, the mix-up is that Pat Wertheim did not make an identification in 90 seconds; he made an exclusion in 90 seconds. When searching manually—as I did for years—we take a cluster of points in one hand, search over it and flip between pages. We make split-second exclusions all the time. Even with bad images, we can distinguish a giraffe from an elephant instantly. We are talking not about identification, but exclusion. I think that that is what he meant.

The Convener: In the SCRO identification process, was simply not enough attention paid to points of dissimilarity?

Arie Zeelenberg: That is totally clear.

Stewart Stevenson (Banff and Buchan) (SNP): I have two brief points. You commented on whether the mark was a double imprint. You observed that there was no line crossing, so you could eliminate the possibility of a double imprint. I say as a mathematician that it might be useful to explain why that is the case. I think that I understand, but I want to ensure that others do.

Is the psychological phenomenon of mental set the key to much of what has happened in the assessment process? I presume that you are familiar with that term.

Arie Zeelenberg: The answer to your second question is yes. There is a mindset. It was shown last week that people worked back from a point of conviction. That has been seen and that is the trap that we all face.

Your other question was about double plants—double setting. We can never be 101 per cent sure about that, but to have five settings is practically physically impossible. On the other hand, we see that crossing lines never merge together in that way—that is really impossible.

Stewart Stevenson: Have you ever encountered a double imprint without line crossing or met an expert who has encountered that?

Arie Zeelenberg: Yes, but that may be two settings that have just merged together—it is not in there like a jigsaw puzzle.

Mrs Mary Mulligan (Linlithgow) (Lab): I assume from what you have said that you do not accept that opinion is involved: the fingerprint either is or is not a match. Given that, how could we get into a situation when there are so many differences—you pointed out more than 20—yet that could be interpreted as an opinion?

Arie Zeelenberg: The opinion is more outside the profession, because experts have differences of opinion. However, in the process of identification, that cannot exist. We both agree that one of us must be wrong.

Mrs Mulligan: I want to take you back to an issue that we asked about last week—that of cropping and the use of a partial print. Have you experience of other examples in which you could not see the whole print—perhaps because parts of the print were not good enough to assess?

Arie Zeelenberg: Yes, that can happen—but first you must show the evidence before it is marked up. If you use your virtual scissors to cut out something that you do not like, that is wrong. You have to explain why you are leaving out part of the print.

Mike Pringle (Edinburgh South) (LD): We have heard a bit about blind testing. What is your understanding of a blind test?

Arie Zeelenberg: There are several notions of what constitutes a blind test. If you present a print to an expert, it is hard to avoid a situation in which the expert does not instantly know, from looking at it, that it is either a possible identification or an exclusion. Exclusions come before identifications. When the expert looks at a print for one minute, they might say, "Well, somebody might have identified it already, so I am being asked to verify it." It is hard to avoid that sort of situation.

Another way to do a blind test is to give the expert an actual case that nobody knows about; the expert does not know whether it is to be an identification or not. Then, at the end, you can look at how the expert went about analysing the print. That is really blind testing. There are several other ways of doing it, but it is always difficult. And it is always difficult to avoid the mindset.

Margaret Mitchell (Central Scotland) (Con): Good morning, Mr Zeelenberg, and thank you very much for your very detailed presentation. Where did you first see the Y7 print?

Arie Zeelenberg: The first time I saw it was on the internet, at the site of Ed German.

Margaret Mitchell: I am sorry—was that a German who had identified—

Arie Zeelenberg: No, no. Ed German is a facilitator who has a website where prints are posted.

Margaret Mitchell: Which website?

Arie Zeelenberg: The website is onin.com. It is a site where fingerprint experts go.

Margaret Mitchell: Was any conclusion reached on the material when you first looked at that fingerprint site?

Arie Zeelenberg: Typically, what I do is run through the process—and I have some booklets that set out how we do that. You take the mark and use ACEV—analyse, compare, evaluate and verify. You mark up everything that you see in the print without looking at the comparison print at all. Then you go to the comparison print, check whether everything is there, and come to your conclusion. That is the normal process.

Margaret Mitchell: So, on the site that you looked at, there was no conclusion as to whether the print was or was not Shirley McKie's.

Arie Zeelenberg: The site said that the print was from a disputed case in Scotland and it invited people to look for themselves.

Margaret Mitchell: But there was no conclusion that it was or was not—

Arie Zeelenberg: If you are in the fingerprint world, you know about the debate.

Margaret Mitchell: So, on the site, it was disputed whether the print was Shirley McKie's or not.

Arie Zeelenberg: Yes.

Margaret Mitchell: I therefore have to put this to you: could you not also be guilty of the mindset?

Arie Zeelenberg: Yes. Yes, I could.

Margaret Mitchell: What is the ideal evidence when you are examining and analysing a fingerprint?

Arie Zeelenberg: The best evidence is simply a good image—the best image from the latent print and best image from the tenprint sheet. Sometimes it helps to look at the original material—what the surface is and where it came from. In this particular case, you have to explain the points outside the contours of the latent print. I was at Tulliallan and I could see that noise in the image was generated by grooves in the wood.

Margaret Mitchell: You would therefore totally reject the idea that the original image is the very best.

Arie Zeelenberg: That depends. Sometimes you have to use fluorescent lighting to get the best image. Sometimes the naked eye is better and sometimes photography is better. It depends. However, that does not directly influence the comparison process per se.

Margaret Mitchell: Did you reach a conclusion? I think you said that perhaps the original image was not the best evidence.

Arie Zeelenberg: I was at Tulliallan and I saw Pat Wertheim's images and the material from the SCRO. Pat Wertheim's images were superior.

10:30

Mr Bruce McFee (West of Scotland) (SNP): I want to go into some of the evidence that we heard last week. I am not sure whether you heard the evidence, particularly in relation to the tip of the thumb print. We heard evidence from Fiona McBride about what she said at Shirley McKie's perjury trial. When Donald Findlay asked her why she had not looked at that area of the print, she said:

"I did not care for the top part of the fingerprint".

She went on to say:

"Because with 14 years experience I know that that cannot be properly interpreted. There is too much wrong with it and I will avoid it and only someone who was not an expert would attempt to interpret those ridges."

Mr Swann gave us the entirely opposite interpretation, which is that no expert should be fooled by that; they should be able to read and look at the two prints. Can you reconcile those positions?

Arie Zeelenberg: No. There is no way to do that. Those are just excuses for the position that you are in. If the tip was not readable, why not show it? Why not explain it?

The Convener: I will take one question from each of the non-committee members. That is all that we have time for.

Des McNulty (Clydebank and Milngavie) (Lab): Mr Zeelenberg, in your response to Margaret Mitchell, you indicated that you had already seen the print via the website. I understand that that was the website on which Ian McKie had also posted his views. When you were invited to participate in this exercise, did you disclose to the HMIC staff involved that you had already formed a view and that you had seen the material?

Arie Zeelenberg: Yes, and I stated that in our report.

Des McNulty: In that sense, is it plausible for you to present yourself as an independent expert?

Arie Zeelenberg: I have not presented myself as an independent expert.

Des McNulty: So, you are not presenting yourself as an independent expert.

Arie Zeelenberg: I am now, yes. I have no relation to the case. I have no interest in the case, other than that it is damaging.

Des McNulty: When you were asked to participate by the people who, I assume, were involved in a testing exercise, did you disclose to them that you had a view on the print? Did you tell them that you had already made up your mind before you saw the material that you were going to be shown?

Arie Zeelenberg: I disclosed it and I disclosed it in my report. Objectivity is not in the chain of events; objectivity is in your mind, heart and procedures. I showed you the facts. You can check them.

Des McNulty: In that context, what was the basis of the exercise? Did you have to present an already-known view on the basis of the evidence that you had seen previously, or look at what was being presented to you?

Arie Zeelenberg: I have given you all the evidence. I will put a question to you: do you accept that there is a mistake?

Des McNulty: I am not a fingerprint expert.

Arie Zeelenberg: Yes, but do you accept it? Your own minister said that. You do not have to believe me. You can accept my independent advice to HMIC, the verdict of your minister and of all the people involved, or you can decide not to accept it and invite another 1,000 experts. For my sake, I do not care. I will be proven right.

The Convener: I will stop the questioning there.

For the record, Mr Zeelenberg, I ask you to make it clear that you looked at the fingerprint before Tulliallan, at the time that you viewed it on the internet. Is that correct?

Arie Zeelenberg: Yes. I had seen it already at the HMIC. I also went to Fife constabulary. I had seen the productions and the material.

The Convener: Okay.

Alex Neil (Central Scotland) (SNP): We have a saying in Scotland—it is by Robert Burns—that facts are chieftains that winna ding. It means that facts are facts.

The First Minister told us that this was an honest mistake. We now know that the deputy chief constable of Tayside police, who was asked to investigate the matter on behalf of the Crown Office, made the allegation that there had been criminality and cover-up. Am I right in interpreting from what you said that, although it may have started as an honest mistake, there is clear evidence of deliberate deceit about the misidentification?

Arie Zeelenberg: I will not enter into a debate about whether it is criminality or not. That always depends on the context.

The Convener: I am sorry to interrupt, but you have already given evidence to the committee on the point.

Arie Zeelenberg: Okay.

Alex Neil: Well, can Mr Zeelenberg answer the question?

The Convener: He can, if he wants to do so. The committee is clear that, in his previous evidence, Mr Zeelenberg never used the word “criminality”. Am I right?

Alex Neil: I did not say that; I quoted Mr Mackay. The question I put to Mr Zeelenberg was that during his presentation he said that it was not just a mistake. I think that he said that it was dishonest, and I think that he suggested that there had been deliberate deceit.

Arie Zeelenberg: I will stay within the fingerprint domain. At Tulliallan we arranged that we would react and respond to each other's presentations. I then reported to HMIC, Mr Bramley and the SCRO that if the presentation that I had seen was used to

convince people of authority to act, it would be the closest thing to malpractice that I have ever seen.

Mr Kenneth Macintosh (Eastwood) (Lab): Mr Zeelenberg, earlier you made a play of the fact that the way in which you operate is that if you come across one single discrepancy when you are comparing prints, that should halt proceedings. Do you accept that the Scottish service works on a different principle, which is that if a discrepancy can be explained, they will go on with the identification until they find something that they cannot explain?

You referred earlier to the Evett and Williams report, in which I understand that the Dutch fingerprint service did not compare very well with the Scottish service. Was the reason for that the fact that you stop making comparisons when you find discrepancies, whereas different services that work to a different standard keep going until they fail to explain the discrepancies?

Arie Zeelenberg: There is a difference between a dissimilarity and a discrepancy. The discrepancy rule is universal. If there is a different Galton point or ridge count, identity cannot be claimed.

With respect to the survey done by Mr Evett, with whom I have spoken many times, it was said here last week that the Dutch would use only 10 unusual characteristics such as lakes, islands and spurs; that is complete nonsense. I have just given you the definition that it is an event in a regular system of lines. I put that in the book that I wrote in 1994 and in the Interpol book. That is my definition.

Mr Macintosh: How did the Dutch do in that international comparison?

Arie Zeelenberg: First of all, Mr Evett's survey was not a competency survey. The word competency is mentioned only once in a hypothetical—

Mr Macintosh: Am I right in saying that the Dutch managed to identify only one out of 10 prints, whereas the Scottish bureau identified nine?

Arie Zeelenberg: The set was such—

Mr Macintosh: Is that true, Mr Zeelenberg?

Alex Neil: Let him answer the question.

Mr Macintosh: It is a straightforward question. Did the Dutch identify one print—

Alex Neil: Well, let him answer it.

Mr Macintosh: Alex, if you do not mind, I will ask my questions and you can ask yours.

Alex Neil: Let him answer.

Mr Macintosh: Sorry; the mouthpiece of Mr McKie wants to intervene as usual. [*Interruption.*]

The Convener: The question has been put, Mr Zeelenberg; it would be helpful if you answered it.

Arie Zeelenberg: I am happy to explain if you will all listen.

You have taken the survey out of context. It was to compare how many points people would line up in a closed setting. Some people see it as a contest to see who can make the most identifications, but it was just to compare systems.

The set-up was such that the people who made the batch envisaged that there would be six or seven identifications within the system, not nine. We wanted to respond as a system, so we would only report an identification if it was verified. We reported that two of the latents would have gone into our questionable identification procedure, the outcome of which might have been an identification. So we would have identified as high a number as three prints, if you want to describe it in that way. Germany also identified three prints.

It was not a competency test. It was a survey of the variations in how people mark points. I made a booklet for Mr Evett discussing every point and showing why I would or would not mark each one. There is one fingerprint with a ridge count that is off and, although I could see a number of points, I would not identify it for that reason. However, Mr Evett's survey did not allow for that; we had to tick the boxes. It was not a competency test.

Mr Macintosh: The point is that you only identified one print and the British experts identified nine. Is that right?

Arie Zeelenberg: That is what was shown, which is surprising because they should have identified only six.

Mr McFee: That is very important. Can you clarify that? If there were only six sets that matched and the Scottish experts identified nine—

Arie Zeelenberg: You cannot explain it that way. You cannot compare systems in that way; it is not meant for that.

The Convener: I suppose that that is relevant because the report was mentioned and we are listening to what Mr Zeelenberg has to say about that. However—

Mr Macintosh: Convener—

The Convener: Please do not speak over me when I am speaking.

The committee is not here to examine the Dutch system; we are here to consider our own system. I will close the line of questioning at that.

Thank you, Mr Zeelenberg, for your presentation and for answering questions. I hope that this might be the last trip that you have to make on this matter, but we will need to wait and see.

We will have a short break in order to set up the next presentation. We will hear from Mr Swann on the same basis as we heard from Mr Zeelenberg. Setting it up will take a few minutes.

10:40

Meeting suspended.

10:48

On resuming—

The Convener: I welcome Peter Swann. Thank you for agreeing to give a presentation to the Justice 1 Committee. You are here today with David Russell, with whom we have been corresponding. The format of the session will be the same as for Arie Zeelenberg. You will have 45 minutes for your presentation and there will be some time at the end for questions.

Peter Swann: Thank you, convener. My presentation is not quite as flamboyant as the previous one—it is quite basic, to be honest. I will use basic material and follow the format that I think is appropriate.

My task this morning is to explain to you my findings, based on the material that was made available to me. I will describe how I reached my conclusions and try to inform the committee, by means of charts, why I know that the other people have got it wrong. That might sound like rather a bold statement, but my reason for making it is simply that, in my opinion, people have not been using the correct material. That answers a lot of the questions that Mr Zeelenberg raised in relation to the tip of the fingerprint. Not one of the impressions of Shirley McKie's left thumb that I saw in his presentations was a rolled impression. I will explain what I mean by a "rolled impression" later.

My involvement in the case started when I received a telephone call from solicitors asking whether I would be prepared to act in this case. I said yes, so they sent me a bundle of material, part of which was a comparison chart of Y7, which I saw in Mr Zeelenberg's presentation. I do not have a copy of it. That chart took a while to go through. I was to ensure that it was a positive identification, which is what I did. That was sent back to Levy & McRae, the solicitors in Glasgow.

My next involvement was a visit that I made to the High Court of Justiciary building in Glasgow, in the company of Angela McCracken, a solicitor from Levy & McRae, to examine the original exhibits. I saw the door standard there. Chart A shows a sketch of the door standard on the right-hand side. On that door standard—quite clear, in black powder—was this mark, which is, in my opinion, the impression of the left thumb of Shirley

McKie. The mark was quite clear. In my opinion, it was a genuine mark that had not been forged or planted, as has been suggested. There was no indication of that. To all intents and purposes, it was a genuine mark. At that time, there were no striation marks through it. I have never worked with a mark with a striation mark through it. I show you now a first-generation photograph of the mark in the condition that it was in when I saw it.

In the High Court building, I saw an actual-size photograph of the mark and what I think was a chart set of Shirley McKie's fingerprints—I am not absolutely certain whether it was a chart set or an elimination set, but it had all of the 10 rolled impressions and plain impressions on it.

I checked the photograph against the mark on the door standard and saw that they were the same. I then checked the mark on the photograph with the left thumb impression on the fingerprint form and spent some time doing a comparison there and was satisfied that both had been made by the same person. No two prints are identical. Sometimes, they do not even look the same because of movement, pressure, distortion and so on. The object of the exercise was to determine whether both marks had been made by the same person. In my opinion, they had been.

At that time, Angela McCracken, the lady solicitor who had instructed me, was writing letter after letter to get material for me from the authorities and the prosecution. However, I got none. I should have had a copy of the fingerprint form, which I was not allowed to have, and I should have had a copy of the mark on the door standard, which I did not get—I got one later, but I did not get one at that time.

With regard to my two comparisons, I spent some time on the first one from the comparison chart, which I had for about a week—no problem there. However, with regard to the one in the High Court building, I had to do a comparison in not particularly salubrious surroundings—I have done that before at murder scenes during the middle of the night, but that is by the by. I was in a small, pokey room that was piled high with other exhibits. The attitude was, "There's a desk and a chair—get on with it." So be it; that was not a problem. I left and prepared my two reports—an initial report and a follow-up report, which contained questions that were asked by Shirley McKie's solicitors and so on. I sent them both off on 16 March 1999.

Following that, there was a question of preparing evidence to prove that the mark was Shirley McKie's left thumb impression. This photograph was taken on 17 March 1998 and is obviously the same mark. In the right-hand photograph, we see the left thumb impression of Shirley McKie. There are various places where one could get the left thumb impression of Shirley McKie. This one is

from the *Daily Mail*. It is a beautiful reproduction. I do not know how the *Daily Mail* got it—it did not get it from me. It was published by the *Daily Mail* in 2000 and reproduced in 2002 and 2004, I believe. It is extremely clear and shows good marks. I have noted 16 characteristics in agreement on this chart.

I noticed that on a BBC "Panorama" programme the other night, Mr Wertheim, who I see is here somewhere, talked about a cluster of characteristics—about four or five—around here on the photo that he found in agreement, but he moved on to a characteristic up here, which he said was not there. It is the same characteristic that Mr Zeelenberg talked about in his presentation. If they had both moved to the right, that would have shown that the characteristic that they are saying is not there is there, because of the movement of the mark to the left. Its movement can be measured: it has moved through 66° anti-clockwise. I will shortly show you all the characteristics at the tip, which are not on the plain impressions but are on the rolled impression of Shirley McKie. A rolled impression is the one that is always taken when you take the charge set of a person charged with the offence. You roll it from side to side: you do not just plonk it down and hope that that is enough, because it probably will not be enough. We will come to that shortly.

These characteristics are all there. I am not making them up—those are facts. Sixteen characteristics are marked on that chart. That has been verified by various other people, not just me.

On chart C, the one at the top is basically the same, but at the bottom left is the crime scene mark. In the middle, you can see the full rolled impression of Shirley McKie's left thumb. Where did I get that from? She—or not she, but her solicitor—sent it to me. That is where I got it from. She also sent three other plain impressions.

Stewart Stevenson: Could you please repeat that? Did you say her sister?

Peter Swann: It was her solicitor. That is the full rolled impression of Shirley McKie's left thumb impression. If you look at the tip, my opinion is that what has happened—I cannot give you another explanation; I am sure that this is the correct one, but I cannot prove it—is that when the thumb has been placed down on the door standard, it has gone like that. Well, perhaps not quite as much as that, but there has been some kind of involuntary movement and adjustment of the tip when it was placed down, which is not unusual. When we grip something, we often adjust our position, make a slight movement and so on.

What has happened is that the characteristics at the tip, which are quite clear—they are as clear as

any points on the mark—are all at around 2 o'clock. You need to be a mathematician to work this out, but from 12 o'clock to quarter past is 90°, so if you move to 10 past—where the characteristics are—that is 66°, 60° or thereabouts. I will not narrow it down to 61°, 62°, 63° or 64°, but that is roughly the figure. That is where all those characteristics are. As I understand it—I was not there—that was used in court at the perjury trial to negate the fact that it was her mark. It was said that those points are not there, so it cannot be Shirley McKie's print. Mr Gilchrist, the procurator fiscal, told me about that evidence when he came down to see me in London in June 2001, by appointment. We met at the offices of the Academy of Experts. Mr Gilchrist showed me Mr Wertheim's presentation to the court, with a copy of the crime scene mark and an acetate sheet to put over the top, on which Mr Wertheim had highlighted these characteristics, which he said were not there. I produced a chart for Mr Gilchrist, which showed that they were there. I took some time to explain the matter to him. He accepted my explanation and understood it. I made sure that he understood what I was talking about. He passed a comment, which I think that I am free to relate. He said, "When I go back, there is no way that I can put in an adverse report about the people in SCRO." I said, "You can't on the basis of that," and we parted company.

Mr Gilchrist showed me some other material—some of Mr Zeelenberg's and some from the Durham training school—but there was no time to absorb it all, and I was not allowed a copy of anything. A theme in this case seems to have been that people are not allowed copies of anything, but that is by the by. Similarly, in relation to the impression on the bottom right-hand corner of chart C, on a BBC "Panorama" programme a colleague of mine took an impression of Shirley's left thumb and said, "That characteristic there is not on your thumb, so it cannot be yours." Lovely. The characteristic that he was pointing at, which we have highlighted and have had enlarged, is in fact there. It is the same one as point 20 on Mr Zeelenberg's chart, which is right at the back of the bundle of charts that members have. That points to a characteristic coming in from that end and highlights one coming in from this way, and says that both are the same. That is an impossibility. It is the most important characteristic on the mark. This might sound a bit flamboyant, but we have called it the Rosetta characteristic, after the Rosetta stone, which was discovered in 1799 in Egypt. It is the one point on the image that allows you to measure the angle of movement or distortion, so all the points at the top are there. It is not fiction: it is fact.

11:00

I turn to chart D. For a fingerprint identification to be positive—or as positive as one can be—you need eight similar characteristics in agreement, in detail, in coincident sequence and so on. For a case in England, it is advised that, with fewer than eight characteristics, the prosecution should not seek to adduce that evidence. With eight plus, it is okay, providing that certain guidelines are met in relation to the experience of the witness, how many experts were in agreement, whether there were any dissimilarities and so on. On the image that you can see here, all that I have done is highlight two of my charts and two charts from Mr John Berry, who I believe is here somewhere and with whom I have worked on this case over the years. Between us, we have marked 32 different ridge characteristics in agreement. You only need eight, so we have four times the minimum number that we require. It is as positive as one can get.

Mr Berry has used the internet image of the crime scene mark, but he has also used Shirley's left thumb print from the *Daily Mail*—one of the best ones he could get. The newspaper's prints are very clear indeed. I do not know where it got them from, but that is by the by. The chart on the bottom left-hand side shows you in greater detail than on the previous chart the characteristics at the top, and there are eight good characteristics in agreement there. The images all show the characteristics coming in there, not at midnight or at 12 o'clock, but at around 2 o'clock.

Chart E is on much the same theme, but it probably shows you the shape and design of a plain impression with the various gaps on the right-hand side and the left-hand side, which on the rolled impression is the full area of ridge detail. It is all there—the whole lot—and the characteristics that should be there, which should marry up with those on the plain impression are, of course, not there, but they are in that area, and you find them all in that box. That shows the image between a plain impression and a rolled impression. Believe me, in serious crimes, when police forces take an individual's fingerprints, they take fully rolled impressions three or four times to ensure that they get all the detail, not only at the fingertip but all down the sides and on the flanges, the palms, the centre, the carpal delta area, which is at the base of the palm, down the edges and everywhere—you name it. They probably take about 10 sets in total, to make sure that they have every aspect of ridge detail that they may need for comparison purposes.

What we have here is simply a small part, just taking one rolled impression. Nowhere in the correspondence and the charts that I have seen from anybody else have I seen a rolled impression. They are all plain impressions and are

shown down at the bottom of this chart. When they show fingerprints being taken on television, they just plonk the thumbs and fingers down and go like that—and that is all they get. However, for classification purposes, as we used to do by the old manual method—it is all computerised now—you have to make a ridge count for all the ridge structure between the centre core, the deltas and what have you, and you need a fully rolled impression for that.

Chart F, again, is on the same theme and shows the same two images, with the characteristics marked up again. It is probably the same as the previous chart that you saw. I just want to highlight the fact that, as the chart says:

“Because of the movement and distortion which occurred when the mark was left on the door standard, these characteristics can only be found on the rolled impression. They may be seen at 2 o’clock.”

The same situation arises on what I have called “Chart G: the Aberdeen findings”—if I am allowed to refer to the Aberdeen findings. Three gentlemen in the Aberdeen fingerprint bureau used the thumb impressions on chart G. Again, none is a rolled impression, so they arrive at the wrong conclusion. Their findings are:

“There are a significant number of ridge characteristics which do not appear in coincident sequence.”

That is quite correct; they do not—they are looking at the wrong fingerprint, so they will not see them. Therefore, they will not arrive at the right conclusion; they cannot, because the characteristics are not there.

Chart H is marked “Q12” and shows a mark on the Marks and Spencer tin that is the right forefinger of the deceased, Marion Ross. There has been some dispute about this as well, apparently, but there is little doubt. Twenty characteristics are marked on the chart, which is more than is required. It is a poor mark, in a sense—well, it is not a poor mark; it is a mark that is surrounded by other fragmentary detail. It is a tin that an old lady used in her house for knick-knacks, buttons, needles—you name it. It is that kind of tin, apparently. Money was put in it as well, I believe. The tin has probably been handled persistently over the years. I do not know how long she had it. That is the reason why there is all this ridge detail—fragmentary detail—surrounding the mark. However, the mark is certainly clear enough to mark out 20 characteristics, which are in agreement with the right forefinger of the deceased, Marion Ross. There is no doubt about them at all.

Chart I has caused a bit of controversy, I believe. It is a mark on a £10 banknote that figured early on in the case. The mark was identified by the SCRO fingerprint department. It then went to

two Danish experts, who said, “No. It’s not identical.” They referred to there being four details that could not be seen. Their report stated:

“On the photograph marked QD2, at least four clear details were seen. These details cannot be found on David Asbury’s right little finger.”

I do not know what four details they were referring to—I have no idea—but certainly the mark is identical. It is a very clear mark—believe me, it is the kind of mark that we give to a trainee, following their initial course.

I understand that, within the past 12 months, the two Danish experts have apologised. Well, I do not know whether they apologised, but they certainly come back and said, “Sorry. We made a mistake. It is identical.” However, I understand that, on the strength of their initial findings, four people were suspended and have remained suspended for the past four years. Now, the Danish experts say, “Oh, sorry. We got it wrong.” That beggars belief. Still—there we go.

The final mark has caused no real controversy at all. It is a mark on a gift tag that belongs to Mr Asbury—it is his right forefinger. This mark has not been commented on at all, really. It is just simply another identification.

Finally, I find it difficult to respond to Mr Zeelenberg’s presentation. I was intrigued by it, but I did not fully understand it. I am not being disrespectful to him. Whether it is because we went to different establishments on our training course, which we obviously did, I do not know, but certainly I just could not work out what he was getting at. All the time, he has never used a rolled impression. I do not know where he got the one that he used, but he has certainly not used a rolled impression. As can be seen on chart K, his mark shows him all these characteristics at the top, which he referred to on more than one occasion and said that they were not there—and they are there, of course.

The thing that intrigued me most is when he talked about characteristic number 20—the Rosetta characteristic—as the most important characteristic on the mark, but Mr Zeelenberg has it marked on the other side as 23. He has it marked on one side as 20 and on the other side as 23. Well, that obviously cannot be right. We cannot mark the same characteristic with two different numbers.

Similarly, Mr Zeelenberg has point 20 coming in from the left and finishing on the right, but on this side, it comes in from the opposite direction. How can the same characteristic come in from opposite sides of the mark? It cannot. I am not sure what he is trying to mark up and show, but one does not mark up fingerprint charts like that—that was not the way that I have been taught, anyway. I have

never heard of that approach being taken in court. One just does not do that. To be frank, I did not understand some of the things that he referred to or the methodology that he adopted. If you did, so be it—you are better than I am.

I have some questions for Mr Zeelenberg. Can he explain why point 19 on the crime scene mark Y7 indicates a continuous ridge that ends further to the right—where he has marked point 20—and how that can be related to points 19 and 20 on Shirley McKie's left thumb impression, which have a totally different ridge structure and point in the opposite direction? Why is point 20 on the crime scene mark Y7 marked as point 23 on Shirley McKie's left thumb impression? A host of questions could be asked. I do not know what that is supposed to prove. To me, it does not prove anything. I am not bragging, because I am getting old, but I have been doing fingerprint work for 49 years and I do not understand what Mr Zeelenberg is getting at.

You can have all the marks and all the charts checked by whoever you wish. I have had them checked by countless people and they are all in agreement, although that might not carry much weight—I do not know. Mr Zeelenberg homed in on another point when he scrolled down on the screen to show a list of people floating around somewhere on the internet who have signed their names to say, "This mark is not identical to Shirley's." We wondered where all those people got the material to do their comparison work and come up with the conclusion that the prints are not identical, so we e-mailed a well-known expert in America to ask him. I will not name names, but we asked him where he got his material from and how long he spent doing his comparison work before he arrived at his conclusion. He replied:

"Perhaps I spoke too quickly. I was relying completely on the background, integrity and experience of Pat Wertheim, and as in the Scottish affair, both he and David Grieve. Unfortunately I did not make an actual comparison of the mark since I could only view them on the Internet, which was, to say the least, 'unreadable'. I merely accepted his 'word' and the word of Bayle."

The last line is:

"Sorry. Perhaps I should have kept my big mouth shut."

That e-mail is from somebody who signed up on the internet to say that the marks are not identical.

When we look at the list of signatories, it appears that the whole of New Zealand has signed up to it. There are not many experts in New Zealand, but all their names are there. There is a gentleman from New Zealand working in a midlands fingerprint bureau. He has the same surname as me, but with one "n". I met him because I went down to look at one of his cases in an independent capacity. I was introduced to him, obviously, and I said, "Oh yes, I was on that case.

I see that you are one of the people who signed their name to say the prints are not identical." With that—he was quite a big chap, actually—his whole demeanour changed. I thought that he was going to hit me. He said, "We did no such thing." I said, "Well, I beg your pardon, but your name is up there in lights." He said, "We categorically told the person who made the inquiry that we would not give a firm opinion until we had the proper material to do a proper comparison." Yet all their names are there.

I wonder how many more people are in the same position. If we e-mailed all of them, invited them to Scotland and offered to pay their air fares and hotel bills, how many of them would stand up and prove what they are supposedly saying? I suspect that there would be very few indeed, if any.

I have lived through six years of this. I have taken quite a bit of flak—not that I am bothered about that, because I have had it all before. I was a lone voice in an IRA case in London when I made a decision, and that took eight years to come to fruition. People said, "Peter Swann doesn't know what he's talking about." However, when I went up to the appeal court and worked for eight days solid on a fingerprint case with a gentleman called Michael Mansfield, whose name you may know, our evidence was accepted and the three learned judges said that we were right and the others were wrong.

11:15

One should not go into such cases in a half-hearted manner—I certainly do not. In this case, everything has been checked, double-checked and triple-checked by experts of long standing. I have often asked them to tell me if there is something wrong with the evidence, as that does not bother me, but as yet no one has said, "Hang on, this is not right." In my opinion, all the expressions—false identifications, erroneous identifications and misidentifications—with which I have lived for six years and that have been directed at a certain fingerprint department are absolutely untrue. The American complete latent print examination internet website—CLPEX—which is a good and informative site, has used the horrible expression "the Scotch botch", but the Scotch, least of all the committee, have not botched anything. The expression is directed at one particular department.

Another expression, which I probably should not mention and which has, I believe, been conjured up by ministers, is "an honest mistake". Who has made the mistake? I will vouch for the fact that the fingerprint department in question has not made it, but someone obviously has. I rest my case.

The Convener: I will begin by putting the same question to you that I put to Mr Zeelenberg. Pat Wertheim stated that it is possible in this case to rule out the identification in 90 seconds. In your experience, is that possible?

Peter Swann: If the mark had been absolutely clear and we could see something like a centre core with a single rod or ridge, and if there was no such rod or ridge in the mark with which it was being compared, the identification could have been ruled out immediately. The mark that we are discussing is not a mark of that type. It is a complex mark, with distortion and movement, and it is not very clear. In my opinion, an identification could not be ruled out in 90 seconds. On the BBC "Panorama" programme, Pat Wertheim came down from 90 seconds to 60 seconds. In my view, it is impossible to do that if you want to make a correct identification. That is my opinion—other people may be far better at identifying fingerprints.

The Convener: Mr Zeelenberg talked a great deal about points on the mark that should exclude an identification—dissimilarities, as opposed to similarities, between the latent and the print. In your view, how important is it to establish the points of dissimilarity in a print?

Peter Swann: It is very important. However, in my opinion, there are no points of dissimilarity in the case of this mark. I was challenged once by a lady who produces "Panorama" programmes. I do not know whether she is here, but she asked how I could be right when the eminent experts who appeared on her programme said repeatedly that I was wrong and that it was not Shirley McKie's mark. I said that I knew that I had proved my findings by producing a chart with the characteristics marked and asked why she did not get the eminent experts to produce charts pointing out all the characteristics of disagreement or dissimilarity. They did not do that, because they could not.

The Convener: Did you appear on the "Panorama" programme?

Peter Swann: No.

The Convener: Did you speak to the producers?

Peter Swann: I received a telephone call from a lady called Shelley Jofre. Between you and me, it was a set-up.

The Convener: Am I correct in saying that your view was not included in the programme?

Peter Swann: It never has been. I wanted to contribute to the most recent programme. It was arranged that I should go to the BBC studios in Leeds for a five-minute slot to explain something that I have talked about today, so that it would not be edited. The producers would not have that.

Apparently, they must have the overriding right to edit anything on the programme.

The Convener: So they offered you a five-minute slot.

Peter Swann: No, they refused to allow that. We wanted an unedited five-minute slot, but that request was refused.

David Russell: Mr Swann was contacted by Shelley Jofre and written to by Dorothy Parker in 2000. They made it clear that they had in their possession his expert fingerprint report on the McKie case. They produced four successive documentaries, including "Panorama" and "Frontline Scotland", but in not one single programme did they say that Peter Swann made the identification or, most important, that he was Shirley McKie's fingerprint expert—it was excluded every time.

Stewart Stevenson: I point to two charts that you used in your presentation—charts C and F. It might be useful if you had them to hand. I have a couple of factual questions before I ask my real question. A set of 16 points is identified on print 1 on chart C, and on the right-hand side, 16 points are identified on the print from the *Daily Mail*. Was that mark-up done by you?

Peter Swann: Yes.

Stewart Stevenson: That is fine—I am just making sure that I have the facts correct before I ask my question. On chart F, I am looking in particular at Y7, which I think is broadly the same as on chart C on the left-hand page. Is that correct?

Peter Swann: That is correct.

Stewart Stevenson: I am looking at the print to the right of that, which is described as the left thumbprint of Shirley McKie—a rolled impression. Eight points are marked up on that print. That was also done by you?

Peter Swann: Yes.

Stewart Stevenson: That is fine. I invite you to compare the print on the right-hand side of chart F, which is the rolled impression of Shirley McKie, with the print on the right-hand side of chart C, which is the one from the *Daily Mail* and on which you marked up 16 points.

I am a little puzzled because what I see on chart C from the *Daily Mail* appears to me as an amateur—you will have to explain this to me—to be a mark-up of points that are clustered round a very distinct part of the print where there is a sweep round, if I can describe it non-technically in that way, although I think that you can see my point—

Peter Swann: It is above the centre core of a loop pattern.

Stewart Stevenson: Thank you—that is the technical term. So a set of points around that were marked up and compared with the Shirley McKie print on chart C.

When I look at chart F, I see that same point on the rolled print, more or less in the centre of the image, but the marked-up points are all distantly to the right-hand side. I am, of course, not an expert who is able to count the number of ridges between that marked-up area and that point, but it seems substantially more distant. Although it has been marked on to essentially the same impression or latent print, it has actually been taken from an entirely different part of Shirley McKie's rolled impression, in this case and in the case of the chart C print from the *Daily Mail*.

That is an apparent discrepancy that I identify as an amateur. Can you explain to me whether what I appear to be seeing is wrong and why it might be wrong, or why I am seeing that discrepancy?

Peter Swann: Why are you calling it a discrepancy?

Stewart Stevenson: I do not use "discrepancy" in a technical sense; I know that fingerprint experts do. It appears to me that the mark-up on chart C from the *Daily Mail* is from the central print and is compared to a point on the latent. What would you say is the closest point on chart C to point 7 on chart F, for example?

Peter Swann: It is not marked, but it is somewhere near the top corner. It is a totally different impression although it is from the same person.

Stewart Stevenson: It is the same latent.

Peter Swann: It is from the same person.

Stewart Stevenson: Yes, I accept that.

Peter Swann: It is a different impression.

Stewart Stevenson: But it is from a totally different part of the print, which is a partial print.

Peter Swann: I am having to use this impression here, because these characteristics of the tip are not on the plain impression. If they were all on the plain impression, I would not need to use the rolled impression. That was the object of the exercise. The characteristics at the tip of the thumb do not appear on plain impressions. They are round at 2 o'clock on the rolled impression. This will appear to be much bigger, because it is bigger.

Stewart Stevenson: How many ridges do you think there are between points 2 and 6 on chart F?

Peter Swann: There are three intervening.

Mrs Mulligan: When did you first meet Shirley McKie?

Peter Swann: I cannot remember the date, but it was shortly after I was spoken to by Angela McCracken, who asked me whether I was prepared to work on the case. That was probably late in 1997, or in 1998. It was in May 1998—I am sorry. I was asked whether Mr McKie and his daughter could come down and see me. I was told the topics for discussion in advance. If you want to know them, I can tell you.

Mrs Mulligan: Yes.

Peter Swann: The first of the three topics was whether mix-ups can occur with exhibits. My verbal response to that, over the telephone, was yes, that happened. The second topic was whether fingerprints can be transplanted and/or forged. I said that, although I had never seen a successfully transplanted or forged fingerprint, I could not say, hand on heart, that it could never be done. With technology and what have you, it probably could be done by somebody if they set their stall out. I would not know, however. The third topic was whether there can be wrong identifications.

When the McKies came down to Wakefield and visited me, we laboured at length over the first two topics, in particular on the second question, about transplanting or forging, but we also—*[Interruption.]*

Mrs Mulligan: I am sorry to have to stop you for a minute, Mr Swann, but I cannot hear you over the chatter that is going on to the side.

Peter Swann: You cannot hear?

Mrs Mulligan: Carry on.

Stewart Stevenson: Sorry.

Mrs Mulligan: I was being distracted.

Peter Swann: I am sorry.

Mrs Mulligan: No, it was not you—please carry on.

Peter Swann: The first topic was discussed as fully as possible. My response was that I had anticipated that I would see all the exhibits in the case in Scotland. I never did, but that is by the by. I said that, once I had seen all the exhibits, it should become apparent whether there had been a mix-up, whether it was to do with, for example, a mix-up of labels or the mark having been taken from somewhere other than the door standard.

The second topic, as I said, was transplant and forging. That is a very complicated subject, in which I am not an expert. I am an expert on genuine fingerprints but certainly not on forged ones. I do not know that I have ever seen a forged fingerprint, to be honest. If there is anybody in the public gallery who has, so be it. I have seen one in mock-up but not in real life.

The McKies never pursued the third topic. They did not both say this to me in one voice, but it was said to me that both of them had the highest regard for SCRO fingerprints. As they were both police officers in the Strathclyde force, they had probably been the recipients of fingerprint identifications in the course of their work, which would have helped them. That third matter was not pursued at all. After they went, things moved on.

Mrs Mulligan: Let me be clear. Did you meet Ms McKie before you saw the mark and the tenprint, or was it after that?

Peter Swann: Before I saw the mark on the—

Mrs Mulligan: The mark and her tenprints, that is, before you compared the mark. Was it before or after?

Peter Swann: I saw both the McKies before I had seen anything technical.

Mrs Mulligan: By the time you saw the mark, were you fully aware of the difficulties of the case, and of the fact that an identification had been made and that there was opposition that questioned whether it could have been Shirley McKie's fingerprint?

Peter Swann: No. I got to know about that after the court case. I was not aware of it before that.

Mrs Mulligan: Which court case?

11:30

Peter Swann: The first one—the perjury one. Following the meeting with Mr McKie and his daughter, I had a visit from a Queen's counsel. Following that, I went to see the items in the High Court building. Following that, I saw Mr Donald Findlay QC, I informed him of my findings and I submitted my two reports—end of story. I had worked for so long and it was obvious that my findings were not going to assist. I appreciated that. As far as I was concerned, that was me finished with the case.

The next thing was that I received a rather unusual telephone call from a gentleman who announced himself as working in the Procurator Fiscal Service in Glasgow. He did not give his name, but he offered to give the telephone number so that I could ring back to check whether it was indeed the Procurator Fiscal Service. He then said, "I'd like to ask you some questions and I simply want you to answer yes or no. Nothing else, just yes or no." I said, "Fine." He asked, "Have you been instructed in the case?" I said, "Yes." "Have you seen the exhibits?" "Yes." "Have you formed an opinion?" "Yes." "Have you put a report in?" "Yes." "Thank you very much, Mr Swann." Then he put the phone down and that was that.

I did not know when the court case was being held. I had no idea—I was not told and I was not called. The next thing I heard was that the identification had been challenged in court.

Mrs Mulligan: How did you feel when you realised that you would not be able to assist with the case that was being built for Ms McKie?

Peter Swann: Well, that sort of thing happens all the time, so I did not have any feelings about it at all. I have been instructed in about 2,500 cases and in easily 90-plus per cent of them I was simply confirming what the prosecution had already produced. The prosecution, generally speaking, thinks that the department is 99.999 per cent correct. On odd occasions, the department makes mistakes—I admit that—although not in this case. However, my reports—apart from when specific questions are posed by barristers who want to know whether a print could have been planted, how old it was, and so on—are generally just to confirm an identification that has already been made.

I have tried to say on many occasions that my only concern with this case had nothing to do with the McKie family, who are not my concern or anybody else's. All I was concerned about was that a thumbprint belonged to so-and-so, and that my expertise had been challenged. I simply tried to defend my view; that is all.

The Convener: Did the phone call from the Procurator Fiscal Service arrive before the perjury trial or after it?

Peter Swann: Before.

The Convener: And after you prepared your report for the McKie's QC, Mr Findlay, were your services dispensed with?

Peter Swann: Yes. I never heard a thing after that.

Mr McFee: What you say means that the Crown knew of your existence before the perjury trial.

Peter Swann: Yes.

Mr McFee: I just wanted to confirm that.

I want to raise a point that I have raised on a number of occasions, but first let me ask you this: did you see the tenprints? Were they provided to you by the Crown?

Peter Swann: Yes.

Mr McFee: Were they rolled impressions?

Peter Swann: Yes. The right and left hand were rolled impressions.

Mr McFee: Was the left thumb impression a rolled impression?

Peter Swann: Yes.

Mr McFee: I listened to the evidence of the four SCRO experts last week and to your—

Peter Swann: I could qualify the answer I just gave you if you want me to.

Mr McFee: Please do.

Peter Swann: It is what we call Sod's law—the impression that you want on a fingerprint form is usually the worst. As I recall, the left thumb impression had not been very well taken on that particular form.

Mr McFee: It was not well taken?

Peter Swann: As far as I can remember—although I saw it only once and that was X years ago.

Mr McFee: Last week, Charles Stewart said:

"I have never had a fingerprint form that has been taken high enough to the top of thumb to allow me to fully compare the top of the thumb to see whether it is continuous with the lower part. It could be continuous"

etc., etc. He went on to say:

"I cannot say definitely whether that happened, because I was unable to compare the top of the impression against the fingerprint form".—[*Official Report, Justice 1 Committee*, 30 May 2006; c 3243.]

Where did you get the impression—which Mr Stewart does not seem to have had—to allow you to compare the top of the print?

Peter Swann: It came via a solicitor called Peter Watson, acting on behalf of Shirley McKie. He sent me a piece of A4 white foolscap. On it was written, in red ink, "Fingerprints of Shirley McKie". There were four impressions taken in blue ink.

Mr McFee: How important is it to take an impression properly?

Peter Swann: It is vital.

Mr McFee: Who took that impression?

Peter Swann: I have no idea, but it was somebody who knew what they were doing.

Mr McFee: Somebody who knew what they were doing?

Peter Swann: They did a damn good job, put it that way. It was a beautiful impression.

Mr McFee: Was it Ms McKie's solicitor?

Peter Swann: With all due respect, I doubt it, but I do not know.

Mr McFee: So, you do not know who took the fingerprint.

Peter Swann: No. It is just a simple piece of paper with no signature on it. It simply says that it is Shirley McKie's left-hand thumbprint.

Mr McFee: Right, so we cannot establish who took the print.

Peter Swann: No.

Mr McFee: When did you make your assessment that the top part of the thumbprint had been twisted by 60° or 66°?

Peter Swann: When I got, finally, an impression of the crime scene mark.

Mr McFee: Was that before or after the perjury trial?

Peter Swann: After.

Mr McFee: So, clearly, the points that you make now could not have been included in the report that you made back at that time.

Peter Swann: No, but when you get X number of characteristics in agreement, you know that the mark is identical. Earlier today, I heard two or three of the eminent experts who are sitting in the public gallery say that one characteristic dissimilarity means that a print is not identical. That is totally untrue. I assume that they will have read a wonderful article in a wonderful American book in which a cross-examination is set out in which the fingerprint experts found 12 characteristics in agreement and three in disagreement. I had 21 in agreement on the chart that I prepared. I accept that five or six at the top were in disagreement. I knew that it was an identification irrespective of what I saw at the top because of what I saw lower down. I knew that there would be a reason for what I saw at the top, but I did not know what it was at the time.

Mr McFee: How many points of disagreement did you end up with?

Peter Swann: None at the end.

Mr McFee: Absolutely none?

Peter Swann: No, none at all.

Margaret Mitchell: Good morning, Mr Swann. Thank you for your comprehensive presentation. As you have heard this morning, a lot has been made of mindset. You were originally engaged by the McKies. At that original meeting, various possibilities were looked at including that of forgery, transplant or the print being someone else's print. Is it fair to say that, when you originally looked at Y7, you had no malice towards Shirley McKie? Is it fair to say that you had an open mind and may even have been predisposed towards looking at the possibility that the print was not her print?

Peter Swann: I go into every case the same. I have been on the new day course at the University of Leeds under the Lord Woolf reforms and so on. An independent expert is straight down the middle: he reports to and is answerable to the person on the bench and not to the defence or the prosecution, albeit that he also reports to them.

If I may, I will share my favourite expression. Working independently, as opposed to working for the police service or the Home Office, it is so easy to offend people by telling the truth. That is happening more and more. You do something for somebody and they want you to say something else. You cannot; you simply tell them what the facts tell you. All that I am dealing with here are the facts that are on people's fingers before they are born. We are stuck with them for the whole of our lives and they are the last thing on our bodies to decompose after death. Fingerprints are facts; they do not tell lies. I am sorry about what those other people are saying, but that is my opinion.

Margaret Mitchell: That is an important point. We are looking very much at the independence of the experts who are making the judgments. The fact is that you were employed by the McKies and yet subsequently identified the fingerprint as Shirley McKie's print. It seems to me that the truth is of the utmost importance to you; it was at the forefront of your presentation, as opposed to partisan politics. It is important to put that on the record.

Peter Swann: I have no partisan politics at all.

Margaret Mitchell: You mentioned that you had a meeting with the regional procurator fiscal, Mr Gilchrist.

Peter Swann: Yes.

Margaret Mitchell: You looked at the Wertheim mark at the time.

Peter Swann: That is what he said it was.

Margaret Mitchell: You went over it with him and he accepted your findings as to why you identified the mark as Shirley McKie's print. When was the meeting?

Peter Swann: June 2001 on a Tuesday. It was the second day of the centenary conference, which was held in London. I am not quite sure of the date, but it was about 16 June. It was a Tuesday in June 2001.

Margaret Mitchell: Would that be after the perjury trial?

Peter Swann: Yes, it was.

Margaret Mitchell: Why was the fiscal coming back to you at that point in time, as opposed to before the trial?

Peter Swann: I have no idea. I got a call from him and then a letter asking whether we could meet somewhere. I told him that I was in London and he said, "I will come down to London." We met at the Academy of Experts offices. I arranged a room and we had a two to two-and-a-half-hour meeting. He showed me the exhibits, the Durham training school's report and some work from Mr

Zeelenberg. The main thrust of the meeting was around the exhibit from Mr Wertheim.

Margaret Mitchell: Did you hear from the fiscal's office again?

Peter Swann: No.

Mike Pringle: I am no expert on fingerprints, as you can imagine. I turn to chart C and chart D because I want some clarification. At the bottom left-hand side of chart C, it says "COURT" and there are effectively three fingerprints on the page. On the print on the left, there are eight points of identification and there are also eight on the print on the other side. Chart D also shows eight points of identification on both fingerprints. Are both those charts the same?

Peter Swann: They are the same.

Mike Pringle: So I only need to refer to one of the charts.

Peter Swann: Yes.

Mike Pringle: Right. My question will probably show my ignorance of the situation. If we look at points 1 and 8 on the left-hand fingerprint on chart D, and then at points 1 and 8 on the print on the other side, there is obviously a substantial difference in the distance between point 1 and point 8. There is also a substantial difference between points 6 and 7 on the left-hand and right-hand charts. Why is there that difference?

Peter Swann: It is caused by the pressure that has been applied on the mark at the crime scene, and there could have been a twisting action that might possibly have had a bearing. The other print has been taken under ideal conditions. Pressure has broadened the ridges on the crime scene mark. The more you press down, the more you will flatten out the ridge structure and distances between ridges will appear to be wider.

Mike Pringle: I can see four different ridges between points 1 and 8 on the right-hand side print on chart D. Is that right?

Peter Swann: Yes.

Mike Pringle: There are four ridges between the two points on the right-hand print, but it looks as if there are about six or seven on the left-hand print.

Peter Swann: It does, I agree, but it is caused by the pressure that was applied when the mark was laid down.

Mike Pringle: Right. I was just curious about that.

I have one other question. Last week, Bruce McFee asked Fiona McBride about the difference of opinion. He said to her:

"How do you explain that difference of opinion? We have read your credentials—you and Mr Swann have years of

experience. One of you says that there is no excuse for a competent expert not to use the top part of the print; the other one says that only somebody who was not a competent expert would use it.”—[*Official Report, Justice 1 Committee*, 30 May 2006; c 3245.]

If you looked at a mark, would you make a comparison if the pattern was different?

Peter Swann: I am sorry, but I do not quite understand that.

Mike Pringle: Bruce McFee asked why one expert would use the top of the print and another would not use it. Apparently you have used the top of the print but Fiona McBride said that she would not use it.

Peter Swann: I do not know why she said that she would not use it. I do not think that the SCRO has as good a rolled impression of the left thumb showing the characteristics at the top as the one that Shirley McKie’s advisers sent down to me. The one that I have is far superior to anything the SCRO has, so it probably could not use the top part of the print. I do not know why she said that, to be honest, but the SCRO could not make the same comparison that I made because it does not have the rolled impression; it is not my place to lend it to the SCRO, so it has not prepared a chart of that nature.

The Convener: There are several differences between your analysis and the previous one. One of them is that it is your position that the print is a left thumbprint, whereas other experts say that it is a right thumbprint. In scientific terms, how big a difference is that? As a layperson, that seems to be a big difference.

11:45

Peter Swann: It is a massive difference. I do not know how anyone could say that the print is a right thumbprint. I cannot account for that. A thumbprint has fault ridges at the top. On a left thumb they tend to flow to the left and on a right thumb they tend to flow to the right. Because of the distortion on the print that we are considering, the fault ridges appear to flow to the right, but we cannot see the whole picture—the part round the corner is missing. It is not possible to see the part of the fingerprint that was not placed on the door standard. If the whole print had been placed on the door standard, the picture portrayed would have been totally different.

I cannot understand why other experts have said that the print is a right thumbprint. They must all have been alerted to the fact that the print is distorted. They all said that they noted a cluster of characteristics in the centre of the print and identified that, above that, a specific characteristic was absent. However, that characteristic is present to the right. Those experts expected a

particular characteristic to appear in a particular place. Their attitude is that because that characteristic does not appear where it appears on one print, we should forget it, but that is not how things work. You must look at the whole print, especially when it is distorted, which is the case with the print in question. If the other experts did not realise that the print was distorted, I appreciate that they would not have looked elsewhere. I do not know what was in their minds. I cannot give any other explanation for their actions.

The Convener: I will allow a few questions, but they must be brief because we must move on to the full panel soon.

Stewart Stevenson: I want to follow up on what Mike Pringle said. It was mentioned that there were two ridges between points 6 and 7 on chart D.

Peter Swann: If you count from point 6 to point 7, there are five ridges, counting both ends.

Stewart Stevenson: Am I looking at the wrong chart D?

Peter Swann: The ridges are closer together on the rolled impression, but they are wider apart—

Stewart Stevenson: I want to be absolutely clear about which chart we are looking at so that there is no ambiguity. We are looking at the print that is second from the left at the bottom of chart D, which is a rolled impression from a tenprint. How many ridges do you assert that there are between points 6 and 7?

Peter Swann: Three intervening ridges are visible, but when I count, I count both ends, so there are five ridges altogether.

Stewart Stevenson: Let us turn to chart C, which is on the previous page. It is the right-hand chart and is entitled “COURT”. Are points 6 and 7 on that chart the same as points 6 and 7 on chart D?

Peter Swann: No—I have marked them differently.

Stewart Stevenson: Where is what is marked as point 7 on chart D on chart C?

Peter Swann: Points 6 and 7 on chart D are points 7 and 8 on chart C. I have marked up the points differently, but that does not make any difference.

Stewart Stevenson: That is fine; I am perfectly prepared to accept that.

Peter Swann: I am sorry—that was probably a bit confusing.

Stewart Stevenson: You assert that there is the same number of lines between points 7 and 8 on chart C.

Peter Swann: Absolutely.

The Convener: Des McNulty can ask some very brief questions.

Des McNulty: If I have got it right, you are saying that you have the best rolled prints—apart from the original rolled prints that the fingerprint experts would have used—because Shirley McKie's solicitor sent them to you. Is that correct?

Peter Swann: Yes.

Des McNulty: Is it the case that the mark that you saw on the post was undamaged and that the photograph that has been used on the internet is a photograph of a mark that has been damaged?

Peter Swann: Yes. The internet photograph has striations on it that run diagonally from the bottom left to halfway up the right-hand side.

Des McNulty: Will you explain what striations are and give us an indication of how you think that they might have been caused?

Peter Swann: If someone repowdered the mark, the striation might be a brush mark that was made during that process. Alternatively, the material of someone's clothing might have caught it and just slightly damaged it.

Des McNulty: So, somebody who inspected the mark after you might have put too much powder on or brushed it or damaged it in some other way.

Peter Swann: I am only surmising, because I do not know. Certainly, however, the striation appeared after I saw it. It could have been caused by a brush or by a light touch of someone's clothing.

Des McNulty: So, you saw the original but the picture that has been put up on the internet shows a damaged mark and is an inadequate representation of the thumb print because it was a plain print rather than a rolled one.

Peter Swann: Yes.

Des McNulty: I understand that there has been a series of attempts to prevent you from giving information about this case through proceedings against you and the intervention of professional bodies. Can you say more about that?

Peter Swann: Some years ago, out of the blue, I got a letter from the Fingerprint Society that criticised me for the manner in which I had given evidence in the trial of Shirley McKie and for asserting that the mark was hers. I wrote back and said, "Well, you have got it wrong, because I did not give evidence in the case of Shirley McKie. However, yes, if asked, I would assert that the mark was hers." I do not know who reported me to the society, but that matter was quickly resolved.

The next thing that happened was my encounter with the Council for the Registration of Forensic

Practitioners, which charged me with incompetency, for making the wrong identification, and with breach of confidentiality, on the basis—I presume—that I stood my ground.

Des McNulty: The complaints that were made against you were made by Iain and Shirley McKie and were made in such a way as to try to prevent you from disclosing your identification. Is that your position?

Peter Swann: I can only presume that that is what happened.

Alex Neil: Your first comparison was with a print that was supplied by the *Daily Mail*. How did the *Daily Mail* supply you with that picture?

Peter Swann: It did not. I just bought the *Daily Mail* and saw it there.

Alex Neil: So the picture that you used came out of a newspaper? Would that be a normal and professional way in which to compare a print?

Peter Swann: It was a good mark and a good impression. You use anything that you can get.

Alex Neil: You have just told us that, when a fingerprint process takes place, at least three prints are taken of each finger for comparison. Presumably, the *Daily Mail* had only one print.

Peter Swann: The *Daily Mail* picture was not of the crime scene mark; it was simply a print of Shirley McKie's thumb.

Alex Neil: So you accepted that the *Daily Mail* was right when it said that the print was Shirley McKie's? You did not check that?

Peter Swann: I knew that it was hers. I had seen it before in the High Court of Justiciary building in Glasgow.

Alex Neil: But you took it from the newspaper.

Peter Swann: Yes, but I knew that it was hers as soon as I saw it.

Alex Neil: Are you sure that it was the *Daily Mail* and not *The Dandy*?

David Russell: Do you have eyes, Mr Neil?

Alex Neil: I am sorry, but I do not think that it is your turn to speak.

Most people—including the Aberdeen bureau and the Edinburgh bureau—accept that the Glasgow SCRO bureau made a misidentification. The Glasgow bureau has made a number of other mistakes—allegedly—and there are no allegations of mistakes or misidentifications by any of the other bureaus in Scotland. Do you have any opinion on that?

Peter Swann: I have never seen anything to prove the assertions of the Edinburgh bureau. I

have never seen any charts that it has produced that show all the points of dissimilarity, which it must have to prove non-identity. We are proving identity by characteristics in agreement, so let it produce its charts showing the characteristics in disagreement. If it does so, we can get round a table and discuss the matter. That is what I told the "Panorama" producer, but nothing ever happened.

I have a chart here regarding the Aberdeen findings. The Aberdeen bureau made a mistake, simply and solely. Unless it has some other material that I have not seen, I would say that it did not use the right impressions. It used simply the plain impression that was supplied by Pat Wertheim—you can see the mark that was used. It came to the conclusion that the marks were not identical because the characteristics—

Alex Neil: I think that you are wrong. My understanding is that the Aberdeen bureau looked at an original. We can clarify that.

This is my final point. There have now been 20 reports by fingerprint experts and others, all of which concluded that there was a misidentification. The vast bulk of the reports were commissioned by the Scottish Executive or the Crown Office. There was a report by the deputy chief constable of Tayside police, who not only accepted that there had been a misidentification but said that there had been criminality and a cover-up, and a report by John MacLeod, who is a highly respected fingerprint expert. Have you read those 20 reports? Obviously you cannot have seen the MacLeod report, which was suppressed by the Scottish Executive, but have you read the Mackay report?

Peter Swann: Yes. I wondered whether Deputy Chief Constable Mackay had looked at the comparison chart that I provided him with for his report. I presume that he thought it was of no value and dispensed with it.

Alex Neil: Deputy Chief Constable Mackay is a very experienced officer.

Peter Swann: He is not a fingerprint expert, is he?

Alex Neil: He obviously employed fingerprint experts.

Peter Swann: That is a fair comment. However, I provided him with a chart—as I provided a chart today—which was obviously not accepted. That is his business, but it is there in black and white and you cannot alter it.

Alex Neil: So everyone is out of step bar you and the SCRO officers.

The Convener: That is enough, Alex; you may not comment on every response.

I will take a brief question from Ken Macintosh, followed by two points of clarification from members. We will then conclude this part of the evidence taking.

Mr Macintosh: Mr Swann, do you detect a similarity between what has happened to you for standing your ground and honestly telling people what you think the mark is and what happened to the SCRO officers? Can a comparison be made between the McKie campaign against the SCRO and the McKie campaign against you?

Peter Swann: The campaign has tried to crush—if that is the right word—any suggestion that the mark belonged to Shirley McKie. Anyone who dared to say that was out of order and had to be reported to somebody and taken to task, whereas the people who expressed the other point of view were allowed to do so and good luck to them. Why do not the same rules apply to everyone? I do not know.

I have worked in fingerprints since I was 23, so I know a bit about the systems. I am not saying that no one makes mistakes; we are all fallible creatures and mistakes can occur. However, I was the head of a fingerprint department for 15 years and I can boast that we never made a mistake, because of the procedures that were in place—just as procedures are in place in Scotland and any fingerprint bureau in the country. If the procedures are followed correctly, there will be no mistakes.

Given the right circumstances—people, timing or what have you—it is inevitable that something will go wrong. However—it is that 99.999 per cent figure again—in 49 years of experience I can count only three wrong identifications in England. I can think of another two or three that I felt should not have gone to court, but that is a different matter from wrong identifications. I can count only three wrong identifications in 49 years.

Mr Macintosh: And the identification that we are talking about is not one of them.

Peter Swann: No, it certainly is not.

Margaret Mitchell: You might recall that when I asked Mr Zeelenberg what he thought was the best evidence for the identification of Y7, he referred to the Pat Wertheim mark. Will you comment on that?

Peter Swann: What is the Pat Wertheim mark?

Margaret Mitchell: I think that it is the mark that was on—the superior mark in each—

Peter Swann: Do you mean the mark that he photographed?

Margaret Mitchell: Mr Zeelenberg said that he was going by the Pat Wertheim mark, which he thought was the best image. Do you agree, or are there flaws in that?

Peter Swann: I do not agree. I will not say that the mark is any worse or better than the one that I had. I would not say that it is the best mark. I think that I had the best mark, which came directly from the person who took a photograph of it when testing its genuineness. I have not seen the Pat Wertheim mark, so I do not know about it.

Margaret Mitchell: Was the Pat Wertheim mark a single print or was it rolled?

Peter Swann: Sorry, are you talking now about the impression from Shirley McKie?

Margaret Mitchell: Yes, the Y7 mark. Mr Zeelenberg said that the best evidence—

Peter Swann: Sorry, Y7—

Margaret Mitchell: Mr Zeelenberg said that the best evidence was the image of the fingerprint that he saw.

Peter Swann: That is Y7.

Margaret Mitchell: He referred to it as the Pat Wertheim mark.

12:00

Peter Swann: No, I do not accept that it is the best. I am not saying that it is any worse than the one that I have, but I would not say that it is any better. I do not see how a mark could be any better than that, quite honestly. It is a perfect mark—a perfect photograph—and it is the one that is reproduced here. I have not seen the Pat Wertheim mark. I have not dealt with it—I have not been asked to.

Mike Pringle: At the bottom of chart C, you have got two prints marked up at points 1 to 8 and 1 to 8. I asked you earlier whether those were the same as points 1 to 8 and 1 to 8 on page D.

Peter Swann: Point 6 on chart D is point 8 on chart C and the other one is point 7.

Mike Pringle: So, they are different.

Peter Swann: Point 8 on chart C is—

Mike Pringle: So, they are not the same: they are different.

Peter Swann: It is just a different number; that is all.

Mike Pringle: Yes. That is my point.

Peter Swann: Oh, yes.

Mike Pringle: I think that you said earlier that they were the same.

Peter Swann: It is the same characteristic. I have just given it a different number from the number that I have given it there.

Mike Pringle: Can fingerprinting be a matter of

opinion? Is it not a matter of fact? Either it is an ident or it is not; it cannot be a matter of opinion.

Peter Swann: Either it is an identification or it is not.

Mike Pringle: So, it is not a matter of opinion.

Peter Swann: There is no middle ground. If there is middle ground and a fingerprint expert cannot make an identification, that is a different matter. A mark can be marked up as being of no value if it is rubbish, or it can be deemed to provide insufficient detail for a positive comparison to be made. That is when it has too few characteristics to allow a fingerprint expert to be certain. When it gets beyond eight characteristics, either it is an identification or it is not. There is no middle ground.

The Convener: You have no way of knowing whether the similar characteristics that you have identified overlap with the characteristics that were identified by the SCRO.

Peter Swann: Do they overlap?

The Convener: For example, if the SCRO has identified 16 points of similarity and you have identified 21, they are not necessarily all the same. Do you have any way of knowing whether the characteristics—

Peter Swann: Some of them will be.

The Convener: Some will be the same, but not all.

Peter Swann: Some definitely will be—in fact, quite a lot will be. There are only so many characteristics on the mark. If you are talking about the middle band—the middle band that was in the SCRO's chart—the answer is yes. A lot of those characteristics will be the same as the ones that I found. Only the same characteristics are there.

The Convener: Do you know that because you have compared your analysis with the SCRO's?

Peter Swann: I have not compared mine with the SCRO's, but I know how many characteristics are on the mark and I know the area that the SCRO has marked up. The SCRO must have marked up some of the same characteristics as me—it is inevitable.

The Convener: Thank you for your presentation, Mr Swann. You will join our discussion panel later. We will break briefly and reconvene as soon as we are set up for the discussion panel.

12:03

Meeting suspended.

12:14

On resuming—

The Convener: I reconvene the meeting. We now have our first round-table discussion and I will outline who will be taking part. We have already heard from Arie Zeelenberg, and I welcome him back. Pat Wertheim and Allan Bayle are independent fingerprint experts. John McGregor is a fingerprint officer at the Scottish fingerprint service Aberdeen bureau, Jim Aitken is a fingerprint officer at the Edinburgh bureau, and Ken Clacher is a fingerprint officer at the Dundee bureau.

I thank all of you for attending. We have approximately an hour, which I know is not long. You will be aware that, although we are beginning to learn a bit about the subject, we are laypeople, so we would be grateful for concise and straightforward answers, if at all possible. I am sure that members will, as ever, keep their questions focused so that we can get the maximum out of this session.

We have already heard Arie Zeelenberg's presentation, which I am sure we will come back to, because there are some further points of clarification that the committee will want to ask about. However, I ask Pat Wertheim to begin by telling the committee when he first got involved in the McKie case and what approach he took to the identification.

Pat Wertheim: It is an honour to be here. I want to do my best to help the committee to understand my involvement and the conclusions that I reached. I was first aware of the McKie case in late December 1998, when I received a phone call from Iain McKie asking me if I would look at a case involving his daughter. As I planned to come to Scotland on holiday in March 1999, I agreed to look at the case while I was here. I was then contacted by Levy & McRae, a firm of solicitors in Glasgow, and I made arrangements through it.

I first viewed the evidence on 24 March. I have brought my original notes, and if the committee is interested I would be glad for you to have a copy. On 24 March at 10.30, I met Angela McCracken at Levy & McRae. At 11.30, we arrived at the High Court, where I received the documents, photographs, evidence and so on at 11.45 at the procurator fiscal's office. Primarily, I was asked to look at the mark on the door frame for signs of fingerprint forgery. In the early 1990s, I did a research project on fingerprint fabrication and forgery, which has been widely published and shorter versions of it have been republished. However, when I began examining the mark on the door frame, it was obvious to me that it was not a forgery. All the indications of forgery were completely missing from the mark on the door

frame, and everything that I saw confirmed that it was a legitimate mark that represented a touch of skin from the person who left it, still present on the door frame.

I also examined the productions that were given to me from the SCRO. I know that much has been made of the fact that I commented that it was instantly obvious to me that the identification was erroneous. As an analogy, convener, suppose that you have a rubber address stamp with your name on it: "Pauline McNeill, 123 Main Street, Edinburgh". If you look at a stamp mark and see the letter X in it, it does not take any longer than that to know that it was not made by your address stamp, because it has such a glaring dissimilarity in it. The dissimilarities between Shirley McKie's thumbprint and the crime scene mark were as glaring as that, as if the letter X appeared on one side and was completely missing from the other stamped message.

Having reached that conclusion at the procurator fiscal's office that morning, I advised Ms McCracken that I needed to take my own inked impressions from Shirley McKie, and she made arrangements to do that. It was at 3.30 pm on 24 March that I returned to the Levy & McRae offices. At 4 pm, Shirley McKie arrived, and between 4 and 4.15 I fingerprinted her.

Much has been made of the fact that I used plain impressions, not rolled impressions. The shape of a thumb tip is a complex surface. It is a curved surface, and a rolled impression reduces that complex curved surface to a square or rectangular flat image, which includes gross areas of distortion. Normally, rolled impressions are used for comparing with latent prints because the inked prints are taken before seeing the latent print. In this case, however, I had the advantage of having first seen the crime scene mark—the latent print—on the door frame. I could see that, if the print was of a left thumb, it must have been placed not flat against the door frame but slanted at a slight angle upward and canted just slightly to the right or clockwise, so the best inked impression to compare to that latent print was one that was taken in the same manner.

During the aforementioned time period, I took from Shirley McKie between 80 and 100 inked impressions of her left thumb to try to duplicate as closely as possible the direction and angle of touch in order to minimise the difference in distortion. The crime scene mark—the latent fingerprint—is not a complex, convoluted, compound, double-touch smear but a single touch of the tip of a finger. It has some distortion and some pressure differential from one side to the other. In the middle of the print—or, rather, to the top of the middle—there is an area where the pressure was great enough to run the ridges

together. However, the latent print is not a complicated or complex image. It is one touch of the finger.

In taking the plain impressions from Shirley McKie, I duplicated the direction and pressure of touch as closely as possible, so that I could compare like with like and minimise the distortion differences. Once I took those impressions from Shirley McKie and did further comparisons, I confirmed the conclusion that I had reached earlier in the procurator fiscal's office, which was that the crime scene mark was not made by Shirley McKie. At that point, I advised her solicitors and Donald Findlay, her barrister, of that.

The Convener: Thank you. I am sure that we will have many questions on what Pat Wertheim has said, but I will first ask Allan Bayle similarly to advise the committee when he first got involved and what approach he took.

Allan Bayle: I did not take any notice of the trial or anything like that when it was going on. I was asked to look at the Lockerbie mark, on which I prepared a forensic ridgeology report. I was then sent to Canada to get it second checked, because there was nobody in the United Kingdom who could second check my work.

When I went to Canada, a particular gentleman—there is no point in my mentioning his name—showed me the photograph of the mark. He asked me to look at it and do a comparison. He showed me a photograph of Shirley McKie's left thumb. When I looked at the mark and did my comparison, I said, "That is not identical." He replied, "Well, what are you going to do about it?"

I returned to New Scotland Yard—I was working there at the time—and I told my senior officers, "I think we have a mistake here. What are you going to do about it?" I was politely told, "We don't investigate other fingerprint bureaux." At the time, I was an instructor at Hendon police college. I left the issue for about six months, but it was getting to me. Seriously, I could not sleep, because I knew that there was a problem. I went back to my superior officers and said, "You have got to do something about this. It is getting out of hand."

I then decided to go on "Frontline Scotland" and state my views. I also went on the internet. That was my downfall. If people think that the people at the SCRO had a bad time, I can tell them what it was like being an instructor at Hendon police college who appeared in that programme. I was marched in—I will never forget it—and told, "You are not allowed to say anything in public about another bureau or another mark." I was then prohibited from going to meetings of ACPO, to which I was an adviser on the non-numeric standard and the future training of experts in the United Kingdom, and I was prevented from

lecturing to fingerprint experts and officers who were doing fingerprint work. I was just allowed to teach forensic scene of crime examination.

It was becoming impossible to work there, so I requested a transfer back to crime scene examination in London. I was refused—I was told that there were no vacancies—so I decided to hand in my resignation, because the pressure was so great. After that, I met Pat Wertheim and various other people, including the McKies. It was I who approached the McKies, not the other way round. I volunteered to help them, because I saw the case as an injustice.

John McGregor (Scottish Fingerprint Service Aberdeen Bureau): I became involved in the matter after Ewan Innes, the head of the Scottish fingerprint service, came up to me in Aberdeen on 10 May 2005 with a letter from David Russell on behalf of Peter Swann, which talked about his involvement in the examination of the mark and said that the fingerprint was identical to the left thumbprint of Shirley McKie.

For years, we tried to obtain material. From 1999 to 2000, we wanted the material to be peer reviewed, so that rather than follow what was going on on the internet we could view the material and make our own judgments. However, we were constantly denied that material, even though we knew that Robert Mackenzie, the deputy head of the Glasgow bureau, had done a presentation for the Association of Chief Police Officers in Scotland. He gave other presentations, but they were always to non-fingerprint experts, which was frustrating for practitioners. We had heard the speculation that an erroneous identification had been made, but we could not check that.

To cut a long story short, the chief fingerprint officer then retired from our bureau. When we were clearing out his possessions and emptying his desk, we came across two photographs, which we recognised as being the images that were on the internet. To establish the authenticity of the marks and to ensure that they were original, we decided to contact Pat Wertheim, who sent us an e-mail that stated, "I am fascinated by the images you sent because they are indeed the original crime scene mark from the bathroom door frame in Marion Ross's house, directly above where her body was found, and an inked left thumbprint of Shirley McKie. You can confirm those images by going to www.onin.com/fp." We were satisfied beyond doubt that we were in possession of genuine marks from the case. Mr Wertheim offered to send us inked impressions of the left thumb of Shirley McKie that he took in 1999 to aid us in our comparison. The photographs that we retrieved from the head of the bureau's desk had been circulated to bureaux in England, but we do

not know where they came from. That is how I became involved.

The Convener: To be clear, were the images that you found photographs of the latent mark?

John McGregor: Pat Wertheim confirmed that they were the original material.

The Convener: And you compared them with prints that you obtained from Pat Wertheim.

John McGregor: Yes.

12:30

Jim Aitken (Scottish Fingerprint Service Edinburgh Bureau): When the case came to light in 1999, everybody was aware of it, but I first became directly involved, by seeing the images from the case, at the end of 1999. At that time, one of the 18 experts at the Edinburgh fingerprint bureau had contacted Mr Wertheim and had sourced from him copies of the mark that he had used for his comparison and images of impressions that he had taken from Ms McKie. The images had already been authenticated by Mr Wertheim, because he supplied them to my colleague, and they were passed around the 18 experts in the Edinburgh bureau.

However, we had also received from the director of the SCRO bureau in Glasgow a memorandum that dumbed down Mr Wertheim's abilities as a fingerprint expert. As a result, when we in the Edinburgh bureau were asked to make the comparisons, we half expected to agree with the Glasgow experts. We did not begin our examination of the material biased against SCRO—indeed, we were fully open and objective. Only after all the experts had examined the material did we discover that there was a problem with the identification.

As a result, in January 2000 we decided to commit our findings to paper and we collectively drafted a letter. However, I must make it clear that only a certain number of the experts in the Edinburgh bureau were civilian employees. In our letter, we distanced ourselves from the police organisation and made it clear that the views expressed were our own. After all, some of the experts were police officers and they felt that the course of action could jeopardise their careers. That letter was sent to Lord Hardie and the Minister for Justice.

The Convener: Who asked you to make the comparison?

Jim Aitken: Mr Finnie, the colleague in the bureau who had been in contact with Mr Wertheim, approached all the experts in the bureau and circulated the material that he had received.

The Convener: So you did it off your own bat.

Jim Aitken: Yes.

The Convener: Did you take the same approach that John McGregor has just outlined?

Jim Aitken: Our approach was probably slightly different, because we were more objective. After all, because we made our comparison long before subsequent events, we did not have as much information.

The Convener: Mr Clacher, do you have any comments?

Ken Clacher (Scottish Fingerprint Service Dundee Bureau): I am in a fairly unique position because I have not been involved in this matter at all. I have seen only the material that is available on the internet—which, when I worked in Fife, I was asked to examine by my senior at the time—and a copy of a photograph of Y7 that is held by Tayside Police.

The Convener: So as far as you know, the Dundee fingerprint bureau has not taken a position on the identification.

Ken Clacher: No, we have not taken a formal position.

Marlyn Glen (North East Scotland) (Lab): I am interested in Pat Wertheim's explanation of the process of taking the fingerprints. Mr Wertheim, I believe that you took up to 80 prints to reduce the distortion between them and the latent print.

Pat Wertheim: That is right. From my analysis of the mark on the door frame, I determined that it was made by the area of the finger above the core or centre of the pattern—in other words, the top part of the finger tip—and that it was twisted slightly to the right. As a result, the best inked print with which to conduct a comparison would be one that was deposited in the same way that the latent print had been. With such an approach, I could compare like with like and minimise the differences in distortion between the two prints.

Marlyn Glen: Am I correct in saying that when experts are given a print to examine they usually have the tenprint and they are not able to take another print based on a different pressure point?

Pat Wertheim: I do not know what usually happens in Scotland but, in the United States, whenever I have the opportunity to fingerprint a defendant I do so, because I want to work from my own ink impressions. I realise that that cannot happen all the time. However, in this case, it was easy enough to tell Ms McCracken that I wanted to take my own prints from Shirley McKie, and the opportunity was afforded to me the same day.

Marlyn Glen: And you did so with the intention of getting as close as possible to the original print.

Pat Wertheim: Yes.

Marlyn Glen: Can you make the other 80 or so prints that you took available to the committee?

Pat Wertheim: I took 80 to 100. Subsequently, I also photographed the fingerprint. I did that on 30 March. Much has been made of the poor quality of the images on the internet. If I may, I will briefly address the point. I used a Nikon FE2 camera with a Nikkor 55mm micro-lens. That camera and lens combination is an excellent photographic outfit for fingerprints. On 30 March, I used three different types of film. I used Agfa APX25, Tecpan at 50 ASA and Fujicolor at 100 ASA. I photographed the crime scene mark using three different types of film and a wide variety of exposures, bracketing to get the best possible exposure. The images on the internet were scanned on a 35mm Nikon negative scanner and reproduced on the internet uncompressed. They are extremely large files for downloading, but we wanted to get the best possible image on to the internet.

References have been made to the scuff or brush marks through the image. They are neither added nor subtracted detail. I return to the analogy of the rubber stamp. You can use a rubber stamp to stamp your name and address on to a piece of paper. If you then take your finger and smear it through the rubber stamp, you might smudge or lighten the ink, but you will not change the name Marlyn Glen to the name Mary Mulligan. The smearing will not change the detail in the fingerprint. It might smudge it slightly or even completely remove it, although in this case it did not.

I return to Marlyn Glen's question of what happened to the other images. I had a number of copies made from the negatives that I took on the day. I put a number of the photographs of the print, copies of the original SCRO photographs and the original ink prints that I took from Shirley McKie into envelopes. I provided them to two other experts without comment as to my conclusion.

Marlyn Glen: Are you talking about all 99 or 100 prints?

Pat Wertheim: No, just some of each. Perhaps 20 of the ink prints plus several of my photographs plus copies of the SCRO photographs went into the envelopes and were passed to other experts without my conclusion. I asked them simply to conduct an examination and to talk to Donald Findlay. They did not know my conclusions. They thought that my involvement in the case extended merely to a determination of forgery. When they received the envelopes, they thought that I had looked at fingerprints that were alleged to be forged. That was the only information that they had.

Marlyn Glen: I repeat the question: are the inked prints that you took—the 100 prints—still available?

Pat Wertheim: Some of them are, but most of them are not; they were passed on to other experts.

Marlyn Glen: That is a pity. It seems as if everybody at committee has looked at one of the 100 prints that you chose. It would have been fairer if everyone had made their own choice or if they had compared the same fingerprint from the 10 prints that fingerprint experts usually look at.

Pat Wertheim: That is true, Ms Glen, but the finger itself stays the same. In other words, if we were to take a fingerprint from Shirley McKie today, the detail would be identical to what it was in 1999 or 1997.

Marlyn Glen: And I would therefore have thought that the 10 prints that were given would have been sufficient, if the print was rolled and done properly—

Pat Wertheim: It depends on the angle and the pressure. In my case, I wanted to duplicate it in the ink print as much as possible.

Marlyn Glen: I understand that.

Mike Pringle: My first question is a yes or no question. Would any expert use a copy of a fingerprint from the front of a national newspaper to make an identification? I can see the witnesses shaking their heads, so nobody would do that.

I turn now to the process of identification and I will address a point to John McGregor, Jim Aitken and Ken Clacher of the three bureaux. Last week, we heard from Fiona McBride. Bruce McFee asked:

"You said that you signed the initials of Charles Stewart and Hugh Macpherson—is that right?"

Fiona McBride replied:

"I printed them on the back. That is correct."

Mr McFee said:

"You printed them on the back of the photograph."

Ms McBride replied:

"I did."

Mr McFee asked:

"Is it normal practice to put somebody else's initials on the back of what could turn out to be a piece of evidence?"

Ms McBride then described the process, and ended by saying:

"I asked Hugh Macpherson whether he minded my putting his initials on it, too, as I thought that it was a good idea. He said, 'Well, okay then.'"—[*Official Report, Justice 1 Committee*, 30 May 2006; c 3218.]

I want to explore how you three go through the process. We heard in evidence that the Glasgow bureau always uses four experts when it goes through its identification process, so I would be

interested to hear how many experts your three bureaux use.

Jim Aitken: The Edinburgh bureau uses three experts. In some cases, if a trainee has worked on a case—a trainee is someone who has not yet qualified but is training to become a fingerprint expert—there may be documentation that they have added. When the three experts have verified all that case work, there will be four names on the back.

Ken Clacher: We are the same in Dundee. Three experts will check identifications, and a trainee may also consider the case. However, we use only three experts.

John McGregor: It is the same in Aberdeen.

Mike Pringle: And the process? When you go through the process, do you normally initial the paperwork so that people know who has looked at it?

John McGregor: First, we would never initial a photograph or a document for anybody else. However, so that a document can be tracked, you have to initial and date it, so a person looking at it would know when you made your comparison. That is what happens in Aberdeen, but we would certainly never, on behalf of someone else, sign anything that we had not checked ourselves.

Jim Aitken: In the Edinburgh bureau we have a diary page attached to the back of the casework sheet, containing the photographs from any particular case. It is up to the individual examiner to sign or initial their findings on the back of the diary page. I certainly would not do that on anybody else's behalf, and I would not expect anybody else to do it on my behalf.

Ken Clacher: In the Dundee bureau we have what we call a case note, which goes with every job. All the actions taken by the people involved are noted and dated and signed. Under no circumstances would we sign for someone else or allow someone to sign for us.

We also have a blind checking system, which we introduced earlier this year. It stops you from knowing what the first two experts have done in a case. The third expert collates all the information and comes to a combined result based on the two previous blind tests.

Mike Pringle: Am I right in saying that, when you in your three bureaux carry out an identification, if you are the second or third person to try to confirm a result you do not have any initials on the work in front of you so you cannot tell who was first or second?

Ken Clacher: We would know from our case note who had been first or second, but we certainly would not know their results. We would

know who had been working on the case, but we would not sign or put results on the back of photographs, and we most certainly would not sign for anyone else.

Mike Pringle: Is it the same in Edinburgh and Aberdeen?

Jim Aitken: In the Edinburgh bureau we have an independent verification process in which the second and first verifiers—although they may know who the other is—do not know the other's findings until the case is complete. That gives integrity to witnesses when they go to court, because if they are asked to answer under oath whether their verification was totally separate, they can put their hand on their heart and say yes.

Mrs Mulligan: I, too, wanted to ascertain whether you would know that somebody else had checked a case before you. Was that also the case in 1997-98?

Jim Aitken: That system has been introduced recently across the Scottish fingerprint service, but most recently in the other bureaux—in Edinburgh, Aberdeen and Dundee. As I recall, that certainly was not the case in Edinburgh back in 1997.

Mrs Mulligan: So what was the case in 1997?

12:45

Jim Aitken: In 1997, some of the paperwork was different. It certainly would not have been the case that an expert would put somebody else's initials on anything, but the processes were slightly different in that the second expert to examine a print might already have known the first expert's findings.

Allan Bayle: I will answer Mike Pringle's question. We had somebody who put another person's signature down, and they were sacked.

The Convener: Who is we?

Allan Bayle: New Scotland Yard. We had somebody who forged a signature. They were sacked immediately. It is a no-no to forge somebody else's signature at all.

The Convener: The issue arose with the four SCRO officers. We were trying to establish whether an expert would know whether another person had checked a print and what their findings were, but that has been clarified.

I do not know whether all the witnesses answered Mike Pringle's question about whether they would use the print that was published in the *Daily Mail*. Why not? What is wrong with that impression?

Arie Zeelenberg: If we put a glass or a lens over the newspaper, we would see that it was pixellated—it is all big dots—and there is no way that—

The Convener: Is it not the same with a computer screen?

Arie Zeelenberg: Sorry?

The Convener: As a layperson, I have difficulty with your saying that you would never use a print in a newspaper such as the *Daily Mail* but would be happy to look at one on the internet at a computer screen, as I can see the quality problems with both. You are clear about not using one, but the other seems to be okay to use.

Arie Zeelenberg: There are two issues. One is authentication, which relates to who is providing the print and whether we are confident that it is from the stated source. The other is the point that, if we put a glass on a newspaper, we will see all the small dots with which it is printed; there is no way that it can reflect the detail that is in a latent.

The Convener: Okay, but are you saying that that is different from looking at a print on a computer screen? Do you not have the same issues with that?

Arie Zeelenberg: A computer screen and a newspaper are totally different.

Stewart Stevenson: I am sorry to be boringly technical, but I ask Pat Wertheim, who said that he used a Nikon 35mm scanner, to tell me what the dots-per-inch mechanical scan rate was and at what bit depth the colour was recorded.

Pat Wertheim: I cannot, because I sent my original negatives to Ed German, who scanned them. All I know about the scanner is that he said that it was a Nikon 35mm negative scanner for which he paid \$3,500; I do not know the resolution.

Stewart Stevenson: I will ask you a question to which I suspect you will know the answer, as you made reference to it. Approximately how big was the resulting file for a single negative?

Pat Wertheim: He told me that the file could not be downloaded to a floppy disk and that the best way to reproduce it would be to download it to the hard drive of a personal computer or laptop and take the computer to a professional printing company, because the resolution was such that the file could not be printed reliably on a home-style, low-budget printer. That was back in 1999 or 2000.

Stewart Stevenson: So it would have exceeded 1.44 megabytes—that is, a floppy disk's capacity.

Pat Wertheim: Yes, sir. He said that the file could not be contained on a floppy.

Stewart Stevenson: So it sounds to me like the resolution is—I am doing a quick calculation—at least 2,400 dots per inch, whereas that in the *Daily Mail*, as Arie Zeelenberg might comment, will be something in the order of 80dpi.

Pat Wertheim: I was amused that Mr Swann would accept the photograph in the *Daily Mail* but reject the images on the internet as being insufficient for his purposes.

Mr McFee: So the problem with the *Daily Mail* image is the resolution.

Arie Zeelenberg: No, it is not so much the resolution as the printing.

Mr McFee: I just wanted that to be clarified.

We heard from Mr Swann that what I am holding up—Shirley McKie's left thumbprint—is his best evidence. Do you have any comment on the method by which that print was taken? Would you allow somebody to take their own fingerprint or to have their lawyer, who was untrained in fingerprinting, take an impression and send it to you? Would you consider that to be the best evidence?

Arie Zeelenberg: That depends on the result. Good ink and good paper might produce a good image—we do not know.

Mr McFee: Have you had an opportunity to look at this print?

Arie Zeelenberg: No. I have not seen it.

Pat Wertheim: In my other consulting cases when I have asked the client to provide their own fingerprints rather than rely on those that the police used, I have always asked the attorney who is involved—I prefer to deal with the attorney—to find a local fingerprint expert, have the fingerprints taken from the defendant in the attorney's presence, then send the prints to me. I far prefer fingerprints that are taken by a fingerprint expert to those that are taken by a layperson and especially to those taken by the defendant themselves.

Mr McFee: Last but not least, I have two questions. Mr Swann says that the reason why nobody else makes the identification is that nobody else looked at a rolled print. He contends that something like a 66° rotation was made to achieve the mark on the door frame. Will you comment on that?

Mr Swann says that at the end of his further analysis, there were no points of disagreement between the mark and the fingerprints of Shirley McKie. Will you comment on that?

Pat Wertheim: I take issue with Mr Swann's conclusion that the fingerprint went through a 66° anticlockwise twisting motion. We can think back to the rubber address stamp. If we place a rubber address stamp on a piece of paper and twist it 66° while leaving an impression, we will see smudges.

How do I know that the crime scene mark has no smudges? We go through two exercises to determine whether smudging exists. One is to run

the ridges and the other is to run the furrows. In other words, we trace every ridge from one side of the print to the other and look for breaks or slippage. We then run the furrows. We follow every furrow from outside the print, through the print and to the other side of the print. If the ridges have slipped, they will have dragged residue through the furrow, which means that we will see an interruption in the furrow. In this case, there is no interruption in the ridges or in the furrows, except for the smudge near the top of the print. Otherwise, the amount of distortion, slippage and twisting in the print is minimal.

Arie Zeelenberg: First, I have seen the rolled impressions. I showed in my presentation that we have mapped the whole thumb and all the pieces. The formation in the tip is not there, whatever angle we look from. It must be kept in mind that the position of the finger when comparing is decided by the cluster down there in the print that is similarish. That decides the orientation of the rest. As I showed the committee, that is already not in agreement. However, if one part is twisted, the whole finger must be twisted, then all the other points are either smudged or out of orientation. People cannot have it both ways. We have compared the latent print and the fingerprint in their natural positions as close as they were when they were placed.

Mr McFee: Just to be absolutely clear, you looked at the rolled fingerprints and you rule out Mr Swann's conclusion.

Arie Zeelenberg: I think that that was also the conclusion of the SCRO.

Mr McFee: Indeed, given that evidence on that was not led.

According to Mr Swann, there are no points of disagreement in his analysis. Do you have any comment on that?

Pat Wertheim: From listening to Mr Swann's presentation, it seemed that he was saying that when he could not find the point in Shirley McKie's thumbprint where it existed in the mark, he went looking in other places until he happened to find a point that looked the same. The only way that he could do that was if he moved 66° around the fingerprint. I reject that approach, which is not valid. One starts with the analysis of the crime scene mark. One does not go looking willy-nilly in the ink print to try to find points that look like it somewhere else in the print.

Arie Zeelenberg: Let us not forget that the initial identification by Mr Swann was, as he said, made on the charted print. He knew that it had been identified by somebody else and it did not have the ten discrepancies in the top. That explains his mindset. He then started to explain things.

Margaret Mitchell: Good afternoon. Mr Wertheim, I think that you said that because of a glaring dissimilarity you were able to make a 90-second identification on what everybody has agreed is a complex mark. Is it correct that you saw a dissimilarity in 60 to 90 seconds?

Pat Wertheim: Yes ma'am, but I would correct a part of the premise. I do not think that everybody agrees that it is a complex mark; many people have said that it is a simple mark. It is one touch, down and off. It does not involve the slipping, twisting, smearing and multiple touches that have been represented by some. There are obvious, glaring dissimilarities.

Margaret Mitchell: Was one of those glaring dissimilarities point 20, which was subsequently referred to by Mr Swann as the Rosetta characteristic?

Pat Wertheim: Yes. That would have been one of them. You refer to Mr Swann's numbering system. I believe that in the SCRO chart 189 it would have been a certain number of ridges above points 12 and 13. If I recall correctly, off the top of my head, about seven or eight ridges directly above points 12 and 13 in the crime scene mark, a ridge comes in from the left, whereas 12 or 13 ridges above that in Shirley McKie's fingerprint is a ridge that comes in from the right. Those cannot be reconciled by saying, "Those do not match, so it must have slipped 66°." There is no sign of slippage.

Margaret Mitchell: Is it possible that that would measure a slight movement? When Mr Swann was speaking, I put my fingerprint on a page and was aware that I had moved it a little bit. Would a slight movement account for the dissimilarity?

Pat Wertheim: No, ma'am.

Margaret Mitchell: Absolutely not, in your opinion.

Pat Wertheim: No, ma'am. Even the points in the middle of the print do not match. At Shirley McKie's trial, I conceded for point of argument to five points in the middle that could conceivably be considered to match. I do not remember the numbers that they were given on production 189. However, under close inspection, even those five do not match. It does not take an expert long to see that the ridge counts are off. There are two ridges between the points, but on the other prints there are three ridges between them. There is a ridge ending on the left-hand side of a ridge in the latent print and it falls on the right-hand side of the ridge in the ink print. Those are glaring dissimilarities.

Margaret Mitchell: Mr Zeelenberg, in his presentation Mr Swann said that you had alluded to point 20 and subsequently referred to it as point 23. Is that the case?

Arie Zeelenberg: No. That is not true. He said that it is improper to mark differences. However, if you discuss marks from a different source, you have to mark everything, which is what we did. Our report clearly states that there are points of discussion and differences. If he says that I marked different points, there are clearly different points. It is semantics.

Margaret Mitchell: Your contention is that point 20 and point 23 are different characteristics, not the same characteristic.

Arie Zeelenberg: They are different points. He says that point 19 comes from one side and point 20 comes from the other side. If the assumption is that this was the source, I had to mark where points would have to be if the mark was the same. I know that it is confusing. It is not very common to argue about a non-identification. It is complex, but if he had read our report he would have seen what I am talking about.

Margaret Mitchell: For the avoidance of doubt, are point 20, point 23 and the Rosetta characteristic to which Mr Swann refers the same characteristic?

Arie Zeelenberg: No.

Margaret Mitchell: Mr Bayle, it is probably fair to say that you have appointed yourself as an expert in the investigation. You could not sleep at night when you were given the print. Who gave you the print originally?

13:00

Allan Bayle: Mr David Ashbaugh.

Margaret Mitchell: Who is he?

Allan Bayle: He was a sergeant with the Royal Canadian Mounted Police. He is a world authority on forensic ridgeology.

Margaret Mitchell: You made several references to the Lockerbie case. I presume that your involvement in that case is testament to your expertise. Was any of your evidence used in the Lockerbie case?

Allan Bayle: I think it was. I was not allowed to go to the trial because there was one guy who produced all the evidence in Holland, so there was no need for me to go, but they had my report and my marking up.

Margaret Mitchell: I would be obliged if you would check that, because my understanding is that none of your evidence was used and that you were not called as a witness. You certainly confirm that you were not called as a witness.

Allan Bayle: Yes. I have copies of my report. I did all the marking up as well—I think that it is being held in Dumfries—and Dave Ashbaugh checked it.

Margaret Mitchell: Perhaps you could check to see whether that evidence was used in the Lockerbie case. Thank you.

The Convener: Although we are focusing on the Shirley McKie case today, you will know that the committee has a wider remit to examine all the work of the Scottish fingerprint service, in particular the Glasgow bureau. That means that we have to consider other issues. There have been other alleged misidentifications. I put that to you, Mr Bayle, because, to be fair, you have been vocal in your criticisms of SCRO. I believe that recently you called for it to be closed down following the latest—as you say—misidentification. Do you want to say something about that? I understand from Mr Zeelenberg's presentation that it has been confirmed that that was not a misidentification.

Allan Bayle: That is correct, and I contacted Mr Mulhern straight away to let him know that. There are other circumstances, but I am putting in a report to Mr Mulhern about that. By the way, I apologise to the media and everyone else about that.

The Convener: So you accept that the SCRO had the identification peer reviewed and that it is not a misidentification.

Allan Bayle: Yes.

The Convener: I am trying to manage the time that we have left, which is about 10 minutes. Mike Pringle has some questions on a line that he has been pursuing. Please be brief, Mike.

Mike Pringle: I want to ask the three other bureaux two or three questions about the process. Apparently, the Glasgow bureau got the AFR system but the other three bureaux did not. Why was that? Charles Stewart implied that Glasgow was using the AFR system. Do you know whether it was used in the identification in the McKie case? Do you use the AFR system?

John McGregor: All the bureaux use the AFR system. Glasgow was the first bureau to get it, and I think Edinburgh got it as well.

Jim Aitken: Edinburgh got it shortly afterwards, but purely as a satellite station that was linked into the database, which was held in Glasgow. Before we got our own terminal to input our own scene-of-crime marks for search, we physically had to send the photographs from Edinburgh to Glasgow for the bureau there to search on our behalf. They would then send the response back to us. Since the equipment was installed in Edinburgh, we have been able to do the work ourselves.

Mike Pringle: So Glasgow got the system first and the other three bureaux got it subsequently.

Jim Aitken: Yes.

Mike Pringle: Do you know whether it was used in the McKie case?

Jim Aitken: I do not know.

Mike Pringle: My next question is about the volume of work in the four bureaux. I understand that there was an implication that the Glasgow bureau identified a lot more fingerprints during the process. Is that because it has more staff? Your three bureaux are much smaller. Do you have any idea about the volumes of work that you all do?

Ken Clacher: In the light of the comment that was made last week, a colleague of mine looked through our operation management system, which is a case-tracking system that all four bureaux use to track the amount of work that comes in and what happens to it. It is undeniable that the Glasgow bureau does far more work and carries out more identifications than the rest of the bureaux, but that is because it has more cases coming in.

When the information is gathered, it is broken down by expert as well as by bureau. On the whole, the volume of marks examined and the number of cases dealt with by each expert is roughly the same, but the Glasgow bureau does slightly less than those in Dundee and Edinburgh and the Aberdeen bureau does slightly more than everyone else. Per expert, the Glasgow bureau does not do more work or identify more crime.

It can sometimes be unfair to compare the number of cases that the different bureaux deal with because some cases might involve only one mark, whereas others might involve 100 marks. That is why we do a breakdown of the number of marks that we examine. Again, a similar volume of marks is dealt with in each of the bureaux, although the Aberdeen bureau examines the highest number of marks per expert and the Glasgow bureau examines the smallest number of marks per expert. I do not know precisely how each bureau enters the amount of work that it does on the system, but it is certainly not appropriate to say that Glasgow's work rate per expert is the highest and that it gets more out of that.

Mike Pringle: Last week, I think that Mr Stewart said that the Glasgow bureau was the first bureau in Scotland to do competency tests, but I understand that the Dundee bureau has been using the collaborative testing system for about 10 years, which is probably longer than the Glasgow bureau has been using it for. Is that correct?

Ken Clacher: I have been in the fingerprint service only since 2000. I know that that system was being used when I started as a trainee in Fife in 2000, but I do not know when the Dundee bureau started to use competency tests. Even when I was a trainee in Fife, I was asked to do the

CTS test. To my knowledge, such testing has been used since before 2000. You would have to ask someone else from the Dundee bureau about when it was first used there.

Mike Pringle: Does Jim Aitken or John McGregor have a comment?

Jim Aitken: I do not recall exactly when we started to use the CTS test, but we certainly began using it before 2000.

John McGregor: We are probably in the same position.

Mike Pringle: A considerable number of experts work in the bureaux in Dundee, Aberdeen and Edinburgh. Have any of the experts in those bureaux who have examined the fingerprint in question over the past few years confirmed that it is an identification or have you all consistently said that it is not an identification?

Ken Clacher: I know of no one in the Dundee bureau who says that it is an identification.

Jim Aitken: The position is the same at the Edinburgh bureau.

John McGregor: The same is true of the Aberdeen bureau.

Mrs Mulligan: I have a supplementary. I understand what Mr Clacher said about working out the workload according to the number of cases that are dealt with. Would you expect people to spend a certain amount of time on a fingerprint?

Ken Clacher: Absolutely not. Each mark is different. It is possible to analyse a mark in a few minutes, but some marks might take far longer to analyse. The length of time that is taken depends both on the mark and on the case, because some cases may involve differently developed marks that are harder to analyse than others. On the whole, if the data are examined over a relatively long period—we took the beginning of last year as our starting point—such differences even themselves out across the bureaux.

Mrs Mulligan: Thank you—that is helpful.

I was interested in Mr Bayle's opening comments, in which he described how he saw the mark and identified it as a misidentification. Prior to what happened with the Y7 mark, had you come across instances of misidentifications of fingerprints?

Allan Bayle: Yes. A long time ago, a misidentification was made at New Scotland Yard, which I think went all the way to court. A man called Ron Cook spotted it. New Scotland Yard put its hands up straight away and another bureau was called in to investigate.

Mrs Mulligan: Were you personally involved in that case?

Allan Bayle: Only in the retraining of the experts, whose rank went from junior right up to senior. We had to design and set tests to test those experts.

Mrs Mulligan: Why do you think senior officers reacted in the way that they did, given that you tried to flag up the problem?

Allan Bayle: There is a culture—not just in Scotland, but elsewhere—whereby the police think that fingerprints belong to them. They do not. Fingerprint identification is a science and, in my opinion, the sooner it is taken away from the police, the better. It has to be objective, transparent and honest.

There is a big problem in the UK because if someone speaks out about a problem, they are jumped on. They tried to discipline me, but that was stopped. I had a decent union person with me and the guy who was interviewing me stopped it because he could see that there was a big problem. I know that other people who have spoken out have been stamped on as well. That is the culture. The police have to look at themselves. Fingerprint experts must join the forensic community or we will have all sorts of problems in the future.

Mrs Mulligan: You have been able to identify one problem that you are aware of prior to this situation. However, in your written evidence you suggest that the mark on the biscuit tin was incorrectly marked up and was fraudulent. Are you surprised to get two misidentifications within one case?

Allan Bayle: Actually, I was shocked. It is possible to get one misidentification—that happens—but to get two in the same case is very rare. I have never seen or heard of that before. If you think that the McKie one is bad, you should see the Asbury one. It is even worse. I know that we are not supposed to talk about that, but it will come out eventually. The marking up is awful.

Mrs Mulligan: I can sense people to my left getting excited, so I will stop my questioning at that point.

Allan Bayle: I tried to be as diplomatic as possible. I do not think that it worked, but never mind.

Stewart Stevenson: I move on to a question on something different—not the McKie case. As we have witnesses with seven different sets of experience, I want to ask you all whether you would think it unusual, in 1997, for there not to be a manual describing the processes and standards under which fingerprint bureaux should operate. We can start with Herman Bergman and go round the table—if Herman wants to contribute, that is.

Herman Bergman: I pass the question to Mr Zeelenberg.

Arie Zeelenberg: You asked whether it was unusual not to have a manual.

Stewart Stevenson: Correct.

Arie Zeelenberg: The answer is yes.

Stewart Stevenson: Would it be unprecedented or just unusual?

Arie Zeelenberg: I was trained in the same manner as many other people. You sit down and look at the print and, when the conviction is there, you go back to the boss and say, "It's okay." I found that wrong. For years, I tried to find out what was wrong and what the process should be. That resulted in the book that I wrote in 1994. It is in Dutch, so it will not be of much help to the committee. From then on, we started to consider how experts worked in other countries because it was soon to be that both criminals and experts would go across borders. I was looking for standardisation throughout Europe, so I initiated the Interpol European expert group on fingerprint identification, which resulted first in a booklet about procedures and secondly in another booklet coming out. The aim is to try to get good process into practice.

If you ask fingerprint experts throughout the world what the cornerstone of their conclusion is, they talk about verification. If you then ask them, "What do you do if you disagree?" you will get no answer because they simply assume that that will never happen. Most police organisations have no procedure in place for situations in which there is a difference of opinion about verification. For us, the matter is resolved in the IEEGFI report, which covers a lot of issues. You can find it on the Interpol website, the address of which is in my CV.

13:15

Stewart Stevenson: So, when the four experts involved in the Y7 identification expressed concerns about the management of the Glasgow bureau because there were no written procedures or standards, that was a perfectly fair thing to say in 1997.

Arie Zeelenberg: I do not think that it was proper to have no manuals, but I also do not think that that was uncommon.

Stewart Stevenson: And Pat Wertheim? Remember that I am asking about 1997.

Pat Wertheim: My experience in 1997 was in the United States, which is drastically different. At that time, the majority of fingerprint operations in the United States did not have manuals, but all of the good ones probably did.

In the United States, there are two sources from which a police fingerprint operation can derive manuals. One is the American Society of Crime

Laboratory Directors. I have worked in ASCLD-accredited laboratories where the manuals were detailed and specific—no deviations were allowed. The second source is the Scientific Working Group on Friction Ridge Analysis, Study and Technology. SWGFAST has been trying for 12 or 15 years to provide guidelines for agencies that do not have their own manuals and which are not ASCLD-accredited. However, by 1997, SWGFAST guidelines were already readily available for anyone who wanted to use them as a blueprint for a manual. I would therefore say that, in 1997, the SCRO should have had a manual to describe the policies and procedures to be followed.

Stewart Stevenson: What about New Scotland Yard, Mr Bayle?

Allan Bayle: We had written procedures. I think that a manual was written in the late 1990s by a Mr Coombes for the whole of the United Kingdom. The manual was used by New Scotland Yard and I think that other bureaux used it as well.

Ken Clacher: It is unusual that any bureau would not have any written processes in 1997. We are talking about part of the police organisation that has processes for everything, to the n^{th} degree. We work closely with the police. Not only the Glasgow bureau but all bureaux should have some sort of procedures written down, because of the environment in which they work.

Stewart Stevenson: But, just to be clear, you are saying that not having been there in 1997.

Ken Clacher: That is right.

Jim Aitken: The Edinburgh bureau had no written set of procedures and no manual in 1997. As to whether that was right or wrong, I suppose the answer is that we now have a working procedures manual and I cannot imagine anybody going from having a manual to not having a manual.

John McGregor: It was the same for us; we did not have any procedures in 1997.

Des McNulty: Earlier, we heard that the crime scene mark had a scrape on it, or striations, when you photographed it. That was shown on the photographs that were put on the internet. Why did you not report to the court officer that the mark had been damaged?

Pat Wertheim: The brush across the print, the light stroke, did not add detail, nor did it take it away. It did not change the identifiability or the excludability of the print in any way.

Des McNulty: Mr Swann, who had been the previous person to inspect the mark, has said that no scrape was there when he looked at it. However, when you looked at it and photographed it, the scrape was there. I suppose there are two

questions: did you make the scrape; and, whether you did or did not, why did you not report the scrape to the court officer? There was obviously an obligation on your part to say, "What I am seeing here is different from what has been photographed."

Pat Wertheim: I disagree, sir. First, I did not make that scrape. Secondly, the scrape did not materially affect the print and, in fact—

Des McNulty: Why did you not report it? That is the question that I am asking.

Pat Wertheim: Pardon, sir.

Des McNulty: You go in, in controlled conditions, to look at an exhibit and the photographs of the exhibit. You are looking at the exhibit and there is a scrape on the exhibit. Why did you not report it to the court officer?

Pat Wertheim: The scrape was insignificant, sir.

Des McNulty: I am not asking you whether it is significant or to judge its significance; I am simply asking you why you did not report to the court officer the fact that the print had been changed.

I will move on to a different question. You said that you were contacted by Iain McKie by telephone. Will you tell me what conversation you had with Iain McKie and Shirley McKie when you met them?

Pat Wertheim: When I met them?

Des McNulty: Yes. When did you first meet them?

Pat Wertheim: I first met them on 24 March 1999; I believe that it was at around 4 pm that afternoon. I had told Angela McCracken that I wanted to deal exclusively with her and that I did not want any conversation with the McKies other than what was necessary for the taking of the inked prints. To the best of my recollection, I did not talk to Iain McKie at all on that day and the only conversation that passed between Shirley and me had to do with me instructing her how to hold her hand or to relax—the little exchange of information that was necessary for me to take her inked fingerprints.

Des McNulty: Did you have the briefing document that I think that we have seen? Did you have a letter from Shirley McKie or her solicitor before you came over? Had you seen any information at all relating to what you were asked to do?

Pat Wertheim: When I came over, I was being asked to examine the marks for signs of forgery. I was asked to determine whether the print had been planted inside the crime scene.

Des McNulty: How did you know that? Did you have a letter or any other written information relating to that?

Pat Wertheim: I do not believe that I did. I believe that all my communication with Angela McCracken at that point was oral.

Des McNulty: Letters have been presented before the committee in which Shirley McKie makes it clear that she is keen that she should have an opportunity to convey a series of messages to experts, but you are saying that none of those messages was conveyed orally or in writing to you.

Pat Wertheim: You will have to forgive me but, when Iain McKie called me on the telephone in late December 1998, my ear was not tuned to the Scottish accent. All I knew was that I had a very angry Scotsman on the telephone, that his daughter was charged with a crime that she denied, that he believed her and that the case involved a fingerprint in a place where she had never been. He asked whether I could come to Scotland and examine the evidence in the case for signs of fingerprint forgery. I told him that I would, but I believe that, at that point, I also told him that I would prefer to deal with the attorney. Angela McCracken phoned me shortly after that, and I told her specifically that I would prefer to deal strictly with her and keep my communications with the McKies to a bare minimum.

Alex Neil: Round about the same time, did Peter Swann ever get in touch with you?

Pat Wertheim: Yes sir.

Alex Neil: Will you tell us when and what it was about?

Pat Wertheim: The week before I was in Glasgow, I was in Liverpool at the Fingerprint Society lectures. Mr Swann approached me and commented that he had heard that I was to be looking at the McKie case, which I acknowledged. I said, "Yeah, I'm going to be looking at it next week when I go to Scotland." He then said to me, "I have looked at the print. It is clearly not a forgery and it is definitely Shirley McKie's print. There can be no doubt of that." I remember the emphasis that he put on that, because it struck me as highly unusual that an independent expert would approach another independent expert before that expert had even begun his examination to tell him the conclusions that he had reached.

Alex Neil: Why do you think that he did that?

Pat Wertheim: I have no idea.

Alex Neil: I have a question for you and Arie Zeelenberg. You have both listened to Mr Swann's presentation. You have covered some of the points that he made already, but I think that one of them was that if he found only one difference in a comparison print, he would not at that stage rule out the idea that the fingerprint with which he was comparing it could belong to the same person. I

think that I am right in saying that he said that he identified five or six differences between Y7 and the comparators at which he was looking. However, Arie Zeelenberg said in his presentation that, by the time he got to three differences, he would have ruled it out as a different print. Having listened to Mr Swann's presentation on that point and others, what is your response?

Arie Zeelenberg: We have to discriminate between dissimilarities that can arise for different reasons and discrepancies. We have a general non-discrepancy rule, which is that if there is a dissimilarity of location, ridge count or direction, the whole thing must stop. We can speculate about ownership, but the identification process must stop.

If Mr Swann makes an identification and he has no sight of 10 dissimilarities, he cannot explain them. The explanation for a dissimilarity must come from the information that is there. You cannot assume distortion; you have to prove it. As long as you have not explained it, it is a discrepancy.

Alex Neil: You have all said that taking a print for comparison from a national newspaper—even one as esteemed as the *Daily Mail*—is not an acceptable standard. The other source of Shirley McKie's fingerprint was that which Mr McFee displayed—the print that her lawyers sent to Mr Swann. How important is it for you to supervise the taking of a print that you will examine or to ensure that a fingerprint expert supervises that? Is it enough for a secretary in a lawyer's office who has no fingerprint experience to take a print? Would you regard that as reliable? You have discounted the *Daily Mail*. Is the quality of what Mr McFee displayed adequate to make a reasonable comparison?

Arie Zeelenberg: What matters is the origin and the authentication. If we have witnesses who are to make their own prints, we typically ask them to ink once and make two impressions. That can be a true representation; it does not have to be bad. Of course, the preference is to have a print taken by a fingerprint expert, but in other circumstances—by chance or with good ink and good paper—a good image can still be obtained. If a print can be compared with all the other images from the same stamp, it can be authenticated as coming from the same stamp.

Alex Neil: During his presentation, Mr Swann attempted to ridicule Mr Wertheim and Mr Zeelenberg. Indeed, there is a campaign to ridicule you—last week, the SCRO officers described Mr Zeelenberg as a flawed expert. I will leave aside that campaign, which has had no impact and which I do not think will have an impact. Mr Swann rubbished the list of 171 international experts and mentioned those from New Zealand. Will you comment on that?

Arie Zeelenberg: I find the situation very difficult. My boss and I sat down in 2000 and discussed what would happen, so I am not surprised by it. I will not go into all those allegations, which are appalling. They do no good. The issue is whether the fingerprint has been identified—is the identification right or wrong?

Mr Allan Bayle has been on television to the world for all the experts and he admits that he has made a mistake. That takes great courage. That should be part of the new culture. If the SCRO had done that in 1997, 1999, 2000 or 2001, we would not be here. In 2000, the cost would have been just that of a bouquet of flowers and an apology. The fact that the SCRO did not do that worries me.

The Convener: You make a valid point, which you have made all along and which has been noted. However, is it equally fair to say that Mr Bayle could be accused of jumping to conclusions before a claim could be checked?

Arie Zeelenberg: Yes. He admits that.

The Convener: It is not just about admitting mistakes. Perhaps we should not be so quick to jump to point them out in the first place.

Arie Zeelenberg: Sure.

The Convener: Everybody has had a go at one another. We are aware of that. You are right to point out that we are not interested in the claims about who the greater expert is; I hope that people appreciate that. We are trying to grapple with what the processes were and what they should be and with the identification.

13:30

Pat Wertheim: Can I respond to Mr Neil? I believe that he directed the question at Arie Zeelenberg and me.

The Convener: Very briefly.

Pat Wertheim: I believe that it is fair to say that this is the most controversial fingerprint case in the history of the science of fingerprints. I am somewhat humbled by the fact that I was a mere Texan on holiday in Scotland when I stumbled into this thing. I am perfectly comfortable with my place in the history books; I know what they will say 20 or 30 years from now. In the long run the case will not have an adverse effect on the science of fingerprints—it is a low speed bump on that road. I am comfortable with what the history books will say and I am comfortable with my place in them. The case has come up in cross-examination all over the world. Mr Bayle ran into it in Australia and in the United States I have been cross-examined about the case by attorneys who did not know that I was involved in it.

The point is that, in the long run, history will record that an erroneous identification was made

by the Glasgow bureau of the SCRO. I do not believe that the case will affect the science worldwide in the long run. How it affects the practice of fingerprints in Scotland in the short term is the issue with which the ladies and gentlemen on the committee have to deal.

Mr Macintosh: I return to the subject that the convener questioned Mr Bayle on earlier. Allegations have been made not only about Shirley McKie's fingerprint but about others. Mr Bayle, a week last Friday you were quoted in the papers as saying that the SCRO fingerprint bureau should be shut down because it was incompetent. Is it the SCRO that is incompetent, or is it you who is incompetent?

Allan Bayle: No. There are things that we did not set to the procedures.

Mr Macintosh: Were you right or wrong?

Allan Bayle: I was wrong. I admitted that.

To be fair, I am writing a report to tell Mr Mulhern and his team that there are other things that I want them to look at in relation to why we came to those conclusions. There is no point in keeping going over the matter. If you see Mr Mulhern and he gives you a report or whatever, you can ask him, but at the moment I am saying why it went wrong.

Mr Macintosh: I appreciate that. Obviously, you earlier graciously apologised to the media for your role in this. Will you take the opportunity now to apologise to the officers of the SCRO, many of whom are here today?

Allan Bayle: Yes. Fair enough.

Mr Macintosh: Two other officers were involved with you in identifying that fingerprint. Can you tell me who they were?

Allan Bayle: Uh—

Mr Macintosh: Can I help you? Was it Mr MacLeod and Mr Dempster?

Allan Bayle: Yes.

Mr Macintosh: Mr MacLeod is obviously a known McKie supporter. Can I ask Mr McGregor whether this Mr Dempster is the same Dempster who works with you in the Aberdeen bureau?

John McGregor: That is correct.

Mr Macintosh: Mr McGregor, will you also take the opportunity to apologise on behalf of Mr Dempster to the Glasgow bureau and the colleagues whose reputation you have ruined?

John McGregor: I cannot comment on the mark, because I have not seen it. The mark is supposed to be coming up to Aberdeen for me to peer review. Until I see the mark, I cannot comment.

Mr Macintosh: Very well.

Finally, Mr Bayle, as you—by your own admission—got it wrong in this case and Mr MacLeod and Mr Dempster got it wrong, and we know that the Danes got QD2 wrong and that the Dutch got one out of 10 right in their test, why on earth should we believe that you got it right in Ms McKie's case?

Allan Bayle: We got it right in Ms McKie's case and we got it right in the Asbury case. We also got it right in the Sinclair case. I have asked Mr Mulhern to look independently at all the misidentifications, peer review them and report back to you. That is the best that I can say.

The Convener: We need to start to bring the evidence session to a close.

I have a few questions for the representatives of the bureaux other than Glasgow. It is important to get information about your practices on the record. I presume that you will be familiar with what happened in the identification of the McKie print. We heard from Hugh Macpherson that he checked the print first and that the second person who checked the print was a Mr Geddes, who could find only 10 points of comparison. Another three experts then found 16 points of comparison. I am interested to find out what would have happened in each of your bureaux if a situation similar to the Geddes situation—if I can call it that—had arisen in 1997.

Jim Aitken: In such a scenario, if one expert failed to agree with the other experts—albeit that, in the case to which you refer, it would appear that there was disagreement not on whether the print was an identification but simply on the number of characteristics that could be found—and the mark was to be used in court, we would ensure that the experts who were to be witnesses in that case were happy to demonstrate in a court of law how they found the number of characteristics that they said that they had found, which was 16 in the case in question.

The Convener: So in your bureau it would not be material if one colleague found fewer points of similarity than another.

Jim Aitken: I imagine that that happens every day in every bureau across the land. However, it would be unusual for the difference in the number of characteristics that were found to be as high as it was in the example that you cited.

The Convener: Is your standard the same for an elimination print?

Jim Aitken: Elimination prints are treated slightly differently from scene of crime marks in that it is slightly easier to eliminate a mark than it is to identify it for court purposes.

Ken Clacher: I certainly cannot comment on what would have happened in 1997 because I was not at the bureau then. As Jim Aitken said, the experts would still have agreed on the end result, even if their opinions differed on how much information they could see in a mark. I do not know what the procedures would have been in 1997.

The Convener: If such circumstances arose now, would your approach be any different?

Ken Clacher: We have a system of blind checking and if there is a large difference in the number of points of comparison that two experts can find, or if they disagree completely about what they see, we have procedures in place for the involvement of quality assurance officers. If a misidentification is made, other bureaux will get involved. We have written procedures on what to do.

The Convener: It is not the case that Mr Geddes was not happy to identify the print; it is just that he identified fewer points of comparison.

Ken Clacher: We would go with the lowest common denominator if both experts agreed that the print was eliminated.

John McGregor: We are in the same position as the Dundee bureau. If the mark did not reach the required 16-point standard, we would go with the lowest common denominator and we would not take it to court.

The Convener: You would not take it to court.

John McGregor: No.

The Convener: If the same situation in which the Glasgow bureau found itself had arisen in your bureau, you would not have gone to court.

John McGregor: I cannot quite understand why the 16-point standard was adopted for an elimination.

The Convener: I will allow a few more questions, but they must be extremely brief if we are even to start our session with the second panel.

Margaret Mitchell: I would like Allan Bayle to clarify a number of points. In your written evidence, you observe:

"The position of the mark on the piece of wood was questionable as a left thumb."

It seems that you go much further than any of the other experts, in that not only do you say that the mark has been misidentified, but you state that you do not believe that it is a left thumb print. Is it still your position that it is a right thumb print?

Allan Bayle: Yes, it is.

Margaret Mitchell: That is fine.

You also state:

"The mark found on the biscuit tin was incorrectly marked-up and fraudulent."

Do you stand by that comment?

Allan Bayle: Yes, I do.

Margaret Mitchell: Will you elaborate on your use of the word "fraudulent"?

Allan Bayle: Are we going to talk about the Asbury case? I thought that we were not supposed to.

The Convener: There has been reference to it, but you need to be careful about what you say because of the sub judice rules.

Allan Bayle: I was told that we were not supposed to talk about the Asbury case.

Margaret Mitchell: You made that statement in your submission, so you must have thought that it was relevant.

Allan Bayle: I did, but we were told that we were not supposed to talk about the Asbury case because of the civil action.

Margaret Mitchell: That is why I am giving you the opportunity to retract that statement.

Allan Bayle: I think that, at point 7, the ridge is going horizontally, whereas the one that has been marked up by the SCRO is going vertically.

The Convener: I am sorry to interrupt, but which print are you talking about now?

Allan Bayle: I am talking about the biscuit tin print.

The Convener: I am afraid that you cannot do that. I do not want to get you into any bother.

Mr McFee: I have a very small point. Mr Bayle, it was suggested that you were the only individual who thought that the print might be a right thumb print. Is that the case?

Allan Bayle: I do not think that that is the case.

Mr McFee: Were there other experts who thought that it might be a right thumb print?

Pat Wertheim: Mr McFee, if you look at the tips of your thumbs you will see that, as you get close to your fingernails, the ridges flow into the thumbnail at an angle of maybe 45°. They are not parallel to the thumbnail. If you look at your fingertips you will see that the ridges flow parallel to the nails all the way up to the tips of the fingers. That allows us, when we look at the tip of a print, to reach a conclusion that it came from a right thumb or a left thumb, or from a finger rather than a thumb. That is not 100 per cent reliable, but the crime scene mark in this case has all the hallmarks of a right thumb print. The ridges flow in

the opposite direction from the direction in which they should flow on a left thumb.

Mr McFee: Is that Mr Zeelenberg's view?

Arie Zeelenberg: In our report to HMIC, we argued that the latent has certain characteristics or elements that could be a small whorl rather than a long-standing loop and that it could be more likely that it is a right thumb. The certainty of it being a left thumb was raised after the so-called identification.

Mr McFee: Thank you.

The Convener: We will have one final, brief question from Mike Pringle.

Mike Pringle: Can I ask the witnesses from the other three bureaux in Scotland two questions?

The Convener: One question.

Mike Pringle: I will put the questions together. In his written evidence, Charles Stewart said:

"The question of confidence in the way SCRO is managed and organised is rather difficult to answer. As experts within the bureau we have had concerns about our management for years."

Do you think that there have been concerns about your management? Some of you have been working there longer than others.

Secondly, should the four bureaux be merged into one or kept separate? Should the bureaux be managed by people who have expertise in fingerprints, unlike most of the managers that you have had in previous years? I accept that you might not want to criticise the management.

Jim Aitken: As somebody who has experienced changes of management during my years in the fingerprint bureau in Edinburgh, I have to say that we have had no management problems in the bureau. The only problems that we have experienced recently occurred since the implementation of an element of management from Glasgow. One problem that arose during recent events is the way in which the management in Glasgow handled the whole affair. They seem to have spoken to people outwith the Glasgow bureau in a way that suggests that the Glasgow bureau is right and they are wrong. It will be hard for the management in Glasgow to recover from that. I am not saying that I have a lack of confidence in the Glasgow management system, but that problem affected all the staff in the Edinburgh bureau.

I cannot speak for the Aberdeen or Dundee bureaux, but I imagine that the position is similar. I know that, last year, the head of the Scottish fingerprint service visited all the bureaux and gave them the same message. He went to some length to mention Mr Russell's letter on behalf of Mr Swann and various other bits and pieces against

Ms McKie, and we felt that the whole thing was biased towards the idea that the Glasgow viewpoint was correct and everyone else was wrong. We did not think that that should come from Glasgow management, particularly from people who are not fingerprint experts.

I have no comment to make on whether we should have a fingerprint expert as a local manager in the bureau. We have had them in the past and we have had problems. We have one at the moment and we have other problems.

Mike Pringle: Do Ken Clacher or John McGregor want to comment?

Ken Clacher: As far as processes are concerned, it is important to have a central management for the four bureaux so that we all sing from the same hymn sheet. However, most of the day-to-day management decisions should remain with the bureaux. The three outlying bureaux have a fairly strong connection with the scenes-of-crime lab, and that should remain. If the management is taken away from the bureaux and placed in Glasgow, that important connection will be lost. Some central management is needed to make sure that we all have the same processes.

John McGregor: We need common processes throughout Scotland. The four bureaux must have the same processes. I do not think that devolved management from Glasgow works particularly well. That has been highlighted by the Shirley McKie case. Each bureau—Aberdeen, Dundee and Edinburgh—should have autonomy in the way that they run and in the way that they implement day-to-day decisions and procedures.

Each bureau is slightly different. What works in Aberdeen does not necessarily work in Glasgow and vice versa. The Glasgow bureau is much bigger and more bureaucratic than the Aberdeen bureau. As Ken Clacher said, in Aberdeen we have a closer working relationship with the criminal investigation department and with traffic and other police departments.

13:45

The Convener: I am afraid that we must draw to a close this part of our evidence taking. Mr Zeelenberg, the committee would be grateful if you could come back to us on Peter Swann's presentation—I do not think that you will have a chance to look at it today. Peter Swann pointed out specifically where he thinks that you misidentified the print, so if you are willing to have a look at the presentation, that would be helpful. It is up to you—the presentation is here.

Arie Zeelenberg: I am happy to put in any effort that is necessary to look at the matter again. However, I stress that I have not identified the

print. We cannot identify prints that are not identical.

The Convener: It would be helpful if you could have that exchange with us.

I thank all the experts, particularly those who travelled a long way. Mr Wertheim tells me that it is always sunny when he comes to Scotland, so perhaps he should come more often. We very much appreciate the efforts that the witnesses have made to give evidence to us. As usual, we have not had enough time, but I think that the committee has asked the main questions that we wanted to put to them.

13:47

Meeting suspended.

13:54

On resuming—

The Convener: I reconvene the meeting. Our first round-table discussion was rather lengthy. We should be moving on to the second round-table session but, in consultation with those witnesses, we have decided to reconvene the panel on a date yet to be agreed. If we started to take evidence now we would have to split the session, because we would have to stop at 2.30 pm for time for reflection. As members know, committees are not allowed to meet while a meeting of the Parliament is in progress. It would be more favourable to hold the second round-table discussion in one session, and I put on the record the committee's gratitude to all the witnesses for agreeing to come back—we will have a better session because of that. We will announce the date of the meeting as soon as possible.

I want to update members on our request to the Minister for Justice for the reports that we think we require. I met the minister yesterday to explore how the information might be provided to the committee. Although I acknowledge that the reports are confidential and the Executive is seeking to protect important legal principles—*[Interruption.]* Can I have some quiet as people leave the room? I will pause for a second, as I have an important announcement to make.

As I was saying, although I acknowledge the Executive's position and understand that it is seeking to protect the legal principle that is set out in the Executive's letter to the committee, I made the committee's view absolutely clear to the minister. At last Thursday's meeting, the committee agreed to a motion that called on the Executive to deliver to the committee the reports by John MacLeod and Mike Pass. The minister is actively considering our resolution and I expect to discuss the matter further with her in the near

future. I hope to have news for the committee in the next few days. I made it clear that the committee feels very strongly that it should see the reports.

Family Support Services Inquiry

13:57

The Convener: The committee agreed a remit for the inquiry, which includes fact-finding visits that Mary Mulligan, who is the committee's reporter, will undertake. We are grateful to her for taking on that work on top of her existing workload. Members have a draft programme of visits. I invite Mary Mulligan to comment before I ask the committee to approve her funding bid to the Conveners Group.

Mrs Mulligan: I do not want to delay members. I hope that they have had an opportunity to consider the proposals and that they support the bid.

The Convener: Does the committee give its approval for Mary Mulligan to make a bid to the Conveners Group on its behalf?

Members *indicated agreement.*

The Convener: We agreed that we would take in private our discussion of issues for our report on the SCRO inquiry.

13:58

Meeting continued in private until 14:28.

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