

TRANSCRIPT OF PROCEEDINGS
UNCLASSIFIED

AUSTRALIAN DEFENCE FORCE

AUSTRALIAN ARMY, VICTORIA BARRACKS, NSW

**INQUIRY INTO THE DEATH OF
PTE JACOB BRUCE KOVCO**

PRESIDING:

GPCAPT W COOK, President
COL M CHARLES, Board Member
MR J O'SULLIVAN, Board Member

COL M GRIFFIN, Senior Counsel Assisting
MAJ E JOLLY, Counsel Assisting
MAJ J HYDE, Counsel Assisting
MAJ A BELKIN, Counsel Assisting

LTCOL P WILKINSON, representing Soldier 2
LTCOL B GREEN, representing Soldier 14
LTCOL T BERKLEY, representing Next of Kin
LTCOL F HOLLES, representing PTE Kovco's Parents
COL L YOUNG, representing PTE Kovco

1348 MONDAY 28 AUGUST 2006
DAY 30

The transcript has been checked and cleared for operational security issues.

TRANSCRIPT VERIFICATION

I hereby certify that the following transcript was made from the sound recording of the above stated case and is true and correct

Signed.....  Date28/08/06.....(President)

Signed.....  Date 28/08/06.....(Recorder)

Signed.....  Date 28/08/06.....(Transcriber)

Signed..... Date 28/08/06.....(Transcriber)

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5 PRESIDENT: Good afternoon, ladies and gentlemen; good afternoon, Major.

MAJ JOLLY: Good afternoon, sir.

10 PRESIDENT: I'm told we've had an interesting day with technology.

MAJ JOLLY: Yes, sir. I've aged 10 years.

15 COL YOUNG: Mr President, just before we start, if I may, you will notice LTCOL Berkley is not here today, he's away at trial in Darwin. He seeks your indulgence to be absent this week and, in his absence, I'll be looking after Shelley Kovco's interests.

PRESIDENT: Thank you. And I see that LTCOL Holles rejoins us.

20 LTCOL HOLLES: Yes, sir, I was just about to announce my return.

PRESIDENT: Thank you.

25 MAJ JOLLY: Sir, we have Ms Michelle Franco, the DNA expert, to give further evidence.

PRESIDENT: Yes, thank you, she might be called.

30 <MICHELLE ANNE FRANCO, recalled and resworn [1350]

<EXAMINATION BY MAJ JOLLY

35 MAJ JOLLY: Ms Franco, MAJ Jolly. Since you were last before the Board, is it correct that you have been asked to review the research into secondary transfer of DNA?---Yes, that's right.

40 In the course of doing that review, you identified a number of articles on secondary transfer?---Yes, I did.

45 As part of that process, have you reduced some of that material down to note form and diagrams?---Yes, that's right.

Do you seek the President's leave to refer to that material should it become necessary?---Yes, I do.

PRESIDENT: Certainly.

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MAJ JOLLY: Ms Franco, I would like to start, if you like, with an overview of the current scientific thought on the transfer of DNA; that is, the transfer between individuals of DNA from an inert surface. If you can perhaps sketch the parameters of the current scientific research?---Yes. There are a number of papers that are available in the topic of secondary transfer. One of the main ones that I've used is a paper by Alex Lowe et al and it was published in 2002. It was called, "The Propensity of Individuals to Deposit DNA and Secondary Transfer of Low Level DNA from Individuals to Inert Surfaces." But the main thought in this paper uses a typical experiment to explore the possibility of transferring DNA through another individual and then the first individual's DNA ending up on an object through secondary transfer.

Ms Franco, were you able to reduce that down to diagrammatic form? ---Yes.

Would it help in your explanation if the Board and members have that diagram available to them?---Yes.

We'll need the document viewer?---The basic experiment that was used by Lowe in 2002 was one that would maximise the transfer of DNA to try to demonstrate that secondary transfer does occur. So what they did was, they chose a person that they knew to be a good shedder of DNA and they called that person A. Then they chose a second person, person B, that they knew was a poor shedder of DNA, person B. They got person B to wash their hands prior to the experiment, then they got person A to hold hands with person B for one minute. Then they got person B to first of all, immediately touch another object and after this experience, they - they tried to recover DNA from this object and the object was just a test tube that they've held for a certain amount of time, But they repeated this experiment at different timeframes. First of all, they got the person B to touch the test tube immediately after the one minute of holding hands with person A.. They also tried it again at 30 minutes, so they had a time delay between when the person touched the test tube of 30 minutes And the last time delay they did with another experiment was an hour. So person A held hands with person B for a minute and then person B would wait an hour and then touch the object. And what they found in this experiment was you could get secondary transfer of DNA occurring, but it was most likely to occur immediately of person B touching an object. It could occur within 30 minutes, but the levels were very low and it was unlikely to be

found at all after an hour. So this was the basis for this interpretation and also another of other - a number of other researchers have conducted similar experiments on this basis to see if they can also obtain secondary transfer. A similar experiment was conducted in our laboratory early this year using the same type of experiment where person A, the good shedder, shook hands with person B, the poor shedder, and this is after person B has washed their hands. They shook hands for a whole minute and then after they shook hands for a minute, person B then used a screwdriver for 5 minutes and after this 5 minutes, the screwdriver was swabbed to see if person B had put any DNA on the screwdriver from person A., so secondary transferring it over. And at the end of this experiment they found out - or it was concluded that a handshake of more than 10 seconds was necessary to produce secondary transfer. If anything less than a 10 second handshake occurred, then they would not be able to find secondary transfer and as everyone, I'm hoping knows - realises that what I mean by secondary transfer is that person B is transferring person A's DNA onto that screwdriver. So we found that that could occur as long as the handshake was a minute, anything less than 10 seconds, there was no evidence of secondary transfer in that experiment.

Ms Franco, the test that your laboratory conducted, did it have any results as to the quality and quantity of the DNA sample obtained from the screwdriver?---Yes. The quality and the quantity of DNA was quite high in instances where the people had shook hands for a minute, that the instance - the level of DNA was higher than I have seen on that - on the gun, for example. But when the handshaking was less than a minute, not less than 10 seconds because they didn't see secondary transfer then, but less than a minute, the levels were much lower.

The experiments that you've described is where person A directly takes the hand of person B, have you been able to identify any research that deals with an intervening object, for example, person A touching an object and then person B touching that same object and transferring person A's DNA then on to a second object, for example such as a pistol handgrip? ---No. The type of research that I have found though does say that some - some researchers have said that secondary transfer is possible to an object, so - but - I'm just looking here. Some researchers have said that they have - they could not actually get secondary transfer to occur at all. The type of question you've given me, it doesn't - I haven't been able to find from the research something directly related to that question. It was more the fact that the researchers have said that secondary transfer is possible, but I have a paper by van Oorschot, Roland van Oorschot - here we go. I have a few papers by Roland van Oorschot, but one of them he says that:

The profile originating from the hand or known depositor was always

present and in nearly all cases was equal or greater in signal intensity to that originating from the secondary transfer.

5 So what he was saying was even though he did see secondary transfer or could demonstrate it, the person that was transferring the DNA, so if you can imagine the person - person B in that scenario I just said would always be equal to or greater than person A.

10 Ms Franco, perhaps if we could put that in the context of the testing that you did on PTE Kovco's 9 mm, am I correct in summarising that the primary or rather the main contributor to PTE Kovco's 9 mm weapon was soldier 14?---Yes, on the slide.

15 On the slide and there was also a contribution by PTE Kovco?---Yes and - and when I'm saying about the people PTE Kovco or Soldier 14, I'm saying that their profiles were - were present.

Yes, we've - -?---Yes.

20 As you've said on the last occasion and from what you're suggesting from the research that you've just read out that in that particular research, it was equal contributions from person A and person B?---Well, when - no, when the secondary transfer was detected, the - the person that was transferring the other person's DNA was present - was always present - he says:

25 always present in nearly all cases and in nearly all cases was equal to or greater in signal intensity than person A.

30 So it was in the context of the case with the DNA on the slide you - with secondary transfer, it shouldn't have been in that - if it was being secondary transferred it shouldn't have been in that ratio. You would've expected the profile of Kovco to be in a greater concentration to Soldier 14.

35 To that of Soldier 14?---Yes.

The research that you've reviewed, am I right in saying is all concerned with trials conducted within a laboratory?---Yes.

40 Have you identified any research that considers the issue of secondary transfer under say field conditions, that is outside the laboratory?---No.

45 Do any of the researchers comment on the probability of secondary transfer occurring outside laboratory conditions?---Yes. There's a paper - a paper by Ladd and he says:

That secondary transfer was not observed under our experimental conditions -

5 So that's laboratory conditions, but he just says:

- therefore our data do not support the inference that the interpretation of DNA profiles from case samples could be compromised by secondary transfer.

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But I wouldn't weight too heavily on this because it is an old paper, it was published in 1999. So no one really has done anything with the fieldwork. And can I just put in, when you asked me about secondary transfer, the big difference in field as opposed to laboratory I think would be the time since hand washing. In a laboratory I know whenever we do experiments it's hard to really do secondary transfer experiments very well because people are always washing their hands. In the field, may be this is not so and there may be more likelihood of secondary transfer occurring because people don't have access to hand washing facilities.

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On the issue, you touched upon one of the variables that I want to ask you to elaborate on and the first one being washing of hands. The prevalence of dust or sand in the environment, would that increase or decrease the likelihood of effective secondary transfer?---I think it may decrease because the person - in the experiments used to maximise the DNA transfer, the one that I'd shown, person A is left without hand washing to about 30 minutes, so that even they're a good shedder, they're not asked to hand wash prior to the experiment. Whereas person B, whose the vector for transferring the DNA is asked to hand wash, so their - their DNA is - their hands are very clean, ready to pick up the other person's DNA. Now, having dirt on the - on person B's hands would, I think would just complicate matters and encourage degradation of DNA rather than anything.

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Before we go onto the next variable, how hard is it to wash away DNA? How does it actually deteriorate from the skin?---Well, I think if you washed DNA it would - like if you washed your hands, the DNA would disappear, but in the laboratory I've - I've been to an evidence recovery workshop where we - we discussed the issue of washing DNA or keeping our benches clean and I remember that it was thought that the actual physical action of wiping over a surface with - with the paper towelling was probably more important than the type of chemical we were using to - to degrade the DNA. So the actual physical action of wiping will remove DNA.

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If we use the example of a hand being wiped against clothes, is that consistent with what you've just said?---Yes.

5 The second variable that I wanted to ask you to elaborate on is time. The summary of Lowe's experiment was quite time specific. The longer the time elapses from the touching of an object by a person, how significant is that?---Yes, very significant. The quicker that person B touches the object, the more likely the transfer of DNA will occur. As time goes on, person B's DNA will continually becoming greater in greater amounts on
10 their hands therefore outweighing or overshadowing any of person A's DNA.

15 Could I take you back to that scenario and ask you to consider it in light of your own expertise where person A, say, touches a glass and then person B picks up that glass within the time limits identified as optimum by Lowe, then person B touches a secondary object such as a test tube, based on the research that you've reviewed and indeed the experiment that your laboratory conducted at the start of this year, is that likely to increase or decrease the chance of secondary transfer?---I'm sorry, you've asked me
20 the transfer experiments but compared to what?

25 Sorry, I'm asking you to go beyond - as I understand the laboratory conditions that Lowe did his experiments on, and indeed that your laboratory did in relation to the screwdriver, it was person A taking the hand of person B for the optimum period of time identified, and then person B touching an object, in your experiment it was a screwdriver, and I think in Lowe's case it was a test tube?---Yes.

30 I'm asking you to interpose another object in that and ask if you're able to express an opinion as to whether the likelihood of secondary transfer increases or decreases?---Decreases. I think decreases because, when I touch an object, I will be putting some of my DNA on that, but if I'm actually touching a person, then there's more of my DNA to be transferred on to the person.

35 Is skin a better conductor of DNA than, say, a plastic object or a glass object?---Well, I just know that porous objects do better to retain or to recover than non-porous, and that's reflected in our casework, because we are more likely to get DNA recovered from clothing items and material
40 rather than shiny surfaces.

I take it that if you're recovery is better on porous objects; does it necessary follow that transfer is better when used by a porous medium?
---I would think - I'm not really sure.

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That's okay. What I want to do next, Ms Franco, is to show you PTE Kovco's pistol and, indeed, the holster that was used by PTE Kovco and get you to comment, if you're able to, on any of the factors surrounding the mechanics of the pistol being in the holster and how that will affect DNA transfer or indeed the preservation of DNA. What we're going to need to do is film it so we have a record of it, sir.

PRESIDENT: Yes, I understand that we have the technology.

MAJ JOLLY: Yes, we do, sir. Perhaps, MAJ Young, if you could approach Ms Franco and use the witness table as a prop.

PRESIDENT: If, LTCOL Green, you need to get a better view, please feel free to move.

LTCOL GREEN: Thank you, sir.

PRESIDENT: Indeed, that applies to anybody.

MAJ JOLLY: Perhaps, MAJ Young, if I could get you to remove the plastic containers so everyone can get a clear shot; thank you. Ms Franco, if you could just firstly observe the holster, the material that it's made of, and you notice MAJ Young putting the pistol into the holster and it appeared to be a snug fit. Does that accord with your observation?---Yes.

I'll just ask MAJ Young to draw the pistol slowly out of the holster and perhaps ask you to just look inside the holster. In terms of your DNA testing, you never received the pistol, did you?---That's correct, I've never seen it except for today.

Could I ask MAJ Young to perhaps just pivot the pistol round so Ms Franco can see the various parts of the pistol. In particular, the nature of the surface, Ms Franco?---Yes.

And ask MAJ Young to put that back into the holster. Ms Franco, are there any observations that you are able to make relevant to the issue of either the preservation or degradation of DNA on the pistol?---Yes. The physical putting in of the gun into the holster would appear to me to be removing DNA because it may wipe the outside surface, or any surface that would have contact with the holster. But on the other hand, if a gun is inside a holster, it will be protected from degradation from the sunlight.

The material of the holster itself: are you able to comment on whether you would class that as a porous material or otherwise? If you need to handle it, we have gloves that you can use?---Even though it does look

like it's meant to be weatherproof, I would still class it as a porous type of material.

5 The surface of the pistol itself, were there any aspects - perhaps MAJ Young, if you could remove it out again, thank you. Perhaps if we deal with the slide firstly. Are there any aspects of the surface of the slide that either add to DNA preservation or indeed subtract from it?---Could you just show me when you use the slide what you actually touch and what you move.

10 Perhaps the working parts back, MAJ Young and locked; thank you? ---Well, the outside part of the slide has been touched and this part would seem that it would be wiped by the casing as it entered into the - what do you call it - - -

15 The holster?---The holster. But there is - well, it's quite a smooth surface.

You will see there are ridges?---There are ridges but I didn't really think you really touched the ridges when you did that.

20 Perhaps, MAJ Young, if you could release the working parts forward and work the slide mechanism again for Ms Franco?---Yes, he did touch the ridges. There's grooves on that gun which would mean that it would encourage DNA to be lost from - into the slide.

25 Perhaps the handgrip; working parts forward, thank you, MAJ Young. Perhaps hold it by the barrel or something like that so Ms Franco can see? ---Yes, there are ridges as well or it's an uneven rough surface on the grip, which would also encourage DNA to be left if someone was to hold it.

30 I hope I'm not stating the obvious too much when I say that's obviously not a porous surface?---No, but it has little pores.

35 That has the ability to trap DNA material?---Yes.

Any other observations that you're able to make in relation to either the pistol or the holster?---I suppose the only other thing would be that the grip is exposed.

40 Perhaps, MAJ Young, if you could return to the holster, please, and perhaps do the Velcro strap up over the hammer; thank you. If those parts of the pistol you see exposed are exposed to the weather and that it's a very hot, dusty and sandy climate, again, what's the impact on either the retention or degradation of DNA in those conditions?---The DNA would be continually being degraded from any - like if it was in the direct

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sunlight, in UV light. So whatever is there would just degrade as time goes on.

5 Are you able to give a timeframe or is that simply too variable?---No, too variable and - I don't know.

Thank you, MAJ Young. Sir, in time we will convert the digital camera footage on to a DVD and tender it.

10 PRESIDENT: To make it available; thank you.

MAJ JOLLY: Ms Franco, earlier on today, did you have the opportunity to read the evidenced of Soldier 14 on the previous two occasions that he's given evidence?---Yes.

15 In the course of reading that evidence, did you notice reference to various objects in the D point?---Yes.

20 I'd like to show you a series of photographs, Ms Franco, that are from that D checkpoint. Perhaps if you take your time. Am I correct in saying that you had an opportunity to view these just before we came in to formally sit?---Yes, I did.

25 Am I right in saying the first series of photographs deal with a megaphone that has a wire attachment, culminating in a small white handset?---Yes.

30 There are pictures of an unidentified person operating the megaphone, firstly by the small white handset and then, secondly, by gripping the megaphone with its pistol grip?---Yes.

Is there also a black walkie-talkie, for want of a better description?---Yes.

35 I think that's an MBITR. Then is there also a telephone, a normal touchpad telephone towards the end?---Yes.

40 Firstly, with the megaphone and focussing on the small white microphone that's attached to it, from those pictures are you able to make any observations - and indeed use the photograph of the operator using the microphone - of the type of surface that that presents for, firstly, the retention of DNA or otherwise?---Yes. The top part of the megaphone that you speak into, that is a - I don't know what you call that. It's not a smooth surface, it's a - what could you call that?

45 A grill?---A grill, the grill-like surface, yes, that's right. Whereas the surrounding what appears to be plastic part of it is a smooth surface. So

the top part is a grill surface, yes.

I take it from what you've said earlier is that the grill surface is the one that presents the better opportunity to trap and hold DNA?---Yes.

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And a smooth plastic surface less so?---Yes.

Perhaps if we could stay with that particular series of photographs with the small white hand microphone, that as an object for secondary transfer: are you able to make any comment on the viability of that object as being able to transfer DNA from, for example, person A to that object and then person B handles that object, and then person B transferring person A's DNA on to a second object?---Yes, well, it would depend on the type of DNA that was transferred, and also it would depend on the time interval since the second person has touched the handset and then touched the object that it would finally rest on. So it is possible, depending on the conditions.

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The German author that you referred to who - correct me if I'm wrong - dealt with the observation that the object being tested for secondary transfer would have equal contributions from person A and person B - firstly, am I right in that summary?---Yes. I'll just say that this is Roland van Oorschot, he's actually Australian.

20

He's Australian?---Yes. He's a leader in trace DNA recovery.

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Was I right in that summary that his observations from his experimentation was that on the object tested for secondary transfer there was equal contributions from person A and person B?---Yes, he said in nearly all cases, "the known depositor" - sorry:

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Furthermore, the profile originating from the hand of the known depositor was always present and nearly all cases was equal or greater to that originating from the secondary transfers.

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So yes, the person depositing was always present and mainly in equal or greater quantities than the secondary transfer.

Could I ask you to draw on your expertise and comment if you're able on the intervention of an additional object, whether that would mean that the equal contributors would also be present on the intervention of that second object - if you're able to understand what I've just said?---Yes. I think if we're talking about trace or contact DNA from a person touching an item, I think then it would be - you would expect a weak amount of DNA to be - if it is transferred to a final item - to be in lower concentrations than the

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person that actually put that DNA there.

5 Could I now get you to look at the photograph of the operator holding the megaphone by the pistol grip; there's only one photo of that. Again, if you're able to make any observations on the nature of the material of the pistol grip of the megaphone and whether that aids or works against the retention of DNA material?---It's hard to see the type of surface but it looks like it's smooth. I really can't see the - - -

10 No, that's okay?---But anyway, the person will be holding that with a tight grip so that would encourage the deposition of DNA.

15 I asked you earlier a question about the presence of dust and sand in relation to whether that assists in the degradation of DNA, and you referred to porous materials. What about the presence of dust or indeed sand on inert objects like the pistol grip of the megaphone? Would that have an impact on the transfer of DNA?---Yes, well, that would seem to encourage the removal of DNA from your hand if there was actual grains of sand rubbing against it. That may encourage the removal of DNA on to an object.

20 You will see there in the remainder of the photographs there's the walkie-talkie, for want of a better description?---Yes.

25 Again, a black plastic material?---Yes.

 Then ultimately with the telephone, the white appears to be a generic Telstra touchpad phone?---Yes.

30 Your responses to the earlier questions on it being a smooth plastic surface: would your comments hold equally true for the walkie-talkie and the telephone?---It's hard to sort of see the walkie-talkie that well but I know that the telephone looks like a very smooth surface. The walkie-talkie does appear to as well but it's difficult to sort of see.

35 Ms Franco, I finish with those photographs. Sir, I tender those. They are the only set at this point and I'd seek your leave to uplift them so that we can replicate them for Counsel Representing.

40 I take it there's no problem with them being reproduced at a later time.

COUNSEL REPRESENTING: No, sir.

45 MAJ JOLLY: They, as a result of this morning's process, unfortunately have not had a chance to find their way to Counsel Representing at this

point, so Counsel Representing might need to see them at some point.

PRESIDENT: Yes, very well. I wonder if the Secretary could just show that to Counsel Representing, please.

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MAJ JOLLY: And if they could also have a classified marking as well, sir.

PRESIDENT: At this point of time they are marked classified. I think they come from don't they?

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MAJ JOLLY: They have, sir, yes.

LTCOL GREEN: Sir, might I have access?

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PRESIDENT: Does Shelley's family wish to have a look at them? Do you wish to have a look?

MRS SMALL: We've had a look.

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PRESIDENT: Any opposition to the reception of those documents?

COUNSEL REPRESENTING: No, sir.

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PRESIDENT: Marked as 174, Classified.

#EXHIBIT 174 - CLASSIFIED SERIES OF PHOTOGRAPHS FROM CHECKPOINT

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MAJ JOLLY: Ms Franco, what I'd like to do now is put a number of factors that the Board has already heard evidence on and get you to comment if you're able to on the issue of secondary transfer and that is the following: that Soldier 14 and PTE Kovco, on the day of the fatal shooting of PTE Kovco were at the end of their roster, collocated together at point They were in that point for approximately 60 minutes and indeed you've seen some of the photographs of point ...and the objects within that area. Secondly, that PTE Kovco did not handle the 9 mm pistol during that 60 minute period, thirdly, that there is a possibility that when PTE Kovco stood down from duty at pointthat he did not clear, that is he did not pick up and manipulate the parts of his 9 mm pistol, that there are no doors from point ...to the point where PTE Kovco would clear his weapon, that during the course of that 60 minutes period, Soldier 14 and PTE Kovco used the megaphone throughout their shift, that it is a gritty and sandy environment and that the temperature at that time of year

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was a minimum of 40 degrees. Finally, can I get you to include in that mix that there is a possibility that Soldier 14 and PTE Kovco may have used either the telephone or the walkie-talkie or indeed both also during that period of time. On those factors how likely is it that Soldier 14's DNA has found its way onto PTE Kovco's pistol solely as a result of secondary transfer?---The last time PTE Kovco touched his gun after he was with Soldier 14, when was that?

We don't know. We don't know and that's why I've put in there that there is the possibility, based on Soldier 14's evidence, that PTE Kovco, upon dismounting duty, did not have the opportunity to handle his pistol? ---Well if - if PTE Kovco didn't handle his pistol at the time he was supposed to - to unload it, then from the papers, you would not expect secondary transfer to occur unless he handled the pistol within 30 minutes at the max of the time that he was handling these objects that Soldier 14 was and that is assuming he hasn't touched other things in the way - in the middle - before he's then handled his weapon.

Could I now get you, if you haven't already done so, to factor in the quality and quantity of the DNA sample that you tested from the slide and the handgrip of PTE Kovco's pistol?---Yes.

Does that change your answer in any way?---No. Although the amount of DNA that I found was much greater than in the literature. I'm making allowances for - for what may happen in the field, but the length of time would have to be within the 30 minutes of PTE Kovco touching his gun and all the other factors that encourage a person to transfer DNA would have to be present, such as time since hand washing, the shedder types of the two individuals. Yes, because in the experiments that have been conducted, all the factors have been maximised to encourage this. The results that I obtained was higher than any one has seen in a laboratory, but because we can't mimic the field to the exact extent. The best that I think or that I can say is that if secondary transfer did occur it would have to occur within 30 minutes of the secondary transfer being picked up by PTE Kovco.

Just touching upon something you said there, am I right in saying that in the laboratory experiments, the threshold is set to encourage the maximum amount of DNA via secondary transfer?---Yes.

The evidence you've just given is that the result that you obtained from the pistol far exceeds the quantity and quality that was obtained under laboratory conditions?---Yes.

Is the issue of it being unequal, that is Soldier 14 having the majority

contribution, is that a factor?---In my interpretation?

Yes?---Yes.

5 I take it that the results that you've obtained and in particularly in the context of the experiment that your laboratory conducted at the start of the year, that the opinion that you've just given is consistent with that review of the research?---Yes.

10 Thank you, Ms Franco. Thank you, sir.

PRESIDENT: Would the situation change in the scenario that's just been painted for you if Soldier 14 was a very good shedder and Kovco was a very poor shedder or a very low shedder, would that change the equation?
15 ---I sort of am assuming that that's the case in - in making the deduction. I think if Soldier 14 was a poor shedder, there probably wouldn't be any secondary transfer. But bearing in mind we don't know, there's no test to determine if someone is a good or bad shedder, assuming that Soldier 14 is a good shedder and PTE Kovco is a poor shedder, then that's how I've
20 based the interpretation.

So you've already factored that in?---Yes.

25 Yes, thank you. LTCOL Green?

<EXAMINATION BY LTCOL GREEN

[1443]

30 LTCOL GREEN: Ms Franco, as you'll probably recall my name is LTCOL Green, I appear for Soldier 14. You've told us, in answer to questions from the President, that whether a person is a good shedder or is a bad shedder is relatively important in determining whether or not secondary transfer takes place?---Yes.

35 Can I suggest to you that that is less important and what is most important is the amount of time spent in contact?---Yes, that is another factor as well, the time spent contacting.

40 You see if you took, for instance, a good shedder shedding 40,000 skin cells a day, you might say that an hourly rate of that is a particular figure. If a poor shedder only shed 20,000 skins cells a day, you might need twice the amount of contact, but still achieve exactly the same result?---Well the experiments that had been conducted in our laboratory showed that - that
45 at least 10 seconds of hand shaking had to occur before secondary transfer

was observed.

5 But if you have 20 seconds of hand shaking or a minute of hand shaking, you would get a greater degree of secondary transfer?---Yes, that has been shown, yes.

10 But to go back to my original question, if you were a good shedder and spent 1 minute hand shaking, that would be the same as being a poor shedding spent 2 minutes of hand shaking?---Yes, but I can't understand what you're trying to say because a poor shedder, we want a poor shedder to exist to enable the secondary transfer to occur.

15 Yes, but you're saying in response to questions from the President that it's important that the first person be a good shedder?---Yes.

What I'm suggesting to you is, is that relative speaking is not truly relevant?---But then if the poor shedder needed an extra time to reach the levels of the good shedder - - -

20 Then you would have the same result, would you not?---No. It's the ratio. I think you would still expect the ratio of the - the good shedder would continue to produce more DNA than the poor shedder, so the ratios would never equate.

25 But if, to take my poor example, a good shedder sheds 40,000 skin cells in a 24 hour period and a poor shedder sheds 20,000 skin cells in a 24 hour period, if you doubled the amount of skin to skin contact you would get the same result, would you not?---Yes. Now, if you mean - let's just take an example of this glass and a good shedder might touch the glass and we'll find their DNA and a poor shedder touched the glass once, no, but touches a few times and we might find more DNA.

30 At some point where you could not tell whether the person is a good shedder or a bad shedder?---That's right.

35 But you would simply just have a finite amount of DNA on that object? ---Yes.

40 So to go back to the original proposition as to whether or not the first person is a good shedder or is a bad shedder, to a certain extent, that's not really relevant, what is important is the amount of time spent in contact? ---Well the study that I've read said that it was a more favourable scenario to have a good shedder paired with the poor shedder because that encourages - if you had two good shedders together then you wouldn't be able to have the transfer to occur.

45

Why?---Because they'd be showing up more of their own DNA and it may eventually overwhelm the person that they've transferred - - -

5 Would that DNA be lost?---Yes it would be overshadowed by that person's own DNA.

10 But you would only need 100 skin cells to make a DNA sample?---That's right, but you're continually producing DNA, as time goes on the other person's DNA is going to degrade and yours is going to be - produce more and more and the way the DNA profiling works, it - it shows the profile of the major person and if the ratio was too small of the second person, it may not even show up.

15 All right, on to some other matters, how many DNA samples does the division of Analytical Laboratories test per week on average?---I just - I don't know. I know how many cases we get a year.

20 Yes?---And last year we were up to about 11,000 cases in the year, but within each - and they do have a big backlog, so I don't really know if we've actually done those 11,000 cases. But within each case we have a lot of samples, so it's not just one sample per case.

25 When a scene of crime examiner takes samples for DNA, do they do it via a swab or by a scraping?---Well normally and in this case, swabs.

But occasionally by a scraping?---I only encourage them to do scraping if it's blood.

30 The swab is traditionally something like a cotton ball or a cotton tipped ball?---Yes.

35 What then happens to the cotton tip itself?---We cut that out - actually it's made of - when we do contact DNA, we ask for the police to use a double swab method which consists of two swabs, one is wet with distilled water and the other one is just a dry swab. So the item in question is - say the surface is this table, the wettened swab is rubbed over the - the stain, followed by the dry swab to mop up anything that may remain and both of these - the cotton tips on the swabs are cut out and put into a tube which
40 goes into the DNA laboratory for a special DNA extraction.

What does that extraction involved?---It's called a Chelex extraction and it involves firstly extracting the DNA and then we quantitate the DNA.

45 Extracted by a centrifugal force?---Yes, that's right and then the DNA is

quantitated and then the DNA is amplified up to a level that we're able then to type it.

5 Just stepping back a few steps. As I understand your evidence to be is that the DNA sample tips are cut off the end and put into a test tube?---Yes and it's labelled according to the item number that it's received into the lab and the special case number.

10 From there, the test tubes themselves are put into a centrifugal?---No, it's actually put into the freezer, then taken by the DNA staff who then - we do all our sampling in batches, so they'll do an extraction batch - - -

15 That's what I'm asking, what does that involve?---Taking probably about 12 samples out of the freezer and getting all the samples that need doing in with a trace DNA testing together and the method is, we identify it as 1B in the laboratory, but it's by Chelex extraction where Chelex is added and the DNA is extracted from the sample.

20 Via what mechanism?---By boiling and the Chelex is added so that it binds to the magnesium iron and therefore doesn't allow the DNA degradation to occur. So once the DNA is extracted then we quantitate it using the quantitative lot method.

25 At that point it's extracted via a centrifugal machine?---Yes, that's right and we usually use a microcon device.

30 Yes and once in effect the DNA is, via centrifugal forces forced to the edge of the test tube, how do you recover it from the test tube?---Well, the DNA - we use a microcon device and the DNA is collected within that device.

35 From there it's put onto a slide?---No, then it is quantitated and that's another procedure that takes a few hours where the DNA is added to a probe which detects a sequence specific on chromosome 17 and this probe enables us, by using known standards of DNA to quantitate the DNA so we know exactly how much DNA to add to the typing mix. The real point in this exercise is not to add too much DNA because sometimes a quantitative lot method can give us a result that said there's no DNA, but we will still get a result. So that's the purpose of the quantification step.

40

Thank you, sir.

PRESIDENT: Yes. LTCOL Holles.

45

5 LTCOL HOLLES: The experiments that were conducted in the laboratory were designed to provide the maximum amount of transfer possible, is that correct?---Yes.

10 Obviously the objects that were used to transfer the DNA onto were cleaned scientifically to provide the possibility of no contamination on the surfaces?---Yes, that's right.

They were non-porous objects which would reflect the transfer DNA quite quickly, is that correct?---Yes.

15 Indeed the experiments were all conducted in optimum conditions to illustrate that the transfer was possible?---That's right.

20 There were no considerations such as temperature, body sweat, other possible contaminants, dust, oil or anything like that were allowed to interfere with the experimentation?---That's right. Because it's controlled laboratory conditions we don't generally have problems with environmental effects.

25 Now, the experiment basically established that there needed to be skin to skin contact expressed by you as a handshake of 10 seconds or more for circumstances to be possible where a secondary transfer could take place, is that correct?---Yes.

30 Now, it's trite to observe that skin is a fairly porous surface?---Yes.

So you have porous surface against porous surface, is that correct?---Yes.

35 That indeed maximises the possibility or likelihood of the transfer being able to occur?---Yes. I think it's more the fact of surface against surface, rather than the porous and the fact that both people are producing DNA.

40 So it's the fact that both people are producing DNA and there is a transfer of DNA to a surface which has a demonstrated capability or capacity to shed DNA?---Yes.

So it's that skin to skin contact which provides the modality by which the experiment is able to take place?---Yes.

45 A test tube is a reasonably easy object to get a DNA sample from? I'm not talking about inside, I'm talking about the outside in terms of the

experiment that you described load experience?---Yes, load experience, yes. That would've been a very easy surface to swab.

5 Equally a screwdriver surface, normally hard surface, non-porous would've been relatively easy to swab as well?---Yes.

You are aware that in the R v Murdoch in the Northern Territory that the issue of DNA transfer was raised?---Yes.

10 I suppose given the verdict of the jury it was dismissed by them at least as being a viable scenario for the transfer as proposed by the defence?---I'm not really very familiar with that - the intimate details for that case.

15 You don't know for example that it was suggested that the accused had brushed up against the surviving victim at some stage in a roadhouse or something like that?---No, I - I really didn't.

20 You had a look at the photographs which MAJ Jolly showed to you. The majority of the surfaces, as best as one could observe on those photographs, that is the telephone, the walkie-talkie so described, the RATEL and the megaphone, appeared to be hard non-porous surfaces, is that correct?---Yes.

25 If it would assist perhaps - - -?---No. Yes, yes. The grill is - is sort of like, well I suppose porous in the fact that it can - solutions could go through the grill, but the rest of the surfaces were quite smooth.

You've said that porous items retain DNA better?---Yes.

30 So non-porous items as a corollary don't retain DNA particularly well, not necessarily as well as porous items?---Yes.

35 So a non-porous surface such as a handset is not necessarily going to retain DNA particularly well?---Yes. What did you say, a handset?

The handset for a telephone or - - -?---Yes.

40 - - - the plastic grip on a megaphone or - - -?---Yes, but that depends what sort of DNA it is.

Could you expand on that please?---Yes, because I know when we've - in the laboratory when we test mobile phones, that has got a good success rate due to the saliva of speaking into it.

45 But in terms of transferring from that surface to another surface, the

saliva, I presume, would adhere to the surface in the microphone area?
---Yes, it may adhere.

5 You wouldn't necessarily expect to find saliva on the body of the phone?
---It depends on how people talk on the phone.

10 You were asked a series of questions by MAJ Jolly about the preservation
of DNA on the pistol surface and I'm going to refer to two weapons
throughout some of the next bit of cross-examination. I'll refer to the
pistol, which is the object you've been shown there this afternoon. I also
15 refer to the Styre, which is the other weapon which PTE Kovco was
carrying, okay. So pistol is the weapon you've seen, the Styre is the
weapon that you haven't seen. If you could accept for the purposes of my
question that the pistol is the secondary weapon he was carrying, which
was carried in his holster. The Styre was the weapon which he carried in
15 his hand, he being a right-hander, he would have normally carried it and
operated it with his right hand as being the dominant hand he was using at
the time, okay?---Mm.

20 The process of placing the pistol in its holster, its container, would have
had the effect, I presume, of preserving any DNA on the pistol; is that
correct?---Yes, but also the fact of pushing it in may have removed some.

25 If the pistol was cleaned, that is, if its working parts were disassembled,
they were brushed and then lightly oiled, and then the weapon was
reassembled, it too would have the effect of removing DNA from the
weapon, would it not?---Yes.

30 If that was carried out once or twice a day, it would mean that the DNA in
effect would be removed from the weapon if it was so present every time
it was cleaned?---Yes, that could be the case.

35 A weapon which had a very thin smear of oil over its surfaces would make
it less likely than otherwise as a way of preserving or trapping DNA; is
that the case?---Having oil on it would I think dilute the DNA, I don't
think it would encourage the recovery of DNA.

40 So if a weapon was lightly oiled after being cleaned, it would in fact dilute
the DNA surface?---Yes, but I'm not actually - - -

I withdraw that. Dilute DNA on the weapon; is that correct?---Yes, but
maybe - I should say that's outside my area of expertise with the oil.

45 Fine. But certainly oil is not really a medium which would be conducive
to the retention of DNA?---Yes, I think it would be better to have a clean

surface.

5 Equally, a pistol which was left on the ground for several days, there would be some degradation of the DNA on the surfaces of the pistol if it was just left out in a room for a couple of days?---If it was left out of the sunlight, then it probably would be okay.

10 So you wouldn't expect any degradation of the DNA on the surfaces if it's left in a closed room, no sunlight, for two or three days?---Yes, I think it would remain quite stable.

15 You've indicated that the ridging on what is called the slide, which is the metal cap, if you like, which goes over the top of the pistol, the ridging actually encourages the loss of DNA as it's manipulated; is that the case? ---Yes.

20 So if you operate the slide as MAJ Young did without rubber gloves on, you would expect to get some transfer of DNA on the person operating the slide on to the slide surface?---Yes, you would expect that that would be a good spot to try to recover DNA. I don't know if you would always get the DNA of the person that touched it, though, because some papers have written that some people can touch things and not leave their DNA.

25 But the fact that DNA has been found on the slide is indicative that somebody has touched the slide; that's the case, is it not?---It's consistent with that.

30 Consistent with that, yes. Equally with the pistol grip, the grip scales on the pistol, there's a faint ridging pattern on those, which again assists in the retention of DNA?---Yes.

Has anybody ever demonstrated to you the main points of contact in a person's hands as they operate a pistol?---Yes.

35 Indeed, you saw the demonstration from MAJ Young a little while ago there?---Yes.

40 Can I suggest to you that predominantly the person has their dominant hand used, usually it be the left or the right hand, around the grip of the pistol and they manipulate the pistol slide or other devices on the pistol, either with the dominant hand or with their other hand?---Yes, that's how I understand.

45 The surface contact between the person's hand and the trigger is fairly minimal, is it not?---I don't really know. I just know from the

demonstration that we had then at work, we've had a demonstration.

5 You would accept as a question of logic that, if one person has their hand all around the grip of the pistol, the other hand working the slide of the pistol, and there's a small surface of one finger on the trigger area?---Yes.

10 So the amount of contact between skin and trigger is minor relative to the contact with the rest of the pistol. Do you understand what I'm putting to you?---Yes, but - actually, I think this might be outside of my area of expertise.

15 That's fine, I'll leave it alone. You were asked questions about basically dust and sand and dirt and so forth and the affect that may have on DNA. You said that the abrasive affect of dust and sand may in fact encourage the removal of DNA?---Yes.

20 Does it follow that because it encourages the removal of DNA it doesn't necessarily follow that it would encourage the transfer of DNA?---Yes, that's right.

25 Yes, because is it not the case the DNA would be absorbed into the dust or the sand, it wouldn't necessarily transfer from the place it was removed on to a new surface?---That's right. I think it would depend a lot on what the surface was that it touched.

30 So you could have some DNA removed by the abrasive effect of dust and sand but wouldn't necessarily transfer to another surface, particularly if that surface was non-porous?---The non-porous really is - the key thing with non-porous is something - that's something that retains DNA better than -

So, it - - ?---Sorry, the porous retains better than the non-porous.

35 MAJ Jolly gave you a scenario about Soldier 14 and PTE Kovco being in a particular location and, during the period of the time in that location, both them may have had occasion to use the objects which you've seen in the photographs you were shown earlier?---Yes.

40 I'd like you to consider MAJ Jolly's scenario with a couple of additional factors in it. If I misstate MAJ Jolly's scenario, I would invite him to correct me in the scenario as I'm portraying it. Soldier 14 and PTE Kovco are in that particular location for a period of about an hour or so. They are there together. The pistol remains in its holster throughout the entire time. They may or may not have touched the microphone and the other objects
45 in that location which you see in the photographs. Okay so far?---Mm.

PTE Kovco has two weapons: the pistol which is kept inside the holster, and he also has a Styre which is a current Army issue personal weapon, a rifle. That has a pistol grip on it, magazine, other working parts. He is required to manipulate various components of the weapon as he moves from location to location. They dismount duty together, it's 40 degrees, it's dusty and - I presume being Iraq - there's a bit of sand around. They walk off the point they're on and they walk away back to their accommodation lines. The pistol which PTE Kovco is carrying remains holstered as it has throughout the entire duration of the scenario I'm asking you to consider. PTE Kovco continues to hold his Styre in his hands. At some point in time he goes through a door. He holds that door shut for a period of time. They've been in for about an hour and it is about 10 minutes or so from the time they leave, movePTE Kovco goes through the door, holds it shut and then they return to their respective accommodation sites. PTE Kovco then removes his body armour, his uniform and his boots. At this stage about 20 to 30, perhaps 40, minutes have elapsed from the time when he was last in Given that scenario, could I suggest to you that it was extremely unlikely there's any possibility whatsoever of PTE Kovco transferring on to the surface of his pistol any secondary DNA from Soldier 14?---Yes, I agree with you because of the amount of things that PTE Kovco has done in between getting the change and touching all those items would remove DNA from his hands, as far as I can see.

Of course, if he had a shower or washed his hands or something like that, that would have in effect eliminated that all together?---Yes.

Is that not the case?---Yes.

My friend LTCOL Green gave you some figures about the daily rate of DNA shedding: I think he said 40,000 cells a day for a good shedder and 20,000 for a bad shedder. Do you agree with those being scientifically viable?---There's still a bit of debate about the shedding issue but the 40,000 skin cells, I think I have read that in one of my papers. But the skin shedding issue seems to be - - -

Up in the air?---Well, people - the latest is that people seem to say that good shedders are less common than we previously thought and there was a paper I've recovered from the internet just last Friday and it's still in publication, it hasn't actually been published yet. But they do make the point about the shedder status, that it's a little bit more involved than - it's not as a simplistic phenomenon as we have been thinking, it's just good shedder/poor shedder. There may be other things. I don't think this paper has been out long enough to know the merits of its worth, even though it's

No peer review?---It has been peer reviewed and it was peer reviewed by the people that I've quoted earlier on today - Alex Lowe.

5

Yes?---The one that had the experiment which we put up on the overhead, it was peer reviewed by her. So as for the amount that a good shedder produces and a poor shedder, no one would know that.

10

Indeed, shedding, whether you're good or bad or good or poor, would be activity dependent rather than necessarily a constant hourly rate, I presume?---It's interesting you've asked that question because I emailed this person that produced this paper, Alex Lowe, and actually asked about the affect of heat on the production of DNA. She said she conducted an experiment where people had their DNA measured when they were just resting and then they got them to run around for 30 minutes and see if they produce more DNA. She said that there wasn't an increase in the amount of DNA; it was really trying to address the question of the presence of sweat. But there could be differences during the time of day but the most important thing I think is the time since hand washing. I think after 30 minutes since hand washing, then it seems to even out for poor shedders. Can I just explain about the poor shedder?

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20

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Yes?---Even though I'm saying there's a bit of controversy about the good shedder/poor shedder, in our laboratory we do think it exists because the same people seem to produce the greater amounts of DNA; we've identified two people specifically.

30

But at the end of the day, it doesn't matter whether you're a poor shedder or a good shedder; 30 minutes or a hand wash and it's gone?---Yes.

Thank you, sir.

35

PRESIDENT: Thank you. COL Young.

COL YOUNG: Thank you, sir.

40

MAJ JOLLY: Sorry, I don't mean to interrupt you, sir. LTCOL Holles inadvertently referred to a location by its name; if we could have the usual direction.

PRESIDENT: Yes. That location will not be reported by the press. I would ask them to extend us the usual courtesy.

45

MAJ JOLLY: Thank you, sir.

5

COL YOUNG: Ms Franco, I just have a few questions. As you might recall, I represent PTE Kovco and also today his wife Shelley. You probably took us through this the first time you came. It would assist me if you're able to give us some sort of a lay description of what DNA is. Is it skin being shed, is it in a dry form, wet form? Can you give me some lay description like that?---Yes. DNA is a complex molecule, it's a thread-like molecule that occurs in the nucleus of most cells of the body. So when we refer to DNA being in blood, it's actually not in the red blood cells, it's in the white blood cells because they have a nucleus. It's also present in sperm, in semen, it's present in your mouth cells, in your saliva, in your skin cells. It's present in hair roots and it's present in other things, such as dandruff, ear wax. The thing is with the trace DNA, people don't really know what it is, they think it's DNA from skin cells but the actual form of the DNA in this trace DNA we're not really quite sure if it's broken cells or whole cells. But it is a thread-like molecule and it's formed in structures called chromosomes. There's 23 pairs of chromosomes in your nucleus of your cell and half of your chromosomes come from your mother and half from your father. One of your pair is your sex-determining chromosomes, which means XX is the female and XY is a male. The DNA that we look at in the laboratory are on the nine different areas which actually refer to nine different chromosomes. We also look at the gender chromosomes as well.

I can stop you there. I thought it might be too much to ask a specialist, an expert, to give a lay opinion, with great respect to you. But for example, when you touch that glass, you say DNA remains on the glass from your hand; that's what you said?---Well, it could.

It could?---Yes. The question probably hasn't been asked as to how likely, I suppose, we - - -

If you touch that glass now, you may or may not leave DNA; is that what you're saying?---Yes, that's right. I mean, it may not be recovered, it may not be a quantity sufficient for me to see a profile.

40

All right. Once you are able to capture DNA from whatever source, from your description you put it through some rigorous testing. Does that mean that DNA, once captured, is fairly robust in the sense that you can put through all these experiments and it continues to exist, as it was?---Yes. We can extract a certain amount and if I can just say very simply, we will

45

5 end up with a liquid, the DNA extracting a liquid, and what we normally end up with would be about 200 microlitres. Of that 200 microlitres, in order to get the profile, we take 20 of the microlitres out of the DNA in the extract so we will have some DNA remaining at the lab in the liquid form.

10 In contrast to that, if there happens to be DNA, say, on a weapon or some object, that deteriorates, as you said, from sunlight over a passage of time? ---Yes.

From friction?---Yes, it could be removed by friction; yes, by friction.

15 Or, if it's on hands, by washing?---Yes, and it also could be humidity, that's like the bacterial action on the DNA through the humidity in the air.

Thank you very much. Thank you, sir.

PRESIDENT: Major?

20 MAJ JOLLY: Only one question, thank you, sir.

<EXAMINATION BY MAJ JOLLY

[1524]

25 MAJ JOLLY: Ms Franco, LTCOL Holles asked you a number of questions in relation to your observations of MAJ Young manipulating the pistol. Firstly, the experiments that the researchers conducted, that has been single hand to a single object; am I right in saying that?---Yes.

30 So it's person A's single hand to person B's single hand and then on to an object?---Yes.

35 You've seen MAJ Young manipulate the pistol, that is, he pulled the slide rearward and then released it forward?---Yes.

40 If you accept that a person can't operate the pistol in that fashion with one hand, that is, it takes two hands to operate, am I right in saying that for the DNA of Soldier 14 to end up on both the handgrip and the slide, that it would take both of Soldier 14's hands for that transfer to occur - sorry, correction, I do apologise. Both of PTE Kovco's hands for that transfer to occur. Do you need me to repeat the question?---No. That's if we're talking about secondary transfer?

45 Yes?---Yes, unless there was such large amounts on the slide that after

5 PTE Kovco has touched the slide he may have touched the grip. I mean I'm just imagining, now this is probably not the scenario, but if there was - another scenario would be if there was some of Soldier 14's on the slide and secondary transfer could remove DNA from the slide onto the grip because there is less amounts on the grip.

10 You've reviewed the evidence of Soldier 14 and one of the scenarios before this Board is that the megaphone is arguably the most likely object in that Soldier 14 has handled that and the PTE Kovco has also handled that object as well. In order to achieve secondary transfer in the locations that you identified DNA, does it necessarily follow that PTE Kovco would have had to have handled the megaphone for example with both his left and his right hand?---It - it seems like it would help.

15 Bearing in mind your observations of MAJ Young manipulating the slide of the pistol rearwards and then forwards, does that assist you further? ---I'm sorry, I'm not sure what you mean.

20 That's okay, the question goes to the issue of the likelihood of secondary transfer if one includes PTE Kovco's left hand and his right hand as well and whether you're able to comment on that?---Well, if it was secondary transfer it seems to be less likely to occur if it's on the grip. It seems that the most DNA is on the slide, so the slide would have to be touched and then if there's transfer of Soldier 14's DNA on that slide, for it then to be transferred again on another surface, it would seem to be more logical if he had Soldier 14's DNA on both hands for that transfer to occur.

Thank you Ms Franco. Thank you, Mr President, nothing further.

30 LTCOL HOLLES: Sir, might I as a supplementary question to something MAJ Jolly said?

PRESIDENT: Yes, certainly.

35

<EXAMINATION BY LTCOL HOLLES

[1528]

40 LTCOL HOLLES: Ms Franco, you were asked a series of questions about touching the glass in front of you and you indicated that one touch may or may not lead to DNA being deposited in recoverable amounts, but the greater the series of times you touch the glass, the greater the likelihood was that the DNA wouldn't in fact become so recoverable, is that the situation?---Yes.

45

5 So it follows from that, does it not, that for DNA to be found in the quantities that you did find on the slide and the grip, there must have been prolonged contact?---No. The thing is with the DNA, secondary transfer would only need an initial contact because if you were continually touching something and secondary - putting someone else's DNA on it, you would imagine that the other person's DNA would be overwhelmed soon by you because you're continually touching it. So - but if you're just putting what we call a primary transfer, me trying to put my DNA on this glass by continually touching it, I will add to my DNA on there.

10 That was my point that the contact on the slide in the quantities that you found, Soldier 14's DNA, indicates primary contact, does it not, rather than secondary contact?---Well it - it seems to be more likely primary contact, but I can't - - -

15 You can't. I appreciate you can't say definitely, but it's certainly more likely than not that it is a primary contact?---Yes.

20 Thank you, sir.

MAJ JOLLY: Mr President, it may be that given that Soldier 14 will follow after Ms Franco and COL Griffin will be leading the evidence in that case, it may be that rather than release Ms Franco, the Board might find it helpful if she sits in to hear Soldier 14's further evidence and indeed if any issues arise out of the objects at point D that Ms Franco would be well placed to be able to immediately respond.

25 PRESIDENT: Does anyone want to make any comment about that approach?

30 LTCOL HOLLES: Sir, I'd be grateful if that approach was taken.

PRESIDENT: I think it would be extremely valuable.

35 COL GRIFFIN: Sir, I note the time and - - -

40 PRESIDENT: I was going to suggest to LTCOL Green that perhaps - I know it's not usual for people to speak to their clients whilst they're in cross-examination, et cetera, et cetera, but given what we've heard, there may be some point in the LTCOL speaking to his client.

45 COL GRIFFIN: Yes, sir. Further examination of Soldier 14, noting the time, it may be that since he's back for LTCOL Holles's purposes, that often not much use in - well, interrupting cross-examination whether or not you would want to have an uninterrupted flow tomorrow morning.

5 LTCOL HOLLES: Sir, I'd prefer that for a number of reasons; arising out of the evidence that has just fallen there are a number of issues which I need to research a little further.

10 COL GRIFFIN: Yes, it would seem to me, sir, that therefore in the circumstances for the points of reasons you've indicated and convenience for a solid run at the next evidence that if we could rise for the day to return tomorrow morning for the next phase of evidence with Ms Franco available - - -

15 PRESIDENT: Is she available to us tomorrow?---Yes.

Excellent. How long do you expect to me LTCOL Holles, without wishing to limit you in any way, knowing that I couldn't anyway?

20 LTCOL HOLLES: Sir, with great respect, I don't mean to be arcane, that's rather like asking how long is a piece of string. I would expect to be some time, an hour or more.

25 PRESIDENT: Yes, very well. We'll take the adjournment now.

<WITNESS WITHDREW [1532]

30 LTCOL GREEN: Before we do that, if LTCOL Holles is going to take an hour or more, as I understand it there may be video link evidence tomorrow commencing at about 1100.

35 COL GRIFFIN: We have video link evidence arranged tomorrow, yes, but that can be pushed back.

PRESIDENT: Would it be more convenient to start at nine?

40 LTCOL GREEN: I would be very concerned for Soldier 14 to finish tomorrow.

PRESIDENT: I would hope that would happen.

45 LTCOL GREEN: Rather than, for argument sake, get halfway through it and then be interrupted by video link and find ourselves coming back - - -

PRESIDENT: I think once we start on Soldier 14, we're not leaving him.

COL GRIFFIN: We can push the video link back, sir, and I'll make arrangements to do that now.

5 PRESIDENT: Well would 9 o'clock be a convenient time to start tomorrow?

LTCOL HOLLES: Sir, I'd prefer 9.30 or 10 if possible.

10 PRESIDENT: We'll make it 9.30.

COL GRIFFIN: Yes, sir, thank you.

15 **MATTER ADJOURNED AT 1533 UNTIL
TUESDAY 29 AUGUST 2006 AT 0930**

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