

COPY

SUPREME COURT OF THE STATE OF CALIFORNIA

THE PEOPLE OF THE STATE OF CALIFORNIA, )  
 )  
 ) Plaintiff-Respondent, )  
 )  
 ) vs. )  
 )  
 ) KEVIN COOPER, )  
 )  
 ) Defendant-Appellant. )

CR 72787

Supreme Court  
No. Crim 2452

APPEAL FROM THE SUPERIOR COURT OF SAN DIEGO COUNTY

HONORABLE RICHARD C. GARNER, JUDGE PRESIDING

REPORTERS' TRANSCRIPT ON APPEAL

APPEARANCES:

For Plaintiff-Respondent: HON. JOHN K. VAN DE KAMP  
State Attorney General  
Department of Justice  
110 West "A" Street, Suite 700  
San Diego, California 92101

For Defendant-Appellant: IN PROPRIA PERSONA

VOLUME <sup>55</sup> of 55 volumes.  
Pages 4714 to 4789, incl.

JILL D. MC KIMMEY, C.S.R., C-2314  
and  
BRIAN V. RATEKIN, C.S.R., C-3715  
Official Reporters

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1 SUPERIOR COURT OF THE STATE OF CALIFORNIA

2 FOR THE COUNTY OF SAN BERNARDINO

3 THE PEOPLE OF THE STATE )  
4 OF CALIFORNIA, )

5 Plaintiff, )

6 vs. )

7 KEVIN COOPER, )

8 Defendant. )  
9

NO. OCR-9319

VOLUME 45

Pgs. 4714 thru 4789, incl.

10 REPORTERS' DAILY TRANSCRIPT

11 BEFORE HONORABLE RICHARD C. GARNER, JUDGE

12 DEPARTMENT 3 - ONTARIO, CALIFORNIA

13 Tuesday, July 10, 1984

14 APPEARANCES:

15 For the People:

DENNIS KOTTMEIER  
District Attorney

16 DENNIS KOTTMEIER  
17 District Attorney  
By: JOHN P. KOCHIS  
18 Deputy District Attorney

19 For the Defendant:

DAVID MCKENNA  
Public Defender  
By: DAVID NEGUS  
20 Deputy Public Defender  
21

22  
23 Reported by:

JILL D. MCKIMMEY  
Official Reporter  
C.S.R. No. 2314  
and  
BRIAN RATEKIN  
Official Reporter  
C.S.R. No. 3715  
24  
25  
26

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1 ONTARIO, CALIFORNIA; TUESDAY, JULY 10, 1984; 1:38 P.M.  
2 DEPARTMENT NO. 3 HON. RICHARD C. GARNER, JUDGE  
3 APPEARANCES:

4 The Defendant with his Counsel, DAVID  
5 NEGUS, Deputy Public Defender of San  
6 Bernardino County; DENNIS KOTTMEIER,  
7 District Attorney of San Bernardino  
8 County, and JOHN P. KOCHIS, Deputy  
9 District Attorney of San Bernardino  
10 County, representing the People of the  
11 State of California.  
12 (Jill D. McKimney, C.S.R., Official Reporter, C-2314,  
13 Brian Ratekin, C.S.R., Official Reporter, C-3715)

14  
15 THE COURT: Good afternoon.  
16 Mr. Negus, Mr. Gregonis is still on the stand.

17  
18 D A N I E L J. G R E G O N I S, resumed the stand on  
19 behalf of the defense, having been previously duly  
20 sworn, was examined and testified further as follows:

21  
22 DIRECT EXAMINATION (Resumed)

23 BY MR. NEGUS:

24 Q Showing you again H-323, you did tests on that sheath  
25 to see whether or not there was any stains that reacted  
26 with ortho-tolidine?

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- 1 A Yes, I did.
- 2 Q Where did you do -- where did you -- where did you test  
3 it?
- 4 A As far as the sheath itself, I did it over the entire  
5 surface. I believe I started in the areas near the  
6 snap here, and then I did it over the entire surface  
7 of the sheath.
- 8 Q Did you get -- you didn't get any reactions?
- 9 A I got a negative result, which indicates to me that no  
10 blood was on the sheath.
- 11 Q Can blood deteriorate so that it will not react to  
12 ortho-tolidine?
- 13 A Over very extended period of time, yes.
- 14 Q What about extended -- extensive heating?
- 15 A What do you mean by extensive? That's -- if it's just  
16 sitting, say, in a regular house or something like  
17 that, I don't think so.
- 18 Q What about a trunk of a car where the temperature is  
19 in the high hundreds?
- 20 A Well, I would think over some period of time, it would  
21 degrade to the point where you couldn't detect it;  
22 however, I have also had times when I've been able to  
23 get ortho-tolidine off of a three-year-old stain that's  
24 been in a trunk of a car also in the desert.
- 25 Q So it just depends on how hot it got?
- 26 A Yes.

1 Q Did you -- when you got that sheath, did you see on  
2 it any -- any areas that appeared to have stains that  
3 were visually consistent with blood?

4 A I don't remember at this time, and I didn't have  
5 anything in my notes to indicate such.

6 Q Can you see anything there now?

7 A Nothing that would indicate to me that it's -- there's  
8 any blood on here, no.

9 Q How many samples that you received in this particular  
10 case that had, at least presumptively, blood on them  
11 were exhausted in analysis so that no independent  
12 testing of them can be done?

13 A Approximately 20.

14 (No omissions.)  
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1 Q Okay. And which, by laboratory number, which ones  
2 were they?

3 A A-42, B-11, B-12, E-5, E-6, J-6, J-16, J-26, L-4,  
4 L-3, C-4, C-5, D-13, D-14, W-1, W-2, W-3, W-5. There's  
5 item BB --

6 THE COURT: I'm sorry?

7 THE WITNESS: Item BB, and W-7.

8 Q BY MR. NEGUS: And A-41?

9 A And A-41, yes. There is a small amount of A-41 left.  
10 I don't know if there's enough to do anything with.

11 Q When were -- when you started analyzing all of those  
12 different -- different samples, was it apparent to you  
13 that there wasn't going to be enough blood there for  
14 independent testing?

15 A I don't have recollection of that, but there probably  
16 was.

17 Q Now, of those, only A-41 did you do all the tests that  
18 your lab -- or, all the tests that your -- let me take  
19 it back.

20 On A-41, you did almost all the tests that your  
21 laboratory is capable of doing; is that right?

22 A That is true, yes.

23 Q The other ones you all did where there was not enough  
24 to do even as many as you did on A-41; is that correct?

25 A That is correct, yes.

26 Q With respect to A-41, you were -- you did not do a test

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1 for glyoxalase, G6PD or PGM subtyping; is that correct?

2 A That is correct, yes.

3 Q And you also did not obtain a result on your test for  
4 group specific component?

5 A That is correct, yes.

6 Q Showing you Exhibits H-324 and H-325, did you prepare  
7 those exhibits in connection with the preliminary  
8 hearing?

9 A Yes, I did.

10 Q And is H-324 a list of the probabilities, first, of  
11 one enzyme antigen test, as the case may be, matching  
12 a given individual in the United States population of  
13 both white and black?

14 A Well, it's a list of the probability of individualizations  
15 and discriminations of various antigens and enzymes in  
16 serum proteins.

17 Q Okay. Okay. And combinations thereof that you can do  
18 together, right?

19 A Yes.

20 Q And the -- the column that's the probability of individu-  
21 ation, that's the probability that two randomly selected  
22 samples would match; is that right?

23 A Yes.

24 Q And the probability of discrimination is the -- is  
25 the inverse of that, the probability that -- that two  
26 randomly selected samples wouldn't match?

1 A That is true, yes.

2 Q Okay. In -- as far as taking an unknown sample of  
3 blood, the enzyme or group test which has the highest  
4 probability of discrimination or, conversely, lowest  
5 probability of individuation is the test which, for  
6 any given sample, is most likely to produce useful  
7 information; is that correct?

8 A That is true, yes.

9 (No omissions.)

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1 Q Those particular things had to do with the entire  
2 population of the United States? That is, they don't  
3 factor in anything that you may know about victims or  
4 suspects in a particular case; is that right?

5 A That is true, yes.

6 Q Now, it's also possible to calculate the -- if you know  
7 your victims' types, for example, it's also possible --  
8 it's also possible to make calculations as to the  
9 probability of any particular test not matching an  
10 individual victim; is that correct?

11 A That is true, yes.

12 Q And the same goes for an individual defendant?

13 A That is true, yes.

14 Q And you can also combine -- you can also combine victims  
15 and defendants, and so you get a limited population of  
16 people you're interested in, and you can also calculate  
17 the probability that a given sample of blood will be  
18 somebody outside of that population of victims and  
19 suspects totally; correct?

20 A That is true, yes.

21 Q In serology, as part of the procedures that serologists  
22 use to conserve limited samples, are those various  
23 probabilities considered in choosing which tests to  
24 do and which order to do the tests?

25 A Yes, they are.

26 Q Did you do that in this particular case?

1 A Some cases, yes, and in some cases, no.

2 Q Just -- I have -- just to make it easy, I have a list  
3 of what you just read as to the samples that were --  
4 where we're in a sample-limited situation in this  
5 particular case. Which of those samples did you take  
6 those factors into consideration with, and which didn't  
7 you?

8 A Okay. As far as A-41, since I did run all but  
9 essentially one system that the laboratory is capable  
10 of doing, that's -- the question is -- I don't know if  
11 you can really say whether I did or did not, since I  
12 did do all those systems.

13 Q Well, I'm asking you did -- when you were -- when you  
14 were setting up your schedule of experiments, did you --  
15 did you take that into consideration when you decided  
16 the order in which you were going to do the experiments  
17 and which ones you were going to do?

18 A No, I did not, except for doing the transferrin and  
19 haptoglobin at the very end.

20 Q And how did -- how did that enter in?

21 A Basically, we typed individual -- individually typed.  
22 I assume that Dr. Blake also typed the transferrin  
23 and haptoglobins before I did, and we'd decided, or  
24 at least I decided that the transferrin and the  
25 haptoglobin both would be very good in trying to  
26 distinguish this blood from the rest of the population

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1 Q Okay, and what about the -- going on down the list,  
2 was there any others where you engaged in this kind  
3 of -- this kind of thinking in selecting which tests?

4 A Okay. As far as B-11 and B-12, I really don't think  
5 there's -- or at least B-11, there really wasn't  
6 enough to do much with in the first place, so I don't  
7 think that's a relevant question.

8 Q Well --

9 A There's only enough to do human, and possibly a  
10 reverse ABO blood group typing, which isn't a lot of  
11 blood to begin with.

12 Q Well, in determining which of those -- which of those  
13 tests to do as far as taking human and ABO reverse,  
14 why -- why -- why are those the only relevant tests  
15 that you considered?

16 A Well, first of all, the human, as far as I'm concerned,  
17 is a necessary test to determine what you're testing,  
18 whether it's human blood or something else. If it's  
19 something else, I really, you know, unless -- except  
20 for a particular case, it really doesn't matter to me  
21 what it is unless it's human.

22 Q Okay.

23 A As far as the ABO, trying to do the reverse, I did  
24 have a very small amount of sample, and I did not  
25 feel with B-11 that I could really do anything else  
26 except for something like the reverse typing.

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1 Q The reverse ABO takes less sample than the other tests  
2 you could do?

3 A Yes, it does.

4 Q The B samples were given -- labeled for you as blood  
5 scraped from beneath the fingernails of Peggy Ryan;  
6 is that correct?

7 A I believe it's from Peggy Ryan, yes.

8 (No omissions.)  
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1 Q Given what you're -- well, the -- the point of looking  
2 at blood under the fingernails is to attempt to  
3 determine whether or not that blood came from either,  
4 on the one hand, Peggy Ryen or, on the other hand,  
5 a -- an assailant that she may have scratched during  
6 the struggle; is that --  
7 A Or -- or anybody else, basically, yes.  
8 Q But -- but the two -- generally the reason why  
9 criminalists normally take samples from blood underneath  
10 the fingernails of victims of assaults or murders is --  
11 is those are the two most likely choices, right?  
12 A I'd agree, yes.  
13 Q Okay. Given that it is underneath the fingernails of  
14 a victim of a homicide and the scarcity of the sample  
15 and the lack of -- of -- of likelihood of it being  
16 other than human blood -- blood, do you think that --  
17 that that was justified in this particular case?  
18 A As far as the -- if you're saying whether I should not  
19 have done the human blood? Is that what you're saying?  
20 Q Right. If you only have enough -- if you only have  
21 enough, you -- did you get a result on the ABO reverse?  
22 A No, I did not.  
23 Q So all you can say about that is that it is human  
24 blood?  
25 A That is true, yes.  
26 Q That's not very informative, is it?



1 A That's all the sample gave me. It's all that was there.

2 Q Well, would it have been more informative to know  
3 whether the blood matched Peggy or didn't?

4 A Of course it would, yes.

5 Q Okay. Given the amount of blood that was there,  
6 enough to do -- enough to do a human and at least  
7 attempt an ABO reverse, could you have -- for example,  
8 would that have been enough to do an absorption-elution  
9 using the Howard-Martin thread technique?

10 A Probably, yes.

11 Q Would it have been enough to do an electrophoretic  
12 run?

13 A Maybe.

14 Q Peggy's blood is of a type ABO that's only shared by  
15 three percent of the population, approximately; is  
16 that correct? •

17 A Three to five percent, I'd say.

18 Q So you had, in just doing the absorption-elution using  
19 the Howard-Martin technique with the threads on the --  
20 on the acetate, the -- you had a 95- to 97-percent  
21 chance of demonstrating, had that blood come from  
22 somebody besides Peggy, that fact; is that right?

23 A That is correct. But in an -- in a way, the negative  
24 reverse typing also shows that, although it is a  
25 negative result. An AB blood does not have any anti-  
26 bodies.

1 Q But that's an inconclusive result, right?

2 A I would say it's more of a negative result. It is  
3 consistent with an AB blood. And if it is a fresh  
4 blood, then I would expect to find the antigens there.

5 Q Well --

6 A Or, the antibodies, excuse me.

7 Q Did you have enough -- did you have enough sample so  
8 that somehow you could demonstrate that it wasn't just a  
9 paucity of sample which gave you your inconclusive  
10 result?

11 A Not really, no.

12 Q Whereas, using the -- the Howard-Martin technique, you're  
13 going to get, if there's enough blood there, you're  
14 going to get an interpretable result, correct --

15 A In --

16 Q -- even if it's -- if it's AB?

17 A In normal situations, yes.

18 Q Any others where you took into account the probability  
19 of discrimination either of the general population or  
20 of the smaller population of victims and suspects in  
21 this particular case?

22 A B-12's an example of that. I did do the ABO, which  
23 discriminates between all but two of the victims.

24 Q Okay.

25 A E-5 is also that way, since it discriminated between  
26 all but the one victim, Christopher Hughes. E-6 is

1 the same way. J-6, I did not take that into account  
2 except for the ABO, which does discriminate between  
3 most of the victims.

4 Q Okay. Did you -- did you take into account, with your --  
5 with the J-6, the probabilities of just discriminating  
6 amongst the population in general? Did you take the  
7 test which would have the highest discriminatory  
8 potential given the amount of sample that you had?

9 A No, I did not. ~~X~~

10 Q Any others that you -- that you took those considerations  
11 into account?

12 A J-16 is, again, looking at which possible -- possibly  
13 which victim or whatever it was from, if it was from a  
14 victim. J-26, I don't know what it was, whether it  
15 was human or not, so I can't really tell you whether  
16 it would have been of any information. But I did try  
17 to discriminate between the victims doing the ABO.

18 Q Didn't you -- you -- on the J-26, didn't the -- the  
19 result of the -- of the test for species indicate to  
20 you that it was not human?

21 A Not necessarily. It could just be that it's degraded  
22 to such a point that I'm not picking up the human blood  
23 types.

24 Q Okay.

25 A I would -- you know, given that the blood was fresh,  
26 if it was, this is an indication that it was not human,

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1 yes.

2 Q Okay. So it was either too old to have been relevant  
3 to this particular case or not human?

4 A I'd agree, yes.

5 Q Okay.

6 A As far as the blood on the Olympic -- Olympia beer  
7 can, I did try to discriminate between the victims  
8 and do -- the PGM would have discriminated between,  
9 if I would have gotten ABO, would have also discriminated  
10 between the victims and Cooper. However, I didn't get  
11 the ABO on that.

12 THE COURT: Which sample was that?

13 THE WITNESS: L-4, excuse me.

14 L-3, there really wasn't enough to do anything with.  
15 C-4, there -- C-4, C-5, D-13, there's basically only  
16 enough to do human and ABO, which I did. D-13 was  
17 inconclusive on that. D-14, I did discriminate between  
18 the victims and also, coincidentally, discriminated between  
19 the victims and Mr. Cooper.

20 Q BY MR. NEGUS: You didn't know that you were doing  
21 that at the time, you would have had that effect?

22 A I knew I was discriminating between the victims, right.

23 Q Right. But not between, excuse me, Mr. Cooper?

24 A Yes, that is correct.

25 As far as W-1, W-2, really didn't take that into  
26 account. W-3, I did take that into account as trying

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1 to discriminate between the victims.

2 W-5, I was basically, on that one, looking to  
3 making the -- the hypothesis, if you will, that that  
4 was Mr. Cooper's blood, and I was trying to discriminate  
5 between that and see if it was not Mr. Cooper's blood  
6 doing the peptidase A.

7 Q And let's see. Have you got any other ones there?

8 A Item BB, again, that was a negative human. So, again,  
9 if there was fresh blood that was given to me, no  
10 problems. Also I have a note down here that I'm  
11 possibly getting positive ortho-tolidine from a varied  
12 mineral soil, so it might not have been blood at all.

13 And W-7, I attempted to discriminate between all  
14 the victims and also tried to do the general population  
15 discrimination.

16 Q Now, of the other samples that you have done, the only  
17 ones that you have done anything -- well, the only one  
18 that you have attempted most of the tests that you can  
19 do on is A-41; is that correct?

20 A I have also attempted it on some of the other ones,  
21 yes.

22 Q Well, you have never -- is there anyone that you have  
23 done Group I, Group II, Group III, Group IV, haptoglobin,  
24 PGM subtyping on it?

25 A I have done Group III in addition to everything else  
26 on A-3. I have done also Group III on A-2, along with

1 the other things. Did not do haptoglobin on that yet.

2 As far as J-17, that was pretty much negative. I  
3 think it's an animal blood, anyway. A-44, I have done  
4 everything except for haptoglobin.

5 J-9, again, I have done everything except for  
6 haptoglobin. M-1, that's a whole blood sample. I  
7 have done everything except for haptoglobin. Item CC,  
8 I have done everything except for haptoglobin.

9 Item JJ, I have done everything except -- well, I  
10 have also done PGM subtyping. That's also a whole  
11 blood, however.

12 Item NN-2, I have done everything except for  
13 haptoglobin.

14 And that's about it. The other samples I do intend  
15 and have them ready for doing other tests on.

16 (No omissions.)  
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- 1 Q Okay. Of the other samples, are there any where there's  
2 not enough left to do the other test?
- 3 A Those I still have to take a look at and see if there  
4 is that possibility.
- 5 Q Okay. So you don't know?
- 6 A Not at this time, no.
- 7 Q When will you know that?
- 8 A I suppose I can go through them one of these days,  
9 whatever, and make a list like that.
- 10 Q Okay. When -- let's -- the -- the chart behind you on  
11 the board which is H-334 in orange there, is that a  
12 chart that you prepared again at the preliminary  
13 hearing?
- 14 A Yes, I believe it is.
- 15 Q And is that a chronology of the tests that you did on  
16 A-41?
- 17 A Yes, it is.
- 18 Q When -- you said there's still some A-41 left?
- 19 A Yes, there is.
- 20 Q Is that -- wasn't there an attempt made to use all  
21 the remaining A-41 on the haptoglobin testing on  
22 10-4 -- 10-3?
- 23 A I believe there was; however, I did look in the  
24 canister the other day, and there is -- like I say,  
25 there is a very small amount left. I don't know if  
26 there's enough to do anything with.

1 Q Was that the small amount of the liquid extract that  
2 you -- that you --

3 A No. That's a small amount of small flakes that were on  
4 the plaster in that sample.

5 Q Were they from the same drop as A-41 or were they  
6 from --

7 A They're from the same drop, as far as I know. They're  
8 all collected in the same tin.

9 Q Are they like specks on the plaster?

10 A Specks on the plaster or in the tin itself.

11 Q And you're not sure whether there's enough there to  
12 do anything with?

13 A No, I'm not.

14 Q You've completed your analysis of A-41?

15 A Not necessarily, no. There may be -- I do have to talk  
16 to another expert, Brian Wraxall, to see how much  
17 quantity he needs for other typing.

18 Q What other typing would you propose to do?

19 A The other typing after -- that I would propose to do,  
20 of course, after looking at the victims' blood, is  
21 probably a typing called Gm, which is looking at  
22 antibodies and different types of antibodies.

23 Q What are the different types of the parties that we're  
24 dealing with in this particular case?

25 A I don't know. That's why I stated that we have to  
26 look at the victims and the suspect first.



1 MR. NEGUS: Could -- just -- this is -- could I  
2 just be -- put -- briefly put something on the record before  
3 we continue, so that we don't have any problems later on?

4 THE COURT: Sure.

5 MR. NEGUS: I would like that remaining A-41 blood  
6 to attempt to do independent testing on, and I just want it  
7 not to get used up by anybody or anything done to it. I  
8 believe -- it was my understanding representations were  
9 made that in doing the testing back in October, all of the  
10 stuff that they had remaining was extracted and used up,  
11 and so before anything happens to it, I want it to be clear  
12 that I would like to do independent testing if there's  
13 any -- if there's enough left of A-41.

14 MR. KOCHIS: Well, without arguing any further, I  
15 will not have that sample tested until I bring it to the  
16 Court's attention, Mr. Negus' attention, and we litigate it,  
17 but it is our intention to conduct a further test on it.  
18 That will be the basis of some litigation, I assume.

19 THE COURT: I suppose what you should do is  
20 probably file an offer of proof as to what further tests  
21 you would desire to complete on that, and the testing for  
22 the defense is obvious, so I am going to have to weigh one  
23 against the other again, and I think you should do that  
24 fairly quickly, within a week, perhaps.

25 MR. KOCHIS: It's not going to be possible to do  
26 that within a week.

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1 THE COURT: To tell me what -- what's the probative  
2 value of further testing to the prosecution as -- as weighed  
3 against the probative value of the defense being able to  
4 verify, corroborate or -- or deny the prosecution's offer  
5 of proof with reference to perhaps the most critical piece  
6 of evidence in the case?

7 MR. KOCHIS: Simply we may be able to discriminate  
8 the blood drop further to either exclude Mr. Cooper as  
9 being the person depositing that or to exclude a larger  
10 percentage of the population from depositing A-41. It's  
11 a further discriminatory genetic marker.

12 THE COURT: Well, do you want to argue it now or  
13 do you want to work on an offer of proof as I suggest?

14 MR. KOCHIS: I can work on an offer of proof, but,  
15 in all candor to the Court, we don't know until we test  
16 the victims and Mr. Cooper for that genetic marker. If  
17 it happens that they all have the same genetic profile as  
18 to that Gm, then obviously I don't have as strong an argument.  
19 The problem is my expert is not going to be available after  
20 this Friday for about 10 or 14 days, so he's not going to be  
21 able to run everybody's blood for that system in the next  
22 two or three days, and it may be something that because of  
23 our lab, we may have to have a lab in Emeryville run, first  
24 of all.

25 THE COURT: Any time problems, Mr. Negus?

26 MR. NEGUS: Yes. I mean all of this stuff I need

5 I should tell you, I suppose, that it's -- I have  
6 a witness on this motion whose testimony probably will  
7 take like half a day on direct and perhaps considerably  
8 longer than that on cross who cannot testify prior to  
9 July the 31st, so, you know, we would hope to be finished  
0 with presenting evidence other than that person sometime --

12 MR. NEGUS: Who is he?

15 MR. NEGUS: Because he's on vacation the next two  
16 weeks. Mr. Gregonis is on vacation the next two weeks. I  
17 was going to put him on this particular week, then --

21 MR. NEGUS: There's no -- Mr. -- Dr. Thornton can't  
22 be here till July 31st. Now, we've made arrangements. Now,  
23 we have stuff that we can do in the interim. We're not  
24 just going to be dark. There's other motions that we can  
25 take up before this one gets completed, so it's not like  
26 a waste of time, but the other thing is that -- that just

1 as a practical matter, I -- unless the prosecution is willing  
2 to stipulate that everything that they haven't done can't  
3 be done, which I doubt if they for the purpose of this  
4 motion -- I doubt if we'll have all the information prior  
5 to sometime after the 31st, but I would like to have this --  
6 whatever testing is going to be done on A-41, if there's  
7 enough left to do, done prior to that time.

8 THE COURT: So that your expert could run whatever  
9 analysis you wish on it before he testifies?

10 MR. NEGUS: Yeah. Well, that's a different  
11 expert, but I'd like to have Dr. Blake have a chance to  
12 look at that stuff that's in A-41 and do some independent  
13 testing on it, because I was led to believe by Dr. Blake,  
14 and I thought also -- I have to check back on Mr. Gregonis'  
15 testimony at the preliminary hearing -- that all of A-41  
16 had been consumed in analysis --

17 THE COURT: I know your points and authorities  
18 previously mentioned that.

19 Well, I instruct you now, Mr. Gregonis, do not  
20 further exhaust any of the substance in A-41 until further  
21 release order from the Court.

22 THE WITNESS: Yes, Your Honor.

23 THE COURT: And I don't know when we can resolve  
24 the issue further then.

25 Any way you can speed up your determination,  
26 Mr. Kochis?

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1 MR. KOCHIS: I can discuss that with my expert,  
2 but I really don't see, Your Honor, that being a Hitch  
3 issue. That seems to be another issue --

4 THE COURT: I agree.

5 MR. KOCHIS: -- and I don't think the results of  
6 that are going to have an effect on the Court's ruling on  
7 the Hitch issue.

8 MR. NEGUS: I think they might.

9 MR. KOCHIS: We're not going to expend it. I  
10 mean we're either going to get to test it jointly or the  
11 Court's going to allow him to test it independently and  
12 we're going to have fulfilled our duty to preserve it. It's  
13 frozen, and it's there, and someone's going to get to use  
14 it, so it isn't like we discarded it, overlooked it, didn't  
15 freeze it or anything.

5a 16 MR. NEGUS: We were just getting into the area  
17 where we found this -- which is what brought it to my mind --  
18 is that it's -- there are several tests up there where  
19 Mr. Gregonis' records, I would submit, as to A-41 are not  
20 sufficient from the photographs to allow an independent  
21 expert to tell from the photographs what he's got, and  
22 so I -- plus he wasted the sample repeating the experiments  
23 a couple of times, which -- that's my offer of proof as  
24 to what I'm going to be bringing out in the next hour or  
25 so.

26 THE COURT: Well, let's just save it -- you haven't

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1 had a chance to think about this -- and bring it up the  
2 first of next week, and let's see if anything's developed.

3 MR. NEGUS: I'd like to bring it up, if we can,  
4 before that. I'd like to get that as soon as possible.

5 MR. KOCHIS: Well, I'm going to discuss it at the  
6 recess with my expert, what we can do to start the ball  
7 rolling.

8 MR. NEGUS: Can we take the recess now? I'd like  
9 to go and -- before I ask some more questions of  
10 Mr. Gregonis, I'd like to try and get in touch with  
11 Dr. Thornton.

12 THE COURT: We'll take an early recess.

13 (Recess.)

14 (No omissions)

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1 MR. NEGUS: I told your clerk, Your Honor, I  
2 requested I get the rest of the afternoon off. I can't get  
3 in touch with my expert until approximately after 3:00,  
4 and I'm not prepared to ask Mr. Gregonis any more questions  
5 about this area until I can talk to him. And that's the  
6 only area I prepared for this afternoon.

7 It's not usual that one finds evidence a year into  
8 a case or six months into a case that there's blood that  
9 was supposed to have not been in --

10 THE COURT: I can't possibly see how that stops  
11 you from continuing your examination with the witness --

12 MR. NEGUS: Well, I think it does.

13 THE COURT: -- reserving that one area for later  
14 on.

15 MR. NEGUS: That was -- that area is what I was  
16 going -- what I was prepared to talk to him about today.  
17 I mean, I -- we've gone through all this jazz leading up  
18 to it --

19 THE COURT: Mr. Kochis, if you have any questions  
20 of the witness, let's conclude. We can bring him back  
21 another day.

22 MR. NEGUS: He's going to be here the rest of the  
23 week, Your Honor, and --

24 THE COURT: Then let's go with --

25 MR. NEGUS: I'm sorry; I'm not -- I'm not prepared  
26 to go at this point in time.

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1 THE COURT: I'm sorry, Mr. Negus. We'll go as far  
2 as we can at this time. I'm going to cut you off. We  
3 worked one hour today so far.

4 We worked one hour today so far. I let you off  
5 this morning. I'm not about to terminate at this time.

6 MR. NEGUS: Your Honor, it's not every day that --  
7 that -- I don't know I wasn't even told this months ago,  
8 if it was -- if it was known. Apparently Mr. Gregonis  
9 has known at least since he went up to see Mr. Wraxall,  
10 because apparently he talked to him about it. And it  
11 wasn't -- I haven't -- this is the first I've heard that  
12 there's anything left of A-41. Everything I have been  
13 told to the contrary was that there wasn't anything left  
14 of A-41. And had I known this a long time ago, we would  
15 have obviously been requesting that before it had -- had  
16 disintegrated any further.

17 THE COURT: Counsel, counsel --

18 MR. NEGUS: Until I know what the facts are,  
19 Your Honor, about A-41 -- I was prepared to spend the rest  
20 of the afternoon questioning Mr. Gregonis about his analysis  
21 of A-41. And I think that's how long it will take me.

22 I don't know what the facts are now about it until  
23 I have a chance to talk to Mr. Blake. I can --

24 THE COURT: We'll give you time for your phone call.  
25 I understand he's going to be available after 3:00. Is that  
26 right?

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1 MR. NEGUS: After 3:00.

2 THE COURT: All right.

3 MR. NEGUS: That's not going to leave us very much  
4 more time in the rest of the afternoon. I mean, I don't  
5 see why --

6 THE COURT: You know, if -- if --

7 MR. NEGUS: There's the --

8 THE COURT: -- if you have some more sample left  
9 over to where it enables more testing, fine. But how can  
10 that possibly affect your continued examination of the  
11 witness?

12 MR. NEGUS: Well, just as an example, the last  
13 test that was done was the haptoglobin test. Mr. Gregonis  
14 thinks that he got a readable result off that test. The  
15 photograph, if you look at it, I don't think a criminalist  
16 would -- would -- would agree with him.

17 The last test was supposedly using all the remaining  
18 sample to try and maximize the chances of getting results.  
19 If Mr. Gregonis somehow held back the sample or didn't  
20 provide all the sample to Dr. Blake, that certainly affects  
21 the results of the last test.

22 I want to find out from Dr. Blake exactly what  
23 his version of what happened is before I cross-examine  
24 Mr. Gregonis any further on this.

25 I think this is a matter which I should have been  
26 told about months ago, if it were -- if it's true. And I

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1 am -- am very upset that I learned it for the first time  
2 on the witness stand today. And I don't think that I can  
3 do an adequate job of questioning Mr. Gregonis until I  
4 find -- until I have a chance to talk to Dr. Blake.

5 THE COURT: I find you're getting just a little bit  
6 pushy, Mr. Negus.

7 MR. NEGUS: I'm sorry, Your Honor.

8 THE COURT: Mr. Kochis, can you proceed with some  
9 of your questions now?

10 I just don't want to delay it any further. This  
11 case has ground out interminably. And I think that you're  
12 being a little bit unreasonable with your request now,  
13 Mr. Negus.

14 I'll give you time to talk to your expert around --  
15 after 3:00 o'clock.

16 Mr. Kochis.

17 MR. KOCHIS: Yes, Your Honor.

18 THE COURT: Let's try and proceed.

19

20 CROSS-EXAMINATION

21 BY MR. KOCHIS:

22 Q Mr. Gregonis, directing your attention to the chart  
23 Mr. Negus asked you a number of questions about  
24 yesterday, H-16 and -17, items that from time to time  
25 you can render an inference about with physical evidence,  
26 when we talk about a reconstruction, are we talking

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1 about a term that allows you to draw certain inferences  
2 or something that allows you to draw some type of  
3 opinion with a mathematical certainty?

4 A Pretty much inferences.

6b Q Now, in this particular case, as to the first item on  
5 that chart, the number of assailants, and turning  
6 specifically to this particular case, the Ryen home,  
7 the Ryen crime scene, did you see, when you were in  
8 that house, evidence that would have allowed you to  
9 determine from the analysis of the blood splatter  
10 patterns the number of the assailants, for example?  
11

12 A No, sir.

13 Q Did you see any type of trace evidence while you were in  
14 the Ryen home that in your opinion would have allowed  
15 you to determine the number of assailants?

16 A No, sir.

17 Q You have examined some of the photographs in this  
18 particular case; is that true?

19 A Yes, I have.

20 Q Have you examined -- if I can have just a moment,  
21 Your Honor.

22 Directing your attention to a series of eight-by-ten  
23 color photographs of the Ryen master bedroom which have  
24 been marked for identification in this hearing as H-213,  
25 H-212 and H-211, putting aside, for the moment, the  
26 possibility of typing all the blood in that room, do you

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1 see any type of physical evidence which in your  
2 opinion would lead to a reconstruction as to the  
3 number of assailants?

4 A No, sir, I did not.

5 Q In this particular case, when you were at the Ryen  
6 crime scene on the 6th of June of 1983, did you see  
7 the type of physical evidence which in your opinion  
8 would have allowed you to determine the second element  
9 on the chart, L-216, the position of the victims when  
10 they were attacked?

11 A I think I could have determined the position as they  
12 were bleeding, possibly, or at least whatever part of  
13 them was bleeding.

14 Q You walked through the entire house on the 6th of June;  
15 is that correct?

16 A Yes, I did.

17 Q And you conducted a visual analysis of the house as  
18 you walked through?

19 A Yes, I did.

20 Q Is it fair to say that, based on your walk-through of  
21 the house, you can draw an inference as to rooms in  
22 the house where victims were not bleeding when they  
23 were attacked? Is that fair to say?

24 A I believe so, yes.

25 Q For example, did there appear to be physical evidence  
26 in the kitchen which was consistent with the victims

1           bleeding there?

2    A    No, sir.

3    Q    In the dining room?

4    A    No, sir.

5    Q    In the living room?

6    A    No, sir.

7    Q    In the trophy room?

8    A    No, sir.

9    Q    In any of the children's bedrooms?

10   A    No, sir.

11   Q    So would that allow you to infer that -- one of the  
12           inferences you could draw is that they were attacked  
13           in the master bedroom?

14   A    Yes, sir.

15   Q    Beyond that, in looking at the photographs, H-211  
16           through H-213, are you able, through those photographs,  
17           to draw any further inferences as to the approximate  
18           location in the room they may have been when they were  
19           bleeding?

20   A    There's some things that you can say. For instance,  
21           the blood underneath the victims is obvious -- or, it  
22           is consistent with their own, that they're bleeding in  
23           that spot. And possibly the blood surrounding them  
24           is consistent. With some of the blood spots that are  
25           around the room, you can draw some inferences as to  
26           possibly who -- which of the victims it came from.

1 Q When we talk about position of victims, is it fair to  
2 say that it can mean two things: One, their geographic  
3 location in the room when they bled and, two, their  
4 actual configuration in the room, whether they were  
5 upright, seated, laying down, when they were bleeding?

6 A I think, as to most of it, you're talking about their  
7 actual physical location in the room. As to their  
8 physical positioning of their bodies, you can draw  
9 some inferences. For instance, as Mr. Negus pointed  
10 out, the blood that is running vertically down Peggy  
11 Ryan's stomach area indicates to me that at some point  
12 while she was bleeding or while that blood was on her  
13 she was sitting up or standing.

14 Q Perhaps my question should be as a result of your  
15 examination of the photographs and your examination of  
16 the scene on the 6th of June, did you see the type of  
17 evidence that would allow you to infer the exact  
18 position, in terms of the limbs of the victims, they  
19 were in or they exhibited when they were attacked?

20 A No, sir.

21 Q Turning to the third element on the chart, the sequence  
22 of the victims when they were attacked, based on your  
23 analysis of the photographs, including the three eight-  
24 by-tens in front of you and your examination of the  
25 scene on June the 6th, did you see the type of physical  
26 evidence that would allow you to determine the sequence

1 of the attack on the victims?

2 A No, sir.

3 Q Based on your analysis of the photographs and your  
4 view at the scene, did you see physical evidence that  
5 would allow you to draw any inference as to the type  
6 of weapon or weapons that may have been used in this  
7 case?

8 A There was some, yes.

9 Q And, for example, are you able to eliminate the  
10 possibility of a gun being used in this case?

11 A I believe so, yes.

12 Q And do you have an opinion in terms of an inference as  
13 to the type of weapon that could have been used in  
14 this case?

15 A As to my knowledge of the wounds on the body, mostly,  
16 plus some of the cast-off type of wounds or cast-off  
17 type of marks in the room, it is consistent with  
18 probably two types of weapons as a -- it is consistent  
19 with an ax, and there's also some of the wounds, in  
20 particular, one that I remember, a wound in the sternum  
21 of Douglas Ryen is consistent with a knife.

22 (No omissions.)

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1 Q By ax, are you also referring to what we as laymen  
2 call a hatchet?

3 A Yes, sir.

4 Q Putting aside for the moment the actual wounds inflicted  
5 on the victims themselves, the other evidence that  
6 existed at the scene that you have looked at in the  
7 photographs and that you saw in person on the 6th,  
8 did you see any type of physical evidence that would  
9 allow you to determine the exact dimensions of the  
10 weapon that was used?

11 A No, sir.

12 Q Turning to number 5, based on your examination of the  
13 photographs and your examination of the crime scene,  
14 was there physical evidence that allowed you to draw  
15 any inferences as to whether or not in this scene the  
16 victims moved from room to room after they started to  
17 bleed?

18 A I believe there was, yes.

19 Q And would that include the absence of blood in many  
20 of the rooms of the house?

21 A Yes, it would.

22 Q Based on the evidence that you saw, was one inference  
23 that you drew that the majority, if not all, the  
24 bleeding took place in the master bedroom or master  
25 bathroom?

26 A Yes, sir, it is.



- 1 Q However, are you able to draw any inference as to where  
2 someone may have been in the house prior to the time  
3 they started to bleed, based on the physical evidence  
4 in this case?
- 5 A No, sir.
- 6 Q As to item number 6 in this case, do you have -- well,  
7 first of all, do you have any personal knowledge as  
8 to whether or not Mr. Stockwell collected any clues  
9 in terms of physical evidence that would allow you to  
10 infer the identity of the assailant in this case?
- 11 A Yes, he did.
- 12 Q And one of those items would be I assume A-41?
- 13 A Yes, sir.
- 14 Q So blood is the type of evidence in this case that  
15 could have given you some information about the  
16 possible identity of an assailant; is that true?
- 17 A Yes, sir.
- 18 Q And, again, the type of information we're talking about  
19 simply allows you to draw an inference; is that not  
20 correct?
- 21 A That is true, yes.
- 22 Q For example, with A-41, can you place a time parameter  
23 on the depositing of that particular stain?
- 24 A Yes, I can.
- 25 Q What -- within what time period?
- 26 A I would say with the typing results that I got, it's

1           within probably two months.

2   Q   Is it therefore correct to say that you cannot testify  
3       with complete certainty that A-41 was deposited on  
4       either the 5th or 6th of June?

5   A   That is true, yes.

6   Q   But it's an inference you would draw?

7   A   Yes, sir.

8   Q   With the blood, for you to draw the inference that  
9       the only blood at the scene was either Mr. Cooper's  
10      or one of the victims, would you have had to test all  
11      the blood?

12  A   As -- I don't understand your question here.

13  Q   For you to have an opinion as to whether the blood in  
14      the Ryen home was deposited by one of six people, those  
15      being either Christopher Hughes, the Ryen family, or  
16      Mr. Cooper, would you, in effect, have to analyze all  
17      the blood?

18  A   Yes, I would.

19  Q   Could you make some educated guesses that would short-  
20      circuit that by taking what appeared to be samples  
21      from various patterns?

22  A   Yes, you could.

23  Q   And Mr. Negus talked to you about that yesterday?

24  A   Yes, sir.

25  Q   And you saw hundreds of different patterns?

26  A   There's many patterns around the room, yes.

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1 Q And even if you further short-circuited the process  
2 to only take some of those samples, would that  
3 procedure not be subject to interpretation?

4 A Yes, it would.

5 Q As to item 7, were there wounds on the victims that  
6 you've seen in the photographs that were consistent  
7 with some type of resistance by the victims?

8 A Yes, there are.

9 Q Putting aside those pieces of evidence, were there any  
10 other pieces of physical evidence either on the 6th  
11 when you looked at the crime scene that you saw or in  
12 the photographs that you've seen in front of you on  
13 the witness stand or the other photographs you've  
14 looked at in this case that would allow you to draw  
15 an inference as to what the nature of the resistance,  
16 if any, was in this case of each of the victims?

17 A Without any further analysis?

18 Q At this point without any further analysis.

19 A No, I believe not.

20 Q Is one of the inferences you could draw in that case,  
21 Mr. Gregonis, whether or not the location of the blood  
22 around the room came back to a particular victim?

23 A As to on that date and now or -- you can say or infer,  
24 because of the location of the bodies, as to whose blood  
25 it might be.

26 Q Perhaps the question was ambiguous. For example, you

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1 have analyzed a number of the blood samples that were  
2 taken from this particular crime scene; is that fair?

3 A Yes, I have.

4 Q And directing your attention to H-291, do you recognize  
5 what this appears to be a xerox copy of?

6 A Yes, I do.

7 Q And does it appear to be a xerox copy of a portion of  
8 the laboratory results in this particular case?

9 A Yes, it does.

10 Q Directing your attention to some pages of this exhibit  
11 which have been marked as 1722 through and including  
12 1726, are those copies of the results of the tests  
13 you performed in this case on a number of the items  
14 that were removed from the Ryen home in testing them  
15 for their various genetic profiles?

16 A Yes, they are.

17 Q And does it also include the genetic profiles of the  
18 five victims and Mr. Cooper in this case?

19 A Yes, it does.

20 Q When you conducted that analysis, did you find blood  
21 that was consistent with coming from Doug Ryen in  
22 various locations in that master bedroom?

23 A Yes, I did.

24 Q And is it also fair to say that that blood is not  
25 consistent with coming from any victim in this case  
26 other than Mr. Ryen?

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- 1 A Yes, sir. That is true.
- 2 Q Is it also fair to say that that blood is not consistent  
3 with coming from Mr. Cooper as well?
- 4 A Yes, it is.
- 5 Q And as a result of that, are you allowed -- can you  
6 draw yourself any inferences, first of all, for example,  
7 as to whether Mr. Ryen moved in the room from the time  
8 the attack started to the time the attack finished?
- 9 A Yes, I can.
- 10 Q What -- what type of inference could you draw?
- 11 A I believe that Mr. Ryen did -- well, at least, if that  
12 is his blood, which my typing indicates that it is,  
13 that Mr. Ryen had moved around the room both on the  
14 bed and I guess it would be counter-clockwise around  
15 the room to the position that he was laying in when  
16 found.
- 17 Q Breaking down for a moment some of the things you said,  
18 when we're talking about a reconstruction, you can't,  
19 as a matter of fact, say with mathematical certainty  
20 that the blood that we're talking about is Doug Ryen's  
21 blood, is it -- can you?
- 22 A Not absolutely, no.
- 23 Q There are other people in the world that have the same  
24 genetic profile that Mr. Ryen does?
- 25 A Yes, sir.
- 26 Q So what you can say in a reconstruction such as this,

1       that there is blood inside that house that is  
2       consistent with coming from Mr. Ryen first; is that  
3       correct?

4     A    Yes, sir.

5     Q    And could not have come from the other five victims  
6       in this case?

7     A    That is true, yes.

8     Q    And could not have come from Mr. Cooper?

9     A    That is true.

10    Q    Does the location of blood consistent with Doug Ryen  
11       throughout that bedroom allow you to draw any  
12       inference as to whether or not there was any resistance  
13       by Mr. Ryen during the attack or not?

14    A    Yes, it does.

15    Q    What -- what are the types of inferences that as a  
16       criminalist you can draw from that?

17    A    I would say at most that I would draw from that is that  
18       Mr. Ryen was physically moving somehow around the room  
19       while he was bleeding, and it is possible that he was  
20       in a struggle of some sort with the assailant.

21    Q    Two of the samples that you analyzed were samples A-31  
22       and A-32; is that correct?

23    A    Yes.

24    Q    And those are samples which are consistent with coming  
25       from Doug Ryen or a person that had his exact genetic  
26       profile; is that correct?

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- 1 A Yes, sir.
- 2 Q And the one sample A-31, the notes indicate that that  
3 was collected from the southeast wall near the  
4 dresser; is that correct?
- 5 A Yes, sir; that is correct.
- 6 Q And from your observations of the crime scene, where  
7 was that in relationship to the wall that was directly  
8 behind the waterbed, where the head of the waterbed  
9 would be?
- 10 A Well, as you're looking at the waterbed, it's to the  
11 left, if that's what you mean.
- 12 Q That was the answer I asked the question to.
- 13 And, likewise, A-32 came from approximately what  
14 location in the house, according to the notes?
- 15 A Blood crossed from the southeast corner of the waterbed.
- 16 Q You then likewise analyzed a number of samples of blood  
17 from the south wall itself; is that correct?
- 18 A Yes, sir; that is correct.
- 19 Q And some of those gave you ABO blood type results; is  
20 that correct?
- 21 A Yes, sir.
- 22 Q And as Mr. Negus brought out, that was -- yesterday,  
23 that was Type A?
- 24 A Yes, sir.
- 25 Q Do you recall how many of the samples you analyzed  
26 from the south wall came back as Type A human blood?

0-1-1-3-0-2

1 THE COURT: While he's looking at that, Counsel,  
2 we can go right on to 4:00 o'clock, the usual quitting  
3 time. He can make his phone call then, so go as far as  
4 you can, Mr. Kochis.

5 MR. KOCHIS: I, of course, am ready to stop at any  
6 point short of 4:00.

7 THE COURT: I'm prepared to go till then.

8 THE WITNESS: There were ten samples that were  
9 A and three samples that were inconclusive, along with the  
10 original sample that was taken from that area.

11 (No omissions.)  
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1 Q So the analysis of those samples allows you to infer  
2 that that blood came from, in this case, for example,  
3 Doug Ryen?  
4 A Yes, sir.  
5 Q Mr. Cooper's also Type A; is that correct?  
6 A Yes, sir, that is correct.  
7 Q You can at least initially, by inference, say it was  
8 consistent with coming from him; is that correct?  
9 A Yes, sir.  
10 Q Consistent from also the portion of the population that  
11 happens to be a Type A ABO blood group; is that true?  
12 A That is true, yes.  
13 Q And you can also say with certainty that none of those  
14 samples could have been deposited by the other four  
15 victims in this case; is that correct?  
16 A That is true, yes.  
17 Q Now, among the samples that you took off the south  
18 wall, were any of those blood drops that were part of  
19 the patterns that you determined to be arterial bleeding?  
20 A Yes, sir.  
21 Q Do you remember about how many?  
22 A I'd say about four of those samples were arterial.  
23 Q Based on the patterns from which the samples were taken,  
24 are you then allowed -- or, are you then able to draw  
25 any inference about the condition of the person who  
26 deposited the arterial blood at the time it was deposited?

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1 A Well, the person -- obviously they had a severed  
2 artery of some sort in some part of their body, so  
3 they're bleeding -- from the amount of blood, they're  
4 bleeding pretty much blood.

5 Q Then, to draw the further inference that it could not  
6 have come from only Mr. Ryen but the defendant as well,  
7 would you expect the defendant to have been severely  
8 injured and cut during the attack?

9 A I can say that the assailant was depositing, if he  
10 deposited, that was also bleeding from an artery,  
11 which, to me, means that he was bleeding pretty severely.

12 Q In response to Mr. Negus' questions yesterday, you said  
13 that when you were at the Ryen home on the 6th of June  
14 you saw blood spatter patterns which to you were  
15 interpretable on various walls in the home.

16 A Yes, sir.

17 Q Which meant, did it not, that you felt there was some  
18 information that could be gleaned from the patterns  
19 themselves?

20 A Yes, there were.

21 Q And, for example, with the south wall, the wall behind  
22 the waterbed, the patterns that you saw, as a criminalist,  
23 what type of information did you feel those splatter  
24 patterns could provide?

25 A They could provide some basically directionality of  
26 where the blood came from, what -- where the source of

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- 1 the blood was when it was being deposited.
- 2 Q And would -- then, in your opinion, would that allow --
- 3 allow you to infer either, one, where a victim may have
- 4 been standing when blood left his body, or where an
- 5 object may have been when blood left the object and
- 6 ended up on the wall?
- 7 A Either one or both.
- 8 Q Did you see any additional type of information that
- 9 could be gleaned from the splatter pattern on that
- 10 wall?
- 11 A Other than those already mentioned, the type of thing --
- 12 the fact that one of -- the person depositing the blood
- 13 was bleeding arterial, I don't believe so, no.
- 14 Q Did you see any wall in the master bedroom of that home
- 15 that had a splatter pattern that would have allowed you
- 16 to draw inferences other than the inferences you felt
- 17 could be drawn from the splatter pattern on the south
- 18 wall?
- 19 A Except for possibly different victims and different
- 20 positions of the people bleeding, no, not really.
- 21 Q But, again, is it fair to say that the type of
- 22 information you felt the splatter patterns could provide
- 23 is possible points of origin of a victim when the blood
- 24 was deposited?
- 25 A Yes, sir.
- 26 Q Do you recall on the 6th of June of 1983 testing a

0-1-1-3-8-9

1 stain in the refrigerator which was not on a beer can?

2 A No, sir.

3 Q You testified yesterday that it took you approximately  
4 four hours to take the sections of the wallboard of  
5 the south wall of the Ryen home from where they're  
6 stored in the evidence locker, set them up, document  
7 the 13 samples, photograph them, take the samples and  
8 put them back; do you recall that?

9 A Yes, sir.

10 Q How much of the four hours was spent in simply taking  
11 the wallboard out, setting it up and then taking the  
12 wallboard down and placing it back into evidence?

13 A I would say approximately 40, 45 minutes.

14 Q Is it fair to say, then, it took you approximately  
15 three hours to document, to record, to photograph  
16 and to collect those 13 samples?

17 A I would say yes.

18 Q And that was without measuring on a two-dimensional  
19 plane the location of each of those samples?

20 A That is true, yes.

21 Q So to take that additional step would have taken  
22 additional time?

23 A Yes, it would have.

24 Q Was it your intention when you were at the crime scene  
25 on June the 6th with Mr. Ogino to take 200 additional  
26 samples of blood?

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1 A No, it was not.

2 Q After you conducted your visual analysis of the scene  
3 with Mr. Ogino, was it your intention to take a sample  
4 of blood of each separate action that may have been  
5 depicted by a bloodstain pattern in the Ryen master  
6 bedroom?

7 A No, sir.

8 Q Did you have a chance to look at the carpet in the  
9 Ryen master bedroom as you walked through the master  
10 bedroom?

11 A Yes, I did.

12 Q At that time, did you see any piece of trace evidence  
13 which in your mind was so important it should be  
14 collected?

15 A I didn't see any, no.

16 Q Does the condition of a crime scene often affect your  
17 decision as to how the scene should be processed?

18 A It can, yes.

19 Q In this case, were you able to draw any inferences as  
20 to how the house was kept prior to the attack based on  
21 your visual examination?

22 A Yes, you can. Or, did.

23 Q And what inferences did you draw, if any, from your  
24 visual examination of the house as to the state of  
25 cleanliness the house was kept in prior to the attack?

26 A Well, the house, as I saw it was very unkept. It was

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1 very dirty carpets and just not a well-kept house.

2 Q Were there in fact sections of the carpet in various  
3 rooms of the house that were missing, that appeared  
4 to be missing due to just normal wear and tear?

5 A Yes, sir.

6 Q Did the carpet appear to have been there for some  
7 period of time?

8 A Yes, sir.

9 Q And did the carpet -- did the house in fact appear to  
10 be a house that was not regularly cleaned?

11 A Yes, it did.

12 Q Would that make any difference in your evaluation of  
13 what to do with potential trace evidence on the carpet?

14 A Basically, the significance of it, the trace evidence  
15 on the carpet would be much diminished because of the  
16 amount of contamination.

17 Q Well, when you talk about contamination, are you talking  
18 about things that may have happened prior to the time  
19 the attack took place?

20 A Yes, sir.

21 Q And is it possible, for example, with the trace  
22 evidence such as human hair to date the hair itself  
23 in terms of when it was deposited on the carpet?

24 A Only roughly. If you can get -- if it was forcibly  
25 removed and you can get some enzymes on it, then you  
26 can say something about it.

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1 Q What type of time parameter are you talking about?

2 A I would say, again, a couple of months.

3 Q And if hair had simply fallen out, would the time

4 parameters be more, be wider than the couple of months?

5 A Yes, it would.

6 Q Did you take -- was that taken into consideration on

7 the 6th as to whether or not the carpet should be

8 more thoroughly examined at that location?

9 A As to the -- the cleanliness of the carpet?

10 Q Yes.

11 A Yes, it was. I believe it was.

12 Q When you examined the sink in the second bathroom of

13 the Ryen home, the non-master bedroom sink, did you

14 see any signs that caused you to infer that a person

15 with blood on their hands washed up in that sink?

16 A No, sir.

17 Q There was a stain in that sink that you analyzed for

18 blood; is that correct?

19 A I don't recall whether it was specifically in the sink

20 or on the counter surrounding the sink, but there was

21 one there.

22 Q And you performed -- performed a presumptive test on

23 that stain?

24 A Yes, sir.

25 Q Was the stain in any shape or form that allowed you to

26 draw an inference as to how it may have been deposited

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1 at that location?

2 A It was a stain that looked pretty much like a -- a  
3 fly speck.

4 Q When you say fly speck, are you talking about a stain  
5 that you infer may have been deposited from a fly  
6 being in wet blood and landing at that location?

7 A Pretty much, yes.

8 Q When you were at the Ryen home on the 6th, were there  
9 in fact flies inside the Ryen master bedroom?

10 A Yes, there were.

11 Q Were there flies in various portions of the home?

12 A I don't remember.

13 Q The stain that you tested in the non-master bath sink,  
14 do you recall the quantity, if any, that remained after  
15 you did the presumptive test?

16 A There was an extremely small amount left after I did  
17 the presumptive tests. I don't recall exactly the --  
18 the amount.

19 Q In your opinion, was the amount that was left, if any,  
20 sufficient to do a complete genetic profile?

21 A No, sir, it was not.

22 Q Was the amount that was left sufficient to run any  
23 group test based on quantity alone and not the other  
24 factors that may affect it, obviously?

25 A As far as the size, I think it would be very difficult  
26 to get any typing off of it.



18 (No omissions.)

1 Q Does Exhibit H-291 and specifically on page 1726  
2 contain the results at the top I believe of the page  
3 under L-4 have the serological results of the stains  
4 from one of the cans?

5 A Yes, it does.

6 Q And what result were you able to get?

7 A The only result that I was able to get was a PGM type  
8 which is Type 2-1.

9 Q With that result alone, are you able to discriminate  
10 between the five victims in this case as to whose  
11 blood was on that can?

12 A I can say that it's either of two victims, either  
13 Joshua Ryen or Douglas Ryen's.

14 Q Is that consistent or inconsistent with being the blood  
15 of Mr. Cooper?

16 A It's inconsistent with being the blood of Mr. Cooper.

17 Q So you can exclude him as the donor, the personal  
18 donor of the blood?

19 A Yes, sir.

20 Q But you can't, I assume, exclude him of depositing the  
21 blood if it was on his hands from another victim?

22 A That is true, yes.

23 Q Likewise, does the exhibit in front of you contain  
24 the results of the other beer can that a stain was  
25 taken off of and examined serologically?

26 A Okay. Which item are you talking about, Mr. Kochis?

1 Q I believe it would be L-3.

2 Let me move to another area, and we can look for  
3 that.

4 The test that you performed on the stain on the  
5 hatchet sheath, the presumptive test, the ortho-tolidine,  
6 the results of that test were negative?

7 A Yes, they were.

8 Q In your opinion, would placing the hatchet sheath in  
9 a plastic bag between the time it left the scene and  
10 the time it got to the crime lab have caused you to  
11 get the negative ortho-tolidine result if in fact  
12 there had been human blood on the hatchet sheath?

13 A No, sir, I believe it would not.

14 Q Directing your attention again back to the south wall,  
15 Mr. Negus showed you some photographs of that wall  
16 yesterday. Do you recall those?

17 A Yes, sir, I do.

18 Q And was there blood on that wall that, in your opinion,  
19 could be consistent with medium velocity blood?

20 A Yes, there was.

21 Q Was there blood on the wall that, in your opinion,  
22 was consistent with arterial blood?

23 A Yes, sir.

24 Q Is there some blood on the wall which you cannot tell  
25 whether it's arterial or cast-off?

26 A I cannot tell at this point whether it's arterial or

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1 cast-off. I'm not sure.

2 Q Is there a limitation of any kind placed on freezer  
3 space in the crime lab?

4 A Yes, there is.

5 Q How many freezers do you have to store evidence of  
6 serological significance?

7 A We have one.

8 Q Is the Ryen-Hughes homicide the only case pending in  
9 your laboratory at this time that has evidence of  
10 serological significance?

11 A No, sir.

12 Q Was it the only case in June of 1983 pending in your  
13 lab that had items of evidence that had to be frozen?

14 A No, sir.

15 Q Was there a practical limitation in terms of storage  
16 space placed on your ability to store intact all the  
17 items of bedding removed from the Ryen scene?

18 A Yes, sir, there was.

19 Q Did Mr. Stockwell in early July take approximately 39  
20 separate samples from the bed sheets and place them  
21 into a freezer?

22 A Yes, he did.

23 Q Since that time, have you started to analyze those  
24 sheets?

25 A Yes, I have.

26 MR. KOCHIS: Your Honor, I suppose the problem with

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1 this line of questioning is I don't know if Mr. Negus has  
2 covered it on direct yet.

3 MR. NEGUS: It doesn't matter to me.

4 Q BY MR. KOCHIS: Of the 39 samples, how many, if any,  
5 have you had the opportunity and time at this point  
6 to conduct any serological analysis of?

7 A That would be 37.

8 Q Was the manner in which they were preserved -- did  
9 that allow you to determine whether those stains were  
10 blood or not?

11 A Yes, it did.

12 Q Did it allow you to determine whether or not it's  
13 human blood?

14 A Yes, it did.

15 Q Did it allow you to determine the ABO blood group of  
16 the person who deposited those stains?

17 A Yes, it did.

18 Q And were you also able to conduct any serological tests  
19 for serum proteins or enzymes on the 37 samples that  
20 you've analyzed?

21 A Yes, sir, I have.

22 Q Which group systems have you been able to complete on  
23 the 37?

24 A Okay. As far as the group systems, they're giving  
25 varying results, but I'm getting results on the  
26 majority of the samples on Group I, Group II, and some

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- 1 on PGM subtyping.
- 2 Q For the record, when you're talking about Group I,  
3 which particular enzymes again are you talking about?
- 4 A Those are EsD and PGM.
- 5 Q And the Group II?
- 6 A That's EAP, ADA and AK.
- 7 Q The results that you're receiving on those 37 samples  
8 which have been frozen, do those results allow you to  
9 distinguish serologically between the five victims  
10 in this case?
- 11 A Yes, they do.
- 12 Q Do the results also allow you to distinguish potentially  
13 not only among the five victims, but Mr. Cooper as well?
- 14 A Yes, they do.
- 15 Q At this point in time, are you able to exclude Mr. Cooper  
16 as being the person who deposited his own blood on any  
17 of those 37 stains?
- 18 A Yes, I can.
- 19 Q How many of them?
- 20 A Approximately 19.
- 21 Q How many of the 37 samples have you been able to  
22 determine the ABO blood group type and run all the  
23 Group I and Group II systems?
- 24 A And get results on all of them?
- 25 Q And get results.
- 26 A Okay, and get results on all of them, none so far.

1       There is one sample, one I have labeled A-5c, which may  
2       give me all the results. I did get both results on  
3       EsD and PGM. I have not run the Group II enzymes yet  
4       on that.

5   Q   Well, for example, in this particular case, which  
6       group provides the higher power of discrimination,  
7       I or II?

8   A   Between the victims you mean?

9   Q   Between the general population.

10   A   It's going to be just a normal thing, and that would be  
11       Group II, as I run it.

12       (No omissions.)

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- 1 Q And were there samples among the 37 that you were able  
2 to determine the ABO type and the entire Group II  
3 system or not?
- 4 A Yes, there was.
- 5 Q Approximately how many?
- 6 A Approximately six, so far.
- 7 Q And, first of all, what would be the probability of  
8 individualization of this in running the ABO and the  
9 Group II?
- 10 A This is in a wide population?
- 11 Q Can you do it with the general population, or do you  
12 have to break it down racially?
- 13 A Using the wide population, it's approximate. There  
14 are some difference.
- 15 Q What is the approximate probability of individualization?
- 16 A I would say it's approximately .15, which is you would  
17 have a 15-percent chance of -- or, you would be able  
18 to exclude essentially 85 percent of the population.
- 19 Q Eighty-five percent of the potential suspects in the  
20 world, in other words?
- 21 A Yes, sir.
- 22 Q What's the probability of discrimination as to the ABO  
23 and the Group II?
- 24 A Well, that's essentially it that you'd be able to  
25 discriminate.
- 26 Q Are there additional samples left that still have enough

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1 blood to conduct serological examination on the 39  
2 frozen samples?

3 A Yes, there are.

4 Q And those are still available for testing?

5 A Yes, they are.

6 Q And your test results have indicated that there is  
7 serological evidence that can still be gleaned from  
8 those 39 additional samples?

9 A Yes, there are.

10 Q The hatchet sheath, item J-5, would you expect any  
11 bloodstain which would have been deposited on that  
12 hatchet sheath of the size of the stain that you saw  
13 on the sheath to still be moist after the sheath had  
14 been inside a home for two days?

15 A Okay. First of all, I didn't see a stain that I really  
16 suspected as being blood. I did a -- a general test  
17 of the entire sheath.

18 Q Did you see any stains on the sheath?

19 A Not that I really suspected as being blood, no.

20 Q Okay. The stains that were on the sheath, do you  
21 recall their approximate size?

22 A The -- I would say they would be from a quarter to a  
23 half inch in diameter.

24 Q Taking the size alone, would you expect a bloodstain  
25 that size on a hatchet sheath to remain moist if the  
26 sheath was left in a home in Chino for two days between

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1 the time the stain was deposited and the time the  
2 Sheriff's Office found the sheath?

3 A No, sir, I would not.

4 Q Do different substrates affect the ability of serologists  
5 to get blood typing from stains on the substrates itself  
6 themselves?

7 A Yes, they can.

8 Q Is nylon one of those substrates?

9 A That's a good question at this point. I do intend to  
10 do a study as to whether it is or is not. But I don't  
11 know at this point.

12 Q So is the passage of time one of several factors that  
13 affects the ability of serologists to get readable  
14 results of a particular stain?

15 A Yes, it is.

16 Q Heat would be another?

17 A Yes, it is.

18 Q And the actual substrate that the stain was deposited  
19 on would be another?

20 A Yes, it is.

21 Q There were certain pieces of items of evidence which  
22 you tested for CA II and peptidase A that had a very  
23 small amount of blood; is that true?

24 A Yes, sir.

25 Q And is there a reason you chose that particular group  
26 of tests, the Group IV test, to perform on a stain

1           that was small?

2   A   Yes, sir.

3   Q   For example, was one of those stains, W-5, the stain  
4       that was removed from the seat belt in the Ryen car?

5   A   Yes, there was.

6   Q   And what was your hypothesis at that time?

7   A   The hypothesis at that time was that, knowing that we  
8       had at least a person next door with a potential  
9       peptidase A 2-1 phenotype, that the hypothesis was  
10      that the blood on that seat belt housing was from that  
11      person.

12   Q   Is one of the inferences that, as a criminalist, you  
13       can draw is that a bloodstain in a car may have been  
14       deposited by a victim?

15   A   Yes, it is.

16   Q   Would the results from the Group IV, the CA II and the  
17       PEP A, allow you to discriminate between the victims  
18       in this case and Mr. Cooper had you received results?

19   A   The victims as a group and Mr. Cooper, yes.

20   Q   Directing your attention again for a moment, Mr. Gregonis,  
21       back to H-291. Essentially, the way this document  
22       works -- are the items that were collected from the  
23       Ryen home listed on pages 1704, 1705 and a portion of  
24       1706?

25   A   Yes, they are.

26   Q   And then the items which were collected at the autopsies

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1 are listed on pages 1706, 1707 and 1708?

2 A Yes, they are.

3 Q Then were the items that were collected from the  
4 Lease home, the 2991 -- 2991 residence, listed on  
5 1709 and 1710?

6 A Yes, they are.

7 Q And then do the following pages list items of evidence  
8 by laboratory identification number that include, first  
9 of all, who collected it?

10 A Yes, sir.

11 Q The approximate date that it was collected?

12 A Yes, sir.

13 Q And a description of the items?

14 A Yes, sir, they do.

15 Q Does page 1722 contain a list of the genetic profile  
16 of each of the five victims in this case?

17 A Yes, it does.

18 Q And Mr. Cooper?

19 A Yes, it does.

20 Q And also several other individuals, Mr. Bulau, Mr.  
21 Knori, and Mr. Martinez?

22 A Yes, it does.

23 Q Do pages 1727 and 1728 contain further serological  
24 results that were performed on some of the physical  
25 evidence that was collected in this case?

26 A Yes, they do.

1 MR. KOCHIS: Your Honor, I believe at this time I  
2 don't have any further questions on the areas that  
3 Mr. Negus has covered thus far of this witness.

4 THE COURT: Want to take the witness again, sir,  
5 on anything that Mr. Kochis brought out, reserve until  
6 tomorrow the area of the pictures and --

7

8 REDIRECT EXAMINATION

9 BY MR. NEGUS:

10 Q Do you have a -- a chart prepared of the results that  
11 you have gotten so far on the -- on the bedding?

12 A Yes, I do.

13 MR. NEGUS: Perhaps we could get a copy of that  
14 made.

15 THE WITNESS: These are the ones so far. There's  
16 six pages.

17 MR. NEGUS: Can we request the --

18 THE CLERK: Your Honor, the photocopy machine is  
19 broken over in this building, and the bailiff right now  
20 is making copies on something else over in the other  
21 building.

22 MR. NEGUS: Okay. I'll wait until tomorrow.

23 THE COURT: They haven't been marked yet, have they?

24 MR. NEGUS: No.

25 THE WITNESS: No, Your Honor.

26 THE COURT: Perhaps they can later go to one of your

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1 offices, and you can make them.

2 MR. NEGUS: I'll just -- I'll start on something  
3 else.

4 THE COURT: Someday the machines are going to all  
5 break down at an inopportune time and the wheels of  
6 justice will grind to a halt.

7 Q BY MR. NEGUS: You say that the way you do Group I,  
8 it's less informative or has a lower discriminatory  
9 probability than Group II?

10 A Excuse me. I stand corrected. There is -- they are  
11 very similar, but the Group I -- well, it depends on  
12 whether you're talking about a Caucasian population or  
13 a Black population, basically. If you're talking about  
14 a Caucasian population, then the Group II does have  
15 more discrimination probability. And if you're talking  
16 about a Black population, the Group I, as I do it,  
17 has a slightly more discrimination prob -- probability.

18 Q The way you do it, though, is not the way that -- that  
19 many criminalists do it; is that right?

20 A It's the way that many criminalists do it; it's the way  
21 that many criminalists do not do it. Some do it the  
22 same as I do; some don't.

23 Q All right. But there's -- there exists within the State  
24 of California people who have the capability of doing  
25 the Group I so that it will include the enzyme glyoxalase;  
26 is that correct?

1 A There are some people that include the enzyme  
2 glyoxalase in Group I, yes.

3 Q And if you include the enzyme glyoxalase in Group I,  
4 you can do that test without consuming any additional  
5 sample to the way that you do it, correct?

6 A That is true, yes.

7 Q So essentially you get three enzymes for the price of  
8 two; is that right?

9 A Well, you got an additional enzyme.

10 Q But in terms of sample, when you're dealing with a  
11 sample in a limited situation, you -- you -- you don't --  
12 it doesn't take you a single drop of -- or, single bit  
13 more blood to get that third result, right?

14 A That is true, yes.

15 Q And, in fact, the only thing that you really have to do  
16 additional is -- is to stain for it; is that right?

17 A That is true, yes.

18 Q Is there any particular reason why -- why you weren't  
19 staining for glyoxalase?

20 A Because I don't feel that, at least in our laboratory  
21 and by myself, that we can run glyoxalase reliably.

22 (No omissions.)  
23  
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- 1 Q You can't -- you're not able to stain it so it will  
2 come out?
- 3 A I can stain it so it will come out, but it -- to me,  
4 it degrades in such a fashion that it makes the calls  
5 unreliable.
- 6 Q Have you in your training sought advice on how to --  
7 how to stain it so it won't be unreliable?
- 8 A It's been discussed. It still does not eliminate  
9 the degradation patterns of glyoxalase. Regardless  
10 of how you stain it, you can bring it up. There's  
11 different ways of enhancing it, but it's still --  
12 to me, it's unreliable at this point. I may  
13 eventually work out a procedure where it's reliable  
14 for me.
- 15 Q Other people can reliably type it; right?
- 16 A They say they can.
- 17 Q Do you think that they're -- there are people who  
18 are authorities in the field; correct?
- 19 A I don't know exactly who's typing it, no, so I can't  
20 say there's people that are authorities in the field.
- 21 Q Mr. Wraxall is the person that developed your particular  
22 system; right?
- 23 A Yes, he did.
- 24 Q He does it?
- 25 A Yes, he does.
- 26 Q Ed Blake is somebody who you've recommended to me, amongst

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- 1 others, as a leading serologist in the state; right?
- 2 A Yes, he is.
- 3 Q He does it?
- 4 A I don't know whether he does it or not.
- 5 Q Does Orange County do it?
- 6 A No, they do not, as far as I know.
- 7 Q How about the State of California, the Department of
- 8 Justice?
- 9 A I believe they do, yes.
- 10 Q Given the importance of some of these limited
- 11 samples in this case, if you can't do it and they
- 12 can, why didn't you have them do it?
- 13 A If there was an additional sample left, they would,
- 14 but I didn't -- my normal procedure, I'm the one
- 15 working the case, and I don't -- our normal procedure
- 16 is not to send a sample out to have it done.
- 17 Q Well, I'm talking about a situation where you have
- 18 extremely limited samples so that somebody's not going
- 19 to be able to -- to do it after -- after you go
- 20 through it. Why in those situations don't you get
- 21 somebody who can do the job to do it?
- 22 A Again, that is not a normal situation. I do get in
- 23 many cases a limited sample, and because I don't feel
- 24 it's reliable, why should I take it down to somebody
- 25 else's lab if I don't feel it's reliable?
- 26 Q So your subjective feeling that it's not reliable is

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1       what's involved?

2   A    If I was going to take anything down someplace else,  
3       it would be something that I would feel is reliable  
4       myself. PGM subtyping is a good example. I have in  
5       the past taken it down to Orange County, for instance.

6   Q    What about Gm? Can you do that reliably?

7   A    I cannot, no.

8   Q    Why do you suggest taking it to somebody else?

9   A    Simply because I've never worked with the system, so  
10       I don't know whether I would call it reliable or not.  
11       I can't make that judgment.

12   Q    So it's not -- the criteria apparently is not apparently  
13       just whether you can do it yourself or whether you  
14       think it's reliable; is that correct? There must be  
15       other criteria in that particular decision?

16   A    The criteria is that I believe that there is little  
17       sample left and one of -- we want to get more information  
18       out of it, if possible. I have pretty much exhausted  
19       all but one of my systems, and the Gm marker may be able  
20       to give us more information.

21   Q    Well, we'll never know, the way you've done it, what  
22       the glyoxalase result on A-41 is; is that correct?

23   A    That is true, yes.

24   Q    Had you taken it to the State, we could have known?

25       MR. KOCHIS: Objection. That calls for speculation.  
26       It assumes they would have gotten a result, that the result

1 was reliable, a number of things.

2 THE COURT: It is contrary to the prior testimony  
3 as far as his opinion is concerned. Sustained.

4 Q BY MR. NEGUS: Well, in the literature on serology,  
5 is glyoxalase listed as one of the enzymes that can  
6 be reliably typed?

7 A Yes, it is.

8 Q Specifically, at the preliminary hearing, you  
9 recommended to Mr. Kochis a chapter of a book by --  
10 written by George Sensabaugh, which is published in  
11 Richard Saferstein's Handbook of Forensic Science on  
12 genetic markers; is that right?

13 A Yes, I did.

14 Q And that -- that publication lists glyoxalase as one  
15 of the enzymes which is -- which can be reliably typed;  
16 is that correct?

17 A I do not recall at this time. It may.

18 THE COURT: Would that simply give you another  
19 genetic marker to further narrow the field?

20 THE WITNESS: Yes, sir, it would.

21 Q BY MR. NEGUS: And what's -- what's the probability  
22 for that genetic marker alone of discriminating  
23 Mr. Cooper?

24 A Discrimination probability -- well, Mr. Cooper, I don't  
25 know what his type is, for one thing.

26 Q Haven't you done some typing with glyoxalase on the

1 blood?

2 A I may have. I don't remember whether I have or have  
3 not.

4 Okay. I don't have it recorded here, so I don't  
5 know.

6 Q Well, if Mr. -- if it turned out that Mr. Cooper was  
7 a Type 2-1, would that give you a better than 50-  
8 percent chance of a excluding him?

9 MR. KOCHIS: Well, I have to object. That assumes  
10 a fact that's not in evidence. I don't know if his  
11 expert will share that information with us, but we have no  
12 evidence of his blood type, at least I don't, of Mr. Cooper's.

13 THE COURT: It's a hypothetical without a basis  
14 from the evidence for the various premises. Sustained.

15 Q BY MR. NEGUS: There are three main types of glyoxalase?

16 A That is true.

17 Q Two, 2-1, and 1; right?

18 A That is correct.

19 Q If Mr. Cooper were a 2, what would the probability be  
20 of excluding him?

21 A If Mr. Cooper was a 2, I would say it would be  
22 approximately 70 percent.

23 Q If he were a 2-1, what's the probability of excluding  
24 him?

25 A Approximately 48 percent.

26 Q And if he were a 1?

1 A Approximately 80 percent.

2 Q Is that population frequencies in blacks or whites?

3 A That's a general population frequency. I don't  
4 believe that it's in blacks or whites. I believe it's  
5 general.

6 Q So depending upon what he is, it's approximately --  
7 at best, at least a 40-percent chance of excluding  
8 him by just doing that one additional test at no extra  
9 cost?

10 A That's true, yes.

11 Q And what would have been the probability of excluding  
12 Mr. Cooper -- back off.

13 Mr. Kochis asked you if the inferences that you can  
14 draw from the different things that criminalists do  
15 which are listed in the chart H-16 are capable of  
16 mathematical certainty, and you said -- you said no.  
17 Is that generally the state of affairs, that most of  
18 the things that criminalists do --

19 A I would say so, yes.

20 Q Are the -- are the -- are the kinds of things that  
21 one can do if one is trying to reconstruct a crime  
22 any less certain or more capable -- more susceptible  
23 to just imagination than any other kind of work that  
24 criminalists do?

25 A I would say they are more subjective, definitely. It's  
26 based more on an opinion, rather than a hard analysis.

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1 Q Well, the angle at which a drop of blood hits a wall,  
2 is that an opinion or is that based upon a large  
3 body of experimental work?

4 A That's based on experimental work.

5 Q So you can, you know, within -- within limits of  
6 error which are common to all scientific work, you  
7 can determine with reasonable accuracy the angle which  
8 a drop of blood hit a wall; right?

9 A Basically, yes.

10 Q Then you trace that angle back; you can draw a line  
11 with reasonable accuracy from which the drop of blood  
12 could have originated; correct?

13 A Yes, you can.

14 Q So that's not interpretation, that part of it, is it  
15 not?

16 A Part of it is interpretation. It's a test. It's  
17 an analysis, if you will.

18 Q And it's something that -- that if done, and properly  
19 documented, that another scientist can take and look  
20 at the work that you've done and verify whether you  
21 made a mistake on; right?

22 A That is true, yes.

23 (No omissions.)  
24  
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- 1 Q With respect to the inferences that one draws about  
2 the, for example, the number of assailants that are  
3 involved, if you get seven -- eight different blood  
4 types in a -- in a scene, in the blood that's been  
5 shed, within the limits of your abilities as a  
6 serologist, you didn't make a mistake in typing, it's --  
7 you can infer that there's at least seven or eight, for  
8 example, people bleeding in the room at one point in  
9 time or another?
- 10 A That is true.
- 11 Q And then, depending upon which kind of enzymes you  
12 get, you can -- you can be -- have some idea as to --  
13 as to the -- the time in which the blood was deposited,  
14 correct?
- 15 A That is true within a time frame, yes.
- 16 Q Then one can usually also make inferences; for example,  
17 there's not normally a lot of blood on sheets in people's  
18 houses; is that correct?
- 19 A Hopefully, not, no.
- 20 Q So you can usually make inferences that a lot of the --  
21 a lot of different blood, like on sheets, was probably  
22 deposited during the -- during the crime?
- 23 A That is true, yes.
- 24 Q So even though it's not capable of mathematical  
25 certainty and there may be other -- there may be  
26 other possibilities which imaginative minds could

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1       conjure up, you can at least, within reasonable  
2       possibilities, make some inferences about the number  
3       of assailants depending upon how many different blood  
4       types you have, right?

5       A    If you find different blood types, yes.

6       Q    And in order to find different blood types, you have  
7       to test the blood to see what you got, right?

8       A    That's -- granted that there's people bleeding or  
9       the assailants are bleeding along with the victims,  
10      yes.

11      Q    And the only way you can tell that is either to somehow  
12      identify the assailants beforehand or check them to  
13      see if they have any cuts on them or to test the blood,  
14      right?

15      A    Basically, yes.

16      Q    And in this particular case, you didn't have anybody  
17      around to look at to see if they were bleeding, so  
18      the only course open to you was testing the blood?

19      A    That is true, yes.

20           THE COURT:  Would you like to break, Mr. Negus?

21           MR. NEGUS:  Sure.

22           THE COURT:  Let's resume at 9:30 in the morning,  
23      please.

24           (Whereupon, the matter was adjourned at  
25           4:01 p.m. to resume at 9:30 a.m. on  
26           Wednesday, July 11, 1984.)

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