

2 COURT OF APPEAL FOR ONTARIO

3
4 IN THE MATTER OF Section 696.3 of the Criminal Code, S.C.
5 202, C.13;

6
7 AND IN THE MATTER OF an Application for Ministerial
8 Review (Miscarriages of Justice) submitted by Steven
9 Murray Truscott in respect of his conviction at Goderich
10 Ontario, on September 30, 1959, for the murder of Lynne
11 Harper;

12
13 AND IN THE MATTER OF the decision of the Minister of
14 Justice to refer the said conviction to the Court of
15 Appeal for Ontario for hearing and determination as if it
16 were an appeal by Steven Murray Truscott on the issue of
17 fresh evidence, pursuant to subsection 696.3(3)(a)(ii) of
18 the Criminal Code.

19 B E T W E E N:

20 HER MAJESTY THE QUEEN

21 Respondent

22 - and -

23 STEVEN MURRAY TRUSCOTT

24 Applicant.

25 -----

1 B E F O R E:

2 Chief Justice Roy McMurtry

3 Justice David Doherty

4 Justice Karen Weiler

5 Justice Marc Rosenberg

6 Justice Michael Moldaver

7

8 A P P E A R A N C E S:

9

10 Rosella Cornaviera, Ms.,

11 Gregory Tweney, Esq.,

12 Alex Alvaro, Esq.

13 & Leanne Salel, Ms., for the Respondent.

14

15 Marlys Edwardh, Ms.,

16 James Lockyer, Esq.,

17 Philip Campbell, Esq.,

18 Hersh Wolch, Q.C.,

19 & Jenny Friedland, Ms., for the Applicant.

20

21 REPORTED BY: KIMBERLEY NEESON, RPR, CRR, CSR, CPC, CBC

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1 TRANSCRIPT OF PROCEEDINGS

2 JULY 7TH, 2006

3 COMMENCING AT 9:45 A.M.

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HELD AT:

7

THE ONTARIO COURT OF APPEAL

8

130 QUEEN STREET WEST

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COURTROOM 1

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TORONTO, ONTARIO

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DAY 11

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WITNESS

PAGE

DR. BERNARD KNIGHT

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NUMBER/DESCRIPTION NO.	PAGE
51: Copy of last page of Exhibit 9.	1983
52: Excerpt from the book entitled "Estimation of the Time Since Death in the Early Postmortem Period."	1998
53: Extract from the 4th edition of "Medicolegal Investigation of Death."	2015
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1 -- Upon commencing at 9:50 a.m.

2 CHIEF JUSTICE MCMURTRY: Counsel?

3 MR. LOCKYER: Good morning, Chief
4 Justice. You remember I was going to go back to the
5 original agonizing reappraisal and get a copy of that
6 last page to see whether it said "possible" or
7 "impossible." We went back to the archives, we got a
8 copy of the original. If I could file that. It is
9 "impossible."

10 THE REGISTRAR: Chief Justice, I'll
11 mark this Exhibit 51?

12 CHIEF JUSTICE MCMURTRY: Yes.

13 THE REGISTRAR: Thank you.

14 EXHIBIT NO. 51: Copy of last page of
15 Exhibit 9.

16 MR. LOCKYER: If I could call Professor
17 Knight, Chief Justice, please.

18 CHIEF JUSTICE MCMURTRY: Yes.

19 JUSTICE DOHERTY: Mr. Lockyer, just so
20 I have the right reference, is this a copy of the last
21 page of what is Exhibit 9? Can you help me?

22 MR. LOCKYER: I'd have to see Exhibit
23 9. Can you turn Exhibit 9 around?

24 JUSTICE DOHERTY: I just have an
25 exhibit list.

1 THE REGISTRAR: Exhibit 9, review of
2 autopsy findings, Dr. Penistan, May 19th.

3 MR. LOCKYER: Yes, it is.

4 JUSTICE DOHERTY: So this is a copy of
5 the last page of that which clearly shows the writing on
6 the side to be the word "impossible"?

7 MR. LOCKYER: As opposed to "possible."

8 JUSTICE DOHERTY: Right.

9 MR. LOCKYER: Remember, just to make it
10 more concrete, it's a substituted last page. Dr.
11 Penistan wrote two last pages.

12 THE REGISTRAR: May I proceed, Chief
13 Justice?

14 CHIEF JUSTICE MCMURTRY: Yes.

15 THE REGISTRAR: Sir, do you wish to
16 swear on the Bible or affirm?

17 THE WITNESS: Swear.

18 THE REGISTRAR: Please state your first
19 and last name, please spell your first and last name.

20 THE WITNESS: Bernard Knight.

21 THE REGISTRAR: Would you spell your
22 last name, sir, please?

23 THE WITNESS: Sorry?

24 THE REGISTRAR: Please spell your last
25 name.

1 THE WITNESS: K-N-I-G-H-T.

2 BERNARD KNIGHT: SWORN.

3 EXAMINATION IN-CHIEF BY MR. LOCKYER:

4 Q. Professor Knight, I understand,
5 sir, since 1954 you've been a medical doctor?

6 A. Yes.

7 Q. Since 1955 you've been a
8 pathologist?

9 A. Yes.

10 Q. And for some three years, from '56
11 to '59, and I'm going to come back to why I'm asking you
12 this, you were a pathologist in what was then call Malaya
13 for the British Army; is that right, sir?

14 A. Yes, I was a military pathologist.

15 Q. From 1959, or since 1959, sir,
16 you've been a forensic pathologist?

17 A. Yes, full-time.

18 Q. I didn't hear what you said.

19 A. Full-time.

20 Q. Full-time, right.

21 A. Many part-times.

22 Q. And I understand, sir, just to
23 relate you to some of the characters who have been in
24 this case in the past, from 1959 to 1962 I understand you
25 apprenticed, was I think the word then, to Dr. Francis

1 Camps; is that right, sir?

2 A. Yes, I was a lecturer in his
3 department, which meant I did a lot of work for him.

4 Q. All right. And as it happens, Dr.
5 Camps' wife is in court today; is that right, sir?

6 A. Yes.

7 Q. As well, you wrote Dr. Milton
8 Helpern's biography; is that right, sir?

9 A. Yes, I knew him very well and wrote
10 his biography as an autobiography.

11 Q. With his co-operation?

12 A. Certainly.

13 Q. And in terms of Dr. Simpson, sir, I
14 understand that you took over the editing of his treatise
15 on forensic pathology; is that right?

16 A. Yes.

17 Q. When did you do that?

18 A. In the eighties sometime. I can't
19 remember exactly the year.

20 Q. I understand, sir, in 1967 you were
21 called to the bar in the U.K. and you're a member of
22 Gray's Inn, a barrister, a qualified barrister; is that
23 right?

24 A. Yes.

25 Q. Never practised a day of law in

1 your career as such; is that right, sir?

2 A. No, we weren't allowed to combine
3 medicine and law. It was one or the other.

4 Q. Okay. I understand, sir, you have
5 a number of honorary degrees. From the University of
6 Wales, an LLD?

7 A. Yes.

8 Q. You have an honorary doctorate in
9 science from the University of Glamorgan?

10 A. Yes.

11 Q. An honorary doctorate in medicine
12 from the University of Finland?

13 A. Yes.

14 Q. And you're a doctor of philosophy
15 as a result of an honorary degree from the University of
16 Tokyo; is that right?

17 A. Yes.

18 Q. So you have honorary degrees in
19 four disciplines, so to speak?

20 A. Yes.

21 Q. I understand, sir, that all your
22 life you've actually been a university -- you've been
23 employed by a university; is that right, sir?

24 A. Yes, they were technically my
25 employers though I wasn't sort of stuck in an ivory

1 tower. Apart from teaching, it was very much a service
2 based occupation, large numbers of autopsies.

3 Q. And so you went through -- at a
4 university level, did you go through the various levels,
5 sir, up?

6 A. Lecturer, senior lecturer, reader
7 and then professor; professor since 1980.

8 Q. And which university, sir?

9 A. University of Wales.

10 Q. Okay. Other universities have you
11 been a professor as well?

12 A. I began -- not a professor but I
13 was a lecturer in London University and a senior lecturer
14 at the University of Newcastle Upon Tyne.

15 Q. I understand now, sir, you're an
16 emeritus professor at the University of Wales?

17 A. Yes.

18 Q. Does that mean anything other than
19 you used to work there?

20 A. It just means you're a has-been,
21 really, but theoretically you're still a member of the
22 academic staff.

23 Q. All right. But you don't go in
24 every day?

25 A. No, and they don't pay you.

1 Q. I understand, sir, that you were a
2 consultant pathologist to the Home Office in the United
3 Kingdom for some 34 years from 1965 to 1999; is that
4 right, sir?

5 A. Yes.

6 Q. And what does that mean?

7 A. Well, the Home Office, which of
8 course is the Ministry of Justice, I suppose, they
9 maintain a register of accredited pathologists who are
10 entitled to seek employment with police forces. I had to
11 seek contracts for various police forces and offer them
12 24-hour forensic service, so being a Home Office
13 pathologist means you are entitled to do that.

14 Q. And was this a theoretical
15 position, sir, or a practical position for you?

16 A. Well, financially it wasn't too hot
17 but it was -- it was a means of access to the forensic
18 material. I mean, the forensic cases.

19 Q. So you did -- did you do regular
20 autopsies, sir, regularly --

21 A. Certainly.

22 Q. -- in your career?

23 A. About 25-30,000.

24 Q. All right. Is it 1999 you retired,
25 sir?

1 A. 1996 I retired from the university,
2 that's the pensionable age, but then I continued doing
3 private consulting practice and hopefully this is my last
4 case.

5 Q. I understand, sir, that as a part
6 of the work you've done, you've done pathology in the
7 human rights field for Amnesty International?

8 A. Yes.

9 Q. You founded or helped found, I'm
10 not sure which, the Medical Foundation For Victims of
11 Torture?

12 A. I helped found it.

13 Q. You helped found it. I understand,
14 sir, you're a prolific author?

15 A. I've written a lot.

16 Q. You've written a lot. First of
17 all, you're a novelist; is that right, sir?

18 A. I've written about 22 novels and a
19 lot of radio and television scripts.

20 Q. And is that over the whole of your
21 career?

22 A. Since 1963.

23 Q. Okay. And the books are in what
24 field, the novels, sir?

25 A. Many of them were contemporary

1 crime fiction based on my forensic experience, but
2 laterally I write 12th century historical whodunits based
3 on the first coroner.

4 Q. All right. I understand, sir, as
5 well you've written a lot and in particular a number of
6 books in your field of expertise?

7 A. I have written about 12 textbooks
8 and contributed to many others.

9 Q. Perhaps the best known is "Forensic
10 Pathology," it's now in its third edition, and is a
11 standard work for pathologists around the world; is that
12 fair to say?

13 A. Certainly in the English language
14 it's done very well, North America particularly.

15 Q. I understand as well, sir, that
16 you've written texts in a number of forensic fields
17 including forensic radiology?

18 A. Yes.

19 Q. Forensic medicine?

20 A. Yes.

21 Q. Forensic paediatric?

22 A. Well, I am very interested in
23 sudden infant deaths, crib deaths, so I wrote a book on
24 crib death.

25 Q. SIDS, in other words?

1 A. SIDS.

2 Q. You've written a book for coroners,
3 sir?

4 A. "The Coroner's Autopsy" for
5 non-forensic pathologists.

6 Q. You've written a book in the field
7 of medical jurisprudence?

8 A. Yes, several of them. One for
9 India, I've written "A Lawyer's Guide to Forensic
10 Medicine."

11 Q. In terms of your more recent years,
12 sir, I understand that one of the bodies that has engaged
13 your services on -- for a number of cases is an agency
14 known as the Criminal Cases Review Commission in the
15 United Kingdom; is that right?

16 A. Yes, the CCRC.

17 Q. And that agency does what -- what
18 work, sir?

19 A. It was established really to
20 re-investigate many cases that had been either turned
21 down at appeal or were thought worthy of appeal.

22 Q. And you've been engaged by the
23 commission itself, is that right, to investigate cases?

24 A. Yes, a number of cases.

25 Q. And you've also done a lot of work

1 with counsel in that field, particularly a Michael
2 Mansfield; is that right?

3 A. Yes.

4 Q. And you've been involved in three
5 cases in particular in this country, I understand, sir?

6 A. Yes.

7 Q. The case of Ronald Dalton, a case
8 out of Newfoundland?

9 A. Yes.

10 Q. That was just the subject of a
11 public inquiry?

12 A. Yes.

13 Q. And a case called Clayton Johnson
14 out of Nova Scotia, sir?

15 A. Yes.

16 Q. And a case called Mullins Johnson
17 out of this province?

18 A. Yes.

19 Q. I understand, sir, in 1993 you were
20 made a Commander of the British Empire; is that right?

21 A. Yes, CB.

22 Q. CB?

23 A. Yes.

24 Q. And why?

25 A. For some reason the Queen

1 recognized I'd been around a long time and given me --
2 awarded me an honour.

3 Q. All right. I want to start with
4 the substance of your evidence by asking you about a
5 concept we've heard something about in the last two or
6 three weeks and that is the notion of evidence-based
7 pathology.

8 Could you talk a little about that,
9 sir? I understand it's something that you've been
10 familiar with for many, many years.

11 A. Well, this term evidence-based
12 medicine, pathology is part of it but it applies to the
13 whole of medicine, is a relatively recent term. I've
14 discovered I've been practising it for years and had not
15 known it had that name.

16 What it really means is, it seems
17 common sense to me, but everything is based on factual --
18 a factual basis. If I can go back a bit, my philosophy
19 has always been in teaching my assistants and medical
20 students and postgraduates, if you can't prove something,
21 don't say it.

22 In other words, you must have your
23 opinion based on hard fact, the hard fact coming either
24 from experimental work or personal experience of a very
25 solid nature. I'm rather suspicious of people who claim

1 their opinions to be based purely on their experience
2 because when experience is analyzed it's often found to
3 be pretty thin.

4 And evidence-based medicine is, as I
5 say, a new term really for basing all medical treatment,
6 diagnosis including pathology on a firm experimental
7 basis.

8 I discovered also the term was invented
9 really or it should be attributed to a professor in my
10 own university, Archie Cochrane, who in fact was a
11 dedicated Communist who fought in the Spanish Civil War,
12 but that's irrelevant.

13 And I say it's -- really the name
14 applies to what I think is a common sense concept, that
15 all opinions should be backed up by hard fact and not
16 plucked out of the air under the excuse of "my
17 experience."

18 Q. You were around in the sixties,
19 sir? In the profession is what I should say.

20 A. Yes.

21 Q. And I wonder, could you try and
22 give us, take us back there to some extent and give us an
23 idea of your profession back in the sixties and the
24 people who worked in your profession in the sixties?

25 A. Well, certainly going back to the

1 sixties and farther, beyond that, further back, forensic
2 pathologists tended to be very egotistical, maybe it was
3 the sort of person who was attracted to the profession,
4 but partly I think that their public prominence, they're
5 in the newspapers, in the media and many of them fed on
6 this. It was almost self-perpetuating. And they would
7 be very, very much inclined to pontificate and say well,
8 I've been doing this job for 40 years, I've done 60,000
9 autopsies and therefore what I say is right and there was
10 that attitude and very often with very little challenge.

11 The prime example would be Sir Bernard
12 Spilsbury, who was in the earlier part of the century up
13 until 1947 and who now I am afraid has had -- there is a
14 lot of criticism, retrospective criticism of some of his
15 opinions, and this applied to some of the household
16 names, as they're called, in forensic pathology, and they
17 would often get away with things purely because of their
18 reputation.

19 But in more recent years, there's been
20 much more challenge. This evidence-based approach now
21 requires expert witnesses to, you know, put their money
22 where their mouth is, so to speak, in other words prove
23 what they're saying by experimental back-up rather than
24 say in my experience, it is so because I say it's so.

25 Q. Um-hmm.

1 A. That attitude has changed a lot in
2 the last 40 years.

3 Q. Time of death, as you well know, is
4 a very important issue in this case. Has time of death
5 always been viewed, first of all, as an important issue
6 in your profession, sir?

7 A. It's an important issue sometimes.
8 I mean, in most -- most criminal deaths it's not an
9 issue, but not infrequently it is, but of course the
10 trouble is that the methods of determining it are so
11 uncertain that it often arises -- gives rise to great
12 controversy.

13 Q. I understand, sir, you've written a
14 book on time of death, it's actually called "Estimation
15 of the Time Since Death in the Early Postmortem Period";
16 is that right, sir?

17 A. Yes, I was the editor and wrote
18 some of it. I got some colleagues together from various
19 countries and, as far as I am aware, it's the only book
20 in the English language devoted to this subject.

21 Q. And it's now in its second edition;
22 is that right?

23 A. Yes, 2002.

24 MR. LOCKYER: And, Chief Justice, I've
25 got a good part of the book, a particular chapter is

1 quoted in Professor Knight's report and I have the
2 original here, so to speak, for the court along with the
3 introduction to the book, which I thought might be
4 helpful.

5 CHIEF JUSTICE MCMURTRY: Thank you.

6 THE REGISTRAR: Chief Justice, Exhibit
7 52?

8 CHIEF JUSTICE MCMURTRY: Yes.

9 THE REGISTRAR: Thank you.

10 EXHIBIT NO. 52: Excerpt from the book
11 entitled "Estimation of the Time Since
12 Death in the Early Postmortem Period."

13 BY MR. LOCKYER:

14 Q. I thought it might be helpful, sir,
15 since this was written, one would imagine, with today not
16 in mind at all, if we could just look at the introduction
17 itself to the book and you could just read out a couple
18 of short passages from the introduction, which perhaps
19 get across the point about time of death.

20 Can I give you the book itself, sir.

21 A. Which particular part?

22 Q. If you could go to the first page
23 literally, and the first two paragraphs perhaps
24 encapsulate what I'm trying to capture.

25 A. I began by saying:

1 "The importance of estimating the
2 time since death must have been
3 appreciated for centuries, probably
4 millennia. Even in the most
5 unsophisticated societies, when
6 homicides took place the community
7 would inevitably have correlated the
8 location and movements of the prime
9 suspects with the apparent time of
10 death - however crude that comparison
11 might have been - to test what would
12 later become the defense of alibi.

13 Little has changed from those
14 early days, except that their data
15 acquisition equipment was merely the
16 back of a hand to test the coolness
17 of the corpse's skin, and their eyes
18 and nose to evaluate decomposition.
19 We now have multichannel thermometry
20 with thermocouples sensitive to a
21 fraction of a degree, enzyme methods,
22 vitreous chemistry, muscular
23 reactivity and several other avenues
24 for collecting data. Regrettably,
25 the accuracy of estimating the

1 postmortem interval has by no means
2 kept pace with the enormous strides
3 made in technological
4 sophistication."

5 Q. So if we consider the issue as a
6 whole, looking at it not from any particular point of
7 view, just the estimation of the time of death, is there
8 any recognition in your profession of an ability to
9 estimate time of death with any -- with any degree of
10 accuracy?

11 A. No. I mean, the real object of
12 this book was to set parameters of reliability. I mean,
13 people have facetiously said to me that this book costs,
14 what, 60 pounds, it's 300 pages long and it says you
15 can't do it. I mean, it's not as bad as that.

16 What we tried to do was to set limits
17 on the accuracy because people have claimed endlessly
18 accuracy which is totally unjustifiable.

19 Q. If you go just at the bottom of the
20 same page, if you just read out the last paragraph of the
21 same page, perhaps that --

22 A. "The onus"?

23 Q. Yes.

24 A. "The onus is therefore upon the
25 doctor to provide a range of times

1 within which he/she thinks the death
2 occurred, which is as accurate as is
3 justified in the circumstances. Even
4 more importantly, it must not be so
5 unreasonably precise as to exclude
6 incorrectly the true time of death, as
7 this may provide a false alibi to one
8 or more suspects."

9 Do you want me to carry on?

10 Q. Perhaps the last two paragraphs of
11 the introduction.

12 A. "To offer an unreasonably accurate
13 time of death is worse than providing
14 such a wide range of times that the
15 police derive no help from it. In the
16 latter situation, they at least then
17 know that they have to use other
18 methods in their investigation, but to
19 mislead them by some outrageously
20 precise time runs the risk of excluding
21 the true culprit, as well as falsely
22 implicating an innocent party.

23 Unfortunately, it is often the least
24 experienced medical witness who tends
25 to offer the most accurate estimate,

1 not having seen enough cases to
2 appreciate the many pitfalls and
3 fallacies in the process. Certainly,
4 with all the methods available up to
5 the present time, the opinion of any
6 doctor who offers a single time of
7 death, instead of a range - or one who
8 includes any fraction of an hour
9 instead of a whole hour - must be
10 viewed with considerable skepticism."

11 Q. Do you think those words may have
12 some application to the Steven Truscott case?

13 A. Yes, I do.

14 Q. If we can then move into the time
15 of death aspects of Lynne Harper's death itself to be
16 more specific, and first of all approach this whole area
17 of stomach contents.

18 Have there been any evidence-based
19 approaches, sir, to trying to determine whether or not
20 one can fix time of death from a deceased's stomach
21 contents?

22 A. There's been very little work on
23 this. There's been some very recently, a German
24 colleague who wrote part of this book did some work but
25 it is quite honestly not of much practical use, it was on

1 animals. There hasn't really been much work because it's
2 virtually impossible to do it. The people who have done
3 the work of course are clinical gastroenterologists like
4 Dr. Diamant and all the reference I quoted because it's
5 extremely difficult to do it. You can't give a series of
6 people a different meal and then sort of shoot them and
7 look at how their digestion has gone on. You would have
8 a job getting ethical consent to the thing.

9 So it is an extremely difficult thing
10 to do, so much so in our first edition of this book we
11 didn't put a chapter on gastric contents.

12 Q. So there was nothing written about
13 it at all?

14 A. We didn't think it was worthwhile.
15 In reviews of the book, somebody suggested why isn't
16 there a section on gastric contents, so I wrote one.

17 Q. And that's what we filed, that's
18 the chapter, the "Changes After Death," chapter 6?

19 A. Yes, which was written before I was
20 involved in this case.

21 Q. Yes, that's a point. It was
22 written just a few months before you were asked to get
23 involved in this case; is that right?

24 A. Yes.

25 Q. And it includes a section on the

1 Steven Truscott case; is that right, sir?

2 A. Well, I mean, the Truscott case is
3 known worldwide to every forensic pathologist as the sort
4 of leading case in gastric content time of death mishap.

5 Q. All right. Insofar as there's been
6 work done on it by your German colleague, sir, have they
7 ever managed to come up with any kind of formula as to
8 determining time of death from stomach contents?

9 A. Many of my friends are German
10 professors and I have every respect for them, but there
11 seems to be a Germanic trend or need to quantify
12 everything.

13 Q. Yes.

14 A. They do a lot of experimental work
15 which really is of very little practical use. In this
16 book there is a section on it by Professor Madea and it
17 really says, it gives a lot of animal work and some
18 tables of this, that and the other, but it really says
19 it's of no use unless you know exactly what the meal was
20 eaten, what the content was, what the volume was, and
21 they even say if you don't know the volume you can go to
22 restaurant tables and put in typical weights from the
23 menus, which I think is pretty outrageous really. I
24 don't think it's of any practical use. It can't be done.
25 It just can't be done.

1 Q. In your book, sir, it's chapter 6,
2 and this is sort of the last time I think I'm going to
3 ask you to actually read something, you have an
4 introduction to what you call "A general assessment of
5 the reliability of the procedure," the procedure being
6 the use of gastric contents in estimating time since
7 death.

8 I just wonder if you could read the
9 introductory paragraph in that regard, sir, page 209 of
10 your book.

11 A. Yes. From the beginning?

12 Q. "For very many years."

13 A. Yes. I said:

14 "For very many years, examination
15 of the contents of the stomach at
16 autopsy has been used as an aid to
17 determine the time since death,
18 though claims as to its usefulness as
19 probative evidence must be viewed
20 with the greatest caution if
21 potential miscarriages of justice are
22 to be avoided. Opinions on the topic
23 vary from author to author, but the
24 following random extracts from
25 standard English language textbooks

1 indicate that strong evidential value
2 can rarely be placed on the use of
3 gastric contents in timing death."
4 Then I give a series of quotations from
5 various textbooks.

6 Q. Now, since you wrote your report
7 in, I'm sorry, I forgot, it was 2000 or 2001?

8 A. 2000.

9 Q. 2000?

10 A. Yes.

11 Q. In 2000, sir, I understand you've
12 been given a substantial quantity of further material to
13 look at; is that right?

14 A. Yes, very substantial.

15 Q. And so your report is a little
16 somewhat dated, you might say, in a sense?

17 A. Oh, yes. There's quite an amount
18 of stuff since then, yes.

19 Q. Can you just quickly run us through
20 the material, the most important material that you've
21 received, sir?

22 A. In recent months?

23 Q. Yes.

24 A. I think the most important was Dr.
25 Diamant's report because I felt that he was a

1 gastroenterologist and outside the competent sphere of
2 forensic pathology. In other words, he was very
3 independent in that he hadn't previously been involved in
4 the use of this technique in dating death. And he gave a
5 very evidence-based account of all modern knowledge about
6 gastric emptying and digestion, much of which I didn't
7 know because, as a forensic pathologist, we can't cover
8 every sphere.

9 But that was a very impressive account
10 which I thought would stand alone in this case because
11 what it says is you can't do it, that there's so much
12 variation that a stomach emptying could be up to six
13 hours, that at two hours there still could be 70 percent
14 of the gastric contents left, and this was all based on
15 material he quoted from the literature from experimental
16 evidence, because since 1959 and 1966, which were the
17 sort of salient markers in this case, there's been an
18 enormous amount of work done using the nuclear medicine
19 method and sophisticated techniques in the field of
20 gastroenterology which, you know, is not open to all
21 forensic pathologists unless they particularly go and
22 search for them.

23 Q. Is it unusual for forensic
24 pathologists to steal from other professions, sir?

25 A. It's routine. We are a parasitic

1 profession really because we're pathologists and we have
2 to deal with such a variety of cases that we have to go
3 to other disciplines like physiology, anatomy,
4 anthropology, every "ology" you can think of, radiology,
5 in order to seek information about some particular facet
6 in that on-going case.

7 Q. Have there been any developments,
8 leaving aside gastroenterology where you talked about the
9 developments through Dr. Diamant, have there been any
10 advances in the field of pathology when it comes to
11 stomach contents or indeed much of anything else?

12 A. No, I'm not aware of any of any
13 significance.

14 Q. So there's been no real research
15 done in the field?

16 A. Nobody's been very interested
17 because generally it's fairly dismissive of the
18 technique. It has -- I'm not saying it's useless, it
19 does have its uses, that's an exaggeration. It's not
20 totally useless but the margins of error are so wide that
21 it usually has very little practical application.

22 Q. The other materials that you've
23 been given recently, sir, besides Dr. Diamant?

24 A. Dr. Pollanen's work, I had a copy
25 of the exhumation which itself was of no assistance but I

1 was very impressed by Dr. Pollanen's approach to all
2 these problems. He again is a younger evidence-based
3 specialist with a very logical outlook and I think he
4 applied his mind in a very logical way to all these
5 problems, incorporating modern knowledge, and I think he
6 did an excellent report, which again, like Dr. Diamant's,
7 really I would have thought wrapped the case up.

8 Q. If we can just look at stomach
9 emptying in normal circumstances, sir, insofar as you're
10 able to give an opinion in this regard, what's your
11 understanding as to how long a stomach will empty in
12 normal circumstances?

13 A. Well again, all I know is what I've
14 read and this has changed recently, what I've read in Dr.
15 Diamant's report has greatly increased my education in
16 this matter. I mean, of course it's obvious if you eat
17 something it stays in the stomach for a certain time and
18 then goes out. Every man on the street knows that.

19 But the times are so variable and there
20 are so many variable factors that this extends the
21 margins of error so greatly that I couldn't give a time.
22 I don't know how long a stomach takes to empty except it
23 must be a number of hours.

24 We talk about normal circumstances.
25 Well, what are normal circumstances and what is a normal

1 meal? So much of the earlier work was done on
2 experimental feeds, sludge made of oatmeal and
3 unrealistic meals. There's been more recent work done on
4 proper meals showing that the variation is very great.

5 But there are other factors and one of
6 the most important in the forensic sphere of course is
7 the emotional fear, fight and flight syndrome, whereby
8 any emotional upset, and I use that as a very loose term,
9 emotional, anything which upsets the person can greatly
10 alter gastric emptying.

11 I quote usually a case where I saw a
12 motorcyclist who crashed and had a head injury and lived
13 for a week, and I did an autopsy and I found his gastric
14 contents as fresh as if he just swallowed them.

15 Another German colleague, Puschel from
16 Hamburg, has reported a whole series of cases of similar
17 events in which 11 days has gone by and still the gastric
18 contents looked like they were freshly swallowed.

19 So there are so many factors which will
20 modify gastric emptying.

21 Q. So why would fear, fight or flight
22 have that kind of influence on the stomach emptying?

23 A. Again, I'm no physiologist but
24 obviously it shuts down the pylorus which is the valve
25 which allows food to pass from the stomach into the

1 intestine.

2 Q. And has there ever been an attempt
3 to measure what kind of impact, what a certain kind of
4 fear or other emotion can have on stomach emptying?

5 A. No, all the evidence has to be
6 anecdotal because you can't do experimental work of that
7 nature, as far as I know. I suppose it's almost feasible
8 but I haven't read any account of 20 students being given
9 a meal and half of them frightened and the other half not
10 frightened. It's not feasible.

11 Q. Is one able to draw any conclusions
12 in your field from an empty stomach as opposed to a
13 stomach with contents in it?

14 A. Well again, it's a common sense
15 conclusion that if a stomach is empty, no food has been
16 put into it for a considerable time before, but what that
17 considerable time is in terms of a mathematical number of
18 hours is very difficult to say.

19 The usual situation is if you find
20 someone dead in the morning and the autopsy reveals an
21 empty stomach, you suggest that they must have died the
22 night before rather than after breakfast that morning,
23 but it's as vague as that.

24 Q. There's been a sort of a shift in
25 position somewhat you might say since 1966 in this regard

1 in trying to move the issue from one of stomach emptying
2 to one of state of digestion and the so-called readily
3 identifiable concept. You're familiar with that in this
4 case?

5 A. Yes, certainly. Certainly, yes.
6 Again I think this is a very ephemeral criterion, there's
7 so many factors alter the rate of digestion, mastication,
8 the type of food, the amount of fluid with it, and I
9 think again, I rely on Dr. Diamant's expertise which I
10 read recently in that he discards the state of digestion
11 as a time marker. He said it's not reliable.

12 Q. Does an evidence-based approach,
13 sir, is it designed to put as much objectivity into the
14 issues as possible; is that the idea?

15 A. Yes. I mean, when someone says the
16 food was partly digested or not digested or very
17 digested, that's a subjective opinion. What might be
18 very digested to me might be different to the next
19 pathologist down the road. I mean, it's a subjective
20 opinion which is incapable of being quantified, really.

21 Q. I just want to take you briefly to
22 what might be called an implied criticism of your report
23 by Dr. Spitz. It's at page 11 of Dr. Spitz's report,
24 Chief Justice. Do you have this with you, sir?

25 A. No.

1 Q. We never did file --

2 THE REGISTRAR: We have an Exhibit 13
3 that says it's materials cited by Dr. Werner Spitz, tabs
4 1 to 8.

5 MR. LOCKYER: No, we never did sort out
6 that issue of filing the reports, it's just occurred to
7 me.

8 BY MR. LOCKYER:

9 Q. Perhaps I can just read it. You're
10 familiar with what --

11 A. Yeah, sure. I've got so much
12 material I'd need a truck to bring it.

13 Q. All right. At page 11, sir, of Dr.
14 Spitz's report he quotes you as follows, or he says the
15 following:

16 'Dr. Knight, in his letter dated
17 December 30, 2000...quotes the 3rd
18 edition of my textbook with a
19 paragraph on the subject of stomach
20 contents as it relates to time of
21 death:

22 'In conclusion, the emptying of
23 the stomach is a complex
24 multifactorial process and its
25 evaluation for determining a time of

1 death requires caution and careful
2 review of all limited factors.
3 Consideration must also be given to
4 the possibility of one or more close
5 consecutive meals.'"

6 That's a citation from the third
7 edition of his book, "Medicolegal Investigation of
8 Death." Dr. Spitz then says:

9 "However, he," meaning Professor
10 Knight, "omits the bottom line and
11 for completeness sake I wish to quote
12 what he omitted:

13 'It has been found that stomach
14 contents which are readily
15 identifiable by naked-eye inspection
16 were usually ingested within a
17 two-hour period.'"

18 You're familiar with this?

19 A. Yes.

20 Q. What reads like you've left
21 something out, so to speak?

22 A. I think he was wrong actually
23 because I didn't omit the last line and what he quotes is
24 the next paragraph on a different topic.

25 MR. LOCKYER: And in fact we have -- I

1 have for the court, the extract, the very page, although
2 it is from the fourth edition, if that could be filed.

3 THE REGISTRAR: Exhibit 53, Chief
4 Justice?

5 CHIEF JUSTICE MCMURTRY: Yes.

6 THE REGISTRAR: Thank you.

7 EXHIBIT NO. 53: Extract from the 4th
8 edition of "Medicolegal Investigation
9 of Death."

10 BY MR. LOCKYER:

11 Q. I should tell the court this is the
12 fourth edition, not the third, and there are three or
13 four words that appear in the fourth edition that don't
14 appear in the third but the format is the same in the
15 third as it is in the fourth.

16 Do you have this before you, sir?

17 A. No.

18 Q. Okay.

19 THE REGISTRAR: Here.

20 MR. LOCKYER: Oh, thank you.

21 BY MR. LOCKYER:

22 Q. And you'll see there, Professor
23 Knight, what's written, albeit this is the fourth
24 edition, that first of all the passage that you quoted is
25 I think identical where it says:

1 "In conclusion, the emptying of
2 the stomach is a complex
3 multifactorial process," et cetera,
4 down to the end of the paragraph.

5 A. Yes.

6 Q. And then the next paragraph which
7 you just pointed out that:

8 "It has been found that under
9 normal circumstances, stomach
10 contents which are readily
11 identifiable by naked-eye inspection
12 were usually ingested within a two-
13 hour period and maintenance on life
14 support may delay gastric emptying to
15 the point where the stomach may
16 contain undigested food for several
17 days."

18 So Spitz has quoted a part of that in
19 response to you and you say that's a different point?

20 A. Yes. Well, I didn't leave out the
21 last sentence and the part he then quotes is a different
22 topic in a different paragraph.

23 Q. Right.

24 A. So I think it is a rather unfair
25 criticism. It's a very minor point, anyway. I also

1 point out the book, Spitz and Fisher, which Professor
2 Spitz was part author of, I notice in one place he says
3 that a large meal may stay in the stomach for up to eight
4 hours, which is a bit contrary to what was said later, I
5 think.

6 Q. While we're talking about that,
7 sir, is there in your opinion, is there a consensus in
8 the literature as to, or an accepted convention among
9 pathologists or both, as to whether, first of all,
10 stomach contents can be used as a measurement of time of
11 death?

12 A. It has a very limited use. There
13 are two aspects. Shall I go into that?

14 Q. Yes.

15 A. The first thing is if you can
16 recognize in stomach contents some unique - not unique -
17 but some recognizable food, then -- and the investigation
18 of the case indicates that that deceased person ate a
19 meal which contained that particular -- I mean, let's say
20 it's a curry or whatever or a Thai food or something,
21 something that could be recognized, if they knew they ate
22 that particular food on a particular day and then the
23 body was found later, then it is common sense to say that
24 they must have died after that meal but before the next
25 meal.

1 But of course there are even fallacies
2 in that because the next meal might also be a curry. It
3 can be -- I've used it in that way a few times. I had a
4 homicide in which a woman was found in a submerged car
5 and no one knew when she died and the meal was
6 recognizable as something which was well recorded as she
7 having taken two days before, so we knew that she must
8 have gone into the river in that interval. But that's a
9 very unusual situation. It's nothing to do with stomach
10 emptying, it's a question of recognizing a particular
11 meal.

12 As I say, there can be snags in that
13 because you don't know if they had two similar meals.

14 But the usual use or the usual
15 attempted use is to estimate the time since death on the
16 volume and the state of digestion of the stomach contents
17 at autopsy, but the variables are enormous, so much so
18 that that method is of very limited use and I think
19 should never be used as probative evidence.

20 It might be of some use to perhaps
21 direct the police investigation early on and say well, I
22 think she must have died within a few hours of the meal,
23 but you cannot pin it down to any -- any useful period of
24 time in pinpointing the time of death.

25 As I said, I've taught all my

1 assistants, my post graduates, my students, that any
2 doctor who gives a fraction of an hour in his estimate of
3 time since death is either uninformed or incompetent.

4 I mean, to try and put a half hour --
5 unfortunately the media have fed this sort of public
6 expectation of accuracy in all these endless programs
7 that someone comes in and feels the brow of a corpse and
8 says he died at 20 past 2:00 last Tuesday. That's utter
9 nonsense; and the same applies to stomach contents.

10 Q. And is there consensus in that
11 regard amongst your profession, sir, in the literature?

12 A. Well, there is a consensus but it's
13 not much good. I mean, that consensus, and it's very
14 rarely used. I mean, if I can go back to experience as a
15 medical witness, in my experience of 40 years, I say this
16 and therefore it must be right.

17 Now, time of death is often not an
18 issue. First of all, in the huge load of autopsies,
19 someone who claims to have done 60,000 autopsies, 90
20 percent of those won't be homicide, they will be sudden
21 deaths, accidents, all sorts of things. Of the
22 homicides, most homicides the time of death is not an
23 issue. And in the small proportion that it is, better
24 methods are available to do your best to assess the time
25 of death, especially temperature. In this case the

1 temperature was never taken.

2 I know there's been a lot of recent
3 discussion in this case about maggots, but I was always
4 taught by my entomological colleagues you must take the
5 temperature of the maggot mass because maturation is so
6 temperature dependent, but I see no reference anywhere in
7 this case to body temperature.

8 Q. If we can just conclude -- well,
9 actually, there's one more thing. One of the reports
10 that there hasn't been a lot of reference to, sir, and I
11 just wanted to ask you about it, is you've seen the
12 report by Dr. DiMaio in this case, have you?

13 A. Yes.

14 Q. And could you just give us your
15 views on Dr. DiMaio's report, sir?

16 A. Well, when I wrote my chapter in
17 the book I actually quoted his section from his textbook.

18 Q. Yes.

19 A. And I thought it was very good. He
20 gave an evidence-based account of the research as of that
21 time and I think -- I think what he said is right. I
22 don't disagree with virtually anything he says.

23 Q. You did make a point, I think, in
24 your report -- sorry. One point he makes in his report,
25 I should say, is that he feels that the degree of

1 digestion is more important than the volume of what's
2 left.

3 A. I would disagree and my
4 disagreement is reinforced by Dr. Diamant's quotations
5 and report. He says that digestion is not time
6 dependent.

7 Q. But beyond that, Dr. DiMaio's
8 report you think is helpful?

9 A. Helpful.

10 Q. And just finally in regards to the
11 stomach contents, sir, and the last word, perhaps for the
12 purposes of this hearing, if we could just go back to
13 your book at page 213. I actually said I finished with
14 the book but I just want to go back to it for a minute.

15 A. 213.

16 Q. And you have on page 213, you have
17 your conclusions just before the section you call "A Case
18 History: Steven Truscott."

19 A. Yes.

20 Q. Your conclusions that you wrote
21 before you were asked to get involved in this case --

22 A. Yes, yes.

23 Q. -- is that right? And I wonder if
24 you would just read the first two paragraphs, sir, so we
25 know what were your views before you actually ever became

1 involved in this case?

2 A. "From the foregoing discussion, it
3 is readily apparent that there are a
4 whole range of variable factors which
5 make it impossible to use stomach
6 contents as definitive evidence in
7 estimating the time since death.
8 Even the generalizations so often used
9 by pathologists and other medical
10 witnesses can be wildly incorrect,
11 sometimes to the detriment of justice.
12 However eminent a pathologist might be,
13 his or her expertise on this matter is
14 of necessity limited. They may have
15 conducted thousands of postmortem
16 examinations, in every one of which the
17 stomach contents have been noted.
18 However, in the vast majority of cases,
19 the issue of time since death need not
20 be considered. Also in the vast
21 majority, the time and nature of the
22 last meal is unknown and is usually of
23 no interest. So, where does the
24 medical witness obtain this sometimes
25 dogmatic evidence which he or she

1 delivers in court with such pontifical
2 gravitas?"

3 Q. Just go on one more, I'm sorry.

4 A. "It may be true that in the
5 majority of persons, the 'average meal'
6 passes from the stomach in something
7 between 30 minutes and 3 hours.
8 However, these persons are not the
9 subjects of a forensic examination,
10 necessitated by a violent crime which
11 may have all the connotations of
12 emotion, fear, injury, etc. that is
13 well known to disrupt the digestive
14 process. In addition, the 'majority of
15 persons' leaves a very sizeable
16 minority, whose gastric emptying may
17 lie well outside the so-called normal
18 parameters. As proof in a criminal
19 case must be 'beyond reasonable doubt',
20 this leaves little scope for firm
21 testimony based on such shifting sands
22 as gastric physiology."

23 Q. Just one question in that regard,
24 sir. When you say 30 minutes, something between 30
25 minutes and three hours, has Dr. Diamant modified that

1 opinion?

2 A. Yes, certainly. Dr. Diamant has
3 pushed it up to six hours and 70 percent of the mass may
4 be there at two hours.

5 Q. If we can now move on beyond
6 stomach contents, sir, and consider some of the other
7 factors that in this case, Lynne Harper's death or
8 murder, could conceivably have been used to try and fix
9 the time of her death, or a timeframe, should I say, for
10 her death, the timespan.

11 First of all, sir, there's been some
12 talk of the use of the state of the rigor mortis in her
13 body when she was found. Is that of any assistance in
14 your opinion --

15 A. Not at all.

16 Q. -- in determining a window for a
17 time of death?

18 A. Well, it's of assistance, but given
19 the window of opportunity we're talking about and Dr.
20 Penistan's claim down to virtually a sort of 30-minute
21 bracket, it's, I won't use the word ludicrous, but rigor
22 mortis is such a variable beast that there's no
23 possibility whatsoever of using that to pitch on that
24 particular window as the time of death.

25 Q. Have there been attempts to make

1 rigor mortis a more defined --

2 A. Well, there's been attempts, yes.
3 My colleague in the book, Krompecher in Switzerland, has
4 done a lot of work on rats and things but it's not of
5 much practical use. With the distance of a day or two
6 after death it is of no use at all in refining a time of
7 death down to an hour bracket.

8 My book quotes the variation quoted by
9 many, many authors as to the onset and disappearance of
10 rigor mortis and the variation is enormous. I won't
11 quote it but it's in there.

12 Q. What about lividity, sir, is that
13 of any assistance?

14 A. Even more useless. No value
15 whatsoever.

16 Q. Now, moving into decomposition,
17 sir, I understand that yesterday you had occasion to go
18 to the coroner's office?

19 A. Yes, I went to look at the
20 histology of Lynne Harper and looked at the slides.

21 Q. And you hadn't looked at them
22 before?

23 A. I'd seen photographs, very good
24 photographs taken by Dr. Pollanen.

25 Q. Right.

1 A. But just for sake of completeness,
2 I went to look at the actual slides.

3 Q. And you met Dr. Pollanen while you
4 were there, sir?

5 A. I did, yes.

6 Q. And discussed the case with him,
7 too?

8 A. Yes.

9 Q. And can you tell us, before perhaps
10 we go into what you saw on the slides, can you tell us a
11 bit about decomposition, sir, particularly as it applies
12 in this case?

13 A. Decomposition again is another very
14 variable phenomenon. All forensic pathologists who have
15 done a lot of cases have seen double deaths, two dead
16 bodies in the same place, one which is in the same
17 environment but totally different degrees of
18 decomposition. There seems to be enormous variation even
19 in the same environment. The environment is all
20 important, of course.

21 I hadn't really appreciated until
22 recently how hot it was at the time of this death, this
23 unfortunately Welsh vision of Ontario being snow covered
24 most of the time, but to see that the temperature is up
25 to 92 --

1 Q. Well, we think it rains all the
2 time in Wales.

3 A. You're right.

4 Q. I think we're right too.

5 A. That's a tropical temperature, 92,
6 and I'm very surprised now, especially that since I've
7 known that climatic knowledge, that the body was in such
8 a good state because the histology, and I'll come to the
9 histology, was almost free from any decomposition.

10 Q. Did you work -- have you ever
11 worked in tropical climes, sir?

12 A. Yes.

13 Q. Yourself?

14 A. I was in the army in Malaya for
15 three years in a hospital like M.A.S.H. and I was -- also
16 done WHO consultancy in Sri Lanka for a couple of months
17 which is also tropical and their bodies would decompose
18 in the first day.

19 Q. And you provided me as well with a
20 chapter or you actually have the book, but a book, the
21 autobiography of Dr. Simpson; is that right?

22 A. Yes.

23 Q. And he wrote a chapter in that
24 book, sir, on the Steven Truscott case?

25 A. Yes.

1 Q. Is that right?

2 A. Yes.

3 MR. LOCKYER: And I have a copy of that
4 chapter for the court.

5 THE REGISTRAR: Chief Justice, Exhibit
6 54?

7 CHIEF JUSTICE MCMURTRY: Thank you.

8 EXHIBIT NO. 54: Chapter from the
9 autobiography of Dr. Simpson.

10 BY MR. LOCKYER:

11 Q. It's just worth noting, sir, that
12 from that, it's the only reference I'll make presently,
13 at page 281 of his autobiography, a little more than
14 half-way down the page, he points out that the
15 temperatures in the last two days had not been far from
16 tropical, hastening decomposition. Do you remember that?

17 A. Yes.

18 Q. While I have this, sir, and I'm
19 sure you're very diplomatic, Professor Knight, but we've
20 heard something about some difficulties that existed back
21 in the sixties between Dr. Simpson and Dr. Camps; is that
22 right?

23 A. Yes. I lived through them.

24 Q. Can you diplomatically tell us
25 something about that?

1 A. Well, there was -- I'm not sure the
2 cause of it, but they wouldn't speak to each other.
3 They, quite frankly, detested each other. Simpson was a
4 very autocratic, egotistical man; Francis Camps was much
5 more a man of the people, so to speak, and they just
6 didn't get on. And in some ways I feel Simpson used this
7 case to kick poor Francis Camps a bit. It's obvious from
8 that extract in his autobiography.

9 I'm not saying that he coloured his
10 evidence in any way, but he certainly took every
11 opportunity to use it to discomfort Francis Camps.

12 Q. If we now go back to the
13 temperature, sir, you told us your opinion is sort of
14 near tropical kind of temperature, and your understanding
15 of the issue of decomposition of Lynne Harper's body
16 before yesterday was you had considered the issue; is
17 that right?

18 A. Well, I know that Dr. Penistan had,
19 in his first, certainly first report had said when he
20 first saw the body said the body was free from
21 decomposition, words to that effect.

22 Q. Yes?

23 A. Then he later modified that saying
24 there was subcutaneous autolysis, in other words
25 decomposition under the skin, which seemed to be odd to

1 me and there certainly was no evidence on the histology I
2 saw.

3 Apart from the genital organs, which
4 are always most vulnerable to decomposition because
5 they're moist and they are attacked by flies and
6 whatever, the tissues I saw were almost totally free from
7 decomposition and that seems difficult to reconcile with
8 45 or 48 hours lying in that temperature which has been
9 recorded.

10 Q. You've also been -- you also more
11 recently had a chance to look at the three versions of
12 the autopsy --

13 A. Yes.

14 Q. -- prepared by Dr. Penistan; is
15 that right, sir?

16 A. Yes.

17 Q. As a practising forensic
18 pathologist, do you have any sort of understanding of how
19 Dr. Penistan's estimates of time of death could have
20 moved around, so to speak, in the way that they did?

21 A. I found it very puzzling because
22 there are three, two handwritten reports and a typed
23 report, and the times are very variable.

24 I wasn't sure on the first one, which I
25 think says 40 hours since death, whether he based that on

1 his examination of the body externally. The way it reads
2 is that he went to the scene, saw the body and wrote 40
3 hours, but I don't think it worked like that.

4 I wasn't sure whether he'd written 40
5 before or after he had seen the stomach contents.

6 Q. Yes.

7 A. Then the 40 changed to I forget the
8 figures but I could find them.

9 Q. 36?

10 A. 36.

11 Q. 30 to 36.

12 A. 30 to 36. And then a third edition
13 became 45 and a half to 45, I think, which I think is
14 extraordinary, for two reasons. First of all, to put a
15 half hour in, to put a half hour in immediately damns him
16 in my book as not knowing what he's doing. You cannot
17 put a half hour estimate from any parameter whatsoever.

18 The best you can do, after my German
19 colleagues have done their magic with temperatures, is
20 plus or minus 2.8 hours each side of the true time of
21 death.

22 Q. That's not in stomach contents, any
23 content?

24 A. Yes.

25 Q. And how long after death would you

1 be plus or minus 2.8 hours?

2 A. You can't do it for more than 24
3 hours because the body is down to environmental
4 temperature then. So for someone at 48 hours distance to
5 put down 45 and a half hours is an indication they don't
6 know what they're doing, to be crude, because it's just
7 not right. And it also, I have to say, perhaps
8 suspicious is too hard a word, but it seems very strange
9 that he happened to land upon exactly the right window of
10 opportunity of access of Mr. Truscott to Lynne Harper,
11 and, I mean, for years the forensic fraternity have
12 kicked this case around in discussion and that has been
13 one of the points which has often been mentioned.

14 Q. If we now move, sir, to
15 probabilities in this case, if I may, are you able, sir,
16 to give us a timeframe in which it is probable in your
17 opinion that Lynne Harper likely died?

18 A. It has to be from the time she went
19 off on the bicycle to the point where the body was found
20 and I can't see any way of refining it better than that.

21 CHIEF JUSTICE MCMURTRY: I'm sorry?

22 THE WITNESS: From the time she was
23 last seen.

24 CHIEF JUSTICE MCMURTRY: Yes.

25 THE WITNESS: Until the body was

1 discovered.

2 CHIEF JUSTICE MCMURTRY: I thought you
3 added something to that.

4 THE WITNESS: I said I can't see any
5 way of refining that to a more accurate estimate.

6 CHIEF JUSTICE MCMURTRY: I see. Thank
7 you.

8 BY MR. LOCKYER:

9 Q. And if you just focus, and I know
10 this is not a very good way of doing things, but I'm
11 going to ask you to do it anyway. If you just focus on
12 the decomposition aspect of the case, sir, or lack of it,
13 where would that put you, the decomposition side of
14 things, in terms of the probability that she died shortly
15 after 7 p.m. on June 9th?

16 A. Again, decomposition is a very
17 variable phenomenon, but given the excellence of
18 preservation of the sections I saw yesterday, I find it
19 hard to believe that the time of death was as far back as
20 7 or 8 o'clock on the 9th of June. I can't put it much
21 more strongly than that, but I would favour a lesser time
22 but there's no way of quantifying it.

23 MR. LOCKYER: All right. Thank you,
24 sir. Those are my questions.

25 CHIEF JUSTICE MCMURTRY: Thank you.

1 MR. ALVARO: Chief Justice, I have a
2 book of extracts of materials that I'll probably be
3 referring to some, not likely all.

4 THE REGISTRAR: Exhibit 55, Chief
5 Justice.

6 EXHIBIT NO. 55: Crown's materials in
7 examination of Dr. Bernard Knight.

8 CROSS-EXAMINATION BY MR. ALVARO:

9 Q. Dr. Knight, good morning, first of
10 all, and I would like to thank you, I understand you came
11 a long way to be here, so I would like to thank you for
12 doing that.

13 I'd like to begin with I guess what
14 we'd call the more extreme of your statements, and I
15 appreciate that your opinion is a little more complex
16 than what I'm going to put to you but we'll start with
17 this and see where it goes.

18 One thing that you told Mr. Sandler in
19 your interview was that stomach contents are useless in
20 determining time of death, and in your book, "Knight's
21 Pathology," which is another one of your books, you also
22 say with the one exception of the last meal, the nature
23 of the last meal, that they are quite irrelevant in
24 providing time of death.

25 Is that the essence of your opinion, if

1 I could put it that way?

2 A. Yes. I mean, a more accurate way
3 of putting it would be that the margins of error are so
4 wide as to make the exercise really futile.

5 Q. And the margins of error emanate
6 from the fact that there is great variability in the
7 stomach emptying?

8 A. Multifactorial variability. There
9 are so many different variables.

10 Q. And I think, as you noted, that's
11 true of pretty well any method of determining time of
12 death, at least pathology methods; is that correct?

13 A. Yeah, there are no other methods.

14 Q. Pardon me?

15 A. There are no other methods other
16 than pathology.

17 Q. Well, I guess what I'm getting at
18 is when you're relying on things like postmortem changes,
19 putrefaction, rigor mortis, body temperature, they are
20 all subject to great variability as well?

21 A. Certainly, yes.

22 Q. And none of these methods can
23 provide certainly a precise time of death?

24 A. No, you must offer a range and the
25 range varies according to your data.

1 Q. I don't understand you, though, to
2 dismiss these other methods necessarily as useless or
3 irrelevant in the way that you do with stomach contents;
4 would that be accurate?

5 A. Well, stomach contents is the worst
6 of all, I suppose that's what I meant.

7 Q. In what sense? I mean --

8 A. Well, the least accurate. Or the
9 most inaccurate.

10 Q. Have there been studies comparing
11 the accuracy of postmortem changes, for example, to the
12 use of stomach contents?

13 A. No.

14 Q. There haven't been. So this is
15 just a sense that you have that it's not accurate or it's
16 less accurate?

17 A. Yes. It's my sense. I don't go
18 back to experience, but it's the worst of all of them.
19 None of them are really good. As I said about my
20 textbook, really, it tells you you can't do it but it
21 tries to set parameters for each method to see where the
22 limits of error are.

23 Q. But in all cases, and when we're
24 relying on things like putrefaction, for example,
25 decomposition, the ranges even in those types of cases

1 when you rely on that is still fairly broad?

2 A. Yes.

3 Q. Wouldn't you agree with that?

4 A. Yes.

5 Q. In your report, and this is the one
6 that's dated December 2000, you cite a number of
7 authorities in support of your proposition that stomach
8 contents are not useful in determining time of death.

9 A. Yes.

10 Q. Now, I won't take you to all of
11 them but I believe they're at tab A of the blue volume
12 and they begin at page 5.

13 A. Tab A.

14 Q. This is the appellant's witness
15 book and again, as Mr. Lockyer pointed out, that issue
16 hasn't been resolved yet. I'm not going to be reading
17 but would you agree with me that not all of the authors
18 that you've cited take the view that stomach contents are
19 useless or irrelevant in determining time of death?

20 A. No, I'm sure they didn't use those
21 words.

22 Q. Well, you did when you -- you did
23 when you were interviewed by --

24 A. They didn't use those words.

25 Q. They didn't use those words, I'm

1 sorry. They didn't use those words?

2 A. No.

3 Q. Is it your view that all of the
4 authors that you rely upon take the view that you
5 shouldn't be using stomach contents?

6 A. Well, no, I don't say you shouldn't
7 be using them. All I'm saying is the information you
8 gain from it is so poor it's hardly worth the effort.

9 Q. It's limited, the information. And
10 I think some of the comments at least in these passages
11 suggest that you can use them but great caution must be
12 exercised in using them, and you would agree with that?

13 A. That's my whole pitch on this.

14 Q. And I appreciate this may be a
15 matter of rhetoric or whatever, but you would agree that
16 there's some limited usefulness to stomach contents just
17 as there is to any type of evidence of postmortem change,
18 body temperature, that kind of thing?

19 A. Well, that's a big generalization.
20 Yes, there is a very limited use. It's so limiting as to
21 be almost non-existent.

22 Q. Well, if a pathologist was
23 conducting an autopsy and he's prepared to give a range
24 and he's prepared to acknowledge all the variability and
25 prepared to consider all the factors and not just stomach

1 contents alone, would you suggest it would be
2 inappropriate for a pathologist to give an estimate of
3 time of death based on all those factors, assuming that
4 he gives a fairly broad enough range in doing so?

5 A. No. Well, this is what we always
6 try to do. But my point is we must be very cautious to
7 make our time of death bracket wide enough to encompass
8 all the potential errors.

9 Q. You wouldn't refuse to give an
10 estimate of the time of death, let me put it that way, if
11 you're conducting an autopsy?

12 A. No, Dr. Jaffe tends to go to that
13 extreme but I wouldn't go to that extreme. I would
14 suggest a time of death and immediately put a caveat, of
15 course it might be beyond that. Even in these very
16 accurate estimates done by my German colleagues, all
17 their work gives a 95 percent probability, that means
18 there's five percent that could be wrong.

19 Q. Right. It also would be important
20 for pathologists to acknowledge, whether it's in a report
21 or in testimony, what the variabilities are and the
22 potential limitations are to that?

23 A. Yes, we always do that. We should
24 do.

25 Q. So there is some very limited

1 usefulness to stomach contents just as there is to any
2 other, and you've written a book about estimations of
3 time of death and I take it that you're not eschewing the
4 estimation itself, the fact the pathologist may do that,
5 as long as it takes into account --

6 A. The estimation of the time of death
7 is a vital part of our work, we attempt to do it anyway,
8 but within the spectrum of methods we use, stomach
9 contents is at the bottom.

10 Q. All right. I take it while we
11 certainly know more about gastric emptying today than we
12 did in 1959, would you agree with me that it was known in
13 1959 that gastric emptying was subject to great
14 variability?

15 A. Yes, certainly.

16 Q. And would you agree with me this
17 was known to Dr. Penistan?

18 A. I don't know what he knew.

19 Q. Well, from the record, from the
20 materials that you've read --

21 A. Yes, yes. Yes, he's admitted.

22 Q. He acknowledged that there's great
23 variability?

24 A. And then still had given an
25 unrealistic time of death.

1 Q. Fair enough. Fair enough. If I
2 could ask you in these materials to turn to the passage I
3 am referring to and it's at tab 1.

4 A. Okay.

5 Q. So I'll just read it very quickly.
6 Mr. Truscott's counsel at the time is Mr. Donnelly and he
7 asks Dr. Penistan a series of questions:

8 'Doctor, I suggest to you that
9 there are many factors that enter
10 into the digestive process. They
11 either speed them up or slow them
12 down?

13 Answer: Many.

14 Question: And they are very
15 variable, are they not?

16 Answer: I am afraid I don't
17 understand what you mean by factors
18 being variable.

19 Question: The person's digestive
20 process may vary from day-to-day
21 without any apparent cause?

22 Answer: Yes.

23 Question: Yes. Emotion can be a
24 considerable factor in the digestive
25 process, can it not?

1 Answer: Yes.

2 Question: Whether it is troubled
3 or untroubled?

4 Answer: I don't know that
5 troubled emotions have a very great
6 deal of effect. Unpleasant emotions
7 do.

8 Question: And frustration helps
9 to slow down digestion, does it not?

10 Answer: If it leads to anger.

11 Question: Emotional upset or
12 anger would lead to the slowing down
13 of the digestion process?

14 Answer: Yes."

15 Just a little more and I'll read it
16 just for the sake of completeness.

17 Question: What about resentment?

18 Answer: I think if it is
19 accompanied by anger, yes.

20 Question: And improperly
21 masticated food can be a very serious
22 interference with the digestive
23 process, can't it?

24 Answer: It can slow them down."

25 Now, I'm not sure if you agree with

1 that very last proposition, but generally speaking with
2 the remainder of the propositions would you agree that
3 Dr. Penistan's, if I could put it, concessions were
4 pretty accurate?

5 A. Yes.

6 Q. In terms --

7 A. Well, he's speaking the truth, all
8 those factors do affect digestion.

9 Q. And he acknowledged that -- he
10 acknowledged that there's a great deal of variability in
11 using stomach contents to estimate time of death?

12 A. Yes.

13 Q. Would you agree with me also that
14 those witnesses, those expert witnesses who testified in
15 1966 at the Reference, and I take it you have read the
16 evidence of those witnesses, they also accepted that
17 gastric emptying was subject to great variability?

18 A. Yes.

19 Q. And pretty well all of them, would
20 you agree with that?

21 A. Yes.

22 Q. I just want to take you to a
23 couple, I'm not going to take you to them all, but if you
24 could go to tab 6, and this is Dr. Jaffe's opinion at
25 page -- actually, go to page 336. Just picking up where

1 I think I have it highlighted there:

2 "...And two equally competent
3 observers looking at the same stomach
4 contents may get very different
5 impressions and therefore arrive at
6 very different conclusions regarding
7 the time of death. This makes it
8 basically almost a useless method."

9 Do you agree with that?

10 A. That's more or less what I said a
11 few minutes ago.

12 Q. It sounds like your opinion,
13 correct? The second one, if I could take you to, would
14 be the opinion of Dr. Camps and that's at tab 8. And
15 I'll just read from the top, it's the first question and
16 answer:

17 "First of all, Dr. Camps, what is
18 your opinion as to whether the
19 contents of the stomach and the state
20 to which digestion has proceeded in
21 relation to the last known meal
22 consumed by the deceased, is a
23 reliable guide to the time of death?

24 Answer: It is so variable that
25 this generally has been described as

1 being of no value in assessing the
2 time of death within a limited
3 period. That is to say, what you can
4 say is, first of all, that the
5 contents indicate the nature of the
6 last meal that the person has had.
7 In other words, it enables you to say
8 they have had nothing else to eat
9 since the last meal. And, secondly,
10 that death has occurred within a
11 number of hours. It is possible, by
12 taking other matters into
13 consideration, to place perhaps
14 within that number of hours a
15 distance in one or other direction;
16 but other than that, it is quite
17 impossible."

18 I take it you agree with that as well?

19 A. Yes.

20 Q. That also sounds like your opinion.

21 I'll just take you to a Crown witness also for the sake
22 of completeness, and that's Dr. Gerber and that's at tab
23 10, page 440, and this is Dr. Gerber in
24 cross-examination, I believe.

25 'Question: Do you agree that the

1 amount of food in the stomach in
2 relation to -- only permits you to
3 estimate the time of death within
4 relatively wide limits?

5 Answer: Estimate or approximate.

6 Question: Not determinate?

7 Answer: Not determinate."

8 Now, that may be a little confusing, I
9 suppose.

10 A. I have no idea what that means.

11 Q. Well, it seems that he's agreeing
12 with the proposition that's put to him that you can only
13 estimate or approximate within wide limits, and you don't
14 disagree with that proposition?

15 A. No.

16 Q. And that sounds, again, it's
17 roughly your opinion as well? I think you discussed very
18 briefly with Mr. Lockyer this notion that you can't
19 really test academically this idea that gastric emptying
20 may be delayed by some threatening or torture or some
21 period of torment. It's not something that you can
22 really test scientifically; is that correct?

23 A. Right.

24 Q. And as you noted, you can't really
25 feed someone, kidnap them, terrorize them in order to see

1 what the effect is on their gastric emptying. Let me
2 suggest this. That even if you assume that it may have
3 that impact, would you agree that it wouldn't have that
4 impact of necessity; that it may be that someone in that
5 kind of situation may still go through the normal, or I
6 appreciate normal is a rather broad word, but it may not
7 delay the gastric emptying?

8 A. The answer to that is I don't know
9 but I'd be very surprised if it didn't because the
10 physiological reactions to the fear, flight, all the rest
11 of it are laid down by the neuro system, the endocrine
12 system of the body. It's not a matter of choice. You
13 can't say I'm not going to be frightened. So I doubt
14 that.

15 Q. Hostages have to eat too, you would
16 agree with that, wouldn't you? That at some point the
17 body may adapt to the situation and --

18 A. I don't know the answer to these.
19 I don't know. I doubt --

20 Q. I'm sorry?

21 A. I doubt if anyone else knows.

22 Q. All you have to base this on is
23 again anecdotal evidence which is based on your
24 experience?

25 A. There are publications I mentioned

1 this morning, Hans Puschel from Hamburg who did a whole
2 series of autopsies on people who had various events and
3 showed that up to 11 days a whole meal could stay in the
4 stomach, so there is some evidence.

5 Q. These various events, though, are
6 things like illness, coma, that kind of thing, would you
7 agree with that?

8 A. It's in my book somewhere. I would
9 have to look it up. There were a whole range of things.

10 Q. But certainly if you're going to
11 have a delay of stomach emptying that runs some 11 days,
12 that's beyond what would be normal?

13 A. That was the extreme and he had a
14 whole spectrum from more than a day to 11 days.

15 Q. And your example of the motorcycle
16 driver, that was a person who was in a coma for a number
17 of days?

18 A. Oh, sure. I agree that serious
19 injury makes it much longer but when we're talking as in
20 this case of virtually minutes, you can't -- you can't
21 disregard a lesser degree of emotional trauma.

22 Q. In this particular case, the
23 Truscott case, a pathologist can't really speculate as
24 to, one, what happened to Lynne Harper after she
25 disappeared, and two, what effect this might have had on

1 her gastric emptying. You'd agree with that?

2 A. The first one is none of his
3 business. We're not detectives. The second one I think
4 has enough medical content for us to say that an
5 emotional impact would have had an effect on gastric
6 emptying.

7 Q. That's assuming there was an
8 emotional impact. Again, that's speculation or at least
9 it's one --

10 A. Yes, yes. We are entitled to say
11 that if X happened then Y is a consequence.

12 Q. And you are aware of Dr. Penistan
13 having written in his autopsy that, and I appreciate you
14 disagree with the narrow range of time that he applied in
15 this case, but he did say unless some complicating factor
16 was present that he wasn't aware of. You remember that
17 little phrase he used?

18 A. Yes.

19 Q. That would be an acknowledgment
20 again all these other things are possibilities and that
21 they may have an impact on the time of death?

22 A. Yes. But it certainly doesn't
23 validate his time of death.

24 Q. It's an acknowledgment, though, of
25 the variabilities that may exist?

1 A. Yes.

2 Q. You agree with me that Dr.
3 Penistan's estimation of time of death wasn't solely
4 relying on the stomach contents but he factored into his
5 opinion the state of the body at the time it was found?

6 A. All I can say about that is he was
7 wrong to apply that time of death. If he was using rigor
8 mortis, decomposition and hypostasis.

9 Q. He was wrong to narrow it to such a
10 small timeframe?

11 A. It's a ludicrous application. It's
12 beyond any belief sometimes. I mean, as I say, this case
13 is well known in the forensic fraternity as being
14 remarkable for this particular application of a tight
15 time of death on poor criteria.

16 Q. And that's your understanding of
17 his evidence that he gave at the prelim and at the trial,
18 that he focused on a very narrow timeframe based on all
19 of these factors?

20 A. Yes.

21 Q. If I could take you, if you could
22 turn to tab 2 of this booklet, and beginning at line or
23 question 324, I'll begin with the answer, "The amount,"
24 and this is Dr. Penistan talking and it's at the
25 preliminary hearing:

1 "The amount of rigor mortis
2 present was very slight. On the
3 basis of rigor I would consider that
4 death had taken place approximately
5 two days before. The eggs and the
6 maggots which have been laid and
7 hatched on the body suggest a similar
8 period, perhaps longer, but the
9 weather was hot, as I recall, and the
10 body was lying in a pretty damp
11 environment. The eggs and maggots
12 would therefore tend to hatch
13 rapidly. There were early postmortem
14 changes in the fat under the skin of
15 the body and in the major organs of
16 the body. All of these findings I
17 feel were compatible with death one
18 and a half to two and a half days
19 before the autopsy was done."

20 Do you remember reading that?

21 A. Yes.

22 Q. I don't see any reference to that
23 in your report.

24 A. I'm not --

25 Q. Well, your view is that Dr.

1 Penistan was dogmatic and precise --

2 A. In what you just read out, first of
3 all I disagree with some of it, what he's saying.

4 Q. Okay, fair enough.

5 A. Do you want me to elaborate?

6 Q. Go ahead.

7 A. "On the basis of rigor I would
8 consider that death had taken place approximately two
9 days before," well, that is a generalization that's not
10 valid. I mean, again, I go back to Penistan and his
11 analysis of people's opinions, approximately two days
12 before. What do you mean by approximately? If by that
13 he means one day to three days, well, fair enough.

14 Q. All right. He does and concluding
15 it at least based on the postmortem changes --

16 A. Again, I haven't finished actually.

17 Q. Sure, go ahead.

18 A. He says there were early postmortem
19 changes in the fat under the skin of the body. Well, I
20 looked at the histology yesterday and I couldn't see any,
21 nor could Dr. Pollanen as far as I know. All these
22 findings were compatible with death one and a half to two
23 days before the autopsy.

24 Q. Actually he says two and a half
25 days.

1 A. Two and a half days, fair enough.
2 Compatible. Compatible is a very different thing to
3 indicative. This case has been bedeviled, I think,
4 between "compatible with" and "indicative of."

5 Q. This is Dr. Penistan talking here
6 and he says, he gives what you ask a pathologist to do,
7 he gives a range of times as opposed to focusing on a
8 specific time, which is your criticism of him at the
9 outset. Do you agree with that?

10 A. Sure, but then he gives a fixed
11 time in his postmortem report. You can't have it both
12 ways.

13 Q. Well, you've looked at all the
14 different postmortem reports, he doesn't give a fixed
15 time in all of them. Maybe the range that he gives isn't
16 to your liking but he certainly gives ranges in all of
17 them?

18 A. A range of half an hour is
19 ludicrous.

20 Q. All right. In his preliminary
21 hearing testimony, the range of one and a half days to
22 two and a half days, is that ludicrous?

23 A. Well, my philosophy has always been
24 that an expert witness should say something and stick to
25 it, not chop and change.

1 Q. This is defense counsel
2 cross-examining him at the preliminary hearing and I'm
3 assuming that was available to defense counsel to use at
4 trial.

5 A. Well, I'm looking at it from a
6 pathologist's point of view. You make your mind up, you
7 stick to it.

8 Q. Let's go to his trial testimony
9 which is the next tab over. And it's put to him:

10 "Doctor, you told us about the
11 postmortem changes in this body?

12 Answer..."

13 A. I've lost you. Where are you?

14 Q. Tab 4, I beg your pardon, tab 4.
15 My mistake.

16 A. Okay.

17 Q. It's right under where it says
18 "Cross-Examination by Mr. Donnelly."

19 "Doctor, you told us about the
20 postmortem changes in this body?

21 Answer: Yes, sir.

22 Question: And there were many
23 factors that could contribute to the
24 variation of time that it would take
25 for those changes to occur, would it

1 not?

2 Answer: Yes, sir.

3 Question: And that is not a very
4 accurate way of estimating the time
5 of death. It would be difficult to
6 tie it down to within five or six
7 hours of those changes, wouldn't it?

8 Answer: Yes, sir."

9 Now, the time is put to him as five or
10 six hours but he certainly acknowledges, would you agree
11 that he acknowledges that the time of death estimate that
12 he gives might well be outside of the range involved in
13 the Crown's allegation?

14 A. Yes, he acknowledges it but he
15 still gives it a very tight time of death when the chips
16 are down, so to speak.

17 Q. I want to take you to one more
18 passage and this relates more to the stomach contents
19 issue and it's at tab 5. I'm not sure if you've ever
20 seen this. This is a Toronto Telegram article. This was
21 found, Chief Justice and Justices, this was found, as I
22 understand it, in Mr. Justice Martin's box number 8. And
23 the date of this article is March 31, 1966 which is about
24 six months before the Reference.

25 I want to take you down the first

1 column where it's highlighted or at least sidebarred.

2 Dr. Penistan -- do you have that in front of you?

3 "Dr. Penistan states

4 unequivocally: 'If either the Crown

5 or the defense had asked me if the

6 girl might have died much later than

7 7:45, I would have had to agree."

8 Now, would that be an accurate

9 statement of limitations of estimating time of death?

10 A. If that is true, I wonder why we're

11 here today, to be honest.

12 Q. And going to the next column, I

13 won't read the whole thing but I'll go to the next column

14 and it's also sidebarred:

15 "However, pathologists know that

16 digestive processes may be long

17 delayed by stress of any kind."

18 Again that's a quotation of Dr.

19 Penistan. You agree with that as well?

20 A. Sure.

21 Q. And that's an accurate statement?

22 A. Yes.

23 Q. You would agree with me that in

24 this passage at least Dr. Penistan acknowledges the

25 limitations to the use of stomach contents in estimating

1 time of death?

2 A. He acknowledges them but he doesn't
3 seem to apply them.

4 Q. This is 1966. Just a few questions
5 about the slides. You were certainly aware of Dr.
6 Penistan's observations before you looked at the slides,
7 that there was very little or no decomposition in the
8 body?

9 A. I've seen very good photographs
10 taken by Dr. Pollanen.

11 Q. And you'd agree with me that by and
12 large, and I appreciate the exception that you've given
13 with respect to the subcutaneous fat, by and large the
14 slides really confirm Dr. Penistan's observations about
15 the minimal state of decomposition?

16 A. I had a feeling that something we
17 read not long ago, he was a bit more strong than minimal.
18 I mean, in other words, they weren't minimal. Perhaps
19 I'm wrong. Anyway, they were minimal.

20 Q. Sorry, the changes were minimal?

21 A. The changes were minimal to
22 non-existent, especially the findings in the liver were
23 as if they were fresh.

24 Q. And you knew at the time certainly
25 that you looked at these materials before you looked at

1 the slides that it was hot and humid in that climate and
2 that was the description given by Dr. Penistan?

3 A. Yes.

4 Q. And today you take the view after
5 having looked at the slides that the difference in the --
6 that you wouldn't have expected a body to be in this
7 state being two days out in those conditions?

8 A. No, I wouldn't have expected this
9 appearance in a body left outdoors for let's call it 48
10 hours in that temperature, maximum being 92, and even
11 nighttime temperatures weren't all that low, but I would
12 immediately say that of course the range of variability
13 is very great. I'm just surprised but I wouldn't go any
14 stronger than that.

15 Q. In fact, in your book "Knight's
16 Pathology" and correct me, you I think stated that in an
17 average temperate climate you wouldn't expect
18 putrefaction to begin for three days?

19 A. No, but my average seems to be
20 different to Ontario.

21 Q. I guess the point I'm making is
22 that you might expect in hot, humid conditions that given
23 the variability of postmortem changes that the heat and
24 humidity might only accelerate it by a day or so from
25 your three-day rough estimate?

1 A. More than that. I worked, as
2 you've heard, in Malaya for a long time with the army and
3 in Sri Lanka and their bodies would go off on the first
4 day, somebody dies in the morning, by the evening they're
5 going off.

6 Q. Were any of these bodies found in a
7 bush?

8 A. Most of them.

9 Q. They were mostly found in the bush?
10 What were the temperatures like in those days?

11 A. About the same, in the nineties.
12 Ontario was tropical if those temperatures are correct
13 for Clinton, that must have been a very hot period.

14 Q. I guess the other point I'm making
15 too is that you were aware before you looked at the
16 slides of roughly the temperature conditions, and number
17 two --

18 A. I didn't know until Dr. Pollanen's
19 report. It might be in there somewhere but I didn't
20 realize it was that hot.

21 Q. Just one -- I don't have much more
22 to go on this. I want to take you to a hypothetical that
23 Mr. Sandler put to you when he interviewed you back in
24 2001, and this is at page -- at tab C of this blue --

25 A. That's my -- okay. I have it here

1 somewhere.

2 Q. If you could turn to page 44.

3 A. Yes, okay.

4 Q. And just for -- again, to be fair,
5 it's about two pages, I'm going to read from the top and
6 I think it's fairly important. And the question that
7 Mr. Sandler asks is:

8 'Now, going on to some of the
9 other things that were mentioned
10 here, there's been some suggestion,
11 and this is a suggestion that you've
12 adopted as well, that trying to time
13 death based upon these stomach
14 contents or gastric emptying is
15 unreliable in a court of law.

16 But let me ask you this. I've
17 put to you a series of facts and
18 let's assume that the police came to
19 you as a pathologist and a consultant
20 in a criminal investigation and said
21 here's what we know, Dr. Knight.
22 This is what we know about when she
23 ate her meal. This is what we know
24 about what Dr. Penistan observed and
25 let's assume the accuracy of his

1 observations for the purposes of our
2 discussion. We'd like to have some
3 handle on - I don't know if that's an
4 expression that's used in Wales - but
5 we'd like to have some sense of a
6 time period that we should be looking
7 at here, recognizing its
8 unreliability in a court of law, what
9 kind of time period do you think we
10 should be looking at? What would you
11 tell them?

12 Answer: Well, I wouldn't answer
13 them until they told me a little bit
14 more. Is there any evidence that she
15 was assaulted and took some time to
16 die? Or she was chased or frightened
17 or whatever? They may not know that.
18 I would certainly want to ask that
19 first.

20 Question: Let's assume their
21 answer was we've described how she
22 was found, you know all about the
23 body site from your reading; beyond
24 that, I mean, we really don't know a
25 heck of a lot about whether she was

1 frightened or anxious or --

2 Answer: Well, I'd tell them if
3 there's a significant amount of
4 stomach contents in there, it would
5 be likely, and more strongly than
6 likely, that she died within, say,
7 three hours of having that meal. But
8 I would immediately put a very strong
9 qualifier on it saying that's just a
10 very rough estimate and there are
11 many modifying factors which might
12 make that wrong. But, I mean,
13 there's no doubt about it; most
14 people, they empty their stomachs in
15 a few hours. A few hours. I mean,
16 it varies a lot. Anything from an
17 hour and a half to four hours. But
18 there's lots of exceptions. But,
19 generally speaking, I mean, if it was
20 a civil case for some reason, the
21 balance of probabilities would be
22 that. It would not be reasonable
23 doubt. I always draw this
24 distinction about standard of proof.
25 I say okay, probably within a couple

1 of hours but, you know, I may be
2 wrong."

3 A. Yes.

4 Q. Do you recall this passage?

5 A. Yes, sure.

6 Q. You still agree with that
7 statement?

8 A. Yes. This of course is trying to
9 help the police in the early stage of investigation. I'd
10 never go to court on oath and say she must have died
11 between X and Y on stomach contents. This is just a help
12 with very strong caveats which you just read out. I
13 might be totally wrong.

14 Q. I'm sorry.

15 A. That I might be wrong. But if it
16 helps the police to do their job, but it's certainly not
17 a probative statement that I'd swear to in court.

18 Q. The distinction you make, I think,
19 as I read it anyway, is that it's the level of certainty.

20 A. Yes.

21 Q. That's at issue here.

22 A. Sure.

23 Q. It's probable, but if you apply a
24 reasonable doubt standard to this particular piece of
25 evidence, it wouldn't make it?

1 JUSTICE DOHERTY: Sorry, I didn't hear
2 your answer to that question.

3 THE WITNESS: I'm sorry, what?

4 BY MR. ALVARO:

5 Q. If I could rephrase --

6 A. I just agreed, I think. I said
7 certainly, I think, to whatever proposition was put to
8 me.

9 JUSTICE DOHERTY: You mean it's a
10 reasonable doubt standard that you would apply to your
11 opinion?

12 THE WITNESS: Yes.

13 BY MR. ALVARO:

14 Q. You'd agree with me then that based
15 on that at least, on what you've said, that taking it in
16 terms of probability versus the reasonable doubt
17 standard, your professional opinion in this case, taking
18 into account all appropriate qualifiers, is that Lynne
19 Harper probably died within two or three hours of her
20 last meal. Is that accurate?

21 A. Well, I've said anything from an
22 hour and a half to four hours. This of course was before
23 I had the benefit of reading Dr. Diamant's exposition
24 which pushes that up much further, six hours. If I'd
25 been asked this today, I'd have said six hours because I

1 knew what Dr. Diamant produced in the way of gastric
2 physiology.

3 Q. I guess a point on that is, though,
4 that the standard that you're applying in your
5 assessment, the reason you might not testify to this in a
6 court of law is because you're not prepared to apply the
7 reasonable doubt standard to that statement?

8 A. Yes.

9 Q. But certainly probability, even
10 let's take the six hours that you gave, within six
11 hours --

12 A. Yes.

13 Q. -- of eating the meal?

14 A. Yes, yes.

15 MR. ALVARO: I think those are all my
16 questions, Dr. Knight. Thank you very much.

17 RE-EXAMINATION BY MR. LOCKYER:

18 Q. Just a few things. Just in
19 relation to tab 2 of the book that the Crown provided
20 you, sir, he read to you from an extract from the
21 preliminary hearing, and it was really just the next
22 answer that I thought was worth reading, it was at page
23 55, and actually the next answer but one and my friend
24 stopped I think it's answer 3, I can't do the numbers.
25 But in any event, if you move down to where it says 325,

1 sir.

2 A. Yes.

3 Q. Do you remember this is the extract
4 where Dr. Penistan first of all talked about the rigor
5 mortis meaning that death had taken place approximately
6 two days before and then an assessment of the findings in
7 relation to that and eggs and maggots, it suggested to
8 him a day and a half to two and a half days.

9 A. Yes.

10 Q. At 325 he says:

11 "There was some other material I
12 didn't identify fully, and I handed
13 the contents of the stomach to
14 Corporal Sayeau for preservation. It
15 is my opinion that the food in the
16 stomach had been there for less than
17 two hours, probably more than an
18 hour, so that if we accept Mrs.
19 Harper's timing, death would, in my
20 view, have occurred between 7:15 on
21 the evening of June 9th and 7:45,
22 which would be two hours after the
23 consumption of the meal, and I would
24 think earlier during that period
25 rather than later. I think that's

1 all I have to tell you, sir."

2 So it would seem there that Dr.
3 Penistan has strayed into that half hour period. In
4 fact, he seems to be defining it even further, suggesting
5 perhaps more of a 15 minute period in that extract.

6 A. To me that's totally unacceptable.
7 It's nonsense.

8 Q. Tab 5, sir, my friend read to you
9 from this newspaper article in the Telegram. I just
10 noticed a part of the interview that may reflect on part
11 of your evidence in-chief. If you look under the heading
12 "Estimate" on the right-hand side, Dr. Penistan
13 apparently here clarifies why he pinpointed the time of
14 death between 7:15 and 7:45 eventually and not as he had
15 originally -- sorry, he clarified the time of death
16 between 7:00 and 7:45 and not originally as he said, 7:15
17 to 7:45, where he said in the most mortem report --
18 sorry.

19 Dr. Penistan also clarified
20 another point of apparent
21 misunderstanding which has brought
22 him criticism from Mrs. LeBourdais.

23 In the postmortem report he
24 estimated the time of death at 7:15-
25 7:45 p.m., but at the trial said

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7-7:45.

The difference, Dr. Penistan says, was because originally he understood Lynne Harper was last seen at 7:15. Later he said he learned she was last seen at 7 p.m."

Is that the way a pathologist should be estimating time of death, sir?

A. Not at all. As I say, I don't wish to be disrespectful to Dr. Penistan's memory, but this sort of activity is very unusual or at least is very -- yeah, unusual. I mean, to set the time of death in those small parameters which happens to fit exactly into a window of opportunity of access to the victim is very -- the only word I can use is suspicious.

Q. Finally, sir, my friend asked you what your probability would be in terms of the six-hour figure, right at the end of your examination. Does that figure include within it the variables such as stress and the like, sir, if we visualize what might have happened to Lynne Harper before she died?

A. No, from the context of Dr. Diamant's explanations, this is the norm, whatever the norm is, the average. Taking all the other factors such as especially emotionally frightened, whatever, would

1 extend that many-fold.

2 Q. So the six hours limit that you
3 said in terms of a probability is the stress-free limit;
4 is that --

5 A. Yes, because in this hypothetical
6 the police weren't able to tell me anything about
7 factors, as is usual. So you have to go on the norm,
8 then you can multiply that norm enormously if you know --
9 if you knew there were these factors of emotional stress,
10 as Puschel and people have shown.

11 MR. LOCKYER: All right. Thank you,
12 sir.

13 JUSTICE WEILER: I was just wondering,
14 sir, if you could assist me with some general comments.
15 When you find -- when you're looking at a body and if for
16 the sake of argument the majority of the body is
17 reasonably well preserved but one part of the body is
18 substantially more decomposed than another part, could
19 you tell me, assuming that the body wasn't lying in water
20 or anything like that, could you tell me what would some
21 of the factors be that would result in greater
22 decomposition at one part of the body as opposed to
23 another?

24 THE WITNESS: Yes, My Lady. It's not
25 uncommon to find that. Sometimes we have no explanation.

1 Of course, as I said, some of the parts of the body are
2 more vulnerable to decomposition, especially the genitals
3 which are moist, especially if they are exposed, as I
4 think was the case here.

5 But even apart from that, decomposition
6 usually is fastest in the more moist areas of the body
7 and that may be due to hypostasis. In other words, a
8 body lies on its back after death, the fluids, the blood
9 and the plasma tend to settle to the back of the body and
10 that wet tissue is more likely to decompose faster.

11 The other factor which is the most
12 common is that the first signs of decomposition usually
13 appear on the lower right abdomen of the appendix area
14 because there the large intestine, the cecum, is very
15 near the surface and the bacteria which start
16 decomposition are able to reach the surface first, so a
17 green patch on the right flank, right dorman (ph) is
18 often the first cause, but sometimes a body will rot
19 badly in the legs and not in the head and sometimes we
20 have no explanation.

21 Much of forensic pathology is a
22 mystery, and the older I get, the more mysteries there
23 are.

24 JUSTICE WEILER: Could one other factor
25 possibly be whether or not insects colonized that part of

1 the body?

2 THE WITNESS: Oh, yes. Insect
3 infestation accelerates decomposition. The maggots have
4 an enzyme, a proteolytic enzyme which dissolves protein.
5 In fact, I won't go into it, but in the army this was
6 sometimes beneficial in wounds in the jungle where the
7 maggots would actually clean out wounds, but in a dead
8 body they will accelerate decomposition.

9 JUSTICE WEILER: So I was just curious,
10 you were shown an extract, sir, from the trial written by
11 Professor Simpson, "Forty Years of Murder," his
12 autobiography, and describing the Truscott case and at
13 page 281 he says:

14 "The temperatures in the last two
15 days had been not far from tropical,
16 hastening decomposition. The girl's
17 vagina was already riddled with
18 maggots, and any brushing or tearing
19 of the delicate entrance folds had
20 been disintegrated."

21 THE WITNESS: Yes.

22 JUSTICE WEILER: He says:

23 "Penistan found some bruising and
24 swelling of the vulva, but it was too
25 putrefied to justify any detail."

1 THE WITNESS: Yes, this business of
2 bruising in putrefied areas is very difficult, and in
3 fact I think Dr. Pollanen has been doing some research in
4 this area and I think he is an extremely able researcher,
5 and I think some of his material might alter our views on
6 being able to detect injuries in the areas of hypostasis,
7 of settlement and putrefaction.

8 But it's very difficult to tell whether
9 an injury has occurred in a putrefied area and it's given
10 rise to many controversial cases.

11 JUSTICE WEILER: Thank you, sir.

12 CHIEF JUSTICE MCMURTRY: Well, thank
13 you very much, Dr. Knight.

14 THE WITNESS: Thank you, My Lord.

15 CHIEF JUSTICE MCMURTRY: I think this
16 concludes the evidence that we are going to hear at this
17 time. So we will adjourn and wish you all a pleasant
18 summer.

19 -- Whereupon the court adjourned at 11:40 a.m.

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1 REPORTER'S CERTIFICATE

2
3
4 I, KIMBERLEY A. NEESON, RPR, CRR,
5 CSR, CBC, CPC, Certified Shorthand Reporter, certify;

6 That the foregoing proceedings were
7 taken before me at the time and place therein set forth,
8 at which time the witness was put under oath by me;

9 That the testimony of the witness
10 and all objections made at the time of the examination
11 were recorded stenographically by me and were thereafter
12 transcribed;

13 That the foregoing is a true and
14 correct transcript of my shorthand notes so taken.

15
16
17
18 Dated this 17th day of July, 2006.

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