

REPORT ON IDENTIFICATION PROCEDURES:

Abdelbaset Ali Mohamed al-Megrahi v. H.M. Advocate

1. My name is Steven E. Clark, and I am a Professor of Psychology at the University of California, Riverside, where I conduct research and teach undergraduate and graduate-level courses on the psychology of eyewitness identification. I have attached a copy of my curriculum vita.
2. I have been retained by Tony Kelly, counsel for Abdelbaset Ali Mohamed al-Megrahi, in the case of *Abdelbaset Ali Mohamed al-Megrahi v. H.M. Advocate*, to review the statements and the eyewitness identification of Tony Gauci and to prepare this report to be attached to Mr. Megrahi's appeal of his conviction for the bombing of Pan Am Flight 103 over Lockerbie, Scotland, 21st December 1988.
3. The preparation of this report and the opinions expressed have three main sources of foundation: 1. my education, and experience; 2. my review of witness statements, photographs, and other documents relevant to the eyewitness evidence, and 3. the scientific literature and research on eyewitness identification.

These three foundational sources are further described below. I first describe my education and experience, then list and describe materials from the case which I have reviewed in preparation of this report. In the third section I describe the body of research in the area of eyewitness identification, and apply that literature to the Lockerbie case.

EDUCATION AND EXPERIENCE

4. I have a B.S. degree in Psychology from Illinois State University (1981) and a PhD in Psychology from Indiana University (1988). Copies of my curriculum vita and relevant publications are attached.
5. I am currently a Full Professor (with tenure) at the University of California, in Riverside, California. From 1998 to 2007 I was also the Chair of the University's interdisciplinary program in Law and Society. I have been a member of the Psychology faculty since 1987.
6. At the University of California, Riverside, I teach a wide array of courses for undergraduate and graduate students, including (but not limited to) Psychology and Law, and seminar courses in Psychology and Law, Eyewitness Identification, and Science and Law.
7. I conduct research which addresses fundamental questions about the workings of human memory and decision-making, with a specific focus on eyewitness memory and

eyewitness identification. My research on eyewitness identification is currently funded by the National Science Foundation.

8. I have published 33 articles on the topics of human cognition, memory and eyewitness identification. Of these, 29 were published (or are currently in press) in peer-reviewed, scholarly, scientific journals. The other five were invited papers.
9. I have served as a reviewer for most of the major scholarly journals relevant to research in human memory, cognition, and eyewitness identification. I have served on the editorial boards of *Journal of Experimental Psychology* and *Memory & Cognition*, and am currently serving on the editorial board of *Law and Human Behavior*. I have served as a reviewer for grant proposals submitted to the National Science Foundation, and I am currently a member of the National Science Foundation Advisory Panel for Law and Social Science.
10. I have given talks at scientific and law-related meetings, including (but not limited to) the Psychonomic Society, the American Psychology-Law Society, The Society for Applied Research in Memory and Cognition, and the National Meeting for Science, Technology, and the Law. I have also given invited presentations at universities, and to groups of defense and prosecuting attorneys, arson investigators, and fraud investigators.
11. Over the span of approximately 15 years, I have consulted in approximately 200 criminal and civil cases, and have qualified as an expert and testified in approximately 80 cases on the topics of eyewitness memory and identification. I have testified as an expert in the United States Federal Court as well as state courts in California, Nevada, Arizona, and Texas. I have assisted counsel in post-conviction appeals in California, Ohio, and Wisconsin.

MATERIALS REVIEWED

12. I have reviewed the following materials in the present case.

Statements:

Statement of Anthony Gauci, 1st September, 1989 (Prod. No. 452)
Statement of Anthony Gauci 13th September, 1989 (Prod. Nos. 455, 456, 457)
Statement of Anthony Gauci 14th September, 1989 (Prod. No. 458)
Statement of Anthony Gauci, 19th September, 1989 (Prod. No. 454)
Statement of Anthony Gauci, 26th September, 1989 (Prod. No. 459, 460, 461)
Statement of Anthony Gauci. 2nd October, 1989 (Prod. No. 463)
Statement of Anthony Gauci, 4th October, 1989 (Prod. No. 462)
Statement of Anthony Gauci, 30th January, 1990 (Prod. No. 464)
Statement of Anthony Gauci, 31st January, 1990 (Prod. No. 465)

Statement of Anthony Gauci, 21st February, 1990 (Prod. No. 466)
Statement of Anthony Gauci, 5th March 1990 (Prod. No. 467)
Statement of Anthony Gauci, 31st August, 1990 (Prod. No. 468)
Statement of Anthony Gauci, 10th September 1990 (Prod. No. 469)
Statement of Anthony Gauci, 15th February 1991 (Prod. No. 470)
Statement of Anthony Gauci, 4th November, 1991 (Prod. No. 471)
Statement of Anthony Gauci, 13th April, 1999 (Identification Parade at Camp Zeist)
Crown precognition of Anthony Gauci, 18th March 1999 (Floriana, Malta) and 25th
August 1999 (Dumfries, Scotland) (both statements summarized in one
document).
Defence precognition of Anthony Gauci 8th October, 1999 (to Defence)
Statement of Paul Gauci, 1st September 1989
Statement of Paul Gauci, 26th September 1989
Statement of Paul Gauci, 4th October, 1989
Statement of Paul Gauci, 19th October, 1989
Statement of Paul Gauci, 8th October, 1999
Statement of Mario Busuttil, undated
Statement of DCI Henry Bell, 21st February, 1990
Statement of DCI Henry Bell, 10th September, 1990
Memorandum, PF Dumfries v. Abdel Baset Megrahi & Lamin Fhima (from A. Duff),
regarding lineup at Camp Zeist 13th April 1999

Photographs

Photographs shown to A. Gauci, 8th September, 1989
Photofit compilation, 13th September, 1989 (Prod. No. 430)
Artists impression, 13th September, 1989 (Prod. No. 427)
Two photographic lineups, 14th September, 1989 (Prod. Nos. 425, 426)
Photographic lineup, 26th September, 1989 (Prod. No. 431)
Photographs shown to A. Gauci, 6th December, 1989 (Prod. No. 1246)
Album of photographs shown to A. Gauci, 10th September, 1990 (Prod. No. 1244)
Photographs shown to A. Gauci, 31st August, 1990 (Prod. No. 437, 438)
Photographs reportedly shown to A. Gauci, 10th September, 1990 (Prod. No. 439)
Listings of photographs shown to A. Gauci, 10th September, 1990
Photographs shown to A. Gauci, 15th February, 1991 (Prod. No. 470)
Source of photographs shown to A. Gauci, 15th February, 1991
Photographs of individuals present to participate in lineup parade at Camp Zeist, 13th
April, 1999.

Trial Testimony:

Transcript of testimony by Mr. Gauci at trial
Transcript of testimony by DCI Bell

Newspaper and On-line Articles, Broadcast News Clips:

Sunday Times newspaper article, 5th November, 1989.
The Times (of Malta) newspaper article (15th November, 1991)
The Times (of Malta) newspaper article (19th February, 1992)
The Times (of Malta) newspaper article (26th March, 1992)
The Times (of Malta) newspaper article (11th October, 1993)
The Times (of Malta) newspaper article (17th January, 1994)
L'Orrizont newspaper article (3rd February, 1995)
In-Nazzjon newspaper article (13th October, 1997)
Kull Hadd newspaper article (19th October, 1997)
Malta Independent newspaper article (1st March, 1998)
It Torca newspaper article (1st March, 1998)
Malta Independent newspaper article (23rd July, 1998)
The Times (of Malta) newspaper article (24th July, 1998)
The Times (of Malta) newspaper article (27th July, 1998)
In-Nazzjon newspaper article (25th August, 1998)
The Times (of Malta) newspaper article (25th August, 1998)
L'Orrizont newspaper article (25th August, 1998)
Malta TV clip (29th August, 1998)
Focus magazine article (December, 1998) (Prod. No. 451)
It Torca, newspaper article, (28th February, 1999) (plus English translation)
It Torca, newspaper article, (7th March, 1999) (plus English translation)
Kull Hadd newspaper article (4th April, 1999)
Net TV clip (5th April, 1999)
Malta TV clip (5th April, 1999)
The Times (of Malta) newspaper article (6th April, 1999)
Net TV clip (14th April, 1999)
Kull Hadd newspaper article (9th May, 1999)
L'Orrizont newspaper article (25th August, 1999)
Kull Hadd newspaper article (31st October, 1999)
The Malta Independent on Sunday (31st October, 1999)
In-Nazzjon newspaper article (6th November, 1999)
The Malta Independent on Sunday newspaper article (7th November, 1999)
Net TV clip (23rd November, 1999)
Net TV clip (7th December, 1999)
BBC on line articles (2) (7th December, 1999)
Business Times (8th December, 1999)
BBC on line articles (3) (8th December, 1999)
L'orrizont newspaper article (17th December, 1999)
Kull Hadd newspaper article (26th December, 1999)
The Malta Independent on Sunday (16th January, 2000)
BBC on line article (4th February, 2000)

BBC on-line article (30th March, 2000)
Net TV clip (17th April, 2000)
BBC on-line article (20th April, 2000)
BBC on-line article (21st April, 2000)
The Times (of Malta) newspaper article (2nd May, 2000)
Net TV clip (3rd May, 2000)
BBC on-line articles (2) (3rd May, 2000)
In-Nazzjon newspaper article (4th May, 2000)
The Times (of Malta) newspaper article (4th May, 2000)
L'orrizont newspaper article (4th May, 2000)
BBC online article (4th May, 2000)
L'orrizont newspaper article (5th May, 2000)
L'orrizont newspaper article (9th May, 2000)
The Malta Independent newspaper article (11th May, 2000)
Kull Hadd newspaper article (21st May, 2000)
Net TV clip (6th June, 2000)

Interviews by Scottish Criminal Cases Review Commission (SCCRC)

Transcript of interviews with DCI Henry , 25th - 26th July, 2006 and 24th October, 2006
Transcript of interview with Godfrey Scicluna, 1st December, 2004
Transcript of interview with Mario Busuttil, 1st August, 2006
Transcript of interview with Tony Gauci, 2nd and 3rd August, 2006
Transcript of interviews with Paul Gauci, 2nd and 3rd August, 2006, and 31 January, 2007

SUMMARY OF EYEWITNESS IDENTIFICATION EVIDENCE

13. Tony Gauci provided evidence at trial in July 2000, identifying Abdelbaset al-Megrahi as the person who came into Mr. Gauci's store in late November or early December, 1988, and purchased clothing and an umbrella that, according to reports, were found in the wreckage of Pan Am 103, which was destroyed by a bomb on 21st December, 1988, over Lockerbie, Scotland.

Based on my review of these materials, I summarize the facts relevant to Mr. Gauci's identification of Mr. Megrahi as follows:

14. A fundamental question that must be addressed at the outset is, *What constitutes an identification?* All of Mr. Gauci's identifications of Mr. Megrahi were qualified and less than positive.
- When shown a photo lineup on 15th February 1991, Mr. Gauci stated, "I can only

say that this photograph (of Mr. Megrahi) resembles the man who bought the clothing.”

- At a lineup parade conducted at Camp Zeist in the Netherlands on 13th April, 1999, Mr. Gauci stated, “I wasn’t sure but the one who looked most like him was number 5 (Mr. Megrahi). Recalling this lineup parade in during his Crown precognition 25th August, 1999, Mr. Gauci stated that he had picked somebody out as *resembling* the purchaser” (emphasis added). Mr. Gauci continued to explain how the man he picked out, Mr. Megrahi, differed in appearance from the purchaser. “His hair was different, not so full and was receding. He seemed narrower.”
- At trial in July, 2000, when directly asked if he saw the man who bought the clothing, he replied, “He is the man on this side,” and then qualified his statement by adding, “He resembles him a lot”.

Mr. Gauci’s identification statements were consistent in noting that Mr. Megrahi resembled the man who bought the clothing and consistent as well in that he never asserted that Megrahi *was* the man who bought the clothing. For simplicity, I will use the word “identification” throughout this report to refer to statements made by Mr. Gauci at the 15th February, 1991 lineup, at the 13th April, 1999 lineup, and at trial in 2000. The ultimate question, as to whether Mr. Gauci’s statements are to be interpreted as “identifications”, or as simply noting resemblance and similarity, seems to require a legal conclusion, rather than a scientific assessment. Thus, this is a question for which I believe I cannot, and should not, attempt to provide an answer.

15. Mr. Gauci made his first statement to law enforcement on 1st September, 1989. During this first interview, Mr. Gauci was presented with evidence from the wreckage of PA 103, which had led authorities to his shop in Malta. Mr. Gauci then described the man who he believed purchased those articles. He stated that the man behaved strangely, purchasing items with little regard or consideration about sizes or styles. Mr. Gauci described this man as follows:

He was about six foot or more in height. He had a big chest and a large head. He was well-built but he was not fat or with a big stomach His hair was very black. He was speaking Libyan to me. He was clearly from Libya. He had an Arab appearance and I would say he was in fact a Libyan.... He was clean-shaven with no facial hair. He had dark-coloured skin.

16. In subsequent interviews on 13th September, 1989 and 26th September, 1989, Mr. Gauci added that the man was about 50 years old.

17. On 8th September, 1989, Inspector Godfrey Scicluna of the Maltese Police Security Branch showed Mr. Gauci a lineup with 23 photographs. The suspect in the lineup was a person selected by Inspector Scicluna, based on his belief that he fit Mr. Gauci's description. Mr. Gauci did not identify this person (who was placed in position 1 in the lineup). The brief one-page report (with six attached pages of photocopies of the men shown to Mr. Gauci) regarding this photo lineup did, however, indicate that Mr. Gauci had stated that the hairstyle of the person in position number two was identical to that of the man who had come to his shop. (Note that the report actually states that Mr. Gauci stated, "that the suspect had a hairstyle identical to No. 2." I am assuming that the report has simply misused the word "suspect" to refer to the person of interest, rather than the person who is suspected of being the person of interest. This is a common misuse of the word suspect.).
18. On 13th September, 1989, Mr. Gauci assisted law enforcement in the construction of a police sketch and a composite photograph. Between 1989 and 1991, Mr. Gauci was shown eight photographic lineups, and on 15th February, 1991, he was shown a lineup which contained a photograph of Mr. Megrahi. When presented with that lineup, Mr. Gauci stated that all of the individuals appeared to be too young, at which point DCI Bell indicated to Mr. Gauci that he should discount the age discrepancy. Mr. Gauci then stated that Mr. Megrahi "resembled" the man who had come to his shop in late 1988.
19. Mr. Gauci identified Mr. Megrahi again from an eight-person lineup parade conducted at Camp Zeist, in the Netherlands, 13th April, 1999. His identification was qualified by his statements, "I wasn't sure but the one who looked most like him was number 5." and "I'm not 100 percent sure."
20. At trial in July, 2000, Mr. Gauci identified Mr. Megrahi as the man who had come to his store in Malta 12 years before, but then qualified his identification, stating, "He resembles him a lot."
21. The *central* question for this - and for any eyewitness identification - is whether the identification, however it might be stated or qualified, presents reliable and diagnostic evidence.
22. The scientific research literature on eyewitness identification can be helpful to the trier of fact in assessing the reliability and diagnosticity of eyewitness evidence, and the key issues relevant to such an assessment are discussed in this report. It is important, however, that I be clear to note that the scientific literature does not provide foundation for any expert to make a definitive conclusion as to whether a particular identification is correct or incorrect, and I presume to make no such conclusion here. In the same way that medical research cannot identify with certainty whether a specific cigarette smoker will die of lung cancer, but can identify cigarette smoking as a risk factor, the research on eyewitness identification cannot determine with certainty whether a particular witness did

or did not make an error, but can identify risk factors that increase the likelihood of a mistaken identification.

SCIENTIFIC RESEARCH ON EYEWITNESS IDENTIFICATION

23. The scientific foundation for the opinions given above are described in greater detail in this section. First, I describe the general research paradigms for the scientific study of eyewitness memory and eyewitness identification, and then apply the findings and principles of that body of research to the Lockerbie case.

Scientific Study of Eyewitness Identification: Experimental and Field Study Research

24. Eyewitness identification research is grounded in three areas of social science: (a) human memory, (b) decision-making, and (c) social influence. Scientific research in human memory traces back to the late 19th century (Ebbinghaus, 1885); scientific research in decision-making and social influence can be traced back to the 1950's (Asch, 1955; Savage, 1951).
25. Eyewitness identification has been the subject of scientific psychological study for over 100 years (Arnold, 1906; Munsterberg, 1908), and currently flourishes in laboratories across North America, Europe, Asia, and Australia. Research into eyewitness memory and identification is a well-accepted area of scientific study.
26. Eyewitness identification research uses both field research methods (archival research) and laboratory research methods. Field studies and laboratory studies, which have complementary strengths and weaknesses, are described in the next two sections.

Field Research

27. Field studies are archival analyses of real crimes and real criminal investigations, and thus there is no concern about their applicability to the real world. These cases *are* the real world. However, these studies suffer from a serious problem known as the *ground-truth problem*. Specifically, because the suspect in a criminal investigation may, or may not, be guilty of the crime, it is often difficult or impossible to interpret witness responses. For example, if a witness identifies the suspect, should that response be counted as a “hit” or as an error? This inability to score the data, to know whether a given response is correct or incorrect, constitutes a fundamental limitation of field research methods.
28. The ground truth problem does not arise under the very specific circumstance in which the witness identifies a filler from a lineup, provided that fillers are known to be innocent. Field studies have provided data on the frequency of occurrence of such filler identifications. Wright and McDaid (1996) examined eyewitness identifications of 1,569

witnesses who viewed 623 suspects in the Greater London area during 1992. They showed that 19.9 percent of the witnesses identified a filler, and of those witnesses who made any identification, slightly over one-third identified a filler. Behrman and Davey (2001) showed similar results for live lineups conducted in Sacramento, California. They reported a 24 percent filler identification rate, and of those witnesses who made any identification 32 percent identified a filler. These results provide strong evidence that witnesses do indeed make identification errors, and do so with considerable regularity.

29. As indicated earlier, the ground truth problem is most difficult to solve when the witness identifies the suspect. A solution to the ground truth problem requires evidence of the suspect's guilt that is independent of the eyewitness identification and reliable to a scientific certainty. Such evidence is difficult to obtain; even a confession cannot always be trusted, as it is now well-known that innocent people sometimes confess to crimes they did not commit (Drizin & Leo, 2004).
30. The most clear-cut solution to the ground truth problem has been shown in DNA exonerations. In such cases, innocent people were convicted and later shown to be innocent through DNA analysis. To date, there has been no large-scale archival analysis of cases with both eyewitness identification evidence and DNA evidence. There are however, a number of case studies (Conners, Lundregan, Miller, & McEwan, 1996; Gross, Jacoby, Matheson, Montgomery, & Patil, 2005). The DNA case studies do not provide information as to how often eyewitnesses make mistakes, but they do show that mistaken identification is a primary cause of wrongful convictions in U.S. cases where innocence has been established through DNA. To date, of the 210 wrongful convictions listed by the Innocence Project, 154 (73.3 percent) were based in whole or in part on mistaken eyewitness identifications. The DNA results are consistent with a more general pattern indicating that mistaken identification is a primary cause of wrongful convictions in the U.S. (Huff, Rattner, & Sagarin, 1996).
31. Taken together, the results of field studies by Wright and McDaid (1996) and by Behrman and Davey (2000) show that witnesses quite often make identification errors, and DNA exoneration cases suggest that identification errors are a primary contributor to wrongful convictions in the U.S. However, these studies provide little insight into how or why such mistaken identifications occur. The "how" and "why" questions are better addressed by the experimental research.

Experimental Research Paradigm

32. In a typical experiment, participants become witnesses to a staged crime, performed live or presented on videotape, DVD, or computer. Because the crime is staged, there is no ground truth problem; the identity of the perpetrator is determined by the experimenter and thus is not a matter of controversy. The staged crime is followed later by the presentation of a lineup or in some cases a one-person showup. For studies using lineup

identification procedures, it is typical for the lineup to consist of a single suspect, plus six to ten fillers. It is important to clarify terminology: the words “target” and “perpetrator” will be used somewhat interchangeably to refer to the person who committed the crime, whereas the word “suspect” refers to a person who is suspected of having committed the crime, but who may be guilty or innocent. The terms “mistaken identification” and “false identification” refer specifically to the incorrect identification of a suspect who is innocent, and this term does not include or refer to incorrect identifications of fillers.

33. There are two important conditions in these experiments: a target-present (TP) lineup condition in which the target person (i.e., the perpetrator of the staged crime) is in the lineup, and a target-absent (TA) lineup condition in which the target person is not in the lineup. The TP condition corresponds to real-world cases in which the person suspected by the police is in fact guilty of the crime, whereas the TA lineup condition corresponds to those real-world cases in which the person suspected by the police is innocent of the crime.
34. The response outcomes are the same for TP and TA lineups. These possible outcomes are listed in Table 1 below. A witness may identify the suspect (who is guilty in the TP lineup, and innocent in the TA lineup), identify a filler (who is always known to be innocent in both TP and TA lineups), or may give a nonidentification response, either by rejecting the lineup with an affirmative none-of-the-above response, or by a “don’t know” response.

TABLE 1. RESPONSE OUTCOMES IN EYEWITNESS IDENTIFICATION EXPERIMENTS

	Identification		Nonidentification	
	Suspect	Filler	Reject	Don’t know
Target-Present	suspTP	fillerTP	rejTP	dkTP
Target-Absent	suspTA	fillerTA	rejTA	dkTA

35. Suspect identifications are of primary importance. In Table 1 suspTP denotes a suspect identification in a target-present lineup and thus refers to a correct identification of the guilty, whereas suspTA denotes a suspect identification in a target-absent lineup and refers to mistaken identifications of the innocent. (We note that in many eyewitness identification studies there is no designated innocent suspect in the TA lineup. In these studies one can estimate the likelihood of a mistaken identification (suspTA) by simply dividing the total identification rate by the number of individuals in the lineup. This

estimation procedure does, of course, imply that the lineup is completely fair and unbiased in that the innocent suspect is no more likely to be identified than any other person in the lineup. Clark and Tunnicliff (2001) and Clark, Howell, and Davey (2008) have argued that innocent suspect identifications, estimated in this way, provide a low estimate of the rate of mistaken identifications in real criminal investigations.)

36. A fundamental question in eyewitness identification research concerns the probative value or diagnosticity of witness identification responses. A given response has probative value, or is diagnostic, to the extent that it is an indicator of guilt or innocence. In eyewitness identification experiments, a response is diagnostic of the suspect's guilt to the extent that it occurs more often when the suspect is guilty (i.e., it arises from a target-present lineup) than when the suspect is innocent (i.e., it arises from a target-absent lineup). Response diagnosticity can be illustrated simply as follows: If the suspect in the lineup is identified with probability .50 when he is guilty (target-present lineup) and is identified with a probability of .10 when he is innocent (target-absent lineup), the probability that the suspect is guilty given a suspect identification is $.50/ (.50 + .10) = .833$. This example also implies a likelihood of mistaken identification of .167, or approximately one suspect identification in six.
37. Research from eyewitness identification experiments shows that suspect identifications are generally diagnostic of the suspect's guilt, whereas nonidentifications (none-of-the-above responses) are generally diagnostic of the suspect's innocence (Clark, Howell, & Davey, 2008; Lindsay & Wells, 1980; Wells & Olson, 2002). However, the diagnosticity of suspect and nonidentification responses is not a constant, but rather varies predictably across experimental conditions. For example, the diagnosticity of a suspect identification increases as the opportunity to observe increases.
38. The advantage of experimental studies over field studies is that experimental studies do not suffer from the ground truth problem because the crimes are staged by the researchers so that the identity of the person acting as the perpetrator is known with certainty. However, experimental studies may differ from investigations of real crimes in many respects: Participant-witnesses typically know that the crime is staged, often as they are watching it unfold, and almost always before the lineup is administered. Only in rare cases do witnesses believe that they are participating in a real criminal investigation at the time they make their identification decisions. Also, the staged crimes, particularly when they are performed live, cannot replicate the chaos and fear that would be aroused in the course of a violent crime. This limitation of laboratory studies is, however, largely irrelevant to the Lockerbie case, because Mr. Gauci made his observations under conditions very similar to those used in many experimental studies.
39. Another potential limitation, in the application of eyewitness identification research to the Lockerbie case, is that most of the people who participated in the experiments are college students. Some have suggested that the body of eyewitness memory research may not

generalize broadly beyond the college student population. Can experiments conducted with college students as witnesses be applicable to the witness in the Lockerbie case? There are three responses to the “college student” criticism: First, although much of the research has involved college students as participants, many experiments have involved non-college student populations. Second, there is no evidence to suggest that the results of college student witnesses are fundamentally different from those of other populations, except perhaps with respect to age differences. The age factor would suggest that the use of college student populations underestimates the level of eyewitness error in the broader population. It is well-known and long-known that memory abilities decline with age. What has only become known only more recently is that the decline in memory abilities begins earlier in life than previously believed. The declines begin in a person’s mid 20's (Schroeder & Salthouse, 2002; Salthouse, 2004), suggesting that the college student population is at a peak level of memory performance. Thus, it not surprising that in studies in which college student witnesses are compared to non-college student populations, college students show higher levels of accuracy (Loftus, Levidow, & Duensing, 1992; O’Rourke, Penrod, Cutler, & Stuve, 1989).

A General Theory of the Psychology of Eyewitness Identification

40. The experimental and field study research on eyewitness identification, and the broader body of research on human memory and decision-making, has lead to a general theory about the workings of human memory and decision-making as these processes relate to eyewitness identification. The properties of this general theory are briefly described below, and each is expanded upon later in this report.
41. Memory is incomplete. Witnesses do not store complete and accurate information in memory. Rather, memories tend to be incomplete and they sometimes contain inaccuracies. There is not a single theory of human memory that takes any position other than this. Views to the contrary - for example the view that memory works like a video camera, and that every second of our conscious experience is preserved in our memories - are simply not supported by scientific evidence.
42. Memory changes and fades over time, and may become distorted or contaminated if a witness is exposed to misinformation from outside sources.
43. Decision processes are inherently errorful. Because the information in memory is incomplete and inaccurate, decisions based on memory must also involve an inherent error. There is no decision strategy or algorithm that will guarantee a correct decision.
44. Decision processes can be modified by instructions and social influence. Witnesses are sensitive and responsive to the instructions and subtle suggestions of others.

Eyewitness Identification, Science, and Common Sense

45. One may ask whether the theory described above goes beyond common sense and beyond what a reasonable person would know. In U.S. courts this question is crucial in determining whether an area of testimony is truly “expert” scientific testimony, as opposed to an extraordinary presentation of ordinary knowledge.
46. Studies that have assessed general knowledge about eyewitness memory have shown that the science of eyewitness identification is not simply common sense.
47. The assessment of lay knowledge and beliefs, and lay reasoning about eyewitness evidence, is based on two types of research methodologies. The simplest studies present people with questionnaires, sometimes in multiple choice format, or with a list of statements to which they may agree or disagree. In other studies, people are presented with very brief summaries of eyewitness evidence, and they are asked to comment on the evidence, and quite often are asked whether they believe, on the basis of that evidence, that the defendant is guilty. In the most elaborate of these studies, people are presented with mock-trials, videotaped in actual courtrooms, with actors playing the roles of witness, judge, and attorneys.

These studies show the following results:

48. Questionnaire studies show that lay knowledge is both incomplete and malleable. Some aspects of eyewitness memory do seem to be within the scope of general knowledge. For example, most people seem to understand that the wording of a question can influence the answer to that question.
49. However, these studies also suggest that lay people are generally quite unaware as to how police procedures can affect the outcome of eyewitness identification. Lay people tend to focus on the characteristics of the witness and overlook the contribution of the police (Shaw, McClure, & Garcia, 1999).
50. Lay knowledge is also quite malleable. What people claim to know depends on how they are asked the question. For example, people generally agree with the proposition that it is more difficult to identify a person of a different race than a person of one’s own race - unless the question is worded in such a way that it sounds racist, in which case many people will declare that the proposition is a “myth”. As another example, people generally believe that high stress impairs a person’s ability to remember events - unless the question is worded in a more dramatic fashion (Schmechel, O’Toole, Easterly, & Loftus, 2006).
51. In mock trial studies, “jurors” seem quite insensitive to variation in the factors that have been shown to influence identification accuracy. In other words, studies have shown that guilty verdicts are given about as often when the witness’s conditions of observation were good as when the conditions were poor, when the police procedures reflected best

practices as when the police procedures were biased (Cutler, Penrod, & Dexter, 1990; Cutler, Penrod, & Stuve, 1988). These results suggest (a) that there are gaps in lay knowledge as to the important factors to consider in evaluating eyewitness evidence, and/or (b) people do not properly apply what knowledge they do have.

52. The results of these studies, which measure lay knowledge and its application, appear to be quite consistent, both across jurisdictions and over time. One of the questionnaires, initially developed by Deffenbacher and Loftus (1982) has been used in various jurisdictions within the United States, and also in Canada (Yarmey & Tressillian-Jones, 1983) and Great Britain (Noon & Hollin, 1987). Although the Deffenbacher-Loftus questionnaire is not a perfect window into lay knowledge, the patterns of knowledge and error are quite similar across studies. In addition, the patterns of results are generally consistent over time and levels of expertise (Benton, Ross, Bradshaw, Thomas, & Bradshaw, 2006).
53. Lay people may also have partial, but imperfect, understanding of the factors that affect eyewitness identification accuracy. For example, people may generally know that memory accuracy declines over time, but may not know the rate of information loss (Deffenbacher & Loftus, 1982), and may not understand how the loss of information over time leads to different kinds of errors, or how it changes the probative value of identification evidence. Clark and Godfrey have recently shown, through meta-analysis, that in general, correct identifications decrease with a longer retention interval, whereas false identification rates remain fairly constant. The combination of the decreasing correct identification rate plus the constant false identification rate leads to a decrease in the probative value of a suspect identification. This level of understanding is almost certainly beyond the ken of the average person, as it appears to have been underappreciated by accomplished social scientists (Ebbesen & Konecni, 1996).
54. The remainder of this report will describe how the properties of memory and decision-making contribute to witness behavior and performance, with specific emphasis on the conditions relevant to the identification of Mr. Megrahi by Mr. Gauci. Included here are discussions regarding the following: (1) the conditions of observation, (2) the loss of accuracy as memories fade and become distorted over time, (3) the accuracy of composite photographs and sketches, (4) the effect of making composite photographs and sketches upon subsequent identification accuracy, (5) the decision processes that underlie eyewitness identifications, (6) the effect of lineup composition, (7) the diagnosticity of nonidentification decisions, (8) the effects of prodding nonidentifying witnesses, (9) the effects of instructions to witnesses to ignore relevant information in a lineup, (10) the low diagnosticity of in-court identifications, (11) the effects of multiple identifications, and (12) the relationship between witness statements and behavior and identification accuracy. Following these sections, (13) I compare statements made by Mr. Gauci about Mr. Megrahi with identification statements he made concerning others, specifically on 10th September, 1990; and (14) I discuss comparisons between statements that Mr. Gauci

made about Mr. Megrahi and statements he made about Abu Talb. The purpose of these last two sections is to place Mr. Gauci's statements about Mr. Megrahi in context, by comparing those statements to statements he made about others.

APPLICATION OF RESEARCH TO THE PRESENT CASE

Conditions of Observation and Their Effect on Identification Accuracy

55. The conditions of observation may be described in terms of the physical and psychological conditions of observation. The physical conditions of observation include the amount of time the witness has to observe the perpetrator, as well as the lighting and distance between the witness and the perpetrator. These variables define the witness's opportunity to observe, and behave in predictable and commonsense fashion. Witnesses are able to take in more information when they have more time, have adequate lighting, and are at a viewing distance that allows them to see and store information about the perpetrator. It is important to note that under conditions of low illumination or longer viewing distances, witnesses may be able to observe and correctly report information regarding the perpetrator's general appearance in terms of gender, hairstyles, and build, but be unable to see or report smaller details including the facial details necessary to distinguish between similar-looking individuals.
56. The *opportunity* to observe (defined by distance, time, and illumination) does not imply that the witness *will* observe or *will* store information in memory from those observations. One must also consider the psychological conditions of observation, for example the attentional focus or distraction experienced by the witness, as well as the emotional state of the witness, in particular whether the witness experiences fear or stress at the time of the crime.
57. Witnesses have been shown to make identification errors even when their conditions of observation were relatively good, and even when very little time had passed between the time of the crime and the time they were presented with a lineup. Indeed, these are the characteristics of many eyewitness identification experiments. A meta-analysis of 94 eyewitness identification experiments, with data from over 8000 participant/witnesses (Clark, Howell, & Davey, 2008) reports a correct (target-present) suspect identification rate of .461, and a mistaken (target-absent) identification rate of .134. Based on these correct and false identifications, the diagnosticity of a suspect identification, considering all of these studies, is calculated as $.461 / (.461 + .134) = .775$. In other words, in these experiments, when a witness identified a suspect, he or she had correctly identified the target slightly more than three-quarters of the time. Conversely, approximately one in four suspect identifications was the mistaken identification of an innocent person.
58. In the present case, Mr. Gauci made his observations under conditions of relative calm. Although the man's behavior was unusual in some respects, there is no indication that it

was threatening, or that it would arouse stress or fear.

59. These conditions are very similar to those employed in many eyewitness identification experiments that were also carried out in retail stores and shopping areas (Brigham, Maas, Snyder, & Spaulding, 1982; Platz & Hosch, 1988; Read, 1995). Like the strange shopper described by Mr. Gauci, the target persons in these studies also behaved in a way as to attract attention or distinguish themselves from other customers. The correct identification rates in these studies varied depending on the specific conditions of each study, from a low of .176 to a high of .636. The lowest correct identification rate .176 was shown by Read (1995) when the opportunity to observe was quite short and the target person changed her appearance. The highest correct identification rate in target-present lineups (.636) was shown by Platz and Hosch with longer exposure durations and a two-hour delay between exposure and test. The average correct identification rates were generally between .30 and .40. Of these studies, only the Read (1995) study included both target-present and target-absent lineups. The target-absent lineups provide estimates of false identification rates (of innocent suspects) and allow the calculation of response diagnosticity statistics. Read's results showed false identification rates between .02 and .08 and diagnosticity probabilities ranging from .67 to .95. If one averages across the various conditions of the experiment, the diagnosticity for suspect identifications was approximately .82. In other words, of those witnesses who identified the suspect, 82 percent correctly identified the target person, and 18 percent incorrectly identified the equivalent of an innocent suspect.
60. In application of the results of these studies to the present case, it is important to note that the experimental results were obtained when the identification tests were conducted within a few hours, or only a few days later. The identification in the present case was conducted 27 months after the original observations were made.

Loss of Information and Increases in Memory Distortion over Time

61. As time passes memory becomes less accurate. This has been demonstrated with such consistency that the function relating the loss of accuracy to the passage of time is typically called *The Forgetting Curve*. Research suggests that the forgetting function follows a power or exponential function such that much information is lost very quickly (a steep downward function) and over time the rate of information loss slows (a less steep downward function). (Wixted & Ebbesen, 1991, 1997).
62. The loss of information over time produces a decrease in eyewitness identification accuracy (Shepherd, Ellis, & Davies, 1982; Yarmey, et al., 1996). There are no studies in the eyewitness identification literature that test identification with the 27-month interval between the time that Mr. Gauci saw the shopper and the time he identified Mr. al-Megrahi. The longest time interval used in an eyewitness identification experiment was 11 months in a study by Shepherd et al. (1982). Their results showed that over the period

of 11 months the rate of accurate identification fell from 65 to 11 percent. At 11 months, the correct identification rate was no better than what would be expected by chance.

63. It is important to note that in the Shepherd et al. study, eyewitness accuracy was initially quite high, with 65 percent of witnesses correctly identifying the perpetrator when the lineup was conducted immediately after the incident. This high level of accuracy suggests that (a) the low performance of witnesses after 11 months was indeed due to the long delay, rather than failures to store information about the target person at the time of the staged crime, (b) the effects of the 11-month delay were large, even when the initial memory was reasonably strong.
64. One limitation of the Shepherd study is that it did not include a target-absent lineup condition. Other studies have included target-absent in addition to target-present lineups, but they did not extend the delay to the 11-month interval used in the Shepherd et al. study. These studies show that, on the whole, false identification rates change very little with the passage of time. (See Clark and Godfrey, in press for a summary of these studies, and note that the results of Krafska and Penrod, 1985, are an exception to the “very little” change pattern, as their false identifications increased from .017 to .091, over a 24-hour period). In Clark and Godfrey’s review of studies that utilized both target-present and target-absent lineup conditions, the diagnosticity (or probative value) of a suspect identification, averaged across studies, decreased. Thus, if the correct identification decreases substantially, as it did in the Shepherd et al. (1982) study, and the false identification rate were to remain constant (as has been shown in other studies), the net result is that the diagnosticity of a suspect identification would be decreased, and the likelihood that a suspect identification would be the false identification of an innocent person is increased.
65. It is important to note that not all studies show the decrease in the correct identification rate that was shown in the Shepherd study. Some studies (see Clark & Godfrey’s review) have shown slight increases or no change in the correct identification rate with the passage of time? Should these studies be taken as evidence that memory gets *better* over time? No. In their analysis, Clark and Godfrey showed that, in some studies, with the passage of time witnesses adopted a more lenient criterion for making an identification. In other words, with longer retention intervals, these witnesses became more willing, but not more accurate, in their identifications. Rather, by shifting their criterion, they changed the nature of their errors. For example, Krafska and Penrod reported an increase in the correct identification rate over time, but an even larger increase in the false identification rate, the net result of which was a decrease in the overall level of accuracy, and a decrease in the probative value of a suspect identification.
66. Changes in memory may also occur due the witness’s exposure to information from outside sources. Specifically, if a witness is exposed to information from an outside source, this information may become woven into the witness’s memory and may be given

in the witness's subsequent statements. If the outside information is correct, the witness's subsequent statements will be correct, but if the outside information is incorrect, the witness's subsequent statements will be incorrect. The latter case - describing the intrusion of false information into a witness's subsequent statements - is called a misinformation effect.

67. The intrusion of misinformation may be very subtle. For example, in a classic experiment by Loftus and Palmer (1974), participant-witnesses who had seen a car accident (staged through a series of photographic slides) were asked a key question, in two different ways. One group of participants was asked how fast the two cars were going when they "hit", whereas the other group was asked how fast the two cars were going when they "smashed". Of course, this one-word difference in the form of the question led to higher speed estimates, but more importantly it changed the way those participants responded to questions asked later. Specifically, when asked if they saw any broken glass - and note that the correct answer is "no" because there was no broken glass - the "smashed" group was twice as likely to erroneously report that they had seen broken glass, compared to the "hit" group. Thus, their memories were distorted by the very subtle slant of a previous question.
68. Information - both correct information and misinformation - may come from a variety of sources. It may come from interviewers, other witnesses, the television or print media, photographs, inaccurate composite drawings or photographs, or it may be self-generated by the witness, who in the course of being interviewed makes mistakes, and then later comes to believe in them.
69. The decline in the accuracy of memory over time, and the susceptibility of memory to distortion, lead to a clear conclusion: Witness statements given sooner are more reliable than statements given later.
70. Mr. Gauci has provided statements to authorities over a span of 17 years, from September of 1989 to August of 2006. The application of the "sooner is better" principle suggests that the most reliable statements are those Mr. Gauci provided in September, 1989. However, the assertion that the statements made in September, 1989 should be "more reliable" than statements that followed does not imply that those statements must be without error, as they were not made until nine months after the critical event.
71. Mr. Gauci clearly was exposed to information that was both self-generated and from outside sources.
72. Regarding self-generated information, police investigators often stated that they reviewed previous statements with him, and he also constructed two composite images of the man. If previous statements or composite drawings contain errors, subsequent exposure to those statements or drawings can perpetuate those errors. Mr. Gauci also received

information from outside sources, most notably from police officers and investigators, and also from the news media. This exposure to self-generated and outside sources of information is discussed in more detail below.

Composite Drawings and Composite Photographs are Often Not Accurate

73. The results of several studies have led to a general view that composites quite often do not clearly depict the person for whom they are created. This has been demonstrated by having research participants create composites for target people and then having other research participants who are familiar with the target person identify the person depicted in the composite. In some studies the target people are well-known celebrities. Identification accuracy for composites averages around 20 %, with accuracy rates approaching 50 % in some cases (Davies, van der Willik, & Morrison, 2000) but lower than 3 % in other cases (Frowd, Carson, Ness, McQuiston-Surrett, Richardson, Baldwin, & Hancock, 2005).
74. Mr. Gauci assisted police in September of 1989, over nine months after his initial contact with the man in his shop. Given the research showing incompleteness and inaccuracy in the storage of information in memory, and the additional loss of information over time, combined with the specific findings on composite drawings, one cannot assume that the composite drawing and photograph created by Mr. Gauci were complete and accurate depictions of the man that he saw in his shop in late November or early December of 1988.

Composite Drawings and Composite Photographs can lead to Decreases in Identification Accuracy

75. Although several studies have examined memory performance following the construction of composite photographs, only a few have used lineup identification procedures, with proper control conditions. These studies showed that the construction of composites led to lower levels of accuracy, in some cases by lowering correct identification rates in TP lineups (Wells, Charman, & Olson, 2005), and in some cases by increasing false identification rates in TA lineups (Sporer, 1996; Yu & Geiselman, 1993). The decrease in accuracy following the construction of an inaccurate composite drawing or photograph fits within the definition of a misinformation effect.

External Sources of Information

76. On several occasions Mr. Gauci was shown items of clothing from the wreckage of Pan Am 103, and his statements about the clothing purchased on the day in question evolved with his exposure to new information he received. It is therefore difficult to determine which details of the man's purchase were the product of Mr. Gauci's memory, and which details he gave based on evidence shown to him. Mr. Gauci's statements regarding the

man's purchases clearly changed over the 10 1/2 years from his first interview to his testimony at trial. In his initial statement recorded on 1st September 1989, Mr. Gauci described the clothing he sold to the man as: three sets of pyjamas (large size), a harris tweed style men's jacket (size 42) that had been in the store for about five years, two pairs of men's trousers (brown and a lighter-coloured pair), a blue babygro with a lamb's face on the front, a black umbrella, and a red and black tartan cardigan (large size).

- The pyjamas changed in their number (three pairs noted on 01-09-89) and detail (with "stripes" added for the first time at trial).
- The babygro changed color from blue to pink and back to blue again, and changed in the detail regarding the lamb on the front (from a lamb's face to a full head-to-toes lamb motif).
- Shirts and pullover sweaters were not mentioned in the initial interview, and in a 30th January 1990 statement, Mr. Gauci asserted, "I am sure I did not sell him a shirt", and "That man didn't buy a shirt for sure." However, in a subsequent interview (10th September, 1990) and at trial he described shirts that he had sold to the man in considerable detail (brand names, colors, and details).

It is not uncommon for people to recall new details from old memories, particularly when new questions are asked for the first time. The alternative hypothesis, of course, is that the new and evolving details are not the product of a remarkable memory or new pinpoint questions, but rather are responses or adjustments based on information presented to the witness. In fact, many of the details of the clothing purchase changed only after clothing materials were shown to Mr. Gauci. This is particularly salient for the shirts. Initially he was quite sure that he sold no shirts to the man. Then on 30th January, 1990, he was shown pieces of cloth that were blue and white and green woolen. At trial he testified to having sold the man two shirts, one blue and white and one green.

77. There is also clear evidence that Mr. Gauci was exposed to news stories and publicity that surrounded the case.

- He was shown an article in the *Sunday Times*, published 5th November, 1989, that showed a picture of Abu Talb with the caption "Bomber". According to Inspector Scicluna (in his report dated 25th February, 1991), Mr. Gauci asked police to bring him this newspaper article on 15th February, 1991, when he was looking at the photo lineup that contained a photograph of Megrabi and made reference to Abu Talb in his 15th February, 1991 statement.
- Mr. Gauci also saw a magazine article about the Lockerbie investigation published in December 1998 in *Focus* magazine that contained a photograph of Mr. Megrabi. Maltese Police Officer Mario Busuttill stated that he obtained the

magazine from Mr. Gauci on 9th April 1999, and that Mr. Gauci pointed to the photograph of Mr. Megrahi and said, “Dans hu”, which translates in English, “That’s him.” Thus, just four days prior to seeing Mr. Megrahi in a lineup parade at Camp Zeist, Mr. Gauci reviewed Mr. Megrahi’s photograph in the news.

- Mr. Gauci was also shown this *Focus* magazine article in the course of his trial testimony, just prior to his identification of Mr. Megrahi in the courtroom, and was asked to recall his having said “Dans hu”. Thus, Mr. Gauci was reminded of his previous statement, and was presented with a photograph of Mr. Megrahi just minutes before being asked to identify him in court. Even if Mr. Gauci had no memory whatsoever of the man who came to his shop in 1988, he had a fresh image in memory of Mr. Megrahi in the form of the *Focus* magazine photograph shown to him just minutes before being asked for his in court identification.
- There were also two publications in a newspaper called *It Torca*, on 7th March, 1999, and on 28th February, 1999. In his interviews with the SCCRC, Mr. Gauci stated that he did not recall seeing the photographs in the 7th March 1999 edition of *It Torca*, but that he did recall seeing the photographs in the 28th February 1999 edition of the paper. The 28th March 1999 edition of *It Torca* showed a photograph of Mr. Megrahi, in the context of a two-page article about the Lockerbie bombing. Mr. Gauci stated in his SCCRC interview that he did “recall that someone read the (7th March) article to me but I cannot remember who that person was.” The 7th March article in *It Torca* provided an analysis of Mr. Gauci’s statements, noting discrepancies in his description of the man who visited his store. *It Torca* noted that Mr. Gauci’s initial description was of a man, age 50, six-foot tall, and well-built, inconsistent with Mr. Megrahi, who is “not well-built”, not six feet tall, and was 36 years old. At trial, Mr. Gauci’s description was of a man “below six feet” and of “normal stature”. This raises the question as to whether Mr. Gauci’s statements at trial were adjusted slightly based on the corrective feedback from *It Torca*.
- In addition to these newspaper articles in *It Torca* and *Focus* magazine, which Mr. Gauci is believed to have seen (or have read to him), there was considerable other coverage of the Lockerbie case, in print, broadcast, and on-line media, between 1991 and 2000. I have in my materials 39 newspaper articles, 9 news video clips from Net TV and Malta TV, plus 12 BBC on-line news articles. In the two weeks prior to Mr. Gauci’s tentative identification of Mr. Megrahi on 15th February, 1991, two newspaper articles (Kull Hadd 4th April, 1999 and The Times, 6th April, 1999), and two Maltese television reports appeared, all of which featured images of Mr. Megrahi. It is not known which if any of these various articles and television news programs Mr. Gauci may have seen. It is quite clear, however, that Mr. Megrahi’s image had appeared often in the media.

Decision Processes

78. The eyewitness identification task is not only a memory task, but also a complex decision-making task. If human memory allowed a witness to retrieve completely reliable, diagnostic information, then the decision processes would be trivial. One could operate with the simplest of decision strategies: “Identify a person if he matches my memory of the perpetrator, and do not identify him otherwise”. However, it is not that simple. Because of encoding and storage failures, and because of the loss or distortion of information over time, the match between a person in the lineup and the witness’s memory does not clearly specify the witness’s decision, and thus the witness must exercise judgment and make a decision.
79. Research on eyewitness decision strategies shows the following results: (a) witnesses sometimes make identification decisions based not on their clear memory of the person they identify, but rather based on the elimination of *other* lineup members; (b) witnesses sometimes identify people from a lineup not because that person is an unambiguously clear match to their memory of the target person, but rather because that person is merely a better match than anyone else in the lineup. Wells (1984) referred to this as a relative judgment. (c) The use of process-of-elimination and relative judgment decision strategies has been shown to be a source of error in eyewitness identification experiments (Dunning & Stern, 1994; Kneller, Memon, & Stevenage, 2001).
80. Mr. Gauci’s responses to the 15th February 1991 photo lineup and to the 13th April 1999 lineup parade were conveyed in words seeming to indicate a relative judgment.
- For the 15th February 1991 photo lineup he stated: “I would say that the photograph at No. 8 is similar to the man who bought the clothing.... It’s been a long time now and I can only say that this photograph, No. 8, resembles the man who bought the clothing, but it is younger.... I can only say that of all the photographs I have been shown, this photograph No. 8 is the only one really similar to the man who bought the clothing, if he was a bit older, other than the one my brother showed me.” This last statement clearly has the language of a relative judgment (“... of all the photographs.... No. 8 is the only one really similar...”). The reference in the last part of his statement, “other than the one my brother showed me,” is a reference to the photograph of Abu Talb in the *Sunday Times* of 5th November, 1989, and suggests a relative comparison between Megrahi and Abu Talb.
 - When Mr. Gauci chose Mr. Megrahi from the lineup parade in Camp Zeist on 13th April, 1999, he did so with the following caveat: “Not exactly the man I saw in the shop 10 years ago, but the man who look a little bit like exactly is the number 5”. This statement was written in English, in which Mr. Gauci was not fluent, and perhaps for that reason the statement is not entirely clear. There is, however, no

lack of clarity in the statement given to Officer Stevenson: “I wasn’t sure but the one who looked most like him was number 5.” Such a statement (“most like”) suggests that Mr. Gauci identified Mr. Megrahi based on a relative judgment.

Lineup Composition

81. Eyewitness decisions are influenced by the fillers in the lineup. As noted earlier, witnesses sometimes pick the best match (even if it is not a “good” match) and sometimes make identifications through elimination strategies. Consequently, lineups should be constructed in such a way as to minimize the error due to the use of these kinds of decision strategies. Specifically, fillers must be selected for the lineup that cannot be easily and trivially eliminated from consideration. Two different strategies for the selection of fillers have been recommended: One is to select fillers who are similar to the suspect. The other is to select fillers that match the witness’s description of the perpetrator. The first, suspect-matched selection is recommended in the Scottish Guidelines (Scottish Home and Health Department, 1982). The second, description-matched selection, is favored in the guidelines of the United States Department of Justice (1999). Several studies have directly compared the two methods, but have not shown a clear advantage for one method over the other (Clark et al., 2008). However, it is abundantly clear that the failure to follow one method or the other, thus selecting foils that are neither similar to the suspect nor consistent with the witness’s description, is a pathway to error.
82. The research on this point is consistent, and best-illustrated by an experiment by Lindsay and Wells (1980). They followed their staged crime with target-present or target-absent lineups, in which the fillers were either similar to the target or mismatched the target in several respects. The innocent suspect in the target-absent lineup however, was a reasonable match to the actual target. Two aspects of their results are notable. First, when “good” fillers were used, the rate of mistaken identification of the innocent suspect was 31 percent, but when poor, mismatched fillers were used, the rate of mistaken identification increased to 70 percent. Second, when mismatched fillers were used, suspect identifications had no diagnostic value whatsoever. The suspect was as likely to be identified when he was innocent (70 percent) as when he was guilty (71 percent). These lineups and these results might be viewed as “worst-case biased” in that the foils were so “off the mark” that they could be easily and trivially excluded.
83. It is important to note that the mismatch of the fillers need not be extreme. In a study by Wells, Rydell, and Seelau (1993) fillers were selected either to match the witness’s description, or to mismatch one aspect of the witness’s description. When fillers were selected to match the witness’s description innocent suspects were misidentified 12 percent of the time, but when the fillers mismatched, the misidentification rate increased - almost four-fold - to 45 percent.

84. Examination of the photo lineup presented to Mr. Gauci on 15th February 1991 shows that every person in the lineup whose age was known was younger than the person described by Mr. Gauci, and that Mr. Megrahi was the third oldest person in the lineup. The two individuals who were older than Mr. Megrahi were Chilean. The person described by Mr. Gauci was Libyan. Thus, Mr. Megrahi was the only person in the lineup consistent with Mr. Gauci's memory regarding the national origin of the individual he saw, and was the person closest in age. Indeed Mr. Megrahi was years older than any of the Middle Eastern individuals in the lineup. Three people in the lineup did not have age information. Two of these individuals appear to be much younger than Mr. Megrahi, and the third person (in position #2) is very dark complected. Thus, Mr. Megrahi was the clear best-match to Mr. Gauci's description of the target person, irrespective of whether he was or was not that target person.
85. What about the composition of the lineup parade at Camp Zeist, 13th April, 1999? Photographs were taken of 12 individuals who were presumably present to participate in the lineup parade. However, only seven of these individuals were included in the lineup, and it is not clear who was included and who was excluded from the lineup, as there are conflicting accounts from Alistair Duff, who was Mr. Megrahi's solicitor at the lineup, versus the police report.
86. Even with the incomplete and contradictory documentation of the lineup parade, it is clear that 9 of the 11 fillers were younger than Mr. Megrahi, by an average of 13 years (with a range of 3 years younger to 22 years younger). Eight of the fillers were under the age of 40 in 1999, and thus would have been in their 20's in 1988. One of the fillers (#4) would have been 14 years old in 1988. Given Mr. Gauci's statement of 15th February 1991 that Mr. Megrahi appeared to be too young, then fillers younger still would seem implausible and easily and trivially excluded from consideration. Based on their age, 8 of the 11 fillers might have been easily excluded. What about the remaining three, identified here as #1, #5, and #11? Filler #1, although the same age as Mr. Megrahi, appears to be a Dutch police officer, and he has a Dutch name, raising the possibility that he could have been eliminated based on his ethnicity. Filler #5, two years older than Mr. Megrahi, was the shortest person in the lineup. At 5' 3", he is 4 inches shorter than Mr. Megrahi, and 9 inches shorter than the 6-foot ("or more") height estimate given by Mr. Gauci on 1st September, 1989. By this analysis, there may have been only one plausible filler in the lineup, that being #11.
87. There appears to be no photograph to document Mr. Megrahi's appearance at the lineup parade. Might he have stood out in the lineup because of his clothing or some other aspect of his appearance? This cannot be known without proper photographic documentation.
88. There is one additional consideration with regard to the live lineup parade. Live lineups differ from photographic lineups in that the participants in a live lineup know that they

are being observed for the purpose of identification, and are aware of the consequences of an identification by the witness. Specifically, a filler has nothing to lose, but the suspect has much to lose. This raises the question as to whether an observer, even one who is not a witness, can tell who the suspect is simply by that person's demeanor. This question was addressed in a study by Weigold and Wentura (2004). Non-witness participants examined lineups, attempting to determine who was the "suspect". In one condition the suspect was given an incentive to not be picked, whereas in a control condition no incentives were offered. Thus, the critical comparisons were for a given person who in one condition had an incentive to not be picked and had no such incentive in the other condition. The results showed that the "suspect" within the lineup was more likely to be picked if he or she had an incentive to not be picked. It would seem that their self-interest was detectable by the participants. The Weigold and Wentura results are not large, but they give support to the possibility that a witness may identify a suspect from a live lineup, due in part to that suspect's inability to suppress his anxiety.

89. In Mr. Gauci's Crown precognition (dated 18th March, 1999 and 25th August, 1999) he noted that Mr. Megrahi, "seemed very nervous at the [13th April, 1999 identification] parade." Presumably, the other lineup participants were not nervous as they had nothing to gain or lose, which raises the question: Could Mr. Megrahi's nervousness have led Mr. Gauci to pick him from the lineup? Mr. Gauci noted a number of discrepancies between Mr. Megrahi and his memory of the shopper. In the face of those discrepancies, was Mr. Gauci's decision to pick Mr. Megrahi based in part on Mr. Megrahi's apparent nervousness?
90. These analyses should be considered with caution, as the assessment of similarity among lineup members involves subjective judgment. With that caveat, the 15th February 1991 photographic lineup and the 13th April 1999 lineup parade have markings not dissimilar from the worst-case biased lineups studied by Lindsay and Wells (1980). In the Lindsay and Wells (1980) lineups, rates of mistaken identification were among the highest ever shown in any eyewitness identification experiment (above 70 percent), and the identification of the suspect - at nearly the same rate when guilty or innocent - had no probative value whatsoever.

Diagnosticity of Nonidentification Responses

91. A recent meta-analytic review of 94 eyewitness identification experiments (Clark, et al., 2008) shows that nonidentification responses occur far more often in target-absent lineups than in target-present lineups. Averaging across 94 studies nonidentification responses occurred with a .327 probability in target present lineups and with a .520 probability in target-absent lineups. Because nonidentification responses are given more often when the target is absent from the lineup than when the target is present in the lineup, nonidentification responses are reliable indicators of the suspect's innocence. Thus, nonidentification responses should not be taken as an indicator of the witness's

failure to identify the culprit, but rather as useful information indicating that the culprit is not in the lineup and hence that the suspect is innocent of the crime.

92. Mr. Gauci gave unambiguous nonidentification responses to each of the eight photo lineups he was shown, including the lineup containing Mr. Megrahi's photograph shown to him on 15th February, 1991. For example, when presented with the first lineup on 14th December, 1989, Mr. Gauci responded:

I identified a photograph of a man on one of the cards. This photograph is similar to the man who bought the clothing. The man in the photograph I identified is too young to be the man who bought the clothing. If the man in the photograph was older by about 20 years, he would look like the man who bought the clothing.

Compare this statement to Mr. Gauci's statement 15th February, 1991:

The first impression I had was that all of the photographs were of men younger than the man who bought the clothing. I told Mr. Bell this. I was asked to look at all the photographs carefully and to try and allow for any age difference.... I then pointed out one of the photographs. I would say that the photograph at No. 8 is similar to the man who bought the clothing. The hair is perhaps a bit long. The eyebrows are the same. The nose is the same, and his chin and shape of face are the same. The man in the photograph ... is in my opinion in his thirty years. He would perhaps have to look about ten years or more older, and he would look like the man who bought the clothes. It's been a long time now, and I can only say that this photograph number 8 resembles the man who bought the clothing, but it is younger.

In both cases, Mr. Gauci clearly indicated that a person in the lineup looked similar to the man who bought clothing in his store in 1988, but in both cases he believed that person to be too young.

93. Prior to the lineup of 15th February, 1991, Mr. Gauci had made three "similar" but nonidentifying responses. In addition to his 14th September, 1989 statement, Mr. Gauci also pointed to the photograph of the police suspect Mohamid Shukri, from the 26th September, 1989 lineup, noting that the man had a similar hairstyle but "this is not the man I sold the clothing to." From the 31st August 1990 lineup, Mr. Gauci pointed to photograph #9, noting that the man was similar in the shape of his face and the style of his hair.
94. These "similar" but nonidentifying statements leave open a lingering question. Why were those three statements, from 14th September, 1989, from 26th September, 1989, and from

31st August, 1990, accepted by police as nonidentifications, but the statement of 15th February, 1991, was not accepted as a nonidentification, despite Mr. Gauci's statement that Mr. Megrahi only "resembles the man who bought the clothing" but was younger?

The Effects of Prodding the Nonidentifying Witness

95. Mr. Gauci's statement that Mr. Bell told him to "allow for any age difference" conveys a clear instruction - to ignore the age discrepancy and continue. What does research show to be the effect of prompting a witness to continue after that witness has given a non-identification response? There are two possibilities: (1) One might assume Mr. Gauci to simply be reluctant or overly cautious, in which case some prompting might be useful, and could result in a correct identification of the target person. (2) Alternatively, such prompting of a reluctant witness could result in the mistaken identification of an innocent person.
96. The relevant research shows that when witnesses are prompted to continue, they will sometimes identify the correct person if the correct person is in the lineup. However, quite often such prompting results in increased error, and most critically, when the suspect in the lineup is innocent, prompting has been shown to increase the likelihood of a mistaken identification. It is important to note that these studies, summarized by Steblay (1997), Clark (2005) and Clark and Godfrey (in press), show that the increase in mistaken identifications is proportionally larger than the increase in correct identifications. In other words the costs (due to increased mistaken identifications) are greater than the benefits (due to increased correct identifications).
97. There is evidence from Clark and Tunnicliff (2001) that the combination of prodding with poor lineup composition can be particularly dangerous. They prodded witnesses who had correctly rejected a biased target-absent lineup, and showed that nearly half of those witnesses identified the innocent suspect as the person in the lineup who was most similar to the perpetrator.
98. Lineup administrators can influence the decisions of witnesses in ways that are very subtle. For example, in our laboratory we (Clark, Marshall, & Rosenthal, in press) showed that seemingly innocuous comments to "take your time" and "look at each picture carefully" influenced witnesses to make identifications. These instructions may sound appropriately cautionary on the surface, but they may convey a message to witnesses that they should continue looking at the photographs until they identify *someone*. Our results varied depending on how we designated our innocent suspect. For a not very similar-looking innocent suspect, our results showed an increase in false identifications from 2 percent to 12.5 percent when witnesses were prodded by seemingly innocuous instructions from the lineup administrator. For a more similar-looking innocent suspect, such undirected prodding had little effect on the false identification rate. However, when witnesses were given a more specific prod, based on similarity, the false identification

rate of the similar-looking innocent suspect increased from 25 percent to nearly 42 percent. It is important to note that the prodding of the lineup administrator sometimes resulted in an increase in the correct identification rate, and sometimes did not. Specifically, direct instructions to consider who looks most like the target produced an increase in the correct identification rate, but less-direct “prodding” through comments such as “take your time” did not produce an increase in the correct identification rate.

99. The statements made by lineup administrators in the Clark, Marshall, and Rosenthal study are not unlike statements made by law enforcement to Mr. Gauci after Mr. Gauci had indicated that all of the men shown in the 15th February lineup appeared to be too young. Specifically, Mr. Gauci noted, after he had in essence rejected the lineup, that he was instructed to “look at all the photographs carefully.” This instruction is almost identical to that given by lineup administrators in our study (“... look at each picture carefully.”). As noted earlier, these statements were associated with a substantial increase in the rate of mistaken identification of a less similar-looking innocent suspect, from 2 to 12.5 percent. It is important to note that this result was obtained when the lineup administrators were blind as to the position of the suspect. They could not influence the decision whom to identify, but only whether to identify. Officers present at the lineup on 15th February, 1991, certainly did know the position of the suspect in the photo lineup.
100. How could this knowledge regarding the position of the suspect affect a witness’s decision? An experiment by Haw and Fisher (2004) showed how lineup administrators can influence the decision as to whom to identify. Lineup administrators who were motivated to obtain “correct” identifications obtained more erroneous mistaken identifications when they were seated close to the witness, but not when they were seated farther away. Again, the increase in false identifications was substantial, from 3.3 percent when lineup administrators were seated too far away to influence witness decisions, to 30 percent when they were seated closer.
101. The results of these studies, by Clark, Marshall, and Rosenthal, and by Haw and Fisher (2004), are consistent with decades of research that show that a person’s expectations and biases can be communicated, even inadvertently, through subtle comments and even more subtle non-verbal gestures, and that these expectations and biases can influence the behavior of others (Garrioch & Brimacombe, see Rosenthal, 1966, 2002, for two reviews of this literature). Based on this extensive body of research it is standard practice to conduct behavioral research using double-blind procedures in which the interviewers and experimenters do not have access to information that would cause them to have expectations and biases that could be communicated to research participants. Eyewitness identification researchers have made strong recommendations that blind procedures be used in obtaining eyewitness identification evidence. That is, in the blind procedure the lineup administrator should not know, for example, the position of the suspect in the lineup. The underlying principle is clear: One cannot leak what one does not know. Such procedures were not used for the lineup conducted on 15th February, 1991 or for the

lineup parade conducted at Camp Zeist on 13th April, 1999.

102. The spirit of blind lineup administration is clearly written into the Scottish procedures for conducting live lineup parades, which state, “The officer conducting a parade must be entirely unconnected with the inquiry.” (*Guidelines on the Conduct of Identification Parades*, Scottish Home and Health Department, 1982, p. 1). The record indicates that the Camp Zeist parade was conducted by Inspector Wilson, and witnessed by Constables Watson and Stewart. Another report indicates the presence of Officer Stevenson. Consistent with the Scottish guidelines, these individuals were not involved in the investigation. However, there was one person present on 13th April, who did have some previous involvement, and that is Mario Busuttil. The issue here is not simply about previous involvement per se, but rather about what those involved in the conduct of the lineup parade *knew* about the case at the time of the lineup, and whether they could have inadvertently conveyed or leaked their knowledge or beliefs to the witness. Of critical importance is whether the person or persons conducting the lineup know the position of the suspect. The report on the identification parade suggests that it was quite clear which person was the suspect.
103. It is important to note as well that the critical 15th February 1991 photographic lineup was conducted by DCI Bell, who was very involved in the investigation and presumably knew that Mr. Megrahi was in position #8. Others, who were also involved in the case – Special Agent (FBI) Phillip Reid, Inspector Scicluna, and DC John Crawford – were all present when the photographic lineup was presented to Mr. Gauci on 15th February 1991.

The Effects of Instructions to Ignore Relevant (Critical) Features

104. Mr. Bell instructed Mr. Gauci to discount or ignore the fact that all of the people in the 15th February 1991 lineup were too young. What effect might this instruction have? Mr. Bell’s instruction is not unlike instructions commonly used in the United States in which witnesses are reminded that some characteristics, such as hairstyles, can be changed. Likewise, people age, and it is possible that a witness could be presented with an old picture that would depict a person at a younger age (although this does not appear to be the case here, as the photograph of Mr. Megrahi was not merely old - Mr. Megrahi was 36 years old in 1988, roughly 14 years younger than the man that Mr. Gauci described). Again, one might assume that “discounting” instructions could lead to higher accuracy, for example, in the case of a witness who appears “stuck” or “hung-up” on a particular mismatching feature that could be easily changed.
105. However, the research shows this is not the case. Although there is not a large literature on this particular aspect of eyewitness identification, a recent study by Charman and Wells (2006) shows a clear result: In their study discounting instructions led to negligible increases in correct identification, but large increases in mistaken identification. Again a very, very small benefit is buried under considerable cost.

In-Court Identifications

106. Eyewitness identification research suggests that identifications made in court have very little diagnostic value. The reasons for this are as follows: An in-court identification generally requires a yes-no decision as to whether the defendant is or is not recognized by the witness as the target person. Even if the answer is asked more generally, for example, as “Do you see the person in the courtroom here today?”, it is usually very obvious that the person in question is the defendant. Thus, the in-court identification is a variation of a single-person showup identification procedure. Showup identifications are much less reliable than lineups (Clark & Godfrey, in press). Averaged across nine studies, the probability of a positive identification for a guilty suspect was .407 and the probability of a positive identification for an innocent suspect was .177. Thus, the proportion of suspect identifications that were mistaken identifications of the innocent was .307. Phrased another way, nearly one-third of the positive identifications made at showups, were false identifications of the innocent. This figure of .307 compares to a figure of .208 for lineup identifications in the same analysis. In addition, a study by Yarmey, Yarmey, and Yarmey (1996) showed that with the passage of only a short amount of time the reliability of showup identifications fell to zero; after only a 24-hour delay witnesses were just as likely to make a positive identification when the suspect was innocent as when the suspect was guilty.
107. One may argue that there was at least one other plausible choice for the in-court identification, beyond Mr. Megrahi, and that person would have been the co-defendant, Lamén Fhimah. However, Mr. Fhimah would have looked quite different from Mr. Megrahi (Mr. Fhimah had a distinctive moustache), and moreover, any possible confusion between Mr. Fhimah and Mr. Megrahi would have been sorted out when Mr. Gauci was presented with the *Focus* magazine article which showed both of their photographs with their names underneath, just moments before the in-court identification.

Multiple Identifications

108. People show considerable consistency in their eyewitness identification decisions. Specifically, if a witness identifies *Person X* the first time he or she is shown a lineup, the chances are very good that the witness will identify *Person X* the second time (Behrman & Vayder, 1994; Gorenstein & Ellsworth, 1980). Gorenstein and Ellsworth (1980) have shown this consistency to hold even when the first identification is an error. They showed that witnesses would stick to their first incorrect choice even when the correct person was in the second lineup.
109. In the present case, Mr. Gauci identified Mr. Megrahi three times: from a photographic lineup on 15th February 1991, from a live lineup parade on 13th April, 1999, and at trial, July 2000. His first two identifications were conveyed with considerable uncertainty and

qualification. Even in his identification at trial, Mr. Gauci seemed conflicted, stating first definitively, “He is the man on this side”, followed by the more diluted statement, “He resembles him a lot.” However, despite the inconsistent mix of “is” versus “resembles” Mr. Gauci’s in-court identification seems the least qualified and most positive of the three. This raises a question: If memory fades and becomes less accurate over time, how could Mr. Gauci become more confident over the span of eight years? The broader question regards the relationship between a witness’s statement of confidence and that witness’s likelihood of having made an accurate identification. (See specifically, the section, *Relationship Between Eyewitness Confidence and Eyewitness Accuracy*.)

Assessing Eyewitness Identification Accuracy from Witness Statements and Behavior Related to the Identification

110. This report has, until now, discussed the assessment of eyewitness identification accuracy based on the witness’s conditions of observation, the length of the retention interval, exposure to outside sources of information, and the procedures used to obtain the identification evidence. Now, we ask to what degree can one assess the accuracy of an eyewitness’s identification decision based on that witness’s statements and behavior? There are four aspects of this question that I address below: (1) Can one infer that a witness who is more confident in his or her identification decision is more likely to have made a correct identification than a witness who is less confident in his or her identification decision? (2) Can one infer that an identification decision made quickly is more likely to be accurate than an identification made more slowly? (3) Can one infer that a witness who provides a longer, more detailed account of a crime is more likely to make a correct identification decision? (4) Can one infer that a witness who gives a longer, more detailed description of the perpetrator is also more likely to make a correct identification decision? Each of these is considered in turn.

Relationship Between Eyewitness Confidence and Eyewitness Accuracy

111. One of the challenges in interpreting eyewitness identification evidence is that witnesses may make mistakes and yet be completely confident. One cannot detect an error by simply assessing the witness’s sincerity or confident demeanor. This raises two important questions: First, what predictive value does the witness’s confidence and demeanor have with respect to the witness’s accuracy? In other words, is the identification made by a more-confident witness more likely to be accurate than the identification made by a less-confident witness? Second, to the extent that confidence is not a perfect predictor of accuracy, what factors are involved in the disconnection between confidence and accuracy?
112. The confidence-accuracy relationship has been measured primarily in two ways: by comparing the confidence of accurate and inaccurate identifications, and by computing the correlation between confidence and accuracy. The first method is straightforward. To

the extent that confidence and accuracy are linked accurate identifications should have higher confidence than inaccurate identifications. Correlational analyses produce a correlation coefficient r that can take on values between negative 1 and positive 1. If confidence and accuracy were perfectly, but negatively, correlated such that the most confident witnesses were the least accurate, the value of r would be -1. A perfect correlation in the positive direction - the most confident witnesses are the most accurate - would take on a value of 1. A value of $r = 0$ is obtained if there is no predictive relationship at all between confidence and accuracy.

113. Typically, confidence is greater for accurate than for inaccurate decisions, not only in eyewitness identification, but in memory judgments in general. There are, however, exceptions that show confidence-accuracy inversions in which inaccurate responses have higher confidence than accurate responses (Clark, 1996; Loftus, et al., 1978; Tulving, 1981). Also, confidence-accuracy correlations are typically in the positive direction (Sporer, Penrod, Read, & Cutler, 1995). However, these correlations vary considerably, from slightly above zero to around .50). A meta-analysis by Sporer et al. (1995) reported an average correlation of $r = .39$. These results, taken together, suggest that in general confidence does have a predictive relationship to eyewitness accuracy, but this relationship is far from perfect: Confidence-accuracy inversions have been found. Confident witnesses are sometimes wrong, and less-confident witnesses are sometimes quite correct.
114. Why is the relationship between confidence and accuracy less than perfect? Why are confidence and accuracy sometimes inverted? First, confidence judgments may be based on relative judgments. Witnesses may feel confident about their identification if their choice seems much better than any of the other choices. Of course, a better choice does not necessarily imply a correct choice. Second, confidence judgments have been shown to be based on variables that have nothing to do with memory. Some people may, in general, be more confident than others; in which case they are more confident when they are correct and more confident when they are incorrect. In this case the confidence is a personality characteristic rather than a predictor of accuracy.
115. The confidence-accuracy relationship can be disconnected as a result of a witness's exposure to misinformation. Referring again to Loftus et al.'s (1978) experiment, witnesses who were exposed to misinformation were more confident in their inaccurate responses than witnesses not exposed to misinformation were confident in their correct answers. The explanation of this negative relationship between confidence and accuracy is straightforward: witnesses who were exposed to misinformation give high-confidence incorrect answers because they have a clear memory of the misinformation. Similar results have been reported by Chandler (1996).
116. In addition the confidence-accuracy relationship can be disconnected through feedback given to the witness. Research shows consistently that if witnesses are given feedback,

indicating that they have made a correct identification - even if they have made an incorrect identification - their confidence in that (incorrect) decision will increase (Bradfield, Wells, & Olson, 2002; Wells & Bradfield, 1998). Note that the increase in confidence has nothing to do with the accuracy of their memory. That the confidence of a witness can be manipulated independently of the accuracy of a witness's memory shows why confidence is an imperfect predictor of accuracy, and why confidence-accuracy correlations are considerably lower than 1.0.

117. In Paragraph 109, the question was raised: How, as time passed and presumably memory faded, could Mr. Gauci have become more confident in his identification of Mr. Megrahi? This combination of fading memory and increasing confidence may be best explained as a product of feedback and exposure to outside sources of information.
118. There is evidence suggesting that Mr. Gauci did receive feedback confirming his identification and it is clear that he was exposed to outside sources of information (as noted in paragraphs 73 to 77).
 - Following the 15th February lineup, DCI Bell wrote, “At this stage I could see that the witness was visibly upset. He stated to me that he was worried that he would become a target and that every time he heard a bang he thought they had come to get him. He was obviously concerned in case there was any publicity. I attempted to reassure the witness and calm him.” The question that is raised by this statement is this: Given that Mr. Gauci had seen many lineups, and had given similar statements about resemblance and similarity, what made this one different? Why did he become upset over this particular lineup? One possibility is that somehow he knew, whether through explicit feedback, or simply by observing the reaction of police to his identification of Mr. Megrahi, that this one mattered – that the police believed that he had identified the correct person.
 - Mr. Gauci clearly did see the *Focus* article about the Lockerbie case, which contained a photograph of Mr. Megrahi, sometime after December 1998, long after his 1991 identification, but shortly before his April 1999 identification at Camp Zeist. In a statement by Mario Busuttil, Mr. Busuttil indicated that he collected the *Focus* magazine article from Mr. Gauci on 9th April, 1999, just three days before accompanying Mr. Gauci to the Netherlands. Moreover, Mr. Busuttil stated that he carried the magazine with him to the Netherlands. Loftus, Miller and Burns (1978) showed that outside sources of information have their most potent effect when presented after a longer period of time following the relevant event and just prior to the memory test. The reason for this is clear. At the time of the memory test the memory for the actual event will be weakest because it has faded over time, and the post-event information will be strongest, because it is so much more recent. The timing of the publication of Mr. Megrahi's photograph, and Mr. Gauci's viewing of it, would, based on the Loftus, et al. results, provide

the strongest set of circumstances suggesting that Mr. Gauci's subsequent identifications could be based on the post-event information (Mr. Megrahi's photograph in the press) rather than Mr. Gauci's long-faded memory.

Relationship Between Response Time and Eyewitness Identification accuracy

119. Can one infer that a witness who looks at the lineup and makes an identification quickly is more likely to have made an accurate identification than a witness who responds more slowly? The answer here is a qualified "yes". Research has shown that eyewitness identification decisions that are made quickly are more accurate than decisions that are made more slowly. Of course, this begs the question: How quick is quick, and how slow is slow? Smith et al. (2000) showed that 69 percent of witnesses who made their identification decision within 15 seconds were accurate in their identification decisions, whereas only 17 percent of witnesses whose response times were over 30 seconds were accurate in their identifications. Similarly, Dunning and Perretta (2002) showed that identifications made within 10 to 12 seconds were significantly more accurate than identifications made after 10 to 12 seconds. Although these studies are consistent in showing an accuracy shift at 10 to 15 seconds, it is important to note that this time is not "carved in stone". Results from a study by Weber, Brewer, Wells, Semmler, and Keast (2004) suggests that there is no critical, fixed cut-off point. One cannot assert, for example, that across all conditions identification decisions made before x seconds are correct, whereas identification decisions made after x seconds are incorrect. However, what is clear from these studies is that if the witness takes very a long time, i.e., several minutes, to make an identification, there is reason to be concerned that the identification is inaccurate. The reason for this is simple: Recognition memory decisions can be made in less than one second. Thus, if a witness takes several minutes to make a decision, the identification is likely based on factors that are unrelated to memory. The situation may be akin to a student who does not know the answer to a multiple-choice question on an exam, and thus ponders over it for a long time, trying to figure out some way to deduce the answer, despite his or her ignorance.
120. There is one important exception to the rule that "faster is better". If the lineup is very biased so that the innocent suspect stands out and the fillers can be easily excluded, some witnesses may be seduced into making quick identifications of the person who appears to be the obviously correct choice (Ross et al., 2007).
121. There is not a clear, precise record as to how much time passed while Mr. Gauci considered his responses to the photo lineup on 15th February 1991 and the live lineup parade on 13th April, 1999. However, regarding the photo lineup, it is documented in Inspector Scicluna's report on 25th February 1991, that Mr. Gauci initially rejected the photo lineup, stating that "they are all too young", and was then instructed to allow for a discrepancy in age. At that point, according to Scicluna's report, Mr. Gauci asked, "bring me that newspaper." (That newspaper was later determined to be the *Sunday Times* from

5th November 1989 and to contain a photograph of Abu Talb with the word “Bomber” underneath.) In his SCCRC interview on 1st December 2004, Inspector Scicluna was asked whether Mr. Gauci, “had both these sets of photographs (those in the lineup as well as the photograph of Abu Talb) in front of him at the same time?” To this Inspector Scicluna replied, “Of course.” Mr. Gauci continued to examine the photographs, and according to DCI Bell’s report of 15th February 1991, examined Mr. Megrahi’s photograph three times. It appears that Mr. Megrahi reviewed the lineup photographs, requested a newspaper, had the newspaper brought to him, and then re-examined the photographs before making a response. Thus, although there was no precise recording of the time that Mr. Gauci spent examining the photographs on 15th February 1991, it is clear that his response was not made quickly.

*Relationship Between Reporting of Details
and the Accuracy of an Identification Decision*

122. It is intuitive that a witness who provides a longer, more-detailed account of an event, should be more likely to make a correct identification of the target person from that event than a witness who gives a shorter, less-detailed account of the event (See Bell & Loftus, 1989; Wells & Leippe, 1981). To illustrate, imagine two witnesses A and B who witness the same crime. Witness A describes the crime scene in great detail whereas Witness B gives a much shorter, less-detailed description of the crime scene. Who should be more likely to correctly identify the perpetrator of the crime? Intuition suggests Witness A.
123. However, this intuition has not been supported by data. Wells and Leippe (1981) and Cutler et al. (1987) both reported a negative relationship between the accurate reporting of peripheral details of a staged crime and the accurate identification of the perpetrator of the staged crime. In other words, those witnesses who were more accurate in reporting the peripheral details were less accurate in identifying the perpetrator. Although these results may seem counter-intuitive, there is a ready explanation: Witnesses who pay attention to the peripheral details, which may be unrelated to the central action of the crime, may be directing their attention away from the perpetrator. This explanation of the results suggests a limitation of these studies; in both studies the measurement of “other details” was for details that were peripheral and perhaps irrelevant to the central action. Nonetheless, these studies suggest a general rule: To the extent that a witness’s attention is directed away from the perpetrator and toward some other task or some other aspect of the environment, the less likely it is that the witness will be able to identify the perpetrator later. Recall may be quite accurate for the activity or the detail that is the focus of the witness’s attention, whereas the identification of the perpetrator, who is outside the focus of attention, may be less accurate. At the core is a general and well-accepted principle of human cognition and performance: With the exception of tasks that are very easy, or are over-learned to the point of being performed automatically, our attentional capacity is limited. Consequently, in order to direct our attention to one task or one aspect of our environment, we must draw our attention away from other tasks or

other aspects of our environment. Thus, a witness who reports some aspects of an event in extraordinary detail may have a less accurate memory for other aspects of the event.

124. This attentional focus explains a well-established phenomenon called the weapon-focus effect. A target person is less likely to be correctly identified if that person is observed carrying a weapon (Stebly, 1992; Loftus, Loftus, & Messo, 1987). The explanation, of course, is that witnesses are focused on the gun rather than the person holding the gun. Of course, there was no weapon in the present case. However, the weapon-focus effect is relevant to the present case because it is an example how, if a witness's attention is drawn to, or focused on one aspect of an event, memory for other aspects of the event may be harmed. Moreover, it is important to note that the weapon is clearly not a "peripheral" detail, but rather is central to the action. This suggests that the redirecting of attention can impair identification accuracy even when attention is directed to an object that is central to the event.
125. The key point is that one cannot infer that because a witness has given a long, detailed account of a event, that the witness's identification of a target person from that event is accurate. The abundant detail in the witness report may, quite to the contrary, indicate that the witness was distracted or attending to aspects of the event other than the target person.
126. The implication of this for the present case is that one cannot infer that because Mr. Gauci provided many details of his interaction with the shopper that his identification of Mr. Megrahi was a correct identification of that shopper. First, it is not clear to what extent Mr. Gauci's detailed report was the product of his own memory, rather than the adoption of new information obtained through years of police questioning and exposure to outside sources of information. Second, to the extent that Mr. Gauci's description of the events is accurate, it does not mean that his identification is more likely to be reliable.

*Relationship between the Witness's Description of the Perpetrator
and the Accuracy of the Eyewitness Identification*

127. Another intuition is that witnesses who give more complete descriptions of the perpetrator should be more likely to correctly identify the perpetrator. Again, to illustrate, if Witness A gives a detailed description of the perpetrator and Witness B gives a less detailed description of the perpetrator, it seems reasonable to assume that Witness A has a better memory than Witness B, and will therefore be more likely to identify the perpetrator from a lineup. Experiments that have examined the relationship between descriptions and identification accuracy have provided no foundation to suggest that one can predict identification accuracy based on the quality of the witness's description (Pigott & Brigham, 1985; Pozzulo & Warren, 2003). This disconnection between giving a description versus making an identification from a lineup may arise because different cognitive processes are involved in the two tasks, or because the two tasks rely on

different kinds of information, specifically verbal information for giving the description and more visual information for making the identification.

Comparison Between Identification Statements About Megrahi and Identification Statements of Others

128. The discussion regarding the relationship between confidence and accuracy raises an important question. It was noted earlier that Mr. Gauci never made a definitive, unqualified identification of Mr. Megrahi. Could this be because Mr. Gauci simply is not one to make confident, definitive statements? It may be that some people, when they express themselves, simply do not make strong claims, but rather have a general tendency to add “hedges”, disclaimers, and qualifiers. In other words, one might question that when Mr. Gauci stated at trial, “He resembles him a lot”, he really meant, “that’s him.” The language may simply reflect an overabundance of caution.
129. Comparisons to other statements made by Mr. Gauci contradict this hypothesis, however. Specifically, on 10th September 1990, Mr. Gauci was shown photographs for the purpose of identifying “Libyans who had been coming to my shop, not making any purchases, but apparently watching me”. His language was clear:
- “I have also pointed out another photograph. This man has also been in my shop many times to look at me but not to purchase.... I am positive of my identification of the second man” (referring to Ibrahim Abuaisha). He has definitely been in my shop looking at me.
 - “I have also pointed out another photograph,” (Aghila Sas Daw) who I am also positive has been to my shop in the last two weeks.
 - “I have pointed out another man” (Mustafa Khattabi). This was the man that I spoke of being in my shop and wearing a jacket and he had his hands in the outside pockets.”
130. These identifying statements contradict the hypothesis that Mr. Gauci’s “tentative” language regarding Mr. Megrahi is simply a matter of linguistic style. His 10th September 1990 statements are clear: He was certainly clear in making unequivocal identifications of the three men listed above.

Comparison Between Statements Made About Megrahi and Statements Made About Abu Talb

131. Photographs of Abu Talb, who at one time had been a suspect in the case, play an important role in the interpretation of Mr. Gauci’s identification of Megrahi.

132. The record indicates that Gauci was presented with photographs of Abu Talb on two occasions, first on 6th December 1989, as one of 12 photographs, and then again on 10th September 1990, as one of 37 photographs. DCI Bell testified at trial that Gauci made no identification on either occasion. However, the documentation of the interviews is poor at best. There is no record of any statement from Gauci for the 6th December 1989 interview. The documentation of the 10th September 1990 interview made no mention of showing the photographic album that included Abu Talb's photograph to Mr. Gauci. Thus, there is no clear record that Abu Talb's photograph was shown to Mr. Gauci on 6th December 1989 or on 10th September, 1990.
133. In a statement given by Tony Gauci on 5th March 1990, he stated that, "About six or eight weeks ago my brother was reading an English Sunday paper (believed to be the *Sunday Times* of 5th November, 1989) and he read some bits of the report to me.... he .. showed me a page of the paper where a picture of a man was printed. He asked me, 'is this the man who bought the clothing?' I told him that I did not know if it was the man or not because I did not want him to know what I thought or to cause any more trouble. However, I think the photograph printed in the newspaper may have been the man who bought the clothing. He looks like him.... All I can say about the photograph printed in the newspaper is that I think the man looks the same as the one who bought the clothing."
134. When shown Abu Talb's photograph at trial, Mr. Gauci stated, "He resembles him a lot. He resembles him a lot."
135. This defines a critical question: If Mr. Gauci stated that Megrahi resembled the man who bought clothing, and that Abu Talb "resembles him a lot", why should one count as an identification but the other not? What differentiates between Mr. Gauci's statements about Abu Talb versus his statements about Megrahi?
136. As noted before, the difference between the two may be due to there having been three occasions when Mr. Gauci was shown photographs of Abu Talb, and the record seems to show that Mr. Gauci made no identification of him. These nonidentifications of Abu Talb presumably would distinguish Megrahi from Abu Talb. However, the documentation of these three occasions does not exist to my knowledge. These three occasions are described below.

Non-identification of Freeze-Frame Photograph: No record of the Photograph

137. Mr. Gauci was shown a freeze-frame photograph on 2nd October, 1989 of Abu Talb, taken from a television broadcast, to which he later stated on 10th September, 1990, "Although this man was similar in his hair style and appearance I could not identify his face." There is no record of this freeze-frame photograph, so it is not clear whether Talb's facial features were sufficiently clear to allow anyone to make an identification. Although Mr. Gauci made no identification of Talb from the freeze-frame photograph (which may have

been due to the quality of the photograph), when he discussed this freeze frame photograph during the interview on 10th September, 1990 he continued to assert, “I would say that the photograph I pointed out in the *Sunday Times* (Abu Talb) was similar to the man who bought the clothing.”

Non-identification 6th December, 1989: Gauci’s Statement Not Recorded

138. On 6th December 1989 Mr. Gauci was presented with a lineup consisting of 12 photographs, including Abu Talb. DCI Bell testified at trial that Mr. Gauci made no identification from this lineup. However, there is no record that any statement was taken from Mr. Gauci on this occasion. A second police officer DC John Crawford was present on this occasion but also apparently failed to document any statement from Mr. Gauci.

Non-identification on 10th September, 1990: Confused Record of Photographs

139. The record indicates that on 10th September 1990, Mr. Gauci was presented with a photo album consisting of 37 photographs. At trial, DCI Bell testified that Abu Talb’s photograph was included as photograph number 30, and that Mr. Gauci made no identification. Consistent with DCI Bell’s testimony Production No. 1244 shows 39 photographs including one numbered 30 of Abu Talb. The record of 10th September 1990 indicates that Mr. Gauci was indeed shown a large number of photographs – of people who had applied for work permits or extensions – but there is no record of Mr. Gauci’s having been shown the photo album (Prod. 1244), and Mr. Gauci made no mention of it in his 10th September 1990 statement. The lack of documentation, and no mention by Mr. Gauci, raises the question as to whether Abu Talb’s photograph was actually among those shown to Mr. Gauci on 10th September, 1990.

Abu Talb as the Standard for Identification

140. The *Sunday Times* photograph of Abu Talb loomed over Mr. Gauci’s statements regarding the photograph of Megrahi on 15th February 1991. According to Inspector Scicluna, in his statement made on 25th February, 1991, and in his interview with the SCCRC on 1st December 2004, Mr. Gauci asked to see the *Sunday Times* article (with Talb’s photograph) on 15th February, 1991, and it is possible that Mr. Gauci had photographs of both Talb and Megrahi available to him at the same time. What significance does this have, and why would Mr. Gauci ask to see the photograph of Talb while considering the photograph of Megrahi? As noted before, there is evidence indicating that witnesses make identifications through relative judgments and comparisons among alternatives; in some way, it seems that Abu Talb may have become a standard of comparison for Tony Gauci’s statements regarding Mr. Megrahi.

SUMMARY

141. The body of scientific research on eyewitness identification points toward a number of factors known to increase the likelihood of error that were operating in the identification of Abdelbaset Megrahi by Anthony Gauci. Mr. Megrahi was presented to Mr. Gauci for the purposes of identification on three occasions, in a photographic lineup on 15th February 1991, in a live lineup parade on 13th April, 1999, and in court in July of 2000. These three presentations, and the potential problems associated with each, are summarized in Table 2. The relevant factors to consider in each case are: (1) the passage of time, (2) the composition of the identification procedure, and (3) sources of influence prior to and during the identification procedure. Item (4) in the Table, documents Mr. Gauci's responses in each case.

Passage of Time

142. Mr. Gauci's initial statements to police were not made until over nine months had passed, and he was not shown a photograph of Mr. Megrahi until over two years (27 months) after Mr. Gauci encountered the individual in his store. Research by Shepherd et al. (1982) and others has shown profound loss of accuracy over much shorter delays (11 months). This research suggests that Mr. Gauci's memory of the man would have faded considerably before he was ever shown the first photograph of Mr. Megrahi, raising questions as to whether his "resemblance" identification of Mr. Megrahi had any significant probative value.

Composition of lineup procedures

143. Table 2 describes the composition of the photo lineup (15th February, 1991) and live parade lineup (13th April, 1999) as "questionable". Evaluation of lineup composition can be somewhat subjective, and in the case of the lineup parade there is no photographic record. Because of that, one must be cautious in declaring a lineup to be "unfair" or "biased", and consequently, the word I have used is "questionable". With those caveats, the record suggests that fillers in both lineups could have been easily excluded based on their being too young. Mr. Gauci described Mr. Megrahi as "too young" and most of the lineup fillers were younger still, perhaps leaving Mr. Megrahi to be the best, and perhaps only plausible, choice. (Note that although there is some subjectivity in evaluating lineup composition, Mr. Gauci seems to have evaluated the 15th February 1991 photo lineup himself in his statement that, "... No. 8 is the *only one* really similar to the man who bought the clothing" – emphasis added).
144. At trial, there were, of course, no fillers. In court identifications are simply yes-no responses as to whether the defendant is the perpetrator. The research on such one-person yes-no identification decisions is clear (Yarmey et al., 1993). They have lower probative value than an identification from a lineup and their disadvantage relative to lineups

increases with the passage of time. The in-court identification by Mr. Gauci was conducted, of course, over 11 years after his initial observations were made.

Outside Influences

145. There were many outside influences that could have contributed to the identification statements made by Mr. Gauci. It is important to note that these influences are cumulative across identification procedures. These influences are as follows:
146. Based on research on the accuracy of composite photographs and their effect on subsequent identifications, it is reasonable to consider that error could have been introduced by the process of creating a composite photograph and sketch.
147. Each identification may be influenced by each prior identification. Thus, the 13th April identification may be influenced by Mr. Gauci's having seen Mr. Megrahi's photograph on 15th February 1991. His in-court identification may have been influenced by the two prior lineup procedures. Because of this accumulation, the critical identification is generally the first one.
148. In this case the critical identification of Mr. Megrahi, on 15th February 1991, came only after Mr. Gauci had first given a none-of-the-above response based on age discrepancies, and only after he was prodded by police to ignore the critical aspect of Mr. Megrahi's age, and continue to examine the lineup. Research has shown that such prodding decreases the diagnostic value of suspect identifications.
149. Another source of influence arises from the press on the Lockerbie case, and presentation of Abu Talb's and Megrahi's photographs, in particular, in the *Sunday Times* and in *Focus* magazine, respectively. The photograph of Abu Talb seems to have played some role in Mr. Gauci's 15th February 1991 identification, as he specifically asked to see the article in the course of making his statement to police investigators. The photograph of Mr. Megrahi in *Focus* magazine was available to Mr. Gauci prior to the identification procedure at Camp Zeist and it was also shown to him in court just moments before the in-court identification procedure.

Outcome of Identification Procedures

150. Mr. Gauci's responses to the three identification procedures were in each case qualified, ambiguous, and less than positive. At no time did he ever clearly and definitively assert that Mr. Megrahi *was* the man who came into his store in late November or early December of 1988. Rather, in each identification procedure, he stated that Mr. Megrahi was "similar" or "resembled" the man.
151. To reiterate a point made earlier in this report, it is not possible, based on the research on

eyewitness memory and identification, to conclude that the identification made by a particular witness is correct or incorrect. Even the most troubled identification – with a very long delay between the observations and the identification procedures, with a number of sources of influence and error, with questionable lineups, and ambiguous responses – can nonetheless be correct.

152. Is it possible that Mr. Gauci could have correctly identified the man who came into his store 27 months before? Yes, it is possible, but the research suggests that such an outcome would be extremely unusual. Is it possible that Mr. Gauci could have navigated his way through the many interviews and the outside sources of information (which may or may not be reliable), and steadied himself against the suggestive questions and influences to make an accurate identification that was the product of his independent recollection? Yes, it is possible, but again, based on the scientific research, it is an outcome that would be extremely unusual. By contrast, the combination of a faded, and perhaps overworked, memory, and the numerous sources of outside information, influence, and suggestiveness, define precisely the conditions which research and past wrongful convictions show to be the cause of mistaken identifications.

TABLE 2. SUMMARY OF IDENTIFICATION PROCEDURES

	15 th February 1991	13 th April 1999	11 th July 2000
PASSAGE OF TIME	27 months	10 years, 4 months	11 years, 6 months
COMPOSITION	Questionable lineup composition	Questionable lineup composition	Not a lineup. No fillers
OUTSIDE INFLUENCES	<p>Composite sketch</p> <p>Asked by lineup administrator to ignore age discrepancies.</p> <p><i>It Torca</i>, 28th February, 1999</p> <p>Witness examined <i>Sunday Times</i> photo of Abu Talb</p>	<p>Composite sketch</p> <p>Exposure to Megrahi's photo on 15th February 1991</p> <p>Exposure to <i>Focus</i> magazine, photograph of Megrahi</p>	<p>Composite sketch</p> <p>Exposure to Megrahi in photo 15th February 1991, and at lineup parade 13th April 1999</p> <p>Exposure to <i>Focus</i> magazine, photograph of Megrahi.</p> <p>Shown <i>Focus</i> magazine only moments before in-court ID</p>
OUTCOME	<p>Initially, "The first impression I had was that all the photographs were of men younger than the man who bought the clothing." After he was asked to ignore age, "...I can only say that No. 8 (Megrahi) resembles the man who bought the clothing.... No. 8 is the only one really similar to the man who bought the clothing, if he was a bit older, other than the one my brother showed me (referring to Abu Talb).</p>	<p>In his own words, "Not exactly the man I saw in the shop 10 years ago, but the man who look a little bit like exactly is the number 5."</p> <p>Summarized by Officer Stevenson, "I wasn't sure but the one who looked most like him was number 5."</p>	<p>"He is the man on this side. He resembles him a lot."</p>

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