

# **ROBERT W. RADLEY**

*M.Sc., C.Chem., F.R.S.C., F.S.Soc.Dip., F.A.E., R.F.P.*

## **HASSAN DIAB**

Anne Bisotti Review

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## **REPORT**

CONCERNING THE REVIEW AND COMMENTS ON THE REPORT OF  
ANNE BISOTTI REFERENCE 2010/0647

FOR THE CONSIDERATION OF  
THE COURT IN THE HEARING  
OF THE ABOVE MATTER

20<sup>th</sup> October 2010

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Our Ref: RWR/kas/10675  
Your Ref: DB/Diab

## **REPORT**

**CONCERNING THE REVIEW AND COMMENTS ON THE REPORT OF  
ANNE BISOTTI REFERENCE 2010/0647**

### **RE: HASSAN DIAB**

Whilst written instructions have been received from Bayne Sellar Boxall, Solicitors of Ottawa, Canada, in this matter, this report is addressed to the Court for its consideration on the hearing of the above case.

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#### **INSTRUCTION**

1. I have been requested to consider the report of Anne Bisotti and comment on the reliability or unreliability of the handwriting opinions, her methodology and the way in which opinions/conclusions have been formulated.
2. If my findings are that the reliability of the examination is questionable, I am instructed to give an indication as to whether I consider any truly professional competent forensic document examiner would have come to the same conclusion based on the materials presented utilising acceptable methodology.

#### **THE ROLE OF THE FORENSIC DOCUMENT EXAMINER**

3. It is a frequent occurrence for one expert to consider the findings and methodology of another expert involved in the same case. It has to be acknowledged that on a worldwide basis, the field of forensic document examination is a troubled one with the training and levels of expertise of individuals giving evidence in Court being variable, resulting in different levels of competence and reliability. Consequently, at the outset of any comment on another expert's report, the fundamental issues of training and reliability of both the expert whose report is being considered and also the credentials of the expert reviewing the report have to be considered. The general methodology adopted by forensic scientists specialising in the examination of handwriting and documents has been well established over the last century and a

vast amount of literature has been published on the subject of both handwriting examination and the general forensic examination of documents. The methodology of the authoritative writers on the subjects is used on a worldwide basis. Such methodologies are commonly accepted and are generally regarded as standards for the profession by those forensic scientists specialising in the field of forensic document examination.

4. With the above points in mind, I have considered the report of Madame Bisotti and will express my opinion in this report relating to the methodology she adopts taking into consideration the aspects of her general approach to the subject. This will be generally in keeping with 'Huber's Law of ACE'<sup>1</sup> (Roy Huber being a very prominent authority on the subject of methodology of the handwriting examination and the author of 'Handwriting Identification: Facts and Fundamentals'). 'ACE' relates to the processes of Analysis, Comparison and Evaluation. A general consideration of methodology also incorporates the assessment of whether the individual takes into account and has a full appreciation of the comparison process and significance of observations derived from the same.

#### **SUITABILITY AS A REVIEWER FOR OTHER EXPERT'S REPORTS**

5. I have over 30 years experience of working solely in the field of forensic document and handwriting examination and my CV is attached to this review.
6. Whilst I hold the degrees of Bachelor of Science in Chemistry, and Master of Science in Forensic Science, which gave me basic understanding of forensic concepts and scientific logic, my principal training was under my father who was an acknowledged expert in the field (both in England and abroad) of forensic document examination.
7. I hold the Diploma of the Forensic Science Society in Document Examination (which covers both the examination of handwriting and signatures together with the other relevant aspects of document examination such as ink analysis, impression analysis, paper identification, photocopy identification, typewriter etc).
8. The Forensic Science Society Diploma was set up principally as a formal qualification for forensic document examiners which was based not on the concept of an individual having 'undertaken handwriting examination over a long period of time' but based on the training of the expert concerned and his/her ability to pass both theoretical and practical examinations showing that he/she has the competence to complete fixed tasks accurately and knowledge of the accepted methodology for such examinations.
9. The Diploma covers, as a requirement, knowledge not only of handwriting but also general document examination. In the United Kingdom, knowledge of only handwriting examination by an expert is not acceptable as significant evidence may be missed by the

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<sup>1</sup> Huber, R.A., Headrick, A.M., *Handwriting Identification: Facts and Fundamentals*, CRC Press 1999, p 34

'handwriting expert' if only handwriting on the document is considered. Other evidence may appear on the document which could be of considerable significance and may be missed without full examination of the whole document.

10. I was an examiner for the Forensic Science Society Diploma examination for 12 years during which time I, together with the three heads of the Government Forensic Document Laboratories in the country at the time, were responsible for setting both the theoretical examinations and practical examinations (typically three cases that had to be undertaken under examination conditions) together with the assessing and marking of the same.
11. Further to my work relating to the Diploma, I was invited to become an Assessor for the Council for the Registration of Forensic Practitioners. This organisation was set up as a Government backed Council initiated to help improve the quality of forensic science evidence in the Courts in the UK. Registration was granted to those individuals who could show reliability and understanding in the field of document examination, this being assessed by experienced trained assessors who would undertake, typically, the review of six actual cases (selected by the Assessor) worked on by the Applicant expert.
12. Further to successfully undertaking the training course required, I was certified as an Assessor on 1<sup>st</sup> December 2000 for the purpose of considering individuals wishing to become registered.
13. My experience of casework and working with other experts on a worldwide basis is considerable. I have naturally dealt primarily with cases from the United Kingdom over the last 34 years but have also dealt with cases emanating from more than 30 countries and given evidence in more than 15 countries worldwide. I have also worked in many of the Government and private laboratories in these countries alongside their experts. This has imparted considerable knowledge to me as to the methodology adopted by experts worldwide. This is supplemented by my near annual attendance at international conferences in the field of forensic handwriting and document examination since the early 1980's in this country, Germany but primarily in America where I am a corresponding member of the American Society of Questioned Document Examiners (ASQDE). The meetings of this organisation almost invariably have 'signature workshops' wherein groups of experts (primarily from the Secret Service, FBI, ATS, IRS, The Postal Laboratories and a variety of Police Laboratories in America) together with other international experts from, for instance, the German Laboratories, Hong Kong and Middle East Laboratories. Again, working in groups of six experts in the signature workshops imparts a very considerable range of knowledge concerning forensic practices on a worldwide basis.
14. I have presented more than 20 papers on aspects of forensic document examination to international meetings and in 2009, I presented a workshop to the American Society of Questioned Document Examiners on the Sequencing of Electrostatic Document Analysis Impressions.

15. I have endeavoured over my working career to ensure that I keep abreast with current developments, books and papers published in the field of forensic handwriting and document examination and to that end attend meetings, take journals and have a variety of contacts concerning literature sources and libraries on this forensic subject.
16. In the light of the above, I consider I am suitably trained in order to comment upon the work of other experts in this field.

#### **PROPOSED METHOD OF CONSIDERATION OF MADAME BISOTTI'S REPORT**

17. I shall adopt the text of the provided English translation of Madame Bisotti's Report as being a true and accurate translation of her original Report. However, the copied illustrations in this translation are generally of poor quality relative to the original French copy report and when I refer to an illustration on a particular page, it will be the illustration as seen in the **French Report**, most of these illustrations presumably being taken directly from the electronic files of the scanned documents.
18. The pagination of the French Report and its translation are not identical unfortunately as different sizes of paper have been adopted resulting in the English translation being 35 pages as opposed to the original French Report containing 34 pages. Consequently, when I refer to a page number concerning the written text of the report, this will refer to the **English translation**. When I refer to illustrations, the page number will be in the **French Report** so as to utilise the best quality copies available. However, in this commentary (albeit it makes this report far more voluminous), I will quote extensively the passages that I refer to in Madame Bisotti's Report for ease of reference for the Court.
19. Whilst working through Madame Bisotti's Report, it has become evident that her method of comparison, in my opinion, is confusing and awkward with no side by side illustrations as is the widespread convention. In order to reduce the time employed by the experts acting for the lawyers of Mr Diab, it has been agreed that Brian Lindblom would produce certain charts with the sophisticated software he possesses which not only reduces the time for production but when these charts are adopted by all the experts for Mr Diab, the time saving is considerable. At the same time, all experts will be referring to the same charts and therefore, hopefully, reduce possible confusion with different charts and therefore assisting the Court.

#### **CURRICULUM VITAE OF ANNE MOREAU NEE BISOTTI**

20. At Appendix 1, Madame Bisotti presents firstly, five pages of the details of the organisation for whom she works, the Institut National de Police Scientifique, which indicate the areas in which they provide services, their aims, associations etc followed by a single page with her own qualifications.
21. She indicates that she has Post Graduate Technical Degrees in Biology and Biochemistry and an unspecified 'University Degree in Forensics' awarded the

same year as the Technical Degrees.

22. She continues and indicates that she has been an expert in handwriting and documents since 1993 but then indicates that she has only been an '*Expert designated to represent the INPS since 2001*' with no mention of her status in the intervening period. However, she does indicate her 'PROFESSIONAL DEVELOPMENT' since 1993 is as follows:—
- 'Legal Concepts: 18 hours – 1995*  
*Expert Analysis: 21 hours – 1996*  
*Testifying in Court: 24 hours – 1996*  
*Professional Environment: 24 hours – 1996*  
*American-English Professional Language Training: 24 hours – November 1996*  
*Administrative Writing: 30 hours - 1998*  
*Awareness of Counterfeit Money: 21 hours – 2001*  
*Using the Bitmap Software: 8 hours – 2004'*
23. I am surprised that since 1993 with respect to 'expert analysis', she has only had 21 hours development back in 1996. No details of updating of training, no indications of how she keeps abreast with current developments, new techniques and thoughts in the field, no reference to any conferences attended, research undertaken and presented, publications etc appear on this list.
24. A 'professional development' of a mere 21 hours would seem, to say the least, very limited. For example, I have just attended a conference in Canada in which various papers and workshops were presented. This conference alone consists of more than 30 hours professional development by way of lectures, research developments, equipment updates, workshops etc and this represents just one meeting for one year. I have attended these meetings since 1983, missing only a handful of them during this period. Whilst this meeting is held by the American Society of Question Document Examiners, I also attend document examination meetings of the Forensic Science Society and of the GSS (the German Document Examination Group) to keep abreast on current developments. It would seem that, in my opinion, over a period from 1993 to date that Madame Bisotti's professional development in the area of analysis is very sadly lacking. The fact that 'administrative writing' occupies nearly fifty per cent **more** time than the time devoted to expert analysis development, I find alarming.
25. Whilst I note that the Institut National de Police Scientifique is a member of ENFSI, I note that Madame Bisotti gives details of the laboratory and its ENFSI association, yet there is no mention in her personal CV of any of the proficiency tests that are administered by ENFSI.

26. Whilst her laboratory is a member of ENFSI, the comments of Fereday and Cop<sup>2</sup> draw attention to the competence assurance effort and state: *'However, it is important to remember that accreditation of the laboratory does not, of itself, imply that the staff of that laboratory are competent'*.

#### PREAMBLE TO THE REPORT FINDINGS

27. The first two pages detail the background of the investigation whilst on page 3 Madame Bisotti gives details of the Order and its Supplement indicating the Mandate and Terms under which the Commissioning Order was given.
28. She continues and indicates the nature of the questioned documents, exhibit numbers etc and also identifies some of the examples *'... which contain notes handwritten by Hassan Diab'*. This relates to, presumably, the documents that Marc Trevidic, Vice president of the Investigation, has deemed to be the writings of Diab. However, I am unclear as to whether or not these were ever accepted by Diab as, indeed, bearing his writing.
29. However, the Commission Order then requests that the expert *'State whether: The writer of the Exemplars is or maybe the writer of the notes .... attributed categorically by the hotel receptionist to the person who introduced himself as Alexander Panadriyu ...'*. It appears that the Order does not give an alternative option as to whether the notes in question were clearly **not written** by the writer of the Exemplars, only the level to which Diab can positively be associated.
30. Similarly, the penultimate paragraph on page 4 indicates further to the question from the Vice President of the Investigation of whether the writer of the Exemplars is the writer of *'The date '22/09/80' in the 'DATE' field, since the hotel receptionist stated that he only wrote the word 'unexpected' at the bottom of the form, which would, by default, indicated that 'MR PANADRIYU also wrote this date'*.
31. Both of the requests are, it would appear in my view, to be potentially prejudging the issues. Kam et al,<sup>3</sup> and others, have looked at this particular issue of the presentation of biasing information with regard to forensic casework. Kam states that confirmation bias is defined as: *"a tendency for people to seek information and clues that confirm the tentatively held hypothesis or belief, and not seek (or discount) those that support an opposite conclusion or belief". A possible effect of confirmation bias might be observed in cases whether the hypothesis are well defined, and the tendency for people to seek confirmation information might result in an "cognitive tunnel vision", in which the operator fails to encode or process information that is contradictory to or inconsistent with the initially formulated hypothesis".* He continues and states this: *" ... may be dangerous because*

<sup>2</sup> Fereday, M.J., Cop, I., *ENFSI and its quality and Competence Assurance Effort*, Science & Justice, 2003, Vol 43, No. 2, pp 99 - 103

<sup>3</sup> Kam, M., Abichandani, P., Hewitt, T., *Confirmation Bias in Intelligent Analyses*, 66<sup>th</sup> Annual Conference ASQDE, Reasoning with Technology – a Cognitive Approach to Casework and Research, 2008

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*potential risks and warning signals may be overlooked and, thus, decision fiascos may be the consequence”.*

32. Byrd<sup>4</sup> defines confirmation bias as being: *‘When people observe more, give extra emphasis to, or intentionally look for evidence that would validate their existing beliefs and expectations and are likely to excuse or completely ignore evidence which could reject their beliefs’.*
33. One of his points for the avoiding of confirmation bias and other errors is to limit outside influences – *‘Even though confidence improves comparatively with given information, accuracy does not improve comparatively with confidence. When evidence is given to forensic scientists, any information that does not pertain directly to the evidence could introduce bias and pose a danger to the objectivity and accuracy of the scientist’s findings’.*
34. Consequently, the statements of the receptionist (whether he/she correctly or incorrectly recalled) indicates that he/she did not write the date and Trevidic’s statement that by ‘default’ the writer of the hotel form also wrote the date is undesirable information to be passed to the expert. So is the presumption that Diab was the writer of ‘all or part’ of the questioned entry without the Order covering the potential for the alternative case, that of a completely different writer. It appears to be asking for confirmation of his involvement, not an objective analysis of what **the evidence** shows with respect to the writer of the entries.
35. I also note that on page 4, Madame Bisotti has indicated that on the 19th March 2010 Officers from the US Embassy presented ‘us’ with the original file regarding Diab’s immigration to the US. These documents were then digitised and on page 5, of her report (penultimate paragraph), she states: *‘We digitised at 600 dpi handwriting specimens attributed to Hassan Diab from the file to be used as Exemplars. After digitisation, the specimens were returned to the Immigration file that was then restored in its entirety to the Officials at the Embassy of the United States of America in Paris’.*
36. Firstly, I would comment that this statement appears to refer to a plural number of persons involved in the examination i.e. *‘... provide us with’.* This use of the first person plural extends throughout the report – page 16 *‘... we selected ...’*, page 21 *‘... we used ...’*, page 30 *‘... We considered ...’* etc. If this is so, it should be standard practice to identify any co-workers in the report and anyone else who had been assisting with the examination or had input in the comparison or consideration processes. I note, however, that the ‘Memorandum’ page following page 34 in the English translation, the comments are expressed in the first person singular. A question obviously arises as to whether Madame Bisotti, in fact, completed all the work herself or whether this was a joint effort with others and if so, how much work

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<sup>4</sup> Byrd, JS, *Confirmation Bias, Ethics, and Mistakes in Forensics*, Forensic-Pathways.com/PDF/JSI.pdf, p1 & p8



on this case did she in fact complete herself and how much may have been influenced by other parties?

37. Secondly, there is no comment on requests by her to retain the originals, no explanation as to why it was not feasible or possible to examine the documents once presented to the laboratory (even if this might have been in the presence of a US Embassy Official). This would be normal practice in my experience and that the digitisation of images **after examination** would be the normal procedure. **Any** copying process will cause a degradation of the sample, hence the requirement of examinations to be completed **on original documents** so as to enable each particular point of detail to be accurately and correctly assessed. On the face of it, **it would appear** that Madame Bisotti has blindly followed the direction of the Vice President of the Investigation and has not taken it upon herself to request what would be a good standard practice, of demanding retention of the original documents for proper examination.
38. Whilst I consider the report with the copy images adequate for the Technical Review, I do note on page 10, last paragraph that Madame Bisotti states that: *'To allow for further examination, the images of the digitised pages have been burnt onto a CD-rom that will be provided to the Examining Magistrate.'* I have requested sight of the same but have been informed that this is not to be made available for my examination. Without sight of that disc, I cannot fully assess the accuracy, reliability and quality of any scans produced nor assess certain comments she makes. Certainly, by the time these images have been reprinted in the French Report which has been presented to me (said to be high quality print reproduction), the images are often poor for examination purposes.
39. A further point on the note of the scanning and the results of the scanning process is that on page 15, Madame Bisotti indicates that the documents have been digitised at 600 dpi (dots per inch). Firstly, she does not state whether the scans produced are 'tif' or 'jpg' images, tif files being 'loseless' as opposed to jpg's which are compressed files which can lose detail. Although this might be academic, it is of interest to note that she uses the term '600 dpi' (dots per inch) as opposed to 600 **ppi** (pixels per inch). The term 'ppi' refers to **input** devices e.g. scanners, cameras etc as opposed to 'dpi' which refers to **output** devices i.e. printers. It is not therefore clear whether the records on which she has worked are input images (i.e. the actual scan retained within the computer) or whether she has worked on the resultant printout of the image (which would presumably be of the same relatively poor quality as the images noted in the report). If she has used the latter, not only will the image be relatively poor but it is downgraded to the level of many photocopiers. She has indicated on page 13 that: *'As Exhibit D3499 is a poor quality copy for which we could not obtain the original, it was not used in the handwriting analyses'*.
40. I would comment that the copy of D3499 in the French Report, I believe, is apparently quite reasonable in reproduction of detail similar in quality to the

scanned images of the Immigration source documents.

41. It is significant to note that this Exhibit D3499 is the closest in date to the questioned document, albeit that is seven years after the writing of the registration form. The remaining comparison documents appear to be dated from 1994 to 2003, a minimum of more than 14 + years after the questioned document was written. This consideration is taken up further later in this report.

**Technical Review of 'CRITICAL ANALYSIS OF THE EXHIBITS – NO. I – METHODOLOGY' - Page 11**

42. Madame Bisotti indicates that: *'We followed the procedure of ENFHEX...'*. The 'Overview Procedure for Handwriting Comparisons' used by ENFHEX is a very basic outline of general procedures together with some recommendations for reading material. It is not a detailed analysis scheme, nor is it intended to be so.
43. Madame Bisotti indicates: *'There are 8 features'* which she defines as the basis of examination of handwriting but seems to make no mention of a number of other points (which can be found in the ENFHEX Procedures) which could also be considered, such as the fluency or line quality, skill level, proportioning of individual letters one to another (relative size of one letter to another), internal letter proportioning (the relative length of a 'T' bar relative to the overall height of the letter etc) although these types of considerations could possibly be considered under the umbrella of what she describes as 'form'.
44. The first paragraph of page 12 reads: *'When doing handwriting comparison, similarity between specimens and the questioned document and the Exemplar is not enough to establish that only one and the same person wrote both, but it does allow a presumption with respect to the comparison writer to be made.'*
45. I note that the word 'presumption' is used. This is a term which I have never encountered before in 34 years of working all over the world. Presumably, it means that there is some evidence to support the proposition of common authorship. More comment on this will be made later in this report.
46. She continues and indicates that one can look for personal characteristics (which is generally taken to be developments away from the 'taught hand' in a personalised style of the individual concerned) and continues to define what she refers to as a 'unique' feature.
47. She indicates that: *'Unique features are significant factors for identifying a writer because they are writing movements made subconsciously by the writer and that are, consequently, very difficult for the writer to hide; thus, if **a** unique feature is found in common between the questioned document and the Exemplar, it is possible to state that **the writer of the Exemplar also wrote the questioned document**'* (my emphasis). I find this quite an extraordinary statement. Firstly, how does any expert, even though they may have worked through thousands of

individuals' handwritings in their career, know that a particular feature is absolutely 'unique' to one particular person and one person only? In the context of the above, Madame Bisotti does not appear to be suggesting that 'unique' means 'very unusual' and therefore highly likely to originate from one particular person but that this is truly a feature which only one person uses. Without quantifying 'unique' as being 'extremely rare' or 'one in a thousand' etc, does this therefore mean that a feature can be unique to the entire population of France (64 million) or to the entire population of the world? The statement that *'if a unique feature is found common..... it is possible to state that the Exemplar and questioned materials were written by one individual'* (my emphasis) is quite unacceptable. I have never, in over 30 years experience in this profession, ever come across anyone who suggests that a single feature (and apparently not having any regard for all the other letters of the alphabet) might be so extraordinary that that feature **alone** proves common authorship. An examiner is only experienced in the limited number of examples of individuals' writings that they have examined. How can any examiner pronounce a single feature to be 'unique'? This is a most unconventional comment and practice.

48. Similarly, I would question the following paragraph in which Madame Bisotti indicates: *'In contrast, if a unique feature found in the Exemplar never appears in the questioned document, the writer of the Exemplar can often be eliminated'*. (My emphasis.) Again, I find that this is an unwarranted statement in that any questioned writing may represent the way in which an individual writes **at any one point in time** (and **may**, sometimes, as suggested by Madame Bisotti, include what she refers to as a 'unique feature'). However, there is no way either of determining whether that individual will **always** write that 'unique feature' **every time** he/she puts pen to paper. Consequently, the suggestion that the **absence** of a particular feature can **eliminate** an individual as being a possible writer is a concept which is, in my opinion, fundamentally flawed and I cannot recall in my experience, this ever being proffered as an argument for the elimination of an individual as a potential writer.
49. She continues and indicates that personal characteristics are: *'less specific than unique features'* which is agreed. In my opinion, for clarification, it is the accumulation of personal characteristics of similarity or difference that provide evidence that, **in combination**, indicates a likelihood of one or more writers having produced the writings examined.
50. The following passage in Madame Bisotti's report, page 12, is one which portrays, in my opinion, a fundamental misunderstanding of the whole basis of forensic handwriting identification. She continues and states: *'Moreover, only when many personal characteristics are identified in both the questioned writing and the Exemplar and especially when the number of these graphic similarities is much greater than the number of dissimilarities found there, will it be possible to identify the writer of an Exemplar as the author of a questioned document'*.

51. This is, in my opinion, a fundamental misconception which throws her whole methodology into disrepute. The discarding or disregarding of differences or balancing the numbers of similarities relative to differences is almost undoubtedly the most common source (usually by graphologists and untrained amateurs) of incorrect identification. In handwriting comparisons, differences are of **fundamental importance**. They are, generally, **far more important than similarities**. Similarities may be found between many individuals' handwritings by chance coincidence. For instance, in very basic illustrative terms, similarities may be the result of a '1', for instance, being written as a downstroke or a '0' being written as a near round circle. Many people write in this way, which results in coincidental similarities between these writers' handwritings. General similarities such as these which are based on the **basic taught hand** are referred to as 'class characteristics' and have limited value in handwriting identification because they are found within the writing of a significant proportion of the population as a whole even in combination. They are therefore regarded as being of a low level of evidential value. However, basic class characteristics can **differentiate** between two different writers' handwritings by virtue of showing, for instance, the writers concerned learnt different writing styles and methodologies of letter construction.
52. What is more significant, however, from the illustration above, is the **personalised** way in which the '1' and '0' are written. Is the pen moving when it touches the paper of the downstroke of the '1'? Is it a light pressure when it leaves the paper at the end of the downstroke? What direction is the pen moving when it leaves the paper? Is the downstroke of the '1' straight or slightly curved one way or the other? What are the relative heights (proportions) of the '1' to the '0'? Is the pen moving when it hits the paper and lifts off the paper in the production of the '0'? Does it hit the paper at 12 o'clock, 11 o'clock, 10 o'clock etc? What is the variation of pen pressure in the circular movement of the '0'? Is it circular or are there any far more angular movements to its construction? Does the beginning and end stroke coincide or is there a degree of overlapping? If so, to what degree of overlap? Etc. These are the *personalised writing characteristics* which, **in combination**, are of importance and which can differentiate between different writers even when numerous class 'similarities' between their writings are noted.
53. However, the identification of handwriting is not by the presence of similarities **but is the result of a lack of differences between two sets of writings**. This concept is supported by numerous authorities on the subject and is the accepted convention. For example, Wilson R Harrison's<sup>5</sup> authoritative text, in the chapter concerning the Comparison of Handwriting, states: *'The above list by no means exhausts the suggestions which have been made for decreasing the subjective element in the comparison of handwriting, and nothing is to be gained by more detailed description of criticism of schemes for the comparison of handwriting based on measurement, on general features or on some system of scoring points for and against (as with 'more similarities than differences' being present). All such schemes are worthless because they fail to take into account the fundamental rule*

<sup>5</sup> Harrison, W.R., *Suspect Documents – Their Scientific Examination*, Sweet & Maxwell, 2<sup>nd</sup> Imp., 1966 p 343

which omits **no exception** when handwritings are being compared. The rule is simple – whatever features two specimens of handwriting may have in common, they cannot be considered to be of common authorship if they display but a single consistent dissimilarity in any feature which is fundamental to the structure of the handwriting and whose presence is not capable of reasonable explanation'. (My emphasis.)

54. Albert S Osborn<sup>6</sup> in the chapter entitled 'The Process of Comparison, or Reasoning Regarding Similarities and Differences' states: '... if the conclusion of identity is reached, either in a person or a handwriting, there **must not remain significant differences that cannot be reasonably explained**. This ignoring of the differences, or the failure to properly account for them, is the cause of most errors in handwriting identification'. (Osborn's emphasis.)
55. He goes on to state<sup>7</sup>: 'It also needs to be emphasised that two writings are identified as being by the same writer by the **absence of fundamental divergences** as well as by a combination of a sufficient number of similarities. The process is always a double operation, positive and negative, and if error is to be avoided neither part of the process should be overlooked. In order to reach the conclusion of identity of two sets of writings there must not be present significant and unexplained divergences' (my emphasis).
56. In the same vein, he states<sup>8</sup>: 'Errors in identification of handwriting are mainly due to two causes. The first of these is this lack of knowledge regarding these common similarities in many handwritings, as already described, and the second is due to the overlooking, ignoring, or incorrect interpretation of the **differences** in the two handwritings' (Osborn's emphasis).
57. Conway<sup>9</sup> agrees and indicates: 'Two handwritings cannot be deemed to be the writing of one and the same person unless they agree in **every fundamental element and embody no basic differences**. It is not a matter of six or eight or twelve or fifty or five hundred 'points of similarity'.' (my emphasis).
58. Numerous other similar references could be cited.
59. Consequently, the concept of counting similarities which are '*much greater than the number of dissimilarities found*' is wholly incorrect and a potential source for considerable, damaging error.
60. Other authorities reiterate this principle but the references are too numerous to detail.

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<sup>6</sup> Osborn, A.S., *Questioned Documents*, Nelson-Hall Co, 2<sup>nd</sup> Edition, 1929, p 245

<sup>7</sup> Osborn, A.S., *Questioned Documents*, Nelson-Hall Co, 2<sup>nd</sup> Edition, 1929, p 262

<sup>8</sup> Osborn, A.S., *Questioned Documents*, Nelson-Hall Co, 2<sup>nd</sup> Edition, 1929, p 383

<sup>9</sup> Conway, J.V.P., *Evidential Document*, Charles C. Thomas, 1959, p 53, p 55

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61. One often used simple illustration of this point may be paraphrased as follows. Consider trying to match a suspect to a detailed description of the perpetrator of a crime. The description of the perpetrator is given as a male, 5 feet 11 inches tall, black hair, thinning on top, brown eyes and weighing 180lbs. These characteristics in combination are helpful and the suspect may well correspond in all those features. This does not identify him specifically. It restricts the possibilities of involvement of many other people. If one then looks further into even more personalised characteristics, one might note the perpetrator is described as having a nervous twitch, he speaks with a stutter, he speaks with a New York accent, he has a scar on his left cheek and walks with a limp. Those features, in combination with the previously described features, greatly reduce the number of possible suspects. However, if all of these features still match the main suspect, this does not identify him specifically but again greatly increases the possibility the suspect and perpetrator having common identity. However, in the light of **one** difference, all of these similarities, even though they may be highly personalised, will be enough to show non-identity. If the description of the perpetrator is of an Afro Caribbean and the suspect is Chinese, **irrespective of all the personalised similarities which are observed**, the suspect and the perpetrator of the crime cannot be the same individual.
62. The same logic applies to handwriting – it is not a ‘numbers game’ relating to ‘... *the number of these graphic similarities is much greater than the number of dissimilarities found* .....’. In my opinion, this is a fundamental misunderstanding by Madame Bisotti of the most basic principle of handwriting identification or, indeed, any identification process.
63. Madame Bisotti, on page 12, continues and includes in an emphasised paragraph: ‘*Thus, to be able to establish a possibility or identify or exclude the writer of an Exemplar as the writer of a questioned document, **it is necessary** to work with **these most optimal working conditions**, that is, with documents that are suitable for handwriting comparison*’.
64. Whilst she appears to strongly emphasise the necessity for working with ‘optimal’ documentation, she has done quite the opposite by using scanned images of all of the Immigration documentation and Exemplar documents that were written 14+ years later. Consequently, this emphasised comment seems a little out of place.
65. I find equally surprising the comment at the foot of page 12 where she indicates: ‘*In the case of signature comparison, unlike for handwriting comparisons, it is not enough to study their graphic form, **since some writers never produce two identical signatures** .....’.* (Note the original French indicates: ‘...deux signatures exactement identique...’). **No writer** will produce identical signatures! That is one of the fundamental axioms of handwriting examination. If one does find identical signatures, they are either photocopy or computer transpositions of signatures from one document to another. It is not a matter of ‘*some writers*’ occasionally writing identical signatures on occasions and other people not, **nobody** writes identical signatures on different occasions.

66. Again, I find this quite an extraordinary statement to have been made by a supposedly trained expert.

**Technical Review of 'II – APPLICATION TO THIS CASE, II - 1 - EXEMPLARS' - Page13**

67. Madame Bisotti indicates that: '*Photocopying prevents certain aspects of writing signatures to be identified ....*' This, and the points that follow, are agreed. However, the same comment applies to scanned copies which I believe is the possible source of Madame Bisotti's comparison material purely from the point of view that (i) she refers to the 'dpi' digitised images whilst (ii) at the same time I cannot envisage a situation where one could even attempt to compare images on the computer screen on document 1 of the Immigration File with the corresponding characteristic on document 2, document 14, document 19, document 20 and document 21 all at the same time, backwards and forwards between all documents. This type of basic comparison process of which the examination is composed, has to be done on a 'side by side' basis of documents, as is the normal practice.
68. She continues and indicates that: '*The documents we took from Hassan Diab's United States of America Immigration File are **originals** and **suitable for handwriting and signature comparisons***' and indicates that the Exemplars are therefore suitable for use in handwriting comparison. However, the fact of the matter is that she did not **examine** the **originals**.
69. On page 14, Madame Bisotti outlines the three stages of development of handwriting. With regard to the adulthood final development, she states: '*The speed and personality of the writing varies depending on the level of education*'.
70. I am somewhat surprised that there appears to be an association of speed and 'personality of the writing' with the level of education. I know of no research to support such a proposition. In practice, in my experience, that can often be the case but vast numbers of the population contradict the statement which is surprisingly presented as fact. For example, I agree this is often found when one encounters extremely poor quality writing of an illiterate or poorly practised hand of an individual of a low level of education. This is often seen in slow and disjointed writing, often printed (unjoined script). However, with specific reference to this particular case, if one observes the writing of Exemplars said to be written by Hassan Diab, whom I understand is a highly educated individual and a university lecturer, he writes at a relatively slow speed incorporating a relatively crude and basic form of handwriting. His level of writing speed and ability, when his educational status is taken into account, is an illustration, in this very case, that contradicts the unequivocal statement put forward by Madame Bisotti.
71. She continues to acknowledge that illness, degenerative conditions, alcohol, drugs and senility can change a person's writing. However, she continues and states that: '*In this case, the writer was born in 1953. When the questioned documents were written, he was 27 years old **and thus had reached his optimum level of graphic***

**performance.** *When he wrote the document in his Immigration File, he was about 40 years old. Unless there was some particular accident in his life, his writing and his signature **would not have changed much**' (my emphasis).*

72. This is an enormous generalisation put forward again as unequivocal fact. The categorical statement that Diab '*had reached his optimum level of graphic performance*' **may** be true but it is pure **speculation**. There are no defined ages in which people reach their 'optimum level' (assuming that optimal level equates to a consistent and unchanging writing form). Some individual's handwriting will be established by the age of 18 and will vary extremely little over the following years. Many individuals, especially if the Roman alphabet is not their first language, may develop their handwriting over a considerably longer period well into the 20's or even 30's. There is no formula by which one can predict when the 'optimum level' of their writing performance will be achieved. It is a purely personal characteristic which cannot be defined except by examining a range of writings over a long period of time.
73. The comment that Diab's writing and signature '*would not have changed much*' over the 15 year period is predicated by the phrase '*unless there was some particular accident in his life*'. There is no information given in Madame Bisotti's report of any knowledge of his medical history or personal circumstances. I would generally agree that at the age of 27, **many** individuals' handwritings do not change much unless there is a mental, physical or ill health problem. However, often in the case of some individuals, they begin to write far more in later years than they did in their younger years and the writing therefore may well develop in style and execution. It is possible, for instance, that with the status of the university lecturer, Hassan Diab may have been in a situation whereby he had to do considerably more writing than previously. This could lead to changes in his handwriting. I do not have that information nor, I believe, does Madame Bisotti as she makes no mention of the same. Similarly, these days, with fewer young people writing documents as opposed to typing or texting them, some individuals' handwritings will deteriorate through lack of use.
74. The fact of the matter is that Madame Bisotti has no knowledge as to how Hassan Diab wrote at the age of 27. One cannot 'extrapolate backwards' from his writings at the age of 40 to determine how he **might** have written at the age of 27. The **only** way of determining how he would have written in 1980 is to obtain writings from that period. All other judgements are pure conjecture.
75. Osborn<sup>10</sup> summarised the position with regard to the relative dates of comparison and questioned materials as follows: '*As stated above, the writings most to be depended upon as standards are always those bearing dates nearest to the date of the disputed writing and that are of the same general class. This is true for the reason that writing of different individuals varies in different degrees as written at*

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<sup>10</sup> Osborn, A.S., *Questioned Documents*, Nelson-Hall Co., 2<sup>nd</sup> Edition, 1929, p 28



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*different times and for different purposes and the only way to learn of these habits of any writer is through standard writing'.*

76. From the above considerations, I consider that this comment by Madame Bisotti is pure speculation as is the comment in the last paragraph on page 14 of her report. She says: '*Thus, basing **our** comparisons on documents written about 15 years apart is possible. **At most**, the passing years would have resulted **only** in a smoother and more definite stroke. If there were changes in the writing they would appear in all of the comparison documents*' (my emphasis). Again, I consider this is an amazing generalisation put forward as a statement of fact. The passing of years does not 'only' result in smoother and more definite strokes. She acknowledges the same earlier when she says the performance level may go down due to illness, degenerative conditions etc, etc. If Diab was in good health at the age of 27 and has suffered some mental or physical ill health, alcohol or drug abuse, his writing may have deteriorated. That **potentially** deteriorated form of handwriting 14+ years after the writing of the questioned document is the **only** material available to Madame Bisotti. She has no factual data as to how Diab's writing may or did change over the period of the 14+ years concerned.
77. Her statement that: '*If there were changes in his writing, they would appear in **all** the comparison documents*' (my emphasis) is again a non sequiter. The comparison documents were written between 1994 and 2003 and may well show a particular level of writing ability. However, whilst all of these documents, as she suggests, may well show the same level of writing **between one another**, they bear no relevance to whether or not there could have been a change in his writing style over the preceding 14+ years.
78. There also seems to be an illogical argument that if changes occurred they would appear in **all** of the Exemplars which span the period 1994 to 2003. Why should this be the case? If Diab's health in one way or another deteriorated, say, in the year 2000 causing changes in handwriting, such changes may not be seen in 'all' of the comparison material which covers the following 9 years. The changes may have only lasted for a year. Similarly, it could be that, for instance, in 1989 Diab's handwriting deteriorated for one reason or another any by 1993 it was improving and by 1996 it was greatly improved. Consequently, not 'all' of the writings would show the same feature. This is the obvious reasoning behind why one needs to see the writing capability of the suspect at the time of writing of the document in question.
79. The comments with regard to the suitability of the available comparison material and the questioned document are, in my opinion, ill conceived and illogical. In my opinion, they are, regrettably, apparently self serving, in order to wholly justify the use of outdated materials for this comparison process. However, it **could be the case** that Diab's writing has not changed in any way over the 14+ year period in which case the material may be used. There is no consideration on this point of the alternatives by Madame Bisotti as her statements are, effectively, pure speculation as to his writing capability, his writing form and mode of execution of writing

generally 14+ years earlier.

### Technical Review of 'II – 2 - QUESTIONED DOCUMENTS' – Page 15

80. Madame Bisotti indicates that the ink has dispersed in the fibres of the paper due to the application of fingerprint solution and that the quality of writing is low. She then makes the statement, in emphasis, ***'However, the fact that the writing shows no sign of disguise makes it possible to consider it useable in the handwriting comparison'***.
81. Quite how Madame Bisotti identifies that there are no elements of disguise present is not stated in her report. On considering the copy in her report of the document in question (Annexe 5), one can see there is a degree of inconsistency of execution, poor alignment, variable slope, unusual letter designs (the 'N' of PANADRIYU), the word 'technician' written in a highly disjointed fashion not adhering to the baseline etc. All these features could well, in my opinion, potentially suggest disguise. Wilson R Harrison<sup>11</sup> in his chapter on '*Recognition of Disguise*' draws together a number of characteristics of disguise with six main sub chapter headings. His first point is: '*Most Disguise is Relatively Simple in Nature*' and he states '*The primary reason for essential simplicity of most disguises stems from the manner in which everyone, with the exception of the document examiner, identifies a familiar handwriting. The recognition is at a glance, and is based upon an awareness of the "general pictorial effect" of a familiar handwriting. As previously pointed out, this general pictorial effect is almost entirely a function of a few features such as slope, shading, fluency and rhythm, coupled with some of the more obvious features in letter design. Any deliberate marked change in any of these features, particularly an alteration in slope, will have a profound effect upon the appearance of the handwriting*'.
82. Harrison continues with his second heading and indicates that: '*Disguised Handwriting Exhibits Less Fluency and Poor Rhythm than the Normal Hand*'. The writing in question, in my opinion, cannot be regarded as being of good quality or consistent rhythm, especially the disjointed, ill spaced and basic structuring of the word 'technician' etc. This writing is typical of many disguised hands.
83. The third heading Harrison identifies as: '*Any Change in Slope Introduced as Disguise is Rarely Constant*'. Variable slope of letter is seen in the questioned material.
84. The fourth heading Harrison identifies is: '*A Disguised Handwriting often Contains Altered Letter Designs*'. With reference to the questioned document shown in Annexe 5, one can see what is a clearly elaborated form of 'N' in the surname. This letter is of an unusual nature starting well below the writing baseline with an **upstroke** with no preceding downstroke. This appears unconventional, possibly,

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<sup>11</sup> Harrison, W.R., *Suspect Documents – Their Scientific Examination*, Sweet & Maxwell, 2<sup>nd</sup> Imp., 1966, pp 350-354

unnatural. Compare this with the more controlled form of 'N' in the word 'LARNACA' i.e. there appears to be two significantly different forms of this letter (or possibly alterations), a lack of consistency, albeit both start with an upstroke.

85. The fifth heading Harrison identifies is that: *'The Internal Consistency of Handwriting is Disturbed by the Introduction of Disguise'*. I have already referred to poor alignment, change in slope, poor spacing etc as found in the questioned writing.
86. It therefore appears that many of these attributes which are found in the questioned writings on the hotel registration form fall within the categories described by Harrison. Consequently, to suggest there is *'no sign of disguise and therefore makes it possible to consider using in the handwriting comparison'* appears, again, to be a somewhat self serving justification. How would Madame Bisotti identify disguised handwriting other than writing obviously heavily disguised which might be in the most bizarre or scrawled fashion? Not all disguises are of that magnitude. The statement that there are no signs of disguise is, in my opinion, therefore controversial and brings to mind the quotation of Harrison<sup>12</sup>, in which he indicates: *'The identification of handwriting embodying even the simplest consistent disguise is certain to present the document examiner with a stern test of his skill, and it should be made clear from the outset that any who guarantees to penetrate the disguise of every specimen of disguised writing which might be submitted to him is suffering from self deception'*. In my opinion, Harrison is effectively saying that one cannot necessarily identify what elements are likely to be disguised and what elements are not. In this particular case, there is a situation where many of the commonly encountered features of disguise could be deemed as being present in the hotel registration form handwriting. How does one therefore prove that any particular feature (especially those incorporated in Harrison's points) are the result of a natural writing process as opposed to disguise?
87. Page 15 continues with Madame Bisotti indicating: *'As for the exhibit SIXTEEN, the fingerprint examination was conducted at the laboratory and thus the record was digitised at 600 dpi before the chemical treatment so that the questioned signature could **eventually be used**'* (my emphasis). Again, this appears to be a very strange procedure in that the original document was available and it was scanned **before examination** and the resultant scan then used for the comparison process. When examining a complex signature as appears on this interview note, features such as the structure of the letterforms, evidence of subtle pen lifts etc should **always** be examined prior to fingerprinting as the ninhydrin chemical can cause a variety of problems and diffusion of the ink (as seen on the hotel record form). Detail of written lines can merge, can be obscured whilst at the same time impressions in the paper, once 'wetted' with the reagent, may relax the paper i.e. the fibres of grooves become less compressed and indeed, on occasions, can disappear altogether. If the original document was available, why was there no

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<sup>12</sup> Harrison, W.R., *Suspect Documents – Their Scientific Examination*, Sweet & Maxwell, 2<sup>nd</sup> Imp., 1966, pp 349-350

examination of this unadulterated signature prior to fingerprinting to ensure that the correct sequence and direction of strokes could be confirmed? The correct organisation of the sequence of such procedures should be known by the laboratory and adopted as standard, proper practice. The use of a scanned image again has to be regarded as very second grade material in this regard.

#### **SUMMARY OF COMMENTS CONCERNING THE METHODOLOGY OUTLINED BY MADAME BISOTTI**

88. I am frankly alarmed to find so many statements and assertions, baseless and illogical arguments coupled with generalisations presented as facts, many of which contradict the conventionally accepted axioms of the profession, to be present in this report. Just to summarise the main points, I would take issue with regard to the features previously described as follows:
89. (i) The use of a 'unique feature' which **alone** will identify an individual.
90. (ii) The **absence** of a unique feature to show identity to **eliminate** an individual.
91. (iii) The 'numbers' concept that if one has more similarities than differences, it will be possible to identify the writer.
92. (iv) The statement that '*some writers*' write identically on different occasions.
93. (v) The generalisation that the speed of writing is associated with the level of education.
94. (vi) The statement that Diab's '*handwriting and signature would not have changed much*' over a 15 year period of time.
95. (vii) The proposition that passing years would '*only*' result in smoother and more defined strokes in a writer.
96. (viii) The illogical argument, that if there were changes in the writing they would appear in **all** of the comparison documents.
97. (ix) The statement that there is no sign of disguise in the questioned writing which **potentially** flies in the face of basic observations.
98. The list is extensive. Any **one** of the above features would give, in my opinion, cause for concern but the sheer enormity of the numbers and combination of these issues leads me to the opinion that the basic principles and methodology adopted by Madame Bisotti are wholly flawed and if these are the basis of her work in this case, it is wholly discredited.

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**Technical Review of 'STUDY OF THE EXEMPLARS FROM THE IMMIGRATION FILE' – Page 16**

99. Madame Bisotti indicates that the writings on pages 7, 13 and 14 were taken as the reference material '*... because according to the Expert Commissioning Order, they are attributed to Hassan Diab.*'. From previous experience in this case, this is not necessarily a good idea to assume those instructing you know the absolute truth and it is **always** a good practice to intercompare **all** reference materials to ensure that the expert is satisfied that these are, indeed, in one hand. However, these three documents have been taken as the known writings and compared directly against the other Exemplars in the immigration file presented.
100. I have considered at great length the methodology used as without good methodology and a good appreciation of the principles of handwriting comparison, the practical observations may be of a lessened significance than thought or in error. The following portion of Madame Bisotti's report deals with the intercomparison of the Exemplar writings in the Immigration file where she expands on the 62 different elements which she has intercompared and the application of her methodology can be assessed.
101. She details at length her considerations on each letterform present and what she perceives as the identifying characteristics of each letter when compared. I do not intend going through each of these at great length. To do so would be an exceeding long and probably unnecessary task. However, I consider Madame Bisotti's treatment of the intercomparisons of the letterforms within the Exemplars to be superficial. I will detail, as an example, a few of the initial instances where I consider her comparisons are lacking in substance and thoroughness and will comment on the type of features she has ignored or not appreciated. Consequently, I would comment as follows.
102. Many of the points Madame Bisotti makes are quite correct in their observation of similarities between the documents but, for the main, they are to be regarded as extremely basic elements of the letterforms which, in some cases, are class characteristics (features which are found common to a vast number of individuals handwritings) as opposed to personalised characteristics (which are significant developments by the individual away from the 'taught hand'). The latter category of features is of far greater significance in assessing identification or elimination rather than the features which are found within a large selection of the population as a whole. Any examination based on class characteristics must be regarded as very limited as these may be related to the 'height and weight' identification feature of the individual in the analogy previously used at page 13 as opposed to 'scars' etc which are of a far more personalised nature and correlate to the more intricate, subtle features of a writing.
103. I will therefore comment briefly on a number of the examples given highlighting the nature of the similarities she details and the nature of the evidence she has ignored or not noted.

104. I now refer to Madame Bisotti's points on pages 16 o 19 which can be considered in conjunction with her illustrations produced in Annexe 11. This Annexe shows numbered arrows pointing to the various features which are the 62 points of similarity between Exemplars. I have experienced considerable difficulty in looking at all of the illustrations given in that the conventional way (based on experience of handwriting charts from many countries) of doing such comparisons is not the flipping between pages of the report but producing a chart showing words and phrases side by side on the differing documents concerned. In this way, a direct comparison can be made and the similarities and differences are more easily recognised and appreciated by the reader. For that reason, I will refer, where necessary, to the various charts produced by Brian Lindblom which do show side by side comparisons.
105. The first four points she mentions are general points which are accepted. In point 5, on page 16, Madame Bisotti emphasises as: '*This is a significant identifying factor*' when referring to slope variation. Quite why this should be the case is not elaborated upon. In my experience, I find that individuals with a relatively low level of writing skill (as in the writing in question and in the Exemplar writings said to be written by Hassan Diab) this particular feature is not unusual. In my experience, it is fairly common especially in individuals who may have English as their second language and have had to learn the basics of the Roman alphabet further to the learning of the alphabet of their native scripts. This point is again reiterated on page 19 under the heading of: '*1 – 2 – Comparison of the Writing on the Original Pages 1, 5, 6, 8 to 12, 19, 21 and 23*' where Madame Bisotti indicates '*The graphic characteristics of the reference Exemplar writing, including the significant identifying factors (characteristics 5 and 8) are described when they are assessable in the writing of each comparison page*'. It is as if Madame Bisotti is, as I have previously indicated, suggesting there are only '*two **significant identifying factors***', the rest being, presumably, not particularly significant so as to warrant emphasis. She seems therefore to be relying heavily on these two points, the first of which, the slope, I find it difficult to appreciate as being a notably significant factor for identification purposes. Why should this be so significant? She does not explain the basis of this point.
106. It is accepted that the slope of letters in the questioned material does vary considerably. It is also accepted that **some elements** of the Exemplars also show differences in slope. However, Madame Bisotti's point 5 represents the variability of slopes and I would query (i) the accuracy with which many of these lines have been drawn (ii) the wisdom of the choices of letterforms concerned and (iii) her method of determining slope. Consider firstly, the words 'about' shown on page 7 of Annexe 10 (without numbers, arrows etc) and page 7 of Annexe 11, showing arrows etc, as shown below. (Note: the difference in size of the marked up photocopy of Appendix 11 as opposed to the unmarked copy from Appendix 10 is the result of these two sets of Annexes being of different magnifications and I have made no adjustment of the size to make them equal).

about

5  
about

107. It will be seen from the above that the line going supposedly through the downstroke of the 'b' is wholly incorrectly positioned, the red line leaning far over to the right than the downstroke of the actual written letterform. One can see an angle between them. I would also question the wisdom of trying to draw a straight line through the 't' to represent a slope as quite clearly from the unmarked up copy, it can be seen that this downstroke is in fact, quite curved. Madame Bisotti has drawn a near vertical red line showing the slope, as judged by herself, although the position of this red line on the writing baseline at the foot of the downstroke seems somewhat arbitrary. If one drew a tangent at the mid point of this curve, it would lean slightly rightwards, higher up the stem and it would lean backwards. Draw the line further down the curve and the slope line will lean to the right. Why should it be positioned as shown above in a very subjective decision? What is the logic of this choice?
108. I would again question the accuracy of the alignment of the red line in the word 'SMITH' where again the red line going through 'l' is backwards leaning whereas from the unmarked up copy clearly this can be seen to be slightly forward leaning.

SMITH

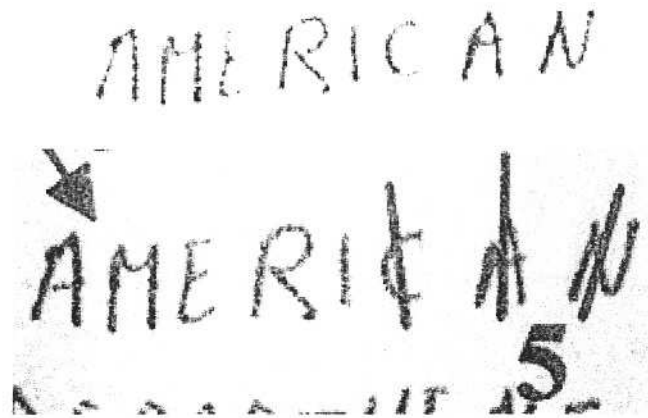
5  
SMITH

109. The above, in my opinion, clearly indicates inaccuracies if these are, indeed, what Madame Bisotti may have used in assessing the situation. Alternatively, they are

poorly made illustrations which are not in keeping with an expert report.

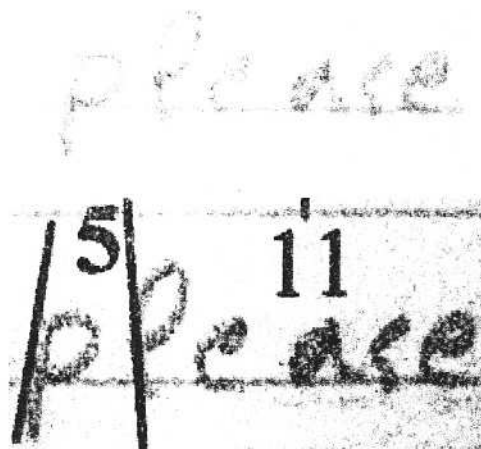
110. Further examples are shown below as some of the illustrations appear to be fairly groundless in their basis of selection which is not a good reflection on Madame Bisotti's methodology.

111. The illustration in the word 'AMERICAN' is again concerning as shown below.



112. She appears to have arbitrarily drawn a back sloping red line through undefined portions of the curved 'C'. What can the justification for this line be? Indeed, I would query whether there is any justification for ever trying to determine the slope of a 'C' especially, as occurs in this case, one which is a near semi circle. It appears to be an arbitrary line drawn through two points on the circumference of the 'C' which are wholly random.

113. I find this a quite unacceptable and poor practice. The same comment applies to the rather arbitrary line through the downstroke of the very looped 'l' of 'Please' as shown in illustration on page 12 of Annexe 11.

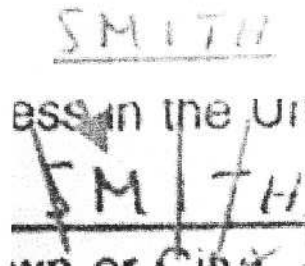


114. Again, this line appears to be a relatively arbitrary selection of not the very bottom of the 'l' downstroke but a slightly upward portion of that. Why not draw the slope



line at a tangent to the centre of the curving downstroke or through the ellipse axis? Indeed, why produce this random slope line utilising this curved letter? One cannot define where a slope of a curve is generally as the slope continually changes along its length. To try and do so in such a random fashion is, again, in my view very questionable methodology and not good practice. There are other letter illustrations that could be made on a reliable and far less subjective basis but not apparently appreciated by Madame Bisotti.

115. Madame Bisotti's method of slope measurement and illustration is again highly suspect concerning the illustration on page 11 of Appendix 11, shown below.



116. It can be seen that the lines running through the 'I' and the 'T' showing difference in slope are reasonably drawn. However, one has to query how the slope line through 'S' has been selected. What is the basis of joining the left hand side of the top portion to the centre of the downstroke? This is not a logical selection. It may well be that the drawn slope line was supposed to go along the relatively straight diagonal. If this is the case, however, this makes no sense as clearly this is a **diagonal line in the letter construction** but the slope alignment of the **letter as a whole** would be, I would suggest, a near vertical line through the centre top bar of the letter and through the centre bottom bar of the letter **if** one really had to use this letter. One could liken this selection of slope line to taking the diagonal of an 'N' to represent the letter slope.

117. I would also comment on the way in which Madame Bisotti appears to use drawn slope lines through ovals. Consider the word 'NICOSIA' shown below. She attempts to draw a slope through the oval of the 'O' of NICOSIA but again, in the unmarked version the **axis** of the ellipse of that letterform appears to be sloping significantly to the right. The drawn in version shows a vertical line. I have no objection to the main axis of such an ellipse being used in this type of consideration but it has to be the true axis of the ellipse which, in my opinion, is, in fact, near parallel to the red slope line running through the 'N', contrary to the object of her illustration.



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118. I would wish to make it clear that I am not disagreeing with Madame Bisotti that the Exemplars do show a wide range of slope variation (as does the questioned writing), it is, in the above cases, more by way of criticism of her accuracy, or lack of the same and also the wisdom of the choice of examples which must represent her cognitive process in the examination procedure and its application.
119. In summary, on this '*significant*' point as Madame Bisotti describes it, if the above illustrations are representative of her methodology of determining slope, the arbitrary way in which certain strokes are drawn in (not to mention the accuracy of the same) appears to lack logic in their selection and are not regarded as being in keeping, in my opinion, with conventional practice in this field. They do not appear to be reasonable interpretations of slope determination in many cases. The worrying feature is there are far better examples that could have been taken which would not be controversial had she applied the more universally adopted system of drawing slope lines through straight lines as opposed to arbitrarily fitting a line to a slope which is bound to be highly subjective. Clearly, Madame Bisotti does not appear to appreciate this. However, she appears to adopt what I regard to be, in some cases, an unconventional and unacceptable methodology in this regard.
120. Points 6 and 7 on page 16 are again general points which would apply to a large section of the population as a whole who are not particularly skilled in writing.
121. Point 8 on page 17 of her report, Madame Bisotti indicates: '*The characters reveal, particularly on the stems, twists, tremors and dented patterns. Angular breaks appear in curved strokes and bowls. The ovals may thus be triangular. This is a significant identifying factor*'. (Madame Bisotti's emphasis.) By the 'stems' I believe Madame Bisotti to mean downstrokes. I take the 'twists' to mean slight bends in the line as illustrated, for instance, at D4 (7) of the Lindblom chart – 'Bisotti – Feature 8'.
122. Clearly, in the examples given in Madame Bisotti's illustrations of Annexe 11, there are some where lines do appear to bend on the downstroke [D4 (1), D4 (7), D4 (10) and D4 (11)] although it is not entirely clear to what she is referring in some of the other arrowed point 8 features. There are clearly some elements showing tremor as seen in D4 (5), and left hand illustration of D4 (19).
123. I do not understand what the reference in the report to 'angular breaks' that appear in curved strokes and bowls would be and I wonder whether the translation is deficient. Certainly in the Lindblom chart, D4 (13), D4 (14) and D4 (23) are angular **bends**. However, I cannot understand what some of the other illustrations shown are said to represent e.g. the end of the right hand end of the 'T' bar in D4 (8), the '3 o'clock' position in the bowl of the numeral '6' of D4 (9), left hand end of the 'T' bar in D4 (11), the same in D4 (19). I note D4 (19) has a black dot towards the end of the 'T' bar to which the arrow vaguely points and seems to be referring. However, this is what is referred to as a 'goop' i.e. a blot (almost invariably appearing after a turn of a stroke). This is not a function of the writer but the pen.

124. Without sight of the originals or at least the scans, it is difficult to assess the position but the illustrations do not clearly show what Madame Bisotti is referring to in these cases. This is an unfortunate position as she has stressed the importance of this factor. I would also query whether, like the goop referred to above, Madame Bisotti is, in fact, referring to features which are the result of a malfunctioning pen – especially where she suggests there are ‘dented patterns’. Often ballpens will not deposit a solid band of ink along the paper and where the ink is missing (referred to as a ‘skip’ or an accumulation of burr striations) the line forms can become distorted. The general visual impression of a smooth line of poor ink application can therefore sometimes appear ‘dented’. This is, effectively, the only way in which a ‘dent’ can be produced in what is the relatively thin width of an inkstroke. One cannot deliberately draw a ‘dent’ so small. In these situations, clearly this is the **pen, not the writer**, which is responsible for such appearances. As such, these features, in this context, cannot be regarded as significant.
125. This second ‘significant’ point referred to by Madame Bisotti, feature 8, **could** be significant and I would agree that **if** features such as consistent tremor or repeated tremor in certain strokes are seen, this has to be a personalised feature. However, one has to consider the nature of what her illustrations are. This will be referred to later. Some features, as illustrated in the Lindblom chart of figure 8, may well be the result of tremor, some possibly pen malfunctions whilst many points that are arrowed by Madame Bisotti do not seem to show any particular point of significance. One also has to bear in mind what other characteristics can cause aberrations in inklines or apparent aberrations in inklines. For instance, some individuals may write on the desk in their house. Consider the position where one has a raised wooden surface for such a desk or the surface has become damaged. This can cause aberrations in inklines as the pen may slightly push through the paper into an underlying rut in the grain of the wood or hole causing a deflection of the pen line.
126. Consider the position where one may be writing on a document with another sheet of paper beneath. If the paper beneath is not aligned with all four edges of the top document, the edge of the paper (or it could be several sheets of paper) may be positioned so that the writing on the top sheet eventually ‘bounces over’ the edge of the underlying pages thereby causing an aberration in the pen line being written.
127. Aberrations can also be found on a microscopic basis when, for instance, the pen may hit a small lump of grit causing a deflection of the normal line stroke. Other apparent aberrations can be seen when a letter is retouched i.e. the writer, for instance, goes back to correct or add to a letter structure.
128. Consequently, a **single** aberration in a body of writing has to be regarded with some suspicion unless the cause can be clearly identified. Repeated aberrations or repeated tremor (especially when associated with strokes in a particular direction) may be of great assistance in an identification/elimination process.

129. Madame Bisotti continues on page 19, penultimate paragraph and indicates: *'Furthermore, to the extent of the graphic characteristic 8 is seen in the group of questioned documents, we can consider it with certitude as a significant identifying factor in the Exemplars'*. The reason for the reference to *'the **group** of questioned documents'* is unclear. If the graphic features of characteristic 8 are indeed, seen repeatedly in the questioned material and are attributable to a specific cause, they would be regarded as personalised characteristics resulting from some form of tremor or repeated deviation of line form (possibly due to ill health). In this case they certainly would be of considerable value in associating all the writings one with another. However, what if a single feature referred to is, in fact, not the result of the pen movement of the writer but due to a single aberration in the questioned document possibly as the result of, for example, ink flow problems? What is the significance of that? What if the feature is the result of an external influence – poor writing surface or paper beneath that being written in? Clearly the answer, in that these cases, is the evidential value is zero.
130. What Madame Bisotti appears to be saying, as quoted above, is that when she finds a feature in the known writings also found in the questioned material, **it has to be significant**. This is not logical unless it is a **personalised writing characteristic of the individual concerned** and not the result of other possibly external factors, such as malfunctioning pens
131. Moving on in Madame Bisotti's report to her discussion of letter structures on page 17, I shall now refer to various points raised demonstrating the nature of the class characteristics of the letters and structures she appears to use as opposed to the personalised characteristics which may be of more significance for identification/elimination purposes.
132. Points 9 and 10 are generally agreed although the hooks on initial internal strokes (point 9) are described as 'frequently drawn'. I would query the nature of the word 'drawn' as these are drag lines which are generally **accidental markings** as the pen is imprecisely applied/lifted from the paper and not what might be interpreted as deliberate drawing of an element.
133. At point 11, Madame Bisotti states: *'The narrow frame of the 'A' is pointed; its convex right stem is disconnected from the cross bar. The left stem is rectilinear'*. This is a **very general description**, in expert terms, of this letterform. She makes no comment on, for instance, how the pen hits the paper at the production of the initial downstroke i.e. a static or dynamic start. There is no comment on the relative length of the downstroke and the following upstroke. Conventionally, they would be expected to be of equal height but in practice, individuals change the proportioning of these elements – a personalised characteristic. There is no comment concerning the variable angle or retrace of the initial downstroke and the following upstroke. She makes no mention of how the pen lifts off the paper from the right hand downstroke – was the pen moving or static when lifted from the paper? No mention is made of the relative position of the crossbar to the overall height of the letter i.e. is it low, in the middle or up towards the apex? There is no comment as to

where the pen touches the paper at the start of the cross stroke – is it in the middle of the initial downstroke, to the left or the right of the same? There is no mention of how far the bar projects to the right – does it reach the right hand downstroke or pierce through to the right hand side of the downstroke or does it fall short of the right hand downstroke? There is no mention of variability of pen pressure within the writing. There is no mention of the range of variation of all the above features, which forms the basis of any handwriting/signature comparison process and has to be considered for **every** letterform etc.

134. The above features that I have mentioned are the **personalised** writing characteristics of the structure of this letter. They are a combination of how **this individual** writes these particular letterforms as opposed to merely indicating the apex is pointed, the right stem is convex and the crossbar is a separate stroke. That is a series of general **class** characteristics which apply to the writings of this letterform by a huge percentage of the population as a whole.
135. At point 12 she refers to '*The triangular bowls of the 'B' are linked. The commissure is angular, flared and does not meet the stem*'. Again, a very basic consideration of features between these letterforms on the documents in this regard. I am unsure as to why she suggests the bowls are 'triangular'. There are some examples of this but many examples where they are well rounded. I am unclear what a commissure is but assume that is the initial downstroke and upstroke. There is no description as previously discussed above, as to the more personalised features of the writing such as (i) the way the pen hits the paper, (ii) the relative size of the downstroke and following upstrokes, (iii) no mention of the relative degrees of curvature of the upper bowl and lower bowl, (iv) no discussion of the shape of the stroke that joins the upper bowl to the lower bowl (slightly curved/retraced, angular for instance), (v) no comment on the direction of the axis of the upper bowl and lower bowl, (vi) no mention of the proportioning of the various elements of the letterforms (e.g. does the lower bowl project to the right more than the top bowl?), (vii) no comment on the variation of pen pressure etc, etc. Again, it appears Madame Bisotti is taking a very basic and generalised look at the shapes of letterforms and not the fine personalised characteristics which, in accumulation, is likely to identify or eliminate common authorship.
136. She continues at point 13 and indicates '*The back of the 'C' is not very round; its terminal stroke is rectilinear*.' There is no discussion of the curvature of the stroke other than 'not very round'. The level of curvature is consistent in most cases and no comment is made of that. There is no comment concerning the positions of the relative positions of the start and the terminal (rather like an 'L' on occasions). No mention is made of any introductory small hook to the 'C', no mention of the variation of pen pressure or how the pen hits the paper and lifts of the paper (a long tapering stroke usually indicating a dynamic lift). No mention is made of the relative size of this letter to the surrounding letterforms etc.
137. At point 14 she indicates: '*The bowl of the 'D' is rounded (a) or triangular (b)*'. No mention is made of the relative height to width proportioning, no mention of the

relative height of the initial downstroke to the overall letter heights, no mention made of whether the ends of the bowl just touch or extend to the left of the downstroke etc, no mention of the way the pen hits the paper or lifts from the paper, no mention of the direction in which the axis of the curved portion or alternatively, the direction of the 'triangular' portion, points, no mention of the proportions of heights to width etc.

138. At point 15 she indicates: *'The stem of the 'E' is very slanted and is linked to its lower arm; its middle arm and upper arms are added; its lower bar is concave and rises upwards'*. One of the most essential features of examining block capital lettering is that the **sequence** in which strokes are produced, for instance 'E', 'H', 'I' (when written with bars at head and foot), 'J', 'T' and 'X' can be of critical importance. These are features which rarely change in an individual's writing even over a very long period of time. They are also unlikely to be disguised as they are produced by an unthinking reflex action. Generally, establishing the sequence of features such as the bars of the 'E' would be one of the very first exercises undertaken with regard to the consideration of this letterform yet there is no mention of the sequence of strokes. This feature when coupled with others so easily helps to **eliminate** writers of different texts. I also note with regard to the other letterforms referred to above that no reference to sequence is made. Similarly, no reference in paragraph 15 (on page 17 of the Report) is made as to the relative proportions of the letter (height to width); relative length of the bars of the 'E', does the central bar touch the initial downstroke and similarly, does the top bar touch the downstroke, is the juncture of top bar and downstroke exactly end on end or does the horizontal top stroke attach to the downstroke slightly below the initial position of the downstroke etc?
139. At point 16 Madame Bisotti indicates: *'The upper arm of the 'F' is linked to the stem'*. These considered points are again extremely limited. What are the relative lengths of the two horizontal lines to one another? Is the centre bar touching the initial downstroke? Is the centre bar slightly above the halfway point at the height of the letter or below it etc? What is the height to width proportion? Is the horizontal line made and the pen lifted off the paper in a statical fashion or is it a rising pen action in a dynamic mode producing a tapered ending to the line etc?
140. Rather than reiterate all of these types of above 'class characteristics' comments for each of the points referred to by Madame Bisotti (which indeed is a criticism that can be made of all of her individual points i.e. an inadequacy of detailed consideration), I will comment finally on her description of the 'G'.
141. At point 17 Madame Bisotti indicates: *'The back of the 'G' is not very distinctive; the chin is linked to the curve'*. This surprises me as I thought this was quite a nice letterform being distinctive (as shown over the page) by its proportioning, the relative placement of the horizontal bar, the relative length of the horizontal bar to the remainder of the letter, the differing curvatures for the initial downstroke of the letterform and lower curve, the absence of an introductory stroke to some of these letterforms, the width to height ratio, the relative height from the bottom of the

letterform to the horizontal relative to the overall height of the letterform etc.



Examples of 'G' taken from Annexe 10, page 1

142. The issues raised above covering the first few points raised by Madame Bisotti can generally be applied to the other remaining 62 features she outlines. My comments generally illustrate the basic approach which Madame Bisotti has undertaken as opposed to a consideration of the more personalised and more important aspects of the writing. I consider many of the points that she has considered are likely to be found between the handwritings of any two relatively basic sets of block capital lettering of this general style to some extent. They are principally **class** characteristics, not a significant accumulation of **personalised** features such as the features I have pointed out.
143. At the end of the 62 points, on page 19, Madame Bisotti indicates that: '*This detailed examination of the reference Exemplar writings reveals there is a **strong presumption** that the writer is right handed: the upper part of the 'E', 'T' and 'I' are written from left to right and no left handed or regressive connecting strokes are evident.*' This is reference to the fact that according to Fryd<sup>13</sup>, the original research on the topic of handedness and stroke direction showed approximately 64% of left handers' draw the top bar of a 'T' from right to left, none of the right handers.
144. Franks et al's<sup>14</sup> figures expanded upon the observations of 'T' bar directions and correspond closely with Fryd's figures (Franks 60% right to left 'T' crossbar). She also studied other crossbars of letters made by left handers being in the right to left direction – 'A' crossbar 58%, 'E' centre crossbar right to left 40%, 'J' crossbar right to left 76%, 'H' crossbar right to left 47% etc.
145. I have no specific figures of studies carried out in France on this aspect of stroke direction but I have no reasons for believing these should be substantially different to figures quoted in the two above papers. However, typically with respect to the 'T' bar, a statistic of 60 – 64% of left handed writers writing in this direction means that 36 – 40% of left handers do **not** write in this direction i.e. 36 – 40% of left handed writers write in the left to right direction (the same as virtually all right handed

<sup>13</sup> Fryd, C.F.M., *Medicine Science and the Law*, 1975, Vol 15, No 3 p167

<sup>14</sup> Franks, J.E., et al, *Variability of Stroke Direction between Left and Right handed Writers*, Journal of the Forensic Science Society, 1985, Vol 25, pp 353 - 370

writers). However, Madame Bisotti seems to believe that the **absence** of the left handed stroke equates to: '*a strong presumption that the writer is right handed*'.

146. This, however, effectively equates to the situation where Madame Bisotti can look at the writing of left handed writers to determine if their handedness can be identified and in approximately 60% of the cases, she would be correct. However, in 40% of the cases, **she will be totally wrong**. However, she equates this 60% accuracy figure to a level of a '**strong** presumption' of right handedness. She does not seem to appreciate the basic point that if one sees a right to left stroke this may be regarded as extremely strong evidence to support the proposition this is a left handed writer but draws a totally wrong inference from the **absence** of the right to left stroke which represents approximately 40% misidentification.
147. Regrettably, in Madame Bisotti's report she does not define or elaborate on the meaning of terms such as 'strong' or 'weak' presumptions whereas, certainly in this country, a requirement of an expert's report is to detail the differing levels of opinion and describe in rough terms what the range of opinions the expert uses and what these represent.
148. Generally, there are a variety of terms used worldwide and a variety of scales of confidence used. The actual terminology varies but in very broad terms the following levels of confidence may be used and for illustration purposes, I will show the 13, 7 and 5 point scales frequently adopted.
149. The 'old fashioned' three point scale - conclusive identification, inconclusive and conclusive elimination - has almost universally been discarded now.

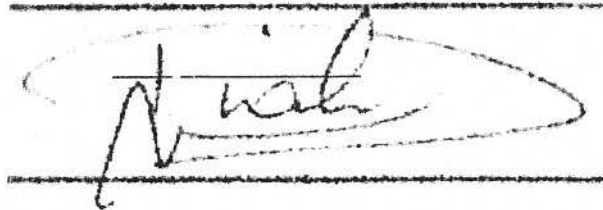
	13 point	7 point	5 point
1	Conclusive evidence of identification	Conclusive	Conclusive
2	Very strong evidence of identification		
3	Strong evidence of identification	Strong	
4	Moderate evidence of identification	Moderate	Moderate
5	Weak evidence of identification		
6	Very weak evidence of identification		
7	Inconclusive		Inconclusive
8	Very weak evidence of different writers	Inconclusive	
9	Weak evidence of different writers		
10	Moderate evidence of different writers		Moderate
11	Strong evidence of different writers	Moderate	
12	Very strong evidence of different writers	Strong	
13	Conclusive evidence of different writers	Conclusive	Conclusive



150. The level for a 'strong' opinion that Madame Bisotti appears to be working on where she may be wrong on 4 occasions out of 10 (in misidentifying a left handed writer). I see no reason why this level of confidence should change when she refers to handwriting identification. She does not indicate whether it does. I would find this wholly and absolutely unacceptable as her opinions could be regarded as only bettering by 10%, a toss of a coin. What level of confidence might one associate with other terms of opinion such as 'moderate', 'weak', 'very weak' etc?

#### Technical Review of 'SIGNATURE COMPARISON' – Page 21

151. The signature comparison commences with three signatures taken from pages 7, 13 and 14 being illustrated on page 20 (report in French) Madame Bisotti indicates how the initial 'D' is produced. She then indicates: *'The hooked initial stroke and that of the terminal stroke of (P) are located to the left of (H)'*. (My emphasis.) However, looking at 13, the terminal stroke of 'P' does not appear to be on the left of the initial downstroke, it is either immediately below it or slightly to the right.



152. She continues with the second bullet point on page 21 and again makes a statement which is demonstrably not correct. She indicates that: *'the 'i' is formed without an initial stroke and its summit is above the top of the oval of the 'a' to which it is attached.'* (my emphasis). This is not correct with regard to 13 where the 'a' is very fractionally above the 'i' or level with the same, not higher.
153. She continues and describes the remainder of the signature with reference to her diagram. She appears to be taking the portion which might be best described as that following the anticlockwise bowl of the 'b' as shown in her diagram (i.e. the downward stroke curving into the horizontal 'underlying stroke' and terminal zigzag) as being a further personalisation of the signature. I have been instructed that this is a second part of the signature which represents the name 'Hassan'. On checking with my Arabic translator, she has identified those strokes as being legible as 'Hassan' and therefore Diab writes his name in the format of 'Diab Hassan' incorporating both the Roman alphabet and the Arabic. From my experience of previous casework, the combination of these two forms of differing alphabets is not particularly unusual and I have encountered it on a number of cases with individuals whose first language writing is in another alphabet.
154. Madame Bisotti also points out that: *'The 'i' is pointed'* which I assume to mean that it has a dot. This is the conventional design of an 'i'. She does not mention its relative position, its placement above or to the right or the left of the downstroke of

the 'i', whether it a discrete dot or whether the pen hits the paper from a direction and terminates with the dot. She does not mention how far above the downstroke of the 'i' the dot appears etc. She ignores the personalised characteristics of this feature.

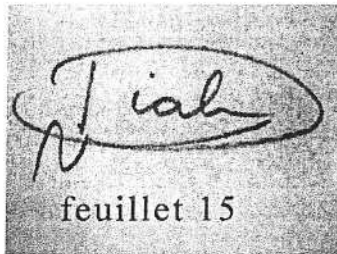
155. She then identifies six '*constructions that are stable*'. I consider the term 'stable' is to define a feature which is constant and therefore of value in identification purposes and assume that this is the meaning she wishes to convey. However, as indicated above one of her 'stable points' is that the initial and terminal strokes of (P) - the curve, are left of (H) - the downstroke, which is clearly not the case in one of the three examples to which she is referring. She also states with regard to these three signatures that one of the stable points is that there are: '*two pen lifts are made systematically: the first one between the stroke of the (H) and the stroke of the (P) and the second one between the oval and the tail of the 'a'.*' Again, this is demonstrably incorrect if one looks at the signature of 7 where there is no pen lift but the 'i' joins into the 'a' and the exit stroke from the 'a' to the 'b' is formed as continuous loop as shown below. There is no pen lift yet Madame Bisotti is recording it as being one of the 'stable points' when dealing with only these three signatures.



156. On page 22 she then continues with: '*1 - 2 - Comparison with the Signatures on the Original pages 1, 6, 9, 10, 11, 12, 15, 16, 18, 20, 21 and 22*', see French Report page 21 for reproductions of these signatures.
157. She illustrates the 12 signatures concerned and states: '*All of the signatures on these pages **fall within the natural variations** of the reference comparison signatures and the **stable elements of construction are retained***'. (My emphasis.) I assume that the 'reference comparison signatures' are those previously described on pages 7, 13 and 14.
158. I find this an incredible statement in that very clearly and very demonstrably, many of these signatures show elements which are **not** as described in the 'stable' category.
159. Consider what Madame Bisotti identifies as being 'stable' and which signatures clearly do not comply i.e. are outside the range of variation previously defined. Her points are:
160. (i) '*The bowl of the 'D' encircles the 'iab' group*' - agreed.

- 
161. (ii) *'The terminal stroke of (Z) (terminal zigzag of underlying stroke) is the lowest point of the signature'*. This is not the case with regard to signature 22. (It may be also noted that Madame Bisotti appears to have truncated signature 9 where the zigzag elements are present but have been cut off at the end of this signature in the illustration on page 22.)
162. (iii) *'The initial and terminal strokes of the (P) are **left** of (H)'*. This is demonstrably not the case in signatures not 1, 6, 9, 10, 11, 12, 20, 21, (representing 75% of the signatures) some of which are significantly to the right of the initial downstroke.
163. (iv) *'Considerable spaces left between the (H)- the downstroke and "i" – agreed, with the possible exception of 22.*
164. (vi) *'Two pen lifts are made systematically: the first one between the stroke of the (H) and the stroke of the (P)' – agreed, and the second one between the oval and the tail of the 'a'*. There are a variety of signatures where clearly this is demonstrably **not** the case – 1, 15, 18 and 22.
165. (vii) *'The large and slanted loop of the 'b' has an ascending and concave terminal stroke'*. I am not entirely clear as to precisely what is being suggested by the indication that the 'b' has an ascending and concave terminal stroke. I assume these relate to where the downstroke of the 'b' curves upwards (the ascending stroke) and then either slopes downwards in very general terms. I assume this comment concerning the terminal is not the terminal underlining stroke to the signature. However, looking at the sample, signature 1 does not have any form of ascending lines that produce a cup shape at the end of the 'b' so this is not in compliance with the 'stable feature' suggestion. Similarly signatures 1 and 21 do not have descending strokes. No mention is made of the variety of descending strokes which may be very shallow (signature 15) or almost vertical (signature 11).
166. No 'stable features' are recorded with regard to the right to left underlining stroke and terminal zigzag representing 'Hassan' possibly because these show enormous variation in their length, curvatures, nature of the zigzag terminals etc and this portion of the signature is therefore not regarded as being a particularly stable nature. There are, however, certain personalised points of note within this series of strokes which have not been addressed by Madame Bisotti.
167. Madame Bisotti, having demonstrated in her diagrams that these stable features are not, in fact, stable does not then mention a variety of differences that can be noted between some of the very basic structures of letterforms of these signatures. For instance, she has described how the 'a' is *'created in a counter clockwise direction and triangular, the oval of the 'a' has knot like opening'*. *Its tail is written after a pen lift'*.

168. I find it extremely surprising that when one looks at signatures such as 15, 18 and 22 the **structures are wholly different**. These letters are formed in what might be regarded as a more conventional style of the joining stroke from the 'i' coming over the top of the 'a', retracing in an anticlockwise direction and the terminal downstroke of the 'a' then produced with no pen lift.



169. This is wholly different to the way that most of the other said Diab signatures are produced with the joining stroke from the 'i' effectively producing a 'u' shape with the pen continuing around in an anticlockwise direction, lifting from the paper and the terminal downstroke and exit to the next letter, then being written.
170. It has to be appreciated that these are **totally and fundamentally different structures** – yet Madame Bisotti has very surprisingly made no mention of them. She also omits any comment that these three signatures coincidentally show the terminal of the curved bowl of the 'D' as being extended significantly (in physical terms) to the left of (H) unlike the other signatures. Similarly, no mention of these three signatures showing a relatively long terminal stroke from what may be regarded as the terminal of the 'b', unlike the other signatures. Looking at 15, 18 and 22, the loop of the 'b' and following strokes could be regarded as akin to a horizontally elongated 'h', this elongation not being seen in any of the other signatures and not seen in the 'reference' signatures to the same extent. Again, it may be noted that the zigzag stroke at the end of the long horizontal underlying stroke in all these three signatures is more of a **curved** down and up and down series of strokes again as opposed to the pronounced angular zigzag exhibited in the other signatures. No mention is made within these three signatures again as a group that the introductory hook to the initial curved portion of the 'D' commences in a near vertical movement in 15 and 22 as opposed to virtually all other Diab signatures where the pen movement is moving towards 10 o'clock (the only exception being number 10 of all the other Diab signatures).
171. Why is there no mention of these features which represent obvious differences especially **as a group**? Why should these three signatures all bear a series of consistent differences with respect to the remainder of the group? There has to be an explanation but no consideration whatsoever of these points has been recorded, if noticed. These are unexplained differences yet no reference to them is made and Madame Bisotti merely makes the categorical statement that: *'It is possible to state that these signatures were written by the same person'*. That is only the case if one totally disregards the differences which, it will be recalled, Osborn points out as being a major source of error. Fundamental differences such as the 'a' structure

cannot be overlooked or discarded without comment, if noticed. If not noticed, can one refer to the examination of these signatures as that of an expert in the field?

172. In my opinion, Madame Bisotti's categorical and unreserved statement flies in the face of the evidence which puts the status of some of these signatures, to say the least, in a very dubious position. I find her approach identifying categorically all of these signatures as being the produce of one individual to clearly show a lack of appreciation or observation of correct procedures and methodology.
173. On page 23, Madame Bisotti indicates in the partial conclusion that all of the writings and signatures in the Immigration File were written by Diab and that: '*all of these writings can be used for the handwriting comparisons*'. Indeed they can be **used** but how effective and how reliable they are is not even considered by her?

#### Technical Review of 'SEALED RECORD NO. SIXTEEN' – Page 27

174. Having commented above on the signatures of Diab, whilst on the subject of the said Diab signatures, I will now jump in the report of Madame Bisotti to the issues raised between the comparison of the said Diab signatures with the signature on item SIXTEEN, exhibit B908.
175. Madame Bisotti on pages 27 and 28 indicates that she has worked towards determining the structure and sequence of the signature on D908 and she indicates there are various techniques that can be used. I note that she refers to ballpens showing certain striation characteristics etc which assist in determining the direction of strokes. That is agreed but I find a worrying misunderstanding of what these striation features are and how they come about. They are extensively used in a number in situations in forensic document examination. However, Madame Bisotti in the fourth paragraph on page 28 indicates: '*Thus, as the pen is used, its ball becomes **worn and changed** creating, in the strokes, characteristic striation*'. That is not correct. Striations appear in a large number of **new** ballpens and this seems to be fairly irrelevant as to their cost of production (which is often incorrectly assumed to equate to quality of product). However, striations are **not** produced by wear, quite the contrary. Striations are also known as 'burr striations' – a burr being an engineering term relating to a rough edge left on a work piece after cutting. Burrs are often produced by the machining of the ball housing (which holds the rotating ball) there being slight jagged edges on the rim of the hole into which the ball fits. The housing is subsequently compressed onto the ball. These tiny burrs effectively scratch the ink from the surface of the ball and as the ball rolls, striations are therefore seen within the ink line as the results of the burrs scratching the ink off the rotating ball. Striations can also be caused by an accumulation of dirt or grit around the junction of the ball housing where again ink is scratched off the ball producing striations. It is not a matter of any element becoming worn down quite the contrary, they are present from the outset of the production process. Madame Bisotti is therefore ill informed on this basic fact which could have significant repercussions in certain casework situations (which do not apply to this case).

176. Madame Bisotti goes into considerable description as to how the structure has been deciphered and I would have a few queries on the same. However, I note that on page 28, bottom diagram, she indicates there are three areas where the pen has lifted from the paper, L1 – L3. L1 and L2 are illustrated on page 27 of the French Report. However, I would query the accuracy of the observations concerning L2 and L3.
177. Firstly, consider L2. This appears to be a relatively poorly inked stroke that rises from bottom left to top right whereupon Madame Bisotti claims there is a pen lift. The pen is then placed back onto the paper at precisely the end point, according to Madame Bisotti, and the following 'C' structure etc written. One might query that in a rapidly scribbled signature such as this why lift the pen from the paper and place it back in **exactly** the same position? Secondly, the photograph of L2 on page 28 of the French Report, in my opinion, does not support the proposition that this is a pen lift. There seems to be a poor application of the ink line on the 'in' stroke which contains a continuous thin white striation running to the tip of the said pen lift/pen reapplication. The photograph does not seem to support the proposition that this is indeed, a pen lift but a supports a proposition of continuous stroke.
178. I note that Madame Bisotti indicates that L3 on page 28 of the French Report is a pen lift, as with L2. However, in the diagrammatic representation on page 29 of the French Report, L2 is represented by a clear break whereas L3 does not appear to be identified as a pen lift but a continuous stroke changing direction. Without magnified photographs, it is difficult for me to comment on this further but again it would seem a very curious feature, in a rapidly executed scribbled signature, for the big curve to be made, the pen lifted at L2, replaced on the paper in the exact same position and the 'C' then being made and the pen lifted again at L3 and then the pen again reapplied in exactly the same position for the right to left downwards stroke that follows.
179. In my experience, most scribbled signatures are produced in a relatively continuous style unless they are being produced as a series of very different sequences of pen movements as in this case with the large inverted 'V' at the commencement and the second large inverted 'V' at the terminal portion of the signature.
180. However, irrespective of whether Madame Bisotti's interpretation is correct, it is the comparisons that she makes on page 30 of the 'Panadriyu' signature with the Diab signatures which is the disturbing factor as she is already comparing two very different forms one with another. I do find this difficult to follow as again, Madame Bisotti has not put illustrations documents side by side. Madame Bisotti indicates that: *'We found the following common: (i) visible twists on the vertical stroke, (ii) pointed form of the frame of the 'A' with curved stems, (iii) the long, slanted loop of (B1) (a) with a concave and upward terminal stroke, forming a cup (b), (iv) the final flourish (PR) in a geometrically inverted alpha (a), written from left to right and descending (b).'*

181. These 'characteristics' are effectively comparing completely different entities,
182. representing totally different names when features picked in isolation are directly compared. However, good methodology dictates that one compares like with like – handwriting with handwriting and signature in one name signatures in the same name.
183. Ellen<sup>15</sup> states, under the heading of 'Like with Like', '*Because each letter has to be compared it is important that all those present in the questioned writings are represented in the known writings*'.
184. Robertson<sup>16</sup> puts the issues more specifically when she is talking of '*Collected Standards (writings that already exist)*.' She states: '**The standards must contain similar words and letter groups.** Comparison cannot be made of dissimilar words and letters or names that have no letters in common'. (Robertson's emphasis). She states more fully in her chapter on Comparison of Signatures<sup>17</sup>, '*... signatures should be compared with signatures and not with narrative writings. It is, however, futile to compare two unlike signatures: for example the names John Dickens and Rudy Barr are not comparable because they contain no common letters or letter groups*' (my emphasis). In this case, Madame Bisotti is comparing Diab in normal script, Hassan (in Arabic) with the signature in the name of Panadriyu - written as a scribble and containing no decipherable conventional letterforms.
185. I can neither see the logic nor the justification of this type of comparison. Madame Bisotti appears to be suggesting that Diab, in an effort to disguise his signature has written the Panadriyu signature, effectively beginning with (i) an 'A', followed by (ii) a 'b', followed by (iii) the 'ah' of the Arabic form of Hassan followed by (iv) another but partial 'A'.
186. Additionally, consider some of her points individually – as seen on page 30 of the French Report, visible twists on the vertical stroke – enumerated '1'. There is an arrow pointing to a slight bend in a clockwise direction in the downstroke of the second pen movement of the 'A' type structure. Unless one writes with **exactly** straight lines, they will bend in one direction or the other. How many people would write **exactly** straight lines? I would suggest extremely few when writing an apparently rapid signature of these physical dimensions when doing a series of up/down strokes. (It is of interest to note that the signature of 'L'Inspecteur Principal' alongside the questioned document also appears to show twists on vertical strokes).
187. The second point suggests that the 'A' is pointed with curved stems. I would suggest a significant percentage of the population as a whole does an 'A' with a point and with curved and not straight stems.

<sup>15</sup> Ellen, D., *The Scientific Examination of Documents – Methods and Techniques*, 2<sup>nd</sup> Edition, 1997, Taylor & Francis, p 64

<sup>16</sup> Robertson, E.W., *Fundamentals of Document Examination*, 1991, Nelson-Hall Inc, p77

<sup>17</sup> Robertson, E.W., *Fundamentals of Document Examination*, 1991, Nelson-Hall Inc, p88

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188. With regard to the long slanting loop, again a significant percentage of the population as a whole incorporate loops, especially into the 'l', 'h', 'b', 'd', etc. Indeed, if one looks at the signature of 'L'Inspecteur Principal', there is again a loop at the top of that 'A' type structure.
189. The long loop followed by the 'cup' formation referred to at point 3 on page 30 is the result of the initial loop being followed by a second loop (no pen lift at L2 as suggested by Madame Bisotti). This, again, is the most basic of crude structures and well within the capability of a significant percentage of the population as a whole.
190. The final pen movement of the slightly rising stroke to 'L3', stop and retrace downwards again is an extremely basic pen movement well within the capability of a significant proportion of the population as a whole. Also note that the signature of 'L'Inspecteur Principal' also seems to have (albeit very foreshortened) a similar pen movement at the end of his/her signature.
191. The fact that the Inspector's signature bears three features which could very broadly be correlated with the Panadriyu signature could be pointed out, as in the methodology of Madame Bisotti, as being evidence supportive of a suggestion that both of these signatures were in fact written by one individual. If one wish to take the matter further one could also point out that the Inspector's signature shows a downstroke after what appears to be an 'A' apex which is of almost vertical slope, very similar to the downstroke of the first 'A' of the Panadriyu questioned signature. This is also curved with a very similar degree of curvature to that in the Panadriyu signature downstroke. Also note that if the Inspector's signature incorporates an 'A', the proportions of the length of the left upstroke and right downstroke are again very similar to those of the Panadriyu questioned signature. Thus with five features of similarity between the Inspector's signature and the Panadriyu signature (as opposed to the four similarities with Diab's writing and Panadriyu's signature), it could be argued, using Madame Bisotti's principles, that this correlation of detail could point to the Inspector being the writer of the questioned signature. However, this is obviously absurd but the facts of the matter are, I can find similarities between the Inspector's signature and the Panadriyu signature in question. I also find a large number of similarities as detailed on page 30 which could also apply to my own signature and my own handwriting. Consequently, on this evidence whilst Madame Bisotti indicates that Diab *'may be the author of the questioned signature'*, by using the same argument concerning the relevant matching detail, so could the Inspector and so could I.
192. This type of alleged association between signatures is, in my opinion, worthless but more importantly is an exercise which should not realistically, in my opinion, have been undertaken by an expert even though it was requested by the Vice President of the Investigation. The only opinion, in my view, would have been to state that it was not possible in realistic terms. I therefore consider Madame Bisotti has, albeit on the instructions of the Vice President of the Investigation, tried to apply comparisons which are meaningless, produce meaningless results and as such I



regard this as extremely poor practice and of no merit.

193. It is also of interest to note that on page 31 Madame Bisotti indicates: '*there is a **presumption** that Hassan Diab **may be** the author of the questioned signature*'. She goes on to indicate '*these common elements alone do not make it possible to identify the writer with certainty*'. (My emphasis.)
194. Madame Bisotti does not make it clear what the precise meaning of this term is. The converse of 'may have' is 'may not have'. There is no indication as to where she considers the balance of evidence lies in this regard. It could be suggested that the Inspector 'may have' written the signature in the name of Panadriyu but there again he may not have. In my opinion, this opinion terminology has no merit with regard to an expert opinion.

#### **Technical Review of I – 2 – The DATE '22/09/80' - Page 26**

195. Madame Bisotti indicates five characteristics of the numerals can be examined. She indicates on page 27, that **only** characteristic 53 is found in the questioned date i.e. the initial and terminal strokes of the '0' meet between '10 o'clock' and 'noon'. However, from the photograph on page 25 of the French Report of the date, it would appear that the entry '09' has the '0' starting and ending at '9 o'clock' not '10 o'clock' to 'noon', albeit the '80' appears to show possibly a '10 o'clock' connection, this '0' being jointed to the '8'. The use of the single point being the identification feature of the '0' is looking at the numeral in most basic of terms. What percentage of the population joins the '0' at a position between 10 and noon?
196. With regard to the '8', Madame Bisotti acknowledges the direction is reversed relative to the Exemplars and comments no further. This is formed in a totally different fashion to that of the Exemplars with the **lower loop** being initially produced in a clockwise direction followed by the top loop in an anticlockwise direction which joints directly to the following '0'. This is a **completely different style of writing** to the Exemplars, a completely different writing method, wholly alien to the Exemplars.
197. The '9' initial and terminal strokes in the questioned entry do not meet at '1 – 3 o'clock', they meet at approximately '5 o'clock'. This difference in position of the meeting of strokes is, indeed, a personalised writing characteristic indicative of how that writer produces this letterform in a rapid, fluent and apparently practised style illustrating a great variation of pen pressure, unlike the Exemplars.
198. Madame Bisotti indicates that the date formats used in the Exemplars is in '*Anglo Saxon format i.e. month then day then year*'. However, she appears to justify discarding the point when comparing with the questioned entry (day, month, year), by suggesting the assessment cannot be made '*since we do not have dates in a text that he wrote in French....*'. In my experience, individuals will adopt the DD/MM/YY format or the MM/DD/YY style that they accustomed to unless directed to do otherwise on a form (i.e. with printed instruction as to how the date format

should be laid out). That does not apply in this case.

199. Madame Bisotti notes there are some notable dissimilarities and identifies the numbers are linked together and secondly, the commencement stroke of the '8' is located at the intersection of the loops. She does not mention the bottom loop is made in its entirety firstly followed by the top loop in its entirety.
200. She makes no mention to other significant differences. Such as:
201. (i) the quality and fluency of writing is greater in the questioned date than in the main text on the Hotel Registration form,
202. (ii) the variation of pen pressure of writing is greater in the questioned date than in the main text on the Hotel Registration form,
203. (iii) the nature of the oblique lines (extending well below the imaginary writing baseline in the questioned material) are much deeper than that in the comparison document,
204. (iv) the relative proportioning of numerals – note the small size of the '0' relative to the '9' and the '0' relative to the '8',
205. (v) the commencement position of the bowl of the '9' is at '7 o'clock' and moves in an anticlockwise direction, the last proportion of this ellipse being retraced,
206. (vii) the axis of the bowl of the '9' being nearly at right angles to the downstroke as opposed to approximately 60° between the downstroke and bowl axis in the known writings i.e. pointing downwards,
207. (viii) the alignment of date running significantly uphill as opposed to the writing on the form which runs reasonably along the printed line i.e. to write the date, **if** the form has this been written by the writer of the main text of the form, the form would have been turned around by approximately 35° or alternatively, the writer would have to move significantly between the two writings of these entries.
208. In the light of the fact that there are numerous significant differences between known and questioned writings, some are from a different writing system (8), one wonders why the accumulation of so many differences (albeit Madame Bisotti not identifying many of these) does not enable Madame Bisotti to form an opinion pointing in the opposite direction i.e. of, different authorship. She indicates on page 33: *'There is a very low presumption that Hassan Diab was the author of the date'*. I find this very disturbing because, frankly, there is no evidence, in my opinion, of **any significance whatsoever** to suggest common authorship whereas the evidence appears to be overwhelming in support of different authorship yet Madame Bisotti still persists in associating Diab with this writing. Where is the

evidence to suggest or support the 'presumption' that Diab wrote this? A single point concerning the position of the 'O' join, as seen in vast members of the population as a whole. This opinion is, in my opinion, illogical, flies in the face of all available evidence and cannot be regarded as a serious reflection of the facts. Why could this not be reflected in her opinion as an honest interpretation of the evidence available? I find this opinion very disturbing and lacking any form of objectivity.

209. Madame Bisotti continues and indicates: *'The degree of presumption cannot be quantified'*, but surely by saying it is very weak she has already defined that to a degree. The evidence, she states: is 'very weak', she does not suggest it is weak, not strong, not very strong or conclusive.
210. This therefore suggests that the evidence on her scale is only slightly above that of inconclusive whereas the evidence (based on her own admissions of obvious fundamental differences) might lead one to a reasonable expectation of the objective location of the opinion being at the lower 'negative' levels of opinion as detailed on page 31.
211. She continues and indicates again the writing is a small volume and that is agreed. However, that still does not detract from the fact that virtually everything concerning the execution and structuring of the date is different to the writing of the Exemplars, sometimes fundamentally different. However, she goes on to mention that: *'The questioned document was subjected to a chemical process which caused the ink to disperse into the fibres of the paper'*. Is that justification for not observing the clear differences that are evident as detailed above? The answer, in my opinion, is clearly no. Even a slight diffusion of the ink will not change the ratio of a '0' to a '9' or modify the very obvious direction and construction of the '8' etc, etc. Again, this statement can only be made with a total lack of objectivity with regard to the obvious differences that are observed between known and questioned writings.
212. A further point of obvious consideration, in my opinion, would be to consider the nature of the inks on the document which has not been commented on by Madame Bisotti. The enlarged photographs on page 26 and on page 24 of the French Report show the main 'PANADRIYU' entries and the date. From these it would **appear** that the main 'PANADRIYU' entries are diffused - slight shadowing around the outside of certain ink lines yet the ink does **not** appear to be diffused in the date entry. If they are all the same ink (possibly written by one person at one point in time) one might well expect a similar level of diffusion for **all** entries on the same document. There are a variety of very standard forensic examinations for ink differentiation utilising, principally, infrared luminescence and infrared reflectance techniques. These techniques will differentiate between inks of different compositions. However, there has been no mention even of any consideration of using such basic equipment to consider the documents in question. Naturally, the question has to be raised as to why Madame Bisotti has either chosen not to undertake this work or has merely not considered the process. If it is said that the date and the remaining customer entries on the form were written by one person at one point in time, it would surely be reasonable to expect one pen to have been

used. I am confident most laboratories in these circumstances would undertake such examinations as a matter of routine.

**Technical Review of THE COMPARISON OF HANDWRITING – I – 1 – THE NOTE ‘PANADRIYU, ALEXANDER, LARNICA, CYPRUS and technician - Page 24**

213. Madame Bisotti identifies the characteristics that can be considered relative to the restricted volume of letterforms that are present on the Hotel Registration form main text. She also points out the ‘*only differences*’, and identifying these as being 7 in number.
214. Her Appendix 12 is the illustration of the common graphic characteristics between the questioned entries and the Exemplars. However, it may be noted from these points (numbered 1 to 30), that after point 11, the numbering system changes relative to the earlier numbering system used to describe the characteristics of the Exemplars, (shown at pages 16 – 18 and also Appendix 11). Consequently, if one wishes to compare the 30 points as identified in Appendix 12 with the marked up copies of the Immigration documents shown earlier in the report, the numbering systems do not tally. For ease of reference, the 30 points referred to in the questioned signature at Appendix 12 will be shown in the following table as the ‘Q’ entries whilst the line below shows the corresponding numbers on pages 16 to 18 and in Appendix 11 relating to the Immigration forms, letters that have been intercompared, marked ‘E’ (Exemplars).

Q	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	X
E	11	13	14	15	19	21	23	25	27	28	30	33	34	35	36	38	41	42	45	49	32

215. Whilst I wish to make comment on certain points that she indicates are common to the questioned writing and Exemplars, a difficulty arises in that one has to diligently search through all of the illustrations numbered and marked with arrows in Appendix 11 to find the corresponding features. A conventional chart which shows known and questioned writings side by side has not been produced. Without a comparison of adjacent entries for the reader, the situation becomes extremely difficult and unwieldy. Consequently, I will adopt Brian Lindblom’s charts which illustrate various features, when appropriate.

**Technical Review of APPENDIX 12 – ILLUSTRATION OF COMMON GRAPHIC CHARACTERISTICS IN THE QUESTIONED WRITINGS AND EXEMPLARS**

216. The same wording for each point appears at points 1 to 30 as were stated in Appendix 11, the common characteristics from the intercomparison of the Immigration forms. Consequently, most of the same criticisms apply that I have already expanded on and I shall not reiterate the same. I can indicate that I consider that the types of features considered are generally very basic features

relating to 'class' characteristics'. Many of the personalised details, examples of which I have previously given, have not been sought out, appreciated or assessed and as such, I reiterate my view that the examination is very restricted and very poor methodology.

217. I would add comments as follows on the common graphic characteristics as described by Madame Bisotti in Appendix 12 when comparing Exemplars and questioned writings.
218. Point 1(a) – *'The writer is able to manage the space provided to him (a). The writing lines respect the margins (c).'* The Exemplars generally show the writings to either sit on or be above the printed baseline or boxes on the printed forms. Only a few examples are seen where the letters fall below the printed baseline to any significant degree. Looking at Annexe 5, the copy questioned document, the relative alignment of writing to the printed line is **highly** erratic. The first six letters of the name Panadriyu are **substantially** below the baseline, the last two letters similarly falling below the baseline. The following two entries 'ALEXANDER' and 'LARNICA' show slight deviation of the writing through and below the printed baseline whilst 'CYPRUS' and 'technician' are **extremely** poorly aligned relative to the printed text. However, Madame Bisotti suggests that *'The writer is able to manage the space provided to him'* and states this as being a similarity between the questioned writing and the Exemplars yet this is clearly demonstrably not the case. The management of space is, in reality, extremely poor in the questioned material. The hotel form has a series of lines in a very similar fashion to the lines on many of the Immigration documents yet there appears to be a significant disregard by the writer for these lines in the questioned entries. The Exemplars do, however, show the **occasional** dipping below the printed baseline by the writing but it is the **extent** and the regularity of occurrence of misalignment to the printed line in the questioned entries that, in my opinion, sets the Exemplars and questioned material apart. I am at a loss to see how Madame Bisotti could suggest otherwise.
219. Point 1 (c) - With regard to the writings lines 'respecting the margins', again I find this point difficult to follow when one looks at the document in question unless Madame Bisotti is suggesting that, for instance, the name PANADRIYU does not overwrite the printed entry to the left, 'Nom'. Otherwise there is no significant marginal attributes to the writing in question other than the two words PANADRIYU and ALEXANDER being beneath one another in alignment. The remaining three lines of writing do not align with the above entries or an imaginary margin.
220. Point 2 - Agreed. This is extremely common as shown in the writings of a significant percentage of population as a whole.
221. Point 3 - Agreed. This is extremely common as shown in the writings of a significant percentage of population as a whole.
222. Point 4 - Agreed. This is extremely common as shown in the writings of a significant percentage of population as a whole.

223. Point 5 – I have made comments at length earlier in this report when this issue was raised concerning the intercomparison of letter slopes in the Exemplars. However, in the case of the questioned writings, there are certain features which have just not been addressed by Madame Bisotti which may influence certain slopes. However, I wish to stress that it is agreed that there are some letters which have considerable variation as shown in her illustration whereby the 'R' is upright and the 'l' is significantly back leaning. However, the structuring of the 'A's (and also the 'N's) have not been commented on by Madame Bisotti yet they contain some of the most remarkable features, in my opinion, of this writing. The 'N's and the 'A's are produced **without an initial downstroke** i.e. they commence in the bottom left hand corner of the letter with a pen movement going **upwards**. This factor can be clarified when one, for instance, looks at the 'N' of PANADRIYU whereby even from the colour print, it is clear that there is a start-up fault **at the foot** of the left hand side of the 'N' showing this is the start of an upwards stroke. This is a characteristic which I see fairly frequently especially in the writings of individuals whose first language and alphabet is not the English/Roman alphabet. If they are poorly taught, often by copying printed typesets of these letterforms, there may be no appreciation that, conventionally, there would be a downstroke followed by an upstroke. They therefore learn to 'draw' the shape of the letter which they interpret as being a series of upward/downward zigzags with an upstroke at the commencement. The absence of the downstroke, in my experience, is not particularly unusual in these types of cases but what almost invariably, in my experience, happens is that the letter takes on a right hand slope.
224. Quite remarkably Madame Bisotti does not mention the absence of the downstroke in these letterforms in the questioned writings (nor are any recorded in her comments on the Exemplars). This is a factor that she appears to totally have overlooked or not appreciated. It is, quite frankly, quite a staggering omission because it is of a highly personalised nature (and therefore of great value in any identification/elimination process). When one looks at the Exemplars of the Immigration document, these **seem to show** a clear downstroke or in some instances where the downstroke and following upstroke are near superimposed, a thickening of the left hand line of the letter as expected on a retrace. I have considered whether the questioned letterforms 'A' and 'N' on the questioned form could be a downstroke and following upstroke which are exactly retraced but, for the reason indicated and from the general appearance of the lines concerned, I am confident this is not the case.
225. Again, I query the wisdom of this selection of points as representations of the slope variation which can be directly intercompared one with another. The 'L' of 'LARNICA' is a good example of the forward leaning downstroke in the questioned writings so why was that not used as the most appropriate example as opposed to a poor selection of an upstroke in the 'A' which is not so appropriate. Again, it is an issue of good methodology application that appears missing.
226. The other factor that is missing, as previously indicated, is that any reasoning why this is such a 'significant' point from Madame Bisotti's point of view. Why this

should be the case is not clear and I would not endorse the suggestion that variable slope of writing is, indeed, a highly significant factor over and above other structural characteristics which she may have (or may not have) noted when comparing these writings. In the words of Harrison<sup>18</sup> in his comments in the chapter relating to the 'Basis of Handwriting Identification', subheading 'Acquisition of Slope', he indicates '*Some find little difficulty in establishing a reasonably consistent slope, whilst others find this beyond their capacity and produce unevenly sloped handwriting to the end of their days*'. There is no suggestion by Harrison that variable slope is highly unusual (and therefore of notable significance for identification purposes) and in my experience, highly variable slopes of letterforms in handwritings (especially those of relatively poor penmanship ability as we have in this case) is not unusual. Consequently, I would query why this feature is said by Madame Bisotti to be so important.

227. These above criticisms do not detract from the fact that known and questioned writings **do** show variation of slopes of letters but it is the poor decision making as to (i) which examples in the Exemplar and questioned entries should be used, (ii) how the sloped lines are (in some cases) arbitrarily drawn and (iii) the accuracy with which the illustrations have been produced which is a worrying factor concerning Madame Bisotti's general approach and work.
228. Point 6 – This states: '*Even when the paper is lined, the baseline does not follow the paper's lines*'. *It is curvy and goes below the strokes*'. (sic) I find it difficult to understand this comment as I accept the imaginary **writing baseline** is curvy but I fail to see how that can go 'below the strokes' the bottom ends of which define that line. Madame Bisotti summarises the position in that '*The words tend to have a convex and descending baseline*'. I accept that the questioned writing does tend to be irregular in its baseline and sometimes waved. However, the baseline of the name PANADRIYU is not descending it is **ascending**, ALEXANDER descends and <sup>19</sup>then slightly rises, LARNICA starts low and ascends. In the word CYPRUS, apart from the 'C', the letterforms show a steep rise from the lower end of the 'Y' to the 'S' whilst 'technician' is the only word which appears to truly descend. I would therefore query whether the baselines in the questioned material, in the main, do 'descend' as the tendency is for them to ascend.
229. Again, whilst Madame Bisotti is referring to baselines, no reference whatsoever is made to the fact that the writing baselines in question do not adhere to the printed lines to such an enormous extent.
230. Point 7 – '*There are large spaces between the words and the between the characters of a given word ...*'. Whilst Appendix 11 is said to be an illustration of **common** graphic characteristics between questioned writings and Exemplars, there are no measurable spaces 'between the words'. They are vertically one above the other and no two words are on the same line. Therefore this comment relating to

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<sup>18</sup> Harrison, W.R., *Suspect Documents – Their Scientific Examination*, Sweet & Maxwell, 2<sup>nd</sup> Imp., 1966 p 295

spaces between words cannot be of relevance. Her comment on the spacing between letters of a word is agreed.

231. Some of the letter spacings are large as in 'C' – 'Y' – 'P' and in part of the word 'technician'. I do not consider this to be of great significance especially, as suggested by the structures of the 'A' and the 'N', the writing is by an individual whose first alphabet is not the Roman alphabet.
232. Point 8 – is identified as a '*significant identifying factor*'. On page 24 of the French Report, the questioned entries show various red and green arrows representing twists and angular breaks/indentations respectively. The twists are identified as the downstroke of the 'P' of 'CYPRUS' (slight bend), the long downstroke of 'Y' of 'CYPRUS', the downstroke of the 'D' of 'PANADRIYU' apparently at the very bottom of the downstroke, the central crossbar of the 'E' (for which I see no significant twist), the 'L' of 'LARNICA' (albeit that 'looking along' the line holding the paper at an oblique angle to the eye, there appears to be exceptionally small deviations on the straight line) and the initial upstroke of the 'A' of 'LARNICA'. It must be remembered that Madame Bisotti suggests that these are significant identifying factors yet, in my experience, the number of individuals that do perfectly straight downstrokes in all letterforms is exceptionally rare. I find it difficult to appreciate the significance of these points with the exception of the curving upstroke of the 'A' (this type of commencement upstroke not, however, being seen in the Exemplars).
233. These types of small bends, being found in the writing of the vast majority of the population as a whole, I do not consider to be significant. I fail to see how an expert can attach significance to such a very common feature which she indicates as being one of the two most important points in her comparison process.
234. With respect to the red arrows identifying angular breaks/indentations, I find most of these examples to be confusing with no clear indication as to precisely what Madame Bisotti is trying to illustrate. The application of the arrows to the photograph apparently lacks accuracy and consequently, it is difficult for me to comment on what the irregularities are said to be. However, I would comment as follows.
235. In the word 'CYPRUS', the red arrow points to the area of **paper** to the left of the initial downstroke of the 'U'. There is some diffusion of ink at this point. It is not clear what the arrow is pointing at but if the arrow were turned to 90° so as to point towards '3 o'clock', it would point to an area of inkstroke which appears to have a small un-inked area. Note: the right hand side of this line is smooth i.e. the pen is moving freely along a smooth course at this point. The un-inked area maybe what Madame Bisotti refers to as a 'dent' but this is not the result of a deliberate or involuntary writing action, it is the result of a malfunction of the ink flow. Consequently, this appears to be a feature relating to ink flow i.e. the result of a malfunction of a pen not of any form of physical attribute of the writer's action.



236. In 'technician' the red arrow points to the area of paper to the left of the terminal downstroke of the side arm. Again, this arrow has been imprecisely placed but just below the tip of the arrow, there does appear, again, to be a slight 'dent' on the left of the line which again, in my opinion, clearly is the result of the pen and not any form physical attribute of the writer's action.
237. In 'PANADRIYU' the red arrow points to a portion of the side bowl of the 'D'. Again, I consider it, as arrowed, difficult to see precisely what is being illustrated. The outside edge of this pen stroke appears relatively smooth but with a possible very slight 'bump' of the ink pattern on the inside of that stroke at a fractionally higher position. The fact that if one again looks along the paper at an oblique direction along the bowl of the 'D', there does not appear to be any physical kink in the line and, although it is difficult for me to see, I consider that any irregularity in the line structuring at that position is again going to be the result of ink flow. Note: ink line or irregularity may be due to the fact that the paper, by virtue of its nature, is composed of 'hills and valleys' of interwoven fibres and as such often only the upper fibres will be inked and there may be a slight absence causing microscopical dents where ink has not deposited in the 'valleys' of ink.
238. With regard to the 'U' of 'PANADRIYU', again the red arrow appears to be pointing to the right hand side of the letterform with the arrowhead obliterating part of the written line making a full interpretation difficult.
239. The point that Madame Bisotti illustrates is the fact that the commencement of the 'U' at the end of the name 'PANADRIYU' appears to show a kink or dent of some sort. She equates this with the unevenness of the twists, tremors and dented pattern seen in the Exemplars. The question raised is what is the true nature of this apparent kink and why does it only appear in this single letterform? If it was a tremor due to a medical condition or involuntary inflection of the hand, one might expect it elsewhere in the writing. However, it does not appear elsewhere.
240. Without sight of the original (which I understand is slightly diffused in any event), one cannot assess whether this point in the ink line is a defection of the pen (from perhaps as the result of hitting a small particle of grit on the paper), whether it could be the result of something beneath the Registration form (a lump of grit or a hole in the writing surface - note Madame Bisotti's comment last paragraph page 12 of her report acknowledging writing surface can affect writing design), a retouch or even possibly whether it is purely an aberration of the ink as it is deposited on the paper. Could the copying process and subsequent fingerprinting which has caused the diffusion have produced an apparent aberration in the ink line? Unlikely, I believe.
241. The appearance of a single aberration in the questioned document makes assessment difficult as to what is the nature of this feature on the form and therefore its significance. If there were a series of such aberrations on the document, the possible cause is far more likely to be established whereas with one isolated example, this could be what is referred to as 'an accidental' originating for a number of possible reasons.

242. Furthermore, Madame Bisotti is clearly associating this feature of the questioned signature with a range of features in the comparison documentation dated 14 plus years later. Features such as the tremor seen in some of the Exemplars could, on Madame Bisotti's own admission, be the result of a change of health over the intervening period 1980 – 1994 resulting in a medical condition causing modification to the steadiness of the writing at the time the Exemplars were written. **If this was the case**, the explanation of the aberration in the 'U' of the questioned writing might be deemed to be more likely to be a true accidental as the result of the pen hitting a small lump of grit, an irregularity in the writing surface, a retouch etc and not due to such a condition as seen in the Exemplars produced much later. However, the problem is that one does not know the writing ability of Diab 14 plus years earlier in 1980 but clearly Madame Bisotti has attributed this feature in the questioned writing as being the result of the same problem occurring in the writings produced 14 plus years later. Can this isolated feature (no other examples seen in the writing in question nor in the Panadriyu signature in Exhibit SIXTEEN [D908]) be regarded as a particularly **significant identifying factor** as suggested by Madame Bisotti?
243. In 'ALEXANDER', there is an arrow pointing to the paper on the inside edge of the 'D' at '5 o'clock'. The arrowhead obscures the line which presumably contains the feature to which Madame Bisotti is referring. I can therefore make no comment as to what I believe she is trying to illustrate. It is not clear from the picture on the same page of the same word without the arrow as to what the irregularity is that she is trying to point out.
244. Consequently, I find (i) the poor placement of these arrows to be confusing, (ii) her report lacking in its description of points which she appears to attribute considerable evidential weight and should therefore be the subject of considerable detail, (iii) I find most of these red arrowed features commented on above to most likely be the result of pen malfunctions and not attributable to the actual writing action.
245. I find no significant merit in any of these points.
246. Point 9 – *'Flowing hooks are frequently drawn in the initial and terminal strokes'*. There is only one hook seen at the commencement of any letterform, that being on the 'P' of PANADRIYU. A single terminal hook is noted on the end of the upstroke of the 'N' of ALEXANDER. There may be other very small movements of the pen which might be interpreted as hooks in, for instance, the commencement and termination of the 'A' of 'PANADRIYU'. These are very small and possible debatable as to whether they are hooks or bends in the line. This 'frequent occurrence' of introductory/terminal hooks is an extremely common characteristic in the writing of a significant proportion of the population as a whole. They are referred to as 'drag lines' i.e. the pen is not lifted cleanly from the paper or placed onto the paper precisely but represent an accidental touching of the paper as the pen is moving either onto the paper or off the paper from or towards the previous/next letterform. Had Madame Bisotti completed a detailed analysis of the variation of pen pressure in these hooks, the length and direction of the hooks etc this might have provided additional **personalised** writing information but she has

merely chosen to mention the presence of such hooks which can be found in a vast number of individuals' handwritings as a whole.

247. Point 10 – *'In the upper case letters, the stems and stems (sic) are plain, disconnected from the bowls (a) or doubled and connected (b)'*. It is not clear quite what the definition of 'plain' would be but I assume that she means they are straight strokes without elaboration or 'twists' referred to previously in her Report and they are not connected to the curved portions of the letterforms. She also suggests that the alternative is that they are doubled and connected. With respect to Madame Bisotti, these two possibilities represent almost the entire spectrum of how such capital letters can be written. Some people always do a disjointed two stroke style letter design, some people always do a joined one stroke style or, alternatively, a combination of them may be used by many people. The comment that sometimes the strokes are joined and sometimes not therefore again covers a vast section of the population as a whole and is not particularly helpful concerning handwriting elimination/ identification processes. However, had, for instance, a basic statistical analysis of the usage of the different forms being present, this might give some further insight as to the **personalised** characteristics as opposed to a generalisation of this nature.
248. Point 11 – *'The narrow frame of the 'A' is pointed; its convex right stem is disconnected from the crossbar. The left stem is rectilinear'*. As previously indicated, this is an extremely basic consideration of the lines of this structure but what I am extremely surprised at is, as previously discussed, the fact that Madame Bisotti makes no reference to the absence of the conventional downstrokes that one would normally associate with the 'A'. However, I have already covered this point in detail and will not comment other than to say that the fact that the right hand stem is disconnected from the crossbar is the conventional way of producing this letter, as is the fact the left stem is 'rectilinear'. A typical class characteristic. How many other people do this?
249. Point 12 – *'The back of the 'C' is not very round; its terminal stroke is rectilinear'*. This applies to the 'C' of LARNICA yet the 'C' of CYPRUS is wholly different and well rounded with a long downward curving extension to the letter 'C'. This is not found in the Exemplar yet there is no mention of this difference, only a comment on the *'not very round 'C' which may be found in 'LARNICA'*. See Lindblom chart 'Occurrences of 'C' and 'c'.
250. Point 13 – *'The bowl of the 'D' is rounded (a) or triangular (b)'*. This gives no detail of the degree of curvature of this curving stroke nor the direction in which the curvature 'points' i.e. the axis of the curving pen movement. If one looks at the illustration of the bowl of the 'D' in the Lindblom chart, it is noted that this shape in the questioned entry is extremely rare in the Exemplars with the vast majority being 'triangular'. Only the 'D' of 'DIAB', D4 (5) Diab, and D1 (6) shows this curved form. However, D4 (5) appears in its exaggerated form to be a representation of the same personalised form of 'D' in his signature. Consequently, out of the 39 specimens there are two with a significantly curved letter 'D', one of which is a reflection of the

signature style, yet both of the two questioned 'D's appear in this very unusual rounded form.

251. Point 14 – *'The stem of the 'E' is very slanted and is linked to its lower arm; its middle and upper arms are added; its lower bar is concave and rises upwards'*. This letter in the questioned and Exemplars do correspond well although, as previously indicated, the personalised writing characteristics concerning sequence of writing etc of the bars has not been explored.
252. Point 15 – *'The 'I', which is never pointed, has a top and base'*. The convention for an 'I' is that is not 'pointed' – it does not have a dot. This whole description is a statement of the obvious and the lay observer does not require expert comment on this. What is missing from Madame Bisotti's description is a comment, for instance, on (i), the number of occasions in which the 'I' in the Exemplars has a top and lower bar, (ii), the relative length of the top to the lower bar (top considerably longer than the lower bar in the questioned letter), (iii) the sequence in which the strokes of the 'I' have been produced (e.g. top bar – downstroke - bottom bar, downstroke - top bar - bottom bar etc), and (iv), the relative length of the top bar to, for instance, the downstroke (equal length in the questioned letterform), (v) the direction of the crossbars etc. These represent the **personalised** way in which this letter is constructed not the mere fact that it has a top bar and bottom bar and not a 'point'. By reference to the Lindblom chart, only 23 of the 137 'I's in the Exemplars have bars top and bottom. Only one of these 23 has the top bar significantly longer than the lower bar (I (is) D1 [8]). Even this single example does not come close to the same proportion as seen in the questioned letterform where the top bar is almost twice the length of the lower bar. The examples cited above in the Exemplar show the top bar being only approximately 1½ times the length of the lower bar. No mention of these differences has been made by Madame Bisotti.
253. Point 16 – *'The stem of the 'L' is slanted; its terminal stroke, which is linked to the stem, is short, concave and slanted sharply upward'*. This is agreed and is a good correlation between the questioned letter and the Exemplars.
254. Point 17 – *'The 'N' is written without lifting the pen; its gables are angular, the terminal stroke of its right stem, which may be hooked, is higher than the left gable'*. Very surprisingly, as dealt with previously, there is no reference to the absence of the downstroke in the questioned 'N'. I have already commented in detail on this and I would only comment further that whilst the 'gables' are angular, that is the conventional 'taught' style.
255. Point 18 – *'The bowl of the 'P' is round'*. This is, of course, the convention. The 'P' of 'CYPRUS' and PANADRIYU appear to be two separate strokes (the downstroke of the 'P' of 'CYPRUS' terminating in a tapering point which therefore indicates the pen is lifting from the paper as opposed to a halting pen movement in order to retrace upwards. This has already been commented on in detail.

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256. Point 19 – *'The bowl of the 'R' is elliptical, even triangular; the commissure is angular (a) or looped (b) and meets the stem; the short leg is rectilinear (c) or convex (d)'. The 'R's of 'ALEXANDER' and 'CYPRUS' are well matched respectively in the Exemplars. The style of the 'R' in 'PANADRIYU' (two strokes well dislocated relative to one another with a triangular central loop) cannot be found (see Lindblom charts). This has not been commented on.*
257. Point 20 – *'The curves of the 'S' and the 's' are angular and open; the spine is rectilinear. Its terminal stroke is rectilinear, on the baseline'. This is agreed and there are reasonably good correlations found in the Exemplars.*
258. Point 21 – *'The 'U' and the 'u' lack a terminal stroke and are narrow cups'. This is agreed although the term 'narrow' might be questionable. The proportions are what is seen in many 'taught hands'. This letterform is extremely basic and has little evidential value for identification purposes when one considers this common structure and how many people write this.*
259. Point 22 – *'The 'Y' is formed with a reverse formation to which a concave tail is added'. I am at a loss to understand why it is suggested that this letterform is common to the questioned writing and the Exemplars. Both examples of the 'Y' in the questioned writing are written as a straight diagonal top left bottom right stroke followed by an elongated, straight downstroke or in the case of the 'Y' of 'CYPRUS', with a slight bend at the end, both of which descend well below the printed baseline. The proportions of the length of the two sides of the 'V' structure in the questioned 'Y's are significantly different in their proportions to the Exemplars. There is no reference in the report to these obvious differences. This is fundamentally different to the description given at point 22 and when one compares this structure in the Lindblom chart, they are obviously of different in construction, proportion and alignment to the baselines. They are **fundamentally** differently constructed between the questioned and Exemplar materials yet it is put forward in Appendix 12 as being a common structure.*
260. Point 23 – *'The lowercase letters are printed'. Whilst this is obviously correct, a significant percentage of the population as a whole write in this fashion. The 'a' structure is certainly disconnected with respect to the curved bowl and terminal exit stroke. There appears to be at least an original 'c' structure, possibly retouched on the top and, apparently, an attempt at retouching (poorly) on the bottom prior to the terminal stroke. This is a wholly irregular written form for one reason or another (which cannot be established). Because of this irregularity in structure, it is difficult to draw any inference from the same and this is acknowledged by Madame Bisotti on page 25. Mention of the same in the 'common characteristics' Annexe is therefore questionable.*
261. Point 25 – *'The back of the 'c' is not very round'. This is agreed but again is well within the writing habits of a large section of the population as a whole for this basic letterform.*

262. Point 26 – *‘The ‘e’ does not have an initial stroke, most of the time. Its body is flattened.’* In other words, it either has an initial stroke or it does not have an initial stroke. Irrespective of how the questioned entry is written it is going to confirm with the description given! There is no other alternative it could be. This is, in my opinion, a totally bizarre point. How can this be regarded in any way significant in an identification process? Had Madame Bisotti considered the relative position of the start point, the degrees of curvature, the direction of the axis oval of the ‘e’ etc, these have been of far more significance. The structure of the questioned ‘e’ is incredibly basic and well within the writing capabilities of the vast majority of the population as a whole. The reference to the body of the ‘e’ being ‘flattened’ is again what is expected from the majority of the population as a whole.
263. Point 27 – *‘The stem of the ‘h’ is not looped, its arch is angular’*. The stem is not looped because, as she has previously stated, it is in the printed form. Loops are only introduced into cursive joined script and the printed ‘h’ does not have a loop and is not **expected** to have a loop. Consequently, the absence of this feature is hardly surprising. It is agreed that the arch is angular but again no reference has been made to, for instance, the relative proportions of the arch – height to width or its relative height to that of the overall downstroke height, the extended nature of the terminal downstroke etc. When one observes the Exemplar writings, it may be noted that the **general** width to height ratio of the side portion of the ‘h’ is far broader than that shown in the questioned entry. The upstroke into the arch of the side arm retraces extensively up the preceding downstroke in the questioned document whereas only very few examples show a retrace in the Exemplar writings. There are only 3 out of 50 ‘h’s in the Exemplars that show any real resemblance to the questioned ‘h’. Again, Madame Bisotti does not appear to have taken these types of feature into consideration as to their rarity value in the Exemplars and only chooses to make very generalised comment on their structures.
264. Point 28 – *‘The ‘i’, a stick, is pointed’*. The ‘i’s in the questioned word ‘technician’ are merely downstrokes and dots above. This is, however, how one expects, by definition, the letterform to be produced.
265. No mention is made of the few personalised characteristics of the ‘i’ that can be made such as the relative positioning of the ‘i’ dot, the height above the downstroke, whether it is immediately above the downstroke or to the left or the right etc. The dots in the questioned letters do compare reasonably closely with those in the Exemplar writings but one also has to bear in mind that there is a tremendous range of variation in the position of the dot in the Exemplar and again, the position is what might be expected from a significant section of the population as a whole. However, it does not appear that Madame Bisotti has considered these types of points.
266. Point 29 - *‘The ‘m’ and ‘n’ are manuscript; their first arch can be disconnected from the left stem’*. This is agreed and this feature does correspond reasonably well between the questioned writing and the Exemplar writing.

267. Point 30 - It is noted that Appendix 12 omits any reference to the structure of the 'X' as seen in 'ALEXANDER' in the Hotel Registration form. The reason for the omission is unclear. Did Madame Bisotti not notice there were direct comparisons between the questioned and Exemplar writings with regard to this letter? Was it omitted because she previously describes (at point 32 of Appendix 11) that the 'X is a cross' with no further consideration as to its merits for identification/elimination purposes?
268. The 'X' is, indeed, a cross, **by definition**. Madame Bisotti appears to have regarded it in its most basic form describing this purely in class characteristic form. She has omitted to consider the personalised characteristics of the letterform such as:- (i) the sequence in which the strokes were made, (ii) the direction of strokes (one downwards, one upwards or two downwards etc), (iii) the angle between the strokes, (iv) the way in which the pen hits the paper and rises from the paper at the beginning and ending of the two strokes, (v) the relative sizes of the four 'arms', (vi) the relative size of the letter relative to adjacent letterforms.
269. These are all personalised features which will either assist identification or elimination. To describe the letterforms as merely 'a cross' tends, in the terms of expert examinations, is, in my opinion, valueless evidence. The personalised characteristics of the cross are for the expert to determine concerning the sequence and directional strokes etc. These are what matter and are often of critical value especially in terms of elimination. Madame Bisotti does not appear to appreciate any of these features and makes no reference to them whatsoever.
270. On page 24, Madame Bisotti identifies the '*only differences*' as being the bowl of the 'D' as triangular, the 'I' is a stick, the bowl of the 'P' is elliptical, the 'Y' is formed with an angular cup and a tail added to the base, the ovals are thin, elliptical and slanted, the 'O's are linked to the tail or stem and the 't' can be a 'y'. She continues and indicates that '*these differences are thus actually natural variations of the form of certain characters and therefore do not constitute dissimilarities ....*'. I find this is very confusing. She lists a number of features which are **not found** in the **questioned writing** but that is not to say that these are 'differences' between the questioned material and the Exemplars. The triangular 'D', the 'I' as a stick, the thin oval, the ovals that link to the tail and the 't' as a 'y' are **just not present** because alternative letterforms are present. The features **present in the questioned writing** which are **different** to the Exemplars she acknowledges as being the 'P', structure of the 'Y' etc. However, these two features she merely states are '*actually natural variations*'. What is the evidence on which she bases this assumption? Her assessment of the range of variation of any letterform of a writer is derived from the examination of all of the numerous letters in the Exemplars. That is the only evidence in which she can rely. What is the justification to denounce any other differences as '*actually natural variation*'? In my opinion, this is a convenient excuse for explaining away the differences between questioned and Exemplar writing. This is precisely what Osborn referred to, not to mention any confirmation bias which is '*likely to excuse or complete ignore evidence which could reject (her) belief*'.

271. There is no example of the oval form of the elliptical, two stroke 'P' anywhere in the Exemplars. In order to reject this difference, evidence has to be found to support such a rejection. One cannot state, as Madame Bisotti has, that everything that does not match, irrespective of its nature and how much it deviates from the observed evidence, must merely be another form of handwriting of the same individual not seen throughout the fairly copious volumes of Exemplars available. Ignoring, or more correctly, 'excusing' the presence of differences is, in my opinion, an unacceptable practice. Similarly, the 'Y' is **fundamentally** different in both examples of the questioned writing relative to copious volumes of that letterform found in the Exemplars. Again, there is no evidence to support any form of reason as to why these two consistent letterforms in the questioned signature should be different to the 55 examples shown elsewhere in the Exemplars. It is not, in my opinion, credible for Madame Bisotti to merely suggest that on the particular occasion of writing the Hotel Registration form Diab decided to change the whole construction of this letterform, its proportions, alignment, etc with no apparent reason other than by natural variation not seen in all the Exemplars. It will be recalled that Madame Bisotti's belief is that there is no evidence to indicate disguise. How can she therefore possibly exclude this obvious difference as merely 'natural variation'? This arbitrary decision to designate these features as being natural variation is exceedingly poor practice and as Osborn indicated, has been the attitude that has led to significant errors in the past.
272. On page 26, Madame Bisotti indicates: *'Consequently, there is a very high presumption that Hassan Diab is the author of the note .... The degree of presumption cannot be quantified. Since this is a small writing sample in the questioned document which was subjected to a chemical process, which caused the ink to disperse into the fibres of the paper, it is not possible to identify the writer with certainty'*. The repeated use of the word 'presumption' in an opinion is a term on which I have already commented. The use of this word could be interpreted in a number of ways, the semantics of which I have found perplexing in this situation. I assume that what she is trying to say is that is very strong evidence to support the proposition that Diab is the author or that it is very probably that Diab is the author. If this is, indeed, the case, I find that the methodology used, the evidence gleaned to be so sadly lacking and certainly far from adequate, that to offer such a strong opinion is wholly unwarranted.
273. Again, I note that she refers to the ink of the questioned writing dispersing into the papers and therefore it is not possible to identify the writer 'with certainty'. This factor will hinder certain investigations such as, potentially, the determination of sequence of lines in the structure of a particular letterform. Even considerable diffusion, however, will not change the shape of the elliptical bowl of the 'P' or change the relative sizes of the top and lower bars of the 'l' or change the structure of the 'Y' etc. These are features which can be observed, even on the copy documents available for my consideration and I therefore see no merit of her suggesting that this has been a significant cause for concern for her in that the features she has observed do not require the appreciation of micro detail. All of the



features she has described one could have elicited from even a relatively poor quality photocopy as they are macro, class characteristics in the main, as opposed to subtle points of constructional detail of a personalised nature. Consequently, I do not consider the slight diffusion of ink to be the reason why most of the points raised in my above commentary could not be considered.

#### **SUMMARY OF THE CONCLUSIONS OF THE TECHICAL REVIEW**

274. Madame Bisotti's general methodology is fundamentally flawed as illustrated by a large combination of factors and practices which I find wholly out of keeping with good conventional practices.
275. I have noted illogical arguments and, frankly, arguments which I believe to be self serving in order to allow her to undertake, without significant qualification, the examinations in hand.
276. There has been no 'balance' to this report and not even a mention anywhere of any consideration of more than one writer potentially being involved. That may not have been in her instructions but is a requirement for document examiners of repute in the UK, and, I believe, in many other countries. The likelihood of the aiternative hypothesis is always to be considered, it can never be ignored.
277. Her knowledge of even the most basic points such as the attributes of writing instruments (the incorrect statement as to the cause of striations in ballpoint pens etc) also points to a poor knowledge of the basics of the subject.
278. Her dogged attribution of the date, albeit only on a 'very weak' basis, on the form in question to Diab in the face of overwhelming evidence to the contrary, shows her lack of objectivity whilst her methodology appears non existent. Again, her determination to associate Diab with the Panadriyu signature lacks credibility in methodology and reasoning.
279. Her whole approach of identifying handwriting by class characteristics reduces the level of appreciation and identification of structures to that of a lay individual whilst the appreciation of personalised writing characteristics is virtually non existent. This is, in my opinion a very superficial examination of little, if any, merit.
280. With respect to my initial instruction i.e. to comment on whether her opinions and methodology are reliable and to consider whether any truly professional competent forensic document examiner would have come to the same conclusions based on the materials presented utilising acceptable methodology, I can state that I find this whole report unacceptable and not what I would expect from a trained competent expert. I find the methodology, and consequently any opinions based thereon, fatally flawed and lacking in objectivity, reliability and accuracy.
281. In over 30 years of dealing with casework and having to produce critiques on literally hundreds of Police Laboratory reports, I have **never** had to express criticism

in such robust terms. I wish to stress that this is not because I have been hired by one side or the other side but this is a truly held reflection of the review, such is the degree of unacceptability of virtually the entirety of the report.

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## **DECLARATION**

I, ROBERT WILLIAM RADLEY DECLARE THAT:

1. I understand that my duty in providing written reports and giving evidence is to help the Court, and that this duty overrides any obligation to the party by whom I am engaged or the person who has paid or is liable to pay me. I confirm that I have complied and will continue to comply with my duty.
2. I confirm that I have not entered into any arrangement where the amount or payment of my fees is in any way dependent on the outcome of the case.
3. I know of no conflict of interest of any kind, other than any which I have disclosed in my report.
4. I do not consider that any interest which I have disclosed affects my suitability as an expert witness on any issues on which I have given evidence.
5. I will advise the party by whom I am instructed if, between the date of my report and the trial, there is any change in circumstances which affect my answers to points 3 and 4 above.
6. I have shown the sources of all information I have used.
7. I have exercised reasonable care and skill in order to be accurate and complete in preparing this report.
8. I have endeavoured to include in my report those matters, of which I have knowledge or of which I have been made aware, that might adversely affect the validity of my opinion. I have clearly stated any qualifications to my opinion.
9. I have not, without forming an independent view, included or excluded anything which has been suggested to me by others, including my instructing lawyers.
10. I will notify those instructing me immediately and confirm in writing if, for any reason, my existing report requires any correction or qualification.
11. I understand that:
12. (i) my report will form the evidence to be given under oath or affirmation;

13. (ii) questions may be put to me in writing for the purposes of clarifying my report and that my answers shall be treated as part of my report and covered by my statement of truth;
14. (iii) the court may at any stage direct a discussion to take place between experts for the purpose of identifying and discussing the expert issues in the proceedings, where possible reaching an agreed opinion on those issues and identifying what action, if any, may be taken to resolve any of the outstanding issues between the parties;
15. (iv) the court may direct that following a discussion between the experts that a statement should be prepared showing those issues which are agreed, and those issues which are not agreed, together with a summary of the reasons for disagreeing;
16. (v) I may be required to attend court to be cross-examined on my report by a cross-examiner assisted by an expert;
17. (vi) I am likely to be the subject of public adverse criticism by the judge if the Court concludes that I have not taken reasonable care in trying to meet the standards set out above.
18. I have read Part 35 of the Civil Procedure Rules and the accompanying practice direction including the "Protocol for Instruction of Experts to give Evidence in Civil Claims" and I have complied with their requirements.
19. I am aware of the practice direction on pre-action conduct. I have acted in accordance with the Code of Practice for Experts.

**STATEMENT OF TRUTH**

I confirm that I have made clear which facts and matters referred to in this report are within my own knowledge and which are not. Those that are within my own knowledge I confirm to be true. The opinions I have expressed represent my true and complete professional opinions on the matters to which they refer.



ROBERT W. RADLEY  
Forensic Handwriting & Document Examiner