



From the Director: Dr Terry Gourvish

APPENDIX 4

**BUSINESS HISTORY UNIT**

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20 April 1999

21 APR 1999

Dear Ms Elson,

We have pleasure in enclosing our joint report on the PWC Exercise. If you have any queries about it, please do not hesitate to contact us.

Yours sincerely,

*Elizabeth Danbury*  
*Terry Gourvish*

Elizabeth Danbury  
Terry Gourvish

Joanna Elson

Director

BBA

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London EC2N 1EX

Report on Methods adopted by PriceWaterhouseCoopers for the TWEA/BT database (George Books) [BT271/801, etc]

by Elizabeth Danbury and Terry Gourvish

1. We were asked to meet members of the BBA working party to consider PWC's procedures for interpreting and computerising the account entries in the George Books (the Board of Trade's list of bank accounts frozen under the TWEA, 1939).

2. We met Jason Hunt of PWC on 8 March 1999, together with Edwin Green (HSBC), James Beasley and Fiona MacColl (Natwest), Derek Ransome (Halifax), Janet Wilkinson (Lloyds/TSB), and Joanna Elson and Roger Miles (BBA).<sup>1</sup>

3. We were supplied with a brief report of the exercise immediately prior to the meeting, and subsequently with fuller information on 26 March 1999.

4. In general, we were impressed with the assiduity with which the PWC team had prepared a set of rules to assist matching and organising the computerisation of the George Book listings.

5. However, at the meeting on 8 March we raised a number of issues, viz.:

the extent of missing data

the means adopted to distinguish between individuals and companies

the proportion of company entries

the meaning of audit ticks/hieroglyphs used in the books, and especially \* and  $\phi$

possible problems arising from double-barrelled names e.g. Blanken Hagen  
hyphenation of names

And we asked to see additional examples of the George Book entries and a sample of post-bureaux computerised entries.

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6. Some of these problems have been addressed in the supplementary documentation [see notes to meeting, 8 March 1999].

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<sup>1</sup> In database speak some of these entries would become Edwin Gren, Fiona Maccol, Joana Elson (BA).

7. However, we feel that there remain clear difficulties in relation to the following, as demonstrated in the computer printout we were sent:

i] Excision of all double character spellings

See entries 213333 LLANES becomes LANES (thereby transforming a Portuguese? name to an English one); 213337 MASSON becomes MASON; 213559 CASSE becomes CASE; 213637 STRAUSS becomes STRAUS - two different families; 213330 ANNE becomes ANE (French word for donkey!). Entry 213268: BRUHL VVE First name given as VE. But is VVE an annotation for veuve (ie. widow)?; see also entry 213556

ii] Excision of consecutive identical vowels

See 213331 AIMEE HUGUET becomes AIME, and therefore changes sex. There may be other examples, e.g. ANDREE/ANDRE and RENEE/RENE.

iii] Excision of 'e' after a vowel

See entries 213399: NOEL PETITGUOT becomes NOL - which does not make sense

Also 213362 Louise Lesueur becomes LESUUR  
and 213400 NOEMIE PETITHUGUENENIN becomes NOMIE  
PETITHUGUNENIN

iv] Handling of pre-fix surnames, esp. Dutch/German names and titles.

There are some real problems here. Cf. entry 213460, which we would read as MADAME MARIE ROEPIUS VAN ZE VANHUIZEN. This is interpreted as: Ist name VENHUIZEN; Middle name MDME MARIE ROEPIUS; and last name ZE!!

v] ~~There is plenty of evidence of faulty transcription.~~

For example, entries 213605-7, "Frau" is consistently transcribed as "Fran". 213607: FREIFRAN (given as first name) actually is "FREIFRAU" ie Baroness. 213472: IVE LINA is probably IVELINA. 213516: MELLE is probably Mille (Mademoiselle). See also 213460 and 213520.

'Esq' is interpreted as a middle name in entry 213390 and 213429.

It would have helped us greatly had we been given George Book entries which matched the computer print-out entries.

While we appreciate that it is important to capture all possible matches, the procedure does run the risk of introducing spurious matches, or obstructing possible genuine matches.

8. Other issues may still give problems in particular instances:

i] Anglicisation of names. This may still be a minor problem.

ii] Reversed order of first name and surname. This is another problem that may need to be addressed.

iii] hyphenation of names

iv] double-barrelled names

v] mis-specification of some private accounts as companies or businesses (where there are two or more account holders)

vi] excision of all accents, e.g. é and ü, may cause problems. When combined with the removal of 'e' following a vowel, the name is changed.

9. George Book Annotations

In general these seem clear, viz. D = Destroyed,  $\phi$  = Finished, though the hieroglyph slopes both ways. The meaning of underlined entries remains a mystery.

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## 10. Conclusion

We believe we have raised sufficient doubts about the transcription process, and some of the assumptions that have been made when seeking to transform George Book entries into Computerised entries, to cast doubt upon the validity of the final product. We would like to know how far the process of data entry has proceeded. If it has only just begun, then we would recommend that some of the transformations we criticise above should not be adopted. If the process of inputting has been completed, then all we can recommend is that rigorous editing be undertaken to ensure that the transformations have not produced substantial inaccuracies in the recording of entries and vital events.

We are aware that this recommendation may result in additional expense; however, we are convinced that transparency and accountability demands that every effort should be made to produce accurate information.

ED

TRG

20/4/1999

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**B**

# BRITISH BANKERS' ASSOCIATION

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8 June 1999

Dear Elizabeth and Terry

**STRICTLY PRIVATE AND CONFIDENTIAL**

## **YOUR REPORT ON METHODS ADOPTED BY PwC FOR TWEA/BT DATABASE**

Many thanks for your letter of 20 April enclosing your report.

The Tendering Group are most grateful to you for your work and wanted to make the following observations on your report:

**Paragraph 7** – this was where the bulk of your major issues lay. It is worth noting that with all of the issues raised in paragraph 7, the banks (and therefore PwC) are not trying to mislead or change names – the names which will eventually appear on the website will be George Book names. Rather, the changes (which are not part of the transcription process from manual George Book records to the computerised version) are made to enhance the comparison process, and have been designed to increase the number of fuzzy matches, in order to compensate for any transcription error.

- I. **Excision of all double character spellings** – this rule was established to reduce the impact of the potential misspelling when the bank data files were created, or a transcription error when the George Book records were written. It is likely to lead to more matches, rather than less, and therefore is an inclusive rather than an exclusive measure. On that basis, we plan to continue with this practice.
- II. **Excision of consecutive vowels** – as above.
- III. **Excision of 'e' after a vowel** – again this is an inclusive measure which improves the chances that proper matches will be identified.
- IV. **Handling of pre-fix surnames** – the example in the report has now been resolved. 'Mdme' was not included in the list of special words at the time the report was written. It is now included and is correctly treated as a prefix. This does raise another issue, which is that formatting is not consistent throughout the George Books, an issue which it is very difficult to address

- V. **Faulty transcription** – we fully accept that there was plenty of evidence of faulty transcription in what you were given. At that stage the database version of the George Books contained data from only one bureau and had not been validated. This work is still ongoing, and PwC are working to resolve some of the differences between transcriptions of the two bureaux. We are confident that the majority of these will be resolved, but have to accept that at the end of the exercise there may still be some problems, as some George Book entries are simply illegible, which is perhaps not surprising given the age of the records.

**Paragraph 8** – these were more minor issues which you raised. Our comments are as follows:

- I. **Anglicisation of names** -- this was the issue that one side of the comparison data (the George Book) might contain the original name while the other side (the bank data) might contain the anglicised version. We think this is very unlikely, as the George Book records were compiled directly from bank records which banks were obliged to send into the Board of Trade.
- II. **Reversed order of firstname and surname** – we recognise that there is a small risk here, but do not plan to pursue it as we do not want to move away from the George Book order.
- III. **Hyphenation of names** – This was the suggestion that PwC's routines could remove hyphens from the names. In fact PwC's routines do not remove any existing hyphens. Therefore, the names are treated in the same way they are represented on the George Books.
- IV. **Double-barrelled names** – we do not see a practical way around this issue.
- V. **Mis-specification of some private accounts as companies or business** – Whilst it is true that there is a possibility PwC will report a personal bank account as a firm bank account (and vice versa) all valid matches will still be identified.
- VI. **Excision of all accents** – the bureaux enter all characters as English characters and accents are lost. However, while the name will be changed, it will still match against the same name in the bank records because the bank records do not contain accent. We are confident therefore that no matches will be lost.

### The banks' view

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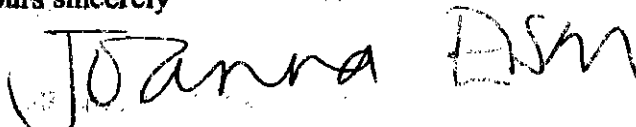
The group's considered view on your report, then, is as follows.

- We share your view that PwC have been assiduous in preparing a set of rules to assist matching and organising the computerising of the George Book listings.

- We have acted where we can to take up your suggestions.
- In other cases you raise, we would point out that changes are not made to source data, but as part of the data matching stage (eg removing double letters and removing foreign vowel representations) to improve the chances that questionable names and spellings will be included in the matching process.
- Subject to any remaining discrepancies due to problems with illegibility of the original records, if an exact match is achieved we are confident that PwC's processes will report it. They will also report a certain number of additional 'fuzzy matches' in order to compensate for possible transcription error.
- We were rather concerned by your statement at the end of paragraph seven that the procedure runs the risk of 'obstructing possible genuine matches' and would be grateful if you could indicate if you this is still your view in the light of comments made here, and, if so, how genuine matches could be obstructed.

Thank you again for your letter and report.

Yours sincerely

  
JOANNA ELSON



J.E S



From the Director: **Dr Terry Gourvish**

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20 March 2000

Dear Joanna,

### **RESTORE UK PANEL**

We welcomed the opportunity on 14 March to take another look at the possible problem areas in the codifying of the George books for matching with the records of the banks. We have also examined additional material sent to us by PriceWaterhouseCoopers.

While of course our investigation only stretches to a very small selection of the data, we feel that most of the concerns we expressed in our initial report dated 20 April 1999 have been addressed. However, the source material is not straightforward, and it may well be that a number of valid matches could be rejected, particularly if a match rests on the identification of surname AND given name.

1] Mis-reading, particularly of prefixes and titles. In our initial report we noted that some confusion might arise with the appellation 'Frau', which in the examples we saw last year was often transcribed 'Fran' and might therefore be read as a given name. While the use of three data processors has limited the possibility of missing matches, it appears that some are still likely. Note, for example, 213605, which should read 'SCHLEIP Frau Eva'. None of the three versions provides this option for matching with the banks' accounts. Entry 213450, we read as Simone Perrot (Madame, Veuve = widow). None of the three versions presented for matching would square with this. We are still worried about the appellation 'Freifrau', which appears in 213607 both as 'Freiffan' and 'Freifan'. In any case, our judgement here is that this entry includes TWO names: i) Baroness W. von Furstenberg; ii) Frau Marie von Furstenberg.

2] Glitches in transcription.

Entry 213429.9 bears no relation to .7 and.8: it appears to have been derived from Entry 213449.

Entry 213442 we feel is VESC as a surname, which will not go to the banks as such.

3] Interpretation.



Entry 213628 contains two names, but only the male has been selected for matching purposes.

Thus, while we are happy to record our endorsement of the assiduity of the matching and computerising processes from the limited number of examples we have seen, we cannot confirm that there are NO cases which might fall through the net. Thus, we recommend:

1] That the web-site and any printed introduction should contain reference to the difficulty which some processes, e.g. titles, prefixes, illegibility, spaces between words, etc may cause.

2] That in the second stage of the process experts familiar with European languages and names should be employed to read and give judgement on selected entries in the George books.

Yours sincerely,

  
  
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Terry Gourvish

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6 April 2000

Dear Joanna

We have reviewed the letter from Terry Gouvisis and Elizabeth Danbury ("the experts") to you dated 20 March 2000, which you faxed to us on 23 March 2000. Please find our response to the points in question:

### **Background**

As you know, the first name, middle name, last name, prefix, etc. for each George Books record is determined by applying rules to split the string of letters into component parts. The pattern of these component parts is used to determine which part is the first name, middle name, last name, prefix, etc. The rules that are applied have been agreed with the Working Party and are necessary to ensure that each George Books record is treated in a controlled and consistent manner.

The effectiveness of these rules depends, among other things, upon the completeness of identification of family names, as opposed to first names, and all possible varieties of personal title and company identifier. It is impracticable to identify all such indicators in ¼ million hand-written records, so we acknowledge that some, limited amount of misinterpretation will have occurred.

We also know that the rules will not cater for every record within the George Books because there is inconsistent formatting of names within the George Books. However, they do cater for the vast majority of records.

### **Response to experts' points**

1] a) We have searched the first name, middle name and last name fields in the final computerised version of the George Books for the word "FRAN". This identified 80 records out of 298,324 total records.

**J Elson**

**6 April 2000**

Given that the creation of the computerised George Books involved having two independent sets of input plus a third set of input for records not agreed between the first two sets, if the word "FRAN" is present in the computerised George Books it means that two or three independent persons have read the word as "FRAN" on the George Books. Therefore, it is reasonable to assume that in at least some of the cases that the word in the George Books is actually "FRAN".

Overall therefore, we feel the risk that the word "FRAU" has been mis-transcribed as "FRAN" in any significant number of cases, is low.

1] b) We have reviewed entry 213,605 in our photocopies of the George Books and we cannot be certain that the name should be "SCHLIEP FRAU EVA" as the record is not clear. The bureaux have had similar problems with reading the record, which has resulted in them inputting three different versions. All three versions have been put on to the final George Books database for matching.

1] c) We have reviewed entry 213,450 in our photocopies of the George Books and confirm that the word "VVE" is not treated as a personal title or "prefix identifier". At the last meeting the experts were not able to be categoric as to whether "VVE" was an abbreviation for "VIVIENNE" or "VEUVE". Therefore, we believe we are correct in not converting "VVE" into another word as long as there is uncertainty over its real meaning.

1] d) We have reviewed entry 213,607 and, as with point b) above, the record is not clear. We can confirm that "FREIFRAU" is not treated as a personal title. However, we have searched the computerised version of the George Books for the word "FREIFRAU" and two variations to take into account input errors by the bureaux of "FREIFRAN" and "FREIFAN". This identified only 4 records containing any of the three variations. Therefore, we feel the impact of any mistranscription of the word "FREIFRAU" is low.

2] a) We have reviewed the bureaux' input for George Books reference number 213,429. We agree that one of the three versions does belong to a different record, which we assume was due to one of the bureaux inputting the wrong reference number. However, this will not lose any names from the George Books. The result is that there will be two versions of the record on the final George Books, ensuring that the correct name has been submitted for matching against the Banks' records.

J Elson

6 April 2000

2) b) We have reviewed George Books reference number 213,442 and confirm that our routines do not detect the word "VESC" as the surname. This is because our routines take the name immediately following a link word, such as "VON", "VAN", "DE", etc., as the surname. In this case the word following the word "DE" has been used as the surname, which is not a correct interpretation, but is the result of consistently applied logic which produces the correct name in the vast majority of cases. This appears to be an isolated instance.

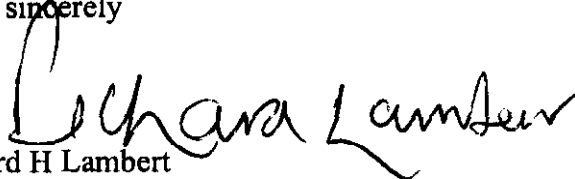
3] We confirm that our routines do not create a second record for matching purposes from the second given name. This is because this particular pattern of names is rare and the second name is not captured by our routines. However, this is the only instance of this combination of names and this is the only record affected.

We agree with the experts' comment "we cannot confirm that there are no cases which might fall through the net". It would be almost impossible to get a 100 percent accurate representation of the George Books as just one record can produce different interpretation by different people. Our routines have to deal with the large volume of records in an agreed and consistent manner.

With regard to the recommendations, we agree with point 1. I believe you have already spoken to the experts about point 2 to clarify their understanding of the second stage. Therefore, we will be pleased to discuss any refinements desired at a later date if there is to be a second stage.

If you have any questions about our response, please contact me on 0121 265 5768.

Yours sincerely



Richard H Lambert  
Partner



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12 April 2000

*Dear Terry and Elizabeth*

## **RESTORE UK PANEL**

Thank you for your letter of 20 March following our meeting with you and Richard Lambert and Jason Hunt of PwC to check whether the issues you raised with us initially had been dealt with by PwC. I understand that since that meeting you have spoken to Jason to clarify further points.

We were glad to note that you feel that most of the concerns you raised in your initial report have now been dealt with.

I have raised the specific points you raised (on possible mis-reading, possible glitches in transcription and interpretation) with PwC. I attach their detailed response.

They and we share your view that no one can be one hundred percent sure that 'there are no cases which might fall through the net'. Throughout this process we have aimed to achieve as accurate and inclusive a process as possible, but we have always been aware that attempting to interpret manual records which are over fifty years old cannot produce a perfect result.

We share your view that the website and any printed introduction should contain reference to the difficulties inherent in the process which you outline, and we are drafting wording to explain this.

On your second recommendation, if there is a second stage of this process we would agree with you that it would make sense for experts familiar with European languages and names to read and give judgement on selected entries in the George books.

Thanks again for your further work on this.

Yours sincerely

**JOANNA ELSON**

Cc: Richard Lambert, PwC  
Lord Newton of Coggeshall

..ODMA\PCDOCS\BBA01\5468\1 12 April 2000



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Representing over 300 member banks from more than 60 countries

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12 April 2000

*Dear Terry and Elizabeth*

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Yours sincerely

*Joanna*

JOANNA ELSON

Cc: Richard Lambert, PwC  
Lord Newton of Coggeshall





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3 May 2000

*Dear Terry and Elizabeth*

## **INTERPRETATION OF THE GEORGE BOOKS**

Thank you for your letter of 2 May to Lord Newton.

We are grateful for your further comments on possible further inflation of the George Book population. These are noted in preparation for a possible second stage of the process (for example, regarding safe custody items).

Yours sincerely

*Joanna*

**JOANNA ELSON**

*(We've sent a copy to Elizabeth)*







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3 May 2000

*Dear Elizabeth and Terry*

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Yours sincerely

*Joanna*

**JOANNA ELSON**

*[I've sent a copy of this to Terry]*





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Lord Newton of Braintree  
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Dear Lord Newton,

### **Interpretation of the George Books**

Further to our letter to Joanna Elson on 20 March 2000 and to the Panel meeting on 14 April we undertook to write to you to clarify our position on this issue.

We were pleased to see that the BBA has agreed to the two recommendations made in our letter of 20 March, viz. 1) adding text to the website and a printed introduction to explain the process; and 2) employing European languages experts at the second stage.

We also recommend that at the second stage further work to inflate the George Book population is undertaken along the lines we indicated in this letter and in our letter of 20 April 1999. We feel strongly that titles and prefixes should not be read as names (e.g. by interpreting 'Frau' as 'Fran'). In addition, the matching of some names may be inhibited by the selection process, which appears to have produced on a few occasions an incorrect surname (e.g. VESC in entry 2133442). Once these amendments have been addressed at the second stage, they should be presented to the participating backs for re-matching.

On this basis we are happy to sign off the project as a sound and comprehensive piece of work.

Yours sincerely,

*Elizabeth Danbury. Terry Gourvish*

Elizabeth Danbury, University College, London  
Terry Gourvish, London School of Economics