

# **Digitising MS 8004 - The Physician's Handbook**

## ***Evaluation results & recommendations for actions***

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## Introduction

In parallel with its plans to develop a large medical journal backfiles digitisation project, the Library has been considering whether digitising its manuscript holdings, and making them available over the Web, is an initiative it should develop.

When undertaking any digitisation project one of the key issues that needs to be resolved is whether a series of page images (scans) sufficiently addresses user needs, or whether there is also a need to create online transcriptions, commentaries and content-rich metadata to facilitate access.

To help answer these and other questions the Library undertook a pilot project to digitise MS8004 (The Physician's Handbook) and make these images available over the Web <<http://library.wellcome.ac.uk/resources/etexts/ms8004/>>. [MS8004 was selected for this pilot as it was a new acquisition and one that had attracted significant press coverage<sup>1</sup>.] As a consequence the Library was reasonably confident that there would be interest in a digital version of this object to make the evaluation statistically valid.]

To solicit feedback on specific issues an online evaluation form was provided. The evaluation period ran from the 25th April through to the 31st May. During this time the site attracted over 1000 visitors, 96 of whom completed the online evaluation form. Many respondents also took the opportunity to add their own comments. These (anonymized) comments are included in Appendix A.

This report details the findings of this evaluation, provides an estimate of the cost to digitise this object, and provides a series of recommendation on how this initiative could be developed.

## Summary of Recommendations

1. The high level of interest and support for this type of project clearly suggest that the Library should consider scaling up this activity to make more of its resources available electronically.
2. Additional (bigger) image sizes should be made available. As a minimum, it is recommended that images should be available in one size bigger – perhaps 1500x1000.
3. When digitising texts, manuscripts etc. the Library should ensure that all binding boards, spines, endpapers, flypapers etc. are included.
4. Image numbers must correlate with the folio (verso/recto) numbers. Thus, rather than having image 001-002, this should be referenced as 0v1r.
5. The Library should investigate whether it is feasible to allow zoom-in/zoom-out image manipulation. This is the approach adopted by the National Library of Scotland and their Auchinleck Manuscript digitisation project <<http://www.nls.uk/auchinleck/>>.
6. Clear instructions should be provided on how to print images from the site.
7. The Library needs a clear policy stating in what circumstances original documents can be consulted when a digital surrogate is available.
8. It is recommended that a catalogue record is created for each page image (folio). Relying exclusively on page images will, as the corpus grows, make access increasingly difficult.

Recognising, however, that cataloguing is an expensive activity, folio descriptions should be kept brief – perhaps limited to simply orientating the reader (e.g. this is folio x, it forms part of the text A which occupies folios y-z within manuscript B) – or describing something exceptional, such as an image that occurs on the page.

9. To allow users to order, email, download images etc, digitised images must be accessible through MedPhoto.

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<sup>1</sup> 'Medieval GP manual saved' Times, 26th June 2002, p15

10. The “e-texts” Web site must be fully integrated with Innopac, CALM and MedPhoto. Data to create the browseable “e-texts” Web site must be sourced from these systems. [Appendix B provides a workflow that describes how data from these different systems could be integrated to produce the “e-text” Web site.]
11. The Library should investigate the feasibility of producing a CD-ROM version of its digitised manuscripts. This should look at what it would cost to produce, the size of the market, and what impact it would have on reproduction sales in MPL.
12. If the Library intends to scale up this activity (Recommendation 1), then it should focus its activity on digitising English medical manuscripts, especially those that are illuminated. The Librarian/Head of Special Collections should identify potential candidates.
13. To establish clearer metrics (especially with regard to the cost of the additional cataloguing that is suggested here) it is recommended that a second text is digitised that adheres to all proposals outlined here.
14. Once clear metrics have been established, and there is some indication of how many illuminated medical manuscripts the Library holds, it is recommended that a formal proposal to scale-up this activity to taken to the Library Developments Programme Board.

In taking forward this proposal, staffing implications across all relevant departments (Conservation, MPL, Special Collections, and Systems Strategy) must be considered.

## Section 1 – Physicians Handbook Web site: Navigation and Functionality

Questions 1 to 7 were intended to determine how useful the Physicians handbook Web site was and to what extent the digital surrogate obviated the need to view the original.

Each question took the form of a statement and users were asked to indicate their level of compliance with each statement.

### Question 1

*The physician's Handbook Web site is easy to use and clearly laid out.*

Comment	Number of replies	% of replies
Strongly agree	50	53%
Agree	40	43%
Disagree	3	3%
Strongly disagree	1	1%
<b>Totals</b>	<b>94</b>	<b>100.00%</b>

### Comment

With 96% of users responding positively to this statement we can conclude that the layout and design of the Web site presented no major problems. Specific user comments include “this is a fabulous site” (C25), and “the Handbook is absolutely stunning and the Web site seems to be well organised (C28).

Comments from users who less enthusiastic about the site included one on download times (“despite my cable modem, download times can be exasperating” (C12), whilst others commented on the paucity of metadata (C22, C34).

### Question 2

*Browsing the Physician's Handbook is straightforward and intuitive.*

Comment	Number of replies	% of replies
Strongly agree	49	53%
Agree	40	43%
Disagree	3	3%
Strongly disagree	1	1%
<b>Totals</b>	<b>93</b>	<b>100.00%</b>

### Comment

As with Question 1, very few users experienced any difficulty in browsing the Web site. Specific user comments included “I thought the design worked well was intuitive and user friendly” (C22) and “I admire the excellence of presentation and clarity” (C10).

Those who were less positive about the Web site’s browse features commented that there was a discrepancy (subsequently corrected) between folio numbers given in the introduction and the page numbers attached to the thumbnail images (C40 and C52), and a concern that thumbnails are not the best way to access individual folios (C50).

### Question 3

*The image resolution is of a sufficiently high quality for my needs.*

Comment	Number of replies	% of replies
Strongly agree	34	38%
Agree	40	44%
Disagree	12	13%
Strongly disagree	4	5%
<b>Totals</b>	<b>90</b>	<b>100.00%</b>

#### Comment

Images for *Physicians Handbook* were supplied in three sizes: thumbnail, medium view (800x600 pixels) and large (1200x800 pixels).

Although the majority of respondents found these sizes sufficient for their needs, a sizeable minority (almost 20%) indicated that the image resolution did not meet their needs. Specific comments include “you need to scale up the image sizes” (C5) and “the images are too small to read even when large” (C57).

In recommending that bigger images should be made available (Recommendation2) it is recognised, however, that bigger images impact on download times and that the sizes used, for example, by the Early Manuscripts at Oxford University project <<http://image.ox.ac.uk/>> are for practical purposes too large to be made available over the Internet. [Using a 600k broadband connection, it takes over 90 seconds to download a large (5315x7520 pixels) image.]

A number of users also commented on the fact that the digitisation of MS8004 omitted front and back binding boards and all the end papers (C36, C40). This needs to be addressed in any future project.

### Question 4

*Printing images from the site is easy.*

Comment	Number of replies	% of replies
Strongly agree	20	24%
Agree	49	60%
Disagree	10	12%
Strongly disagree	3	4%
<b>Totals</b>	<b>82</b>	<b>100.00%</b>

#### Comment

Although most users found printing easy, there were a number of comments indicating how printing could be improved. One respondent remarked that “my only quibble with the ease of printing images is the absence of any instruction for the user”(C5), whilst another (C19) commented “it took me some time playing around with different options for saving and printing an image to find the combination that gave me a full-page size of the image at good resolution. Perhaps some tips about how to achieve good images from the web site would be a help, even if they need to say something about different hardware and software configurations possibly requiring different settings to get the best possible image from the web.” These suggestions need to be incorporated into any future project.

### Question 5

Having seen the digital version of the Physician's Handbook I am **more likely** to visit the Library to see the original.

Comment	Number of replies	% of replies
Strongly agree	14	15%
Agree	30	32%
Disagree	41	44%
Strongly disagree	8	9%
<b>Totals</b>	<b>93</b>	<b>100.00%</b>

#### Comment

The purpose of this question was to try and test whether a digital surrogate would obviate the need to visit the Library to view the original.

Although the majority of responses (53%) indicated that the availability of digital surrogate would mean that they did *not* have to visit the Library to view it, a significant proportion (47%) believed that they would now visit the Library to see the original. This almost 50/50 split reinforces the much held view that the availability of digital surrogates does not lead to a decrease in the use of the original. Consequently, if the Wellcome Library is hoping to use digital surrogates as a way of minimising access to the originals (for preservation purposes) it will need a clear policy that prohibits access to the original, except in special circumstances.

### Question 6

Now I can access the Physician's Handbook on the Web I **no longer need** to visit the Wellcome Library to study the original.

Comment	Number of replies	% of replies
Strongly agree	9	10%
Agree	33	38%
Disagree	28	32%
Strongly disagree	17	20%
<b>Totals</b>	<b>87</b>	<b>100.00%</b>

#### Comment

This question is the opposite of question 5 and was included to try and test the consistency of answers given to the previous question.

However, where the previous question set out to determine whether the availability of the surrogate would make the user **more likely** to visit the Library, this question asks users to comment on whether or not the digital surrogate would obviate the need to visit the Library.

As with question 6, replies to this statement indicate that although 48% of readers would be happy with the digital surrogate, 52% are **not** and still require access to the original.

### Question 7

The physician's Handbook site met my expectations.

Comment	Number of replies	% of replies
Strongly agree	40	44%
Agree	36	40%
Disagree	12	13%
Strongly disagree	2	3%
<b>Totals</b>	<b>90</b>	<b>100.00%</b>

## Comment

Overall the Web site enjoyed a high ratings approval, with 84% agreeing that the site met their expectations. It is clear from the responses (see Appendix A) that there is a strong desire for the Library to make more material available electronically. One respondent commented, “using high tech means to increase access to such a wonderful resource is exactly where the Wellcome Library should be going” (C37), whilst another simply commented “please give us more!” (C35).

Figures from the Web logs also show that heavy use is made of the Physician’s Handbook Web site. During the month of May (when the evaluation took place) the site attracted 1014 visitors and was the fourth most visited part of the site. Only the home page, catalogue page and resources page attracted more hits.] In June (when the site was not actively promoted, or linked to from the Home page, the site still attracted over 500 visitors and was the 6th most requested page on the Library Web site.

## Recommendations from Section 1

1. The high level of interest and support for this type of project clearly suggest that the Library should consider scaling up this activity to make more of its resources available electronically.
2. Additional (bigger) image sizes should be made available. As a minimum, it is recommended that images should be available in one size bigger – perhaps 1500x1000.
3. When digitising texts, manuscripts etc the Library should ensure that all binding boards, spines, endpapers, flypapers etc are included.
4. Image numbers must correlate with the folio (verso/recto) numbers. Thus, rather than having image 001-002, this should be referenced as 0v1r.
5. The Library should investigate whether it is feasible to allow zoom-in/zoom-out image manipulation. This is the approach adopted by the National Library of Scotland and their Auchinleck Manuscript digitisation project <<http://www.nls.uk/auchinleck/>>.
6. Clear instructions should be provided on how to print images from the site.
7. The Library needs a clear policy stating in what circumstances original documents can be consulted when a digital surrogate is available.

## Section 2 – Extent of Digitisation: other value-added facilities

With the *Physicians Handbook*, the Library focused on providing access via page images. It is possible, however, to add other features such as online transcriptions, expert commentary etc. This section looks in more details at specific aspects of the project and attempts to tease out those features our users’ most desire.

Each of the following questions (8-15) took the form of a statement and users were asked to indicate their level of compliance with the sentiment expressed.

### Question 8

*Each digital manuscript must be accompanied by an online transcription/translation.*

Comment	Number of replies	% of replies
Very important	28	30%
Important	30	33%
Neutral	15	16%
Not important	14	15%
Irrelevant	3	4%
Not applicable	2	2%
<b>Totals</b>	<b>92</b>	<b>100.00%</b>

## Comment

With 63% of users indicating that an online transcription or translation is a “must have”, the Library will need to consider whether this need can be met and if so, how. A number of respondents pointed out that the text was difficult to read (C3, C16, C18, C29) and therefore a translation would be “helpful, or even essential (C30).

### Question 9

*Each digital manuscript must be accompanied by a searchable online transcription/translation.*

Comment	Number of replies	% of replies
Very important	17	18%
Important	33	35%
Neutral	20	23%
Not important	17	18%
Irrelevant	3	3%
Not applicable	3	3%
<b>Totals</b>	<b>93</b>	<b>100.00%</b>

## Comment

Again, over 50% of respondents considered a searchable transcription to be an important component to a digitisation project. One reader remarked, “the lack of a searchable transcription was a great disappointment” (C22), whilst another stated, “some basic information about the texts and illustrations should be searchable by the time the corpus of digitised items grows too large for simply browsing through the thumbnails” (C56).

This latter point is particularly valid, for if the Library does decide to scale up this operation (Recommendation 1), simple browsing will **not** be an effective way to find specific texts/folio’s.

### Question 10

*Each digital manuscript must be accompanied by expert commentary, explaining the importance of the text etc.*

Comment	Number of replies	% of replies
Very important	11	12%
Important	32	35%
Neutral	34	37%
Not important	13	14%
Irrelevant	1	1%
Not applicable	1	1%
<b>Totals</b>	<b>92</b>	<b>100.00%</b>

## Comment

Interestingly, 53% of respondents were either neutral or against any plan to create an expert commentary to help explain the text and its context. As the cost of producing an expert commentary would be high (expert scholars would need to be sourced and paid), the lukewarm response to this question suggests that this is an avenue that the Library need not pursue.

### Question 11

*The system must be developed to allow users to order high-quality prints of these images through an online ordering system.*

Comment	Number of replies	% of replies
Very important	15	16%
Important	29	31%
Neutral	26	27%
Not important	17	18%
Irrelevant	7	8%
Not applicable	0	0%
<b>Totals</b>	<b>94</b>	<b>100.00%</b>

#### Comment

Again, the majority of users were either neutral or against any plan to develop a system that would enable them to order high quality prints.

However, as the Wellcome Library already has an online image ordering system (MedPhoto) the cost of extending this would be insignificant. To achieve this, however, the Library needs to work out a mechanism for ensuring that mages that are created through this type of digitisation are fed through the Image Acquisition Pipeline (IAP) and become accessible to MedPhoto users.

### Question 12

*The system must be developed to allow users to view the images at a higher magnification/resolution that that currently offered.*

Comment	Number of replies	% of replies
Very important	19	21%
Important	22	24%
Neutral	21	23%
Not important	23	26%
Irrelevant	3	3%
Not applicable	2	3%
<b>Totals</b>	<b>90</b>	<b>100.00%</b>

#### Comment

This question is similar to question 4, though this asks specifically if a higher magnification is required. The results for this question are somewhat mixed. However, as a number of respondents specifically stated the need for bigger images, it is recommended that the Library address this in any future project.

### Question 13

*The system must be developed to allow users to email and download images.*

Comment	Number of replies	% of replies
Very important	12	13%
Important	29	31%
Neutral	30	32%
Not important	17	18%
Irrelevant	5	5%
Not applicable	1	1%
<b>Totals</b>	<b>94</b>	<b>100.00%</b>

## Comment

Again, a relatively mixed set of responses. If, however, the images are held within MedPhoto, providing this functionality will present no problem.

### **Question 14**

*The system must be developed to allow users to select and sort images (i.e. lightbox functionality).*

<b>Comment</b>	<b>Number of replies</b>	<b>% of replies</b>
Very important	4	4%
Important	18	19%
Neutral	45	47%
Not important	25	26%
Irrelevant	3	3%
Not applicable	1	1%
<b>Totals</b>	<b>96</b>	<b>100.00%</b>

## Comment

Although most users were neutral on this issue, if the page images are part of MedPhoto this functionality will come as standard.

### **Question 15**

*Each manuscript must be made available on CD-ROM for purchase at low cost. The quality of the images on the CD-ROM would be far higher than that made available on the Web.*

<b>Comment</b>	<b>Number of replies</b>	<b>% of replies</b>
Very important	17	18%
Important	29	32%
Neutral	25	27%
Not important	15	17%
Irrelevant	4	5%
Not applicable	1	1%
<b>Totals</b>	<b>92</b>	<b>100.00%</b>

## Comment

With 50% of respondents indicating that a CD-ROM version of the manuscript would be an important value-added feature, the Library should investigate what it would cost to produce, the size of the market, and what impact it would have on reproduction sales in MPL.

## Section 3 – Extent of digitisation – choices

Having posed a number of questions as to what value-added features would be useful, section 3 posed a simple, stark choice.

### Question 16

*In digitising its material the Library can adopt either:*

- *An image-only approach. This should allow a significant number of manuscripts to be digitised – though no add-on facilities such as translations, transcriptions, text searching, commentary would be available.*

**or**

- *An image + text transcription + commentary approach. Although this would provide readers with much richer digital surrogates, the total number of digitised manuscripts would be smaller.*

**Which approach would you find most useful? (please tick one box)**

Approach	Number of replies	% of replies
Image only	41	46%
Image + transcription + commentary	48	54%
<b>Totals</b>	<b>89</b>	<b>100.00%</b>

### Comment

In many ways the choice presented was too stark and a number of respondents commented that there is a middle way. C23, for example, remarked “it would be helpful if simple captions could be attached that briefly describe the content of the page”. C27 picks up this theme and suggests “skipping the transcription and commentary but provide a minimal text breakdown”.

Although the “image only” approach provides a relatively quick and easy way to make manuscripts more accessible, there are significant limitations to this approach, especially as the corpus of images grows. Consequently, it is recommended that a *brief* catalogue record is created for each page image (folio).

## Recommendations from Sections 2 and 3

8. It is recommended that a catalogue record is created for each page image (folio). Relying exclusively on page images will, as the corpus grows, make access increasingly difficult.

Recognising, however, that cataloguing is an expensive activity, folio descriptions should be kept brief – perhaps limited to simply orientating the reader (e.g. this is folio *x*, it forms part of the text *A* which occupies folios *y-z* within manuscript *B*) – or describing something exceptional, such as an image that occurs on the page.

[Note: It is envisaged that this cataloguing will take place in MIRO. See Appendix B.]

9. To allow users to order, email, download images etc, digitised images must be accessible through MedPhoto.
10. The “e-texts” Web site must be fully integrated with Innopac, CALM and MedPhoto. Data to create the browseable “e-texts” Web site must be sourced from these systems. [Appendix B provides a workflow that describes how data from these different systems could be integrated to produce the “e-text” Web site.]

11. The Library should investigate the feasibility of producing a CD-ROM version of its digitised manuscripts. This should look at what it would cost to produce, the size of the market, and what impact it would have on reproduction sales in MPL.

## Section 4 – Medieval Manuscripts – choices

This final section of the questionnaire attempted to get a steer from respondents as to where the Library should focus its digitisation efforts, in terms of mediaeval manuscripts.

### Question 17

*Since it is inevitably only possible to digitise a limited quantity of manuscripts, it would be helpful to know which categories of material would be most suitable for digital reproduction.*

*Which of the following categories of medieval manuscripts in the Wellcome Library would you most like to see made available on-line as digital surrogates ? (Please choose one category only, or add one of your own choice):*

Comment	Number of replies	% of replies
Medical manuscripts in English	29	32%
Herbals	11	11%
Alchemical manuscripts	7	8%
Illuminated manuscripts	22	24%
Twelfth and thirteenth-century manuscripts	16	17%
Other	7	8%
<b>Totals</b>	<b>92</b>	<b>100.00%</b>

### Comment

The spread of responses is not surprising, and confirms the widely held belief that whatever objects you choose to digitise you will only please a minority of users. That said, almost a third of respondents indicated that we should focus our efforts on English medical manuscripts, whilst 24% indicated that illuminated manuscripts should be the priority.

Recognising that any scaling-up this activity is going to be relatively slow in the current financial climate, it seems to make sense for the Wellcome to look first at digitising English medical manuscripts, especially those that are illuminated.

## Recommendations from Section 4

12 If the Library intends to scale up this activity (recommendation 1), then it should focus its activity on digitising English medical manuscripts, especially those that are illuminated. The Librarian/Head of Special Collections should identify potential candidates.

## Section 5 – Developing the Physicians Handbook Web site – costings

If the Library is to scale up the production of digital facsimile's of medieval manuscripts then it will need to have an idea of costs.

Although the costs of producing the Web site for MS8004 cannot simply be extrapolated by the number of items the Library may wish to digitise – not least because the suggestions made here (such as additional cataloguing) will impact on costs – they do provide a ballpark figure on which future plans can be estimated.

The cost of the Physician's Handbook Web site was made up of the following staff components. [Note, the Library already has the hardware for creating images and making them available via the Web and thus have been excluded from these costings.]

<b>Item</b>	<b>Time taken</b>
Preparatory work from Conservation	3 days
Time taken by MPL to set up the text, photograph it and produce one set of TIFF images. [For this manuscript, ninety-five 40MB TIFF files were created.]	2 days
Time taken by Special Collection to produce catalogue record in CALM and write introductory text for the Web site.	1 day
Time taken by SSD to produce: 3 different sets of images (for each folio), design and develop Web site, write PERL scripts to call appropriate image	15 days
<b>Total time taken</b>	<b>20 days</b>
<b>Approx. staff cost:</b>	<b>£2700</b>

## Recommendations from Section 5

- 13 To establish clearer metrics (especially with regard to the cost of the additional cataloguing that is suggested here) it is recommended that a second text is digitised that adheres to all proposals outlined here.
- 14 Once clear metrics have been established, and there is some indication of how many illuminated medical manuscripts the Library holds, it is recommended that a formal proposal to scale-up this activity to taken to the Library Developments Programme Board.

In taking forward this proposal, staffing implications across all relevant departments (Conservation, MPL, Special Collections and System Strategy) must be considered.

## Conclusion

Digitising the Physician's Handbook (MS8004) and making it available on the Web <<http://library.wellcome.ac.uk/resources/exttexts/ms8004/>> has proved to a highly popular decision, as shown in the Web logs and the online evaluation forms. Evidence from these sources clearly suggests that this in an activity that the Library should scale-up and develop.

This report has highlighted the key findings from the survey and provided a clear set of recommendations on how the lessons learnt from this pilot study can be implemented.

## Appendix A– User Comments (unedited)

- C1. An image of the front of the closed volume (and any blank pages preceding the first page of text) should have preceded the first image, and an image of the back of the closed volume (and any blank pages following the last page of text) should have followed the last image. There should be no "back" button on the first image, and no "next" button on the last image."
- C2. I have clicked many neutrals above as I do not feel in a position to comment. The little back button on the left hand side doesn't work and neither will the browser back button take you back. The other way I tried to get back from a page view to the contents or Physicians handbook intro page was to click on the Physician's Handbook link in the navigation chain across the top but this didn't link either. I ended up having to use the browser history panel - very frustrating. As someone with no expertise in historical manuscripts it would be of most interest to me if there were a text and commentary as well as the images. however these would only be of passing interest and not the subject of serious study. In other words which approach you want to take depends on your target audience - in practice you would probably get more bang for your buck (excuse the phrase) with the image only approach. On your intro page for the Physicians Handbook I would suggest that you refer to it as The Physician's Handbook rather than MS8004. Keep the number in brackets on the title then drop it - it makes it sound like an anonymous librarian thing not the unique artifact that it clearly is. As long as they can quote the number to someone if they need to what user wants to know it as MS8004?!!!
- C3. I do think transcriptions are important (commentaries less so), but can see that you need to concentrate on getting the maximum number of images online first. Probably whatever gets the most use should be the first priority, but I think if you will be using transcriptions, then material which is difficult to use in the original (Latin script, tricky handwriting etc) should be high priority too.
- C4. Fantastic, image quality is good enough to read and appreciate the complexity and value of the source. Are you monitoring online use to compare with user figures in the search room? Many thanks for this, hope the project progresses well.
- C5. I was particularly glad to see the up front" rights management section (under Copyright). My only quibble with the ease of printing of images is absence of any instruction for users. (Of course one can easily print from the web browser, but some may need to be reminded of this and also warned that the quality of the output will vary by device etc). By contrast, I think the inclusion of the "printer-friendly" text pages is excellent. Finally, while I favor full-text access, I think it's important to recognize that in some cases page images may provide sufficient access to textual resources. There are preservation trade-offs, too...as a smaller file, the encoded text will probably be less costly to maintain. If we rely on page images to capture all the intellectual/artifactual content, we need to scale up to image sizes + associated metadata that may be more costly to manage. (Stephen Chapman, from the Harvard digital preservation program, has just/is about to publish a piece on this subject.) Personally, I think that some collaborative curatorial decision making in this area would be very useful, e.g., for establishing some community standards for cost/benefit of full-text vs. page image (with or w/out associated text file). Would the Wellcome consider working with other history of medicine repositories on a project like this?
- C6. If you wish to attract visitors beyond medical history, I think digitising fascinating/interesting social comments/recipes/procedures and practices should draw people in. Some years ago I completed a dissertation, the subject matter being how medical information (particularly pertaining to herbs) was disseminated in the medieval/early modern period. (My degree was that of Medieval history rather than connected to health or medicine.) I wish this had been around then!!"
- C7. Sort out the foliation problem before going public with the digitisation. Inconsistency in some of the data leads to confusion and lack of confidence in the site. E.g. I wondered why the website calls it "The Physician's Handbook": the catalogue record calls it something else, and the

introduction implies that it's a luxury literary production rather than a handbook. The catalogue doesn't commit to saying it belonged to a physician either. And while I'm about it, what does "The" mean? There's only one physician's handbook and this is it? Navigation would be easier if "Introduction" were called Home, and if a Home link were on every page. Also "Table of Contents" isn't a table of contents. A real Table of Contents would be useful, i.e. analysing the text into sections. Would be useful if the contents were shown under the relevant image e.g. "Calendrical tables (continued)". The last question in the questionnaire offers a stark choice between "Images only" and "Images + text + commentary". Suggest that as "text" (i.e. a complete and indexed transcription) would be so time-consuming, a middle way might be considered: give people a bit of help so that they can read and understand the text by their own efforts (which is also much more enjoyable than reading a transcript!). E.g. provide one page with interlinear or line-by-line transcription so that people can get the hang of the script, then read the rest themselves when they've got their eye in; provide a bit of commentary giving the subject and any important/difficult words on each opening. That would give more value for money than a complete transcription.

- C8. Thank you very much for undertaking this effort and asking for feedback. I was excited to get the announcement (via Caduceus-L)--and very disappointed that, by and large, I cannot read the manuscript on the web. These comments are based on about 10 minutes of exploring the site. I should say that I am quite near-sighted and wear bifocals. I cannot read the intro or catalogue description (or this form) without requesting a larger font size from the browser. Not surprisingly, by and large, I cannot read the ms on the web at the "larger image" size--the images would have to be at least 2x larger for me to use this in research. I cannot make out the details of the illuminated initials at all--can't tell where the problem lies, in the original, the photography, or the web-mounting. The print-outs, using an old Apple LAser printer, are even worse. The introduction is interesting and tantalizing, but I expected it and the catalogue description to include a breakdown of all the individual opuscles/foliation--standard.
- C9. You brought to my home , my desk this thrill one have when he look at an archive for a document or pictures to prove a point , and Opps! it is in my hands. Thanks!
- C10. Although this period is not my field, I am full of admiration for the excellence of presentation, the clarity, and speed of downloading. Personally, and unrealistically, I would like to see C19 journals available on the WWW, and rare publications of relevance to the history of anaesthesia.
- C11. The page would not move over enough for me to check "Image + text + commentary" I would find that approach most useful. I think it is a great idea."
- C12. Despite my cable-modem downloads times can be exasperating
- C13. Having just spent hundreds of dollars on numerous black and white microfilms of medieval medical manuscripts, viewing the Physician's Handbook in vivid color (and for no cost) was refreshing and inspiring. Thank you
- C14. In any case, as many manuscripts as possible should be digitised. This will save very important documents. It will avoid the necessity of people handling the originals, and if, God forbid, any disaster caused their destruction, at least the documents would be preserved in digital form."
- C15. A highly useful source and it would be good to see digitisation extended, especially for material that is regularly consulted (ie Lancet etc)"
- C16. The resolution is excellent and I appreciate the difficulties involved in including commentary. However, this would be valuable as the text is difficult to decipher.
- C17. As someone who is not a specialist in this historical period, but certainly is interested in reading the manuscript, I would only find it worthwhile my time to read the entire manuscript with a supplementary typed transcript. Otherwise, I would not have the time to make my way through the manuscript.

- C18. I think an online transcription would be a very useful addition to this already wonderful site, as it would widen the appeal, and accessibility of the manuscript. Although it means less manuscripts would be available online, I think the transcription approach would encourage more people to visit the library to see more material if it is what they required.
- C19. It's a beautiful piece of reproduction and I look forward to more being available. I wasn't able to enter my answer to part 4 in the on-line form, so let me say that although I'd like to have the richer materials available, I think I'd personally find having more materials (the image-only approach) available more helpful than fewer, richer materials. But I speak as a scholar, and you might find that the more general-audience users of your site would benefit more from images with fuller apparatus. On the printing question, it took me some time playing around with different options for saving and printing an image to find the combination that gave me a full-page size of the image at good resolution. Perhaps some tips about how to achieve good images from the website would be a help, even if they need to say something about different hardware and software configurations possibly requiring different settings to get the best possible image from the web. Having CD's available for purchase by those who want higher-quality images seems like an excellent idea."
- C20. The web site enables readers like me located far away to have a glimpse of the fascinating pictorial material available at the library. Since I have selected an image only approach this would enable me to see many more manuscripts."
- C21. The Physicians Handbook is a fascinating manuscript, but one which also reinforces the need for higher resolution imaging as it is really difficult to read in its present state. One of the benefits to digitizing a manuscript is the ability to magnify the image for ease of translation.
- C22. I thought the design worked quite well, was intuitive and user-friendly. Quite frankly, however, the lack of a searchable transcription was a great disappointment. The quality of images that can be created and distributed on the net will get better and better, ensuring that an image-only resource has a relatively short shelf-life. In its current form, this site will be superseded within five years. The addition of a searchable transcription (in XML) would provide added value that would last (its worth would not be dependent on the form of delivery)."
- C23. It would be helpful if simple captions could be attached to each thumbnail image that briefly describe the content of the page, thus saving on download time. Such captions could then be extracted to provide a single page of text which would provide a 'index' or 'contents' to the manuscript - with cross-links back to the page images. This would be an effective system halfway between 'image only' and 'image + text + commentary.
- C24. I found the issue of access paramount, and I would keep that as the focus of the project. It also goes hand in hand with issues of preservation. So, having to choose, I would make as many mss as possible widely accessible to scholars world-wide first and foremost as primary sources of research. In terms of accompanying text, I believe it would be useful to scholars to have an updated bibliography of any relevant articles written on a given ms (without having to provide transcription, translation or commentary of the text). The CD-Rom option, as well as the possibility of allowing for higher magnification (an option I use regularly when accessing PhD files from Gallica of 15th-16th printed texts) would help scholars substantially and reduce scholarly use of the original. I fully support the initiative and I am very grateful to the Wellcome Institute for opening this new venue of scholarly research.
- C25. This is a fabulous site and for the beginning researcher who doesn't have the access to specialized archival materials it is a godsend. Thank you so much for the hard work that was undertaken in order to bring these works to the general population.
- C26. Little known, but significant manuscripts would be helpful. Also manuscripts available in other institutions allowing for comparison studies at a distance?
- C27. Could one consider a middle approach? Skip the transcription and commentary, but provide a minimal textual breakdown? Here I'm told that there is a pilgrimage account, but I'd have to look at every single image to find it. Basic cataloguing beyond the level of "English medical ms"

should be possible, and very desirable. I like the fact that the images show a real 3-D book, with the outward slope of the underlying leaves visible. I wish that your technology were more transparent: link to a page that outlines photography, scanning, eventual database, searching mechanism, etc.? Include sample images with color bar, gray scale, ruler in cm? Number of "pages" (?) doesn't correspond to the number displayed.

- C28. The Handbook itself is absolutely stunning and the website seems to be very well organised."
- C29. "This is great for bringing the past to life. The image only format means it is accessible only to a very few people. It is better to have broader access to fewer items through text + commentary than very narrow access for a broader range of image only items. The real experts will probably want to come to the Library anyway to look at the original MS. Anyway, well done and keep it up."
- C30. When viewing texts in old English or foreign languages it is very hard to read or understand therefore a translation would be very helpful, essential even. However in everyday English language there would be no need of a translation."
- C31. I think it's stunning - a wonderful way of promoting a significant item of the Wellcome collection. This must be the future hitting us again!"
- C32. Focus should be on medical history.
- C33. Popular titles Lancet etc
- C34. Transcription into online text very important, as otherwise other people will try to do it themselves and perhaps get it wrong. this opens the texts up to misinterpretation & misquoting. If Wellcome provide an authoritative, expert-based transcription and commentary: 1. there are no such risks of misquoting / misinterpretation 2. the articles can be assigned digital object identifiers (DOIs) and cited as normal medical articles, presumably at the Wellcome website. if no transcriptions / translations were available, then people can't really cite the images, as many other people might not be able to read them.
- C35. I think that the Physician's handbook is excellent. Please give us more."
- C36. Further comment to supplement previous reply: It would be useful to include views of the front and back binding boards (inside and out) and all the endpapers. Not only do these contain important information in themselves, but they help one to visualise the work as a physical entity. It is good practice in microfilming to include them."
- C37. "I think this combination of using high-tech means to increase access to such a wonderful resource is exactly where the Wellcome Library should be going. (I say this as someone who is not a regular physical user of the Library but who does spend several hours each week - mostly in short intervals - looking at resources on line.) More please!"
- C38. More important than a full transcription of the text and commentary is a detailed catalogue description, identifying texts, giving incipits, owners'/readers' inscriptions etc. which is linked directly to ms. pages where information is quoted from."
- C39. It's a beautiful ms. and thus a good item to provide in this format; perhaps one could combine this method with e.g. b/w PDF:s of less elaborate mss, where the content might be the only interesting feature?"
- C40. Some point: 1) ALL PARTS of the manuscript must be digitalized (binding, flyleaves, blank folios ....) 2) Your index (1-80; 81-160) doesn't correspond to photographs really shown 3) Reference must be done to folios (r/v) and not to pages 4) If you go on digitalizing (and I hope so), please, take notice that illustration, even if it is one of the most important criteria to acquire manuscripts, is not the first reason for scholars to find manuscripts interesting: so, begin with number one ....

- C41. The use of "page" views and numbering is very confusing, because the MS is foliated, not paginated. I wanted to find the start of the Pilgrimage text: the catalogue description says this is on "f.76", so I guessed that this would be "page" 152. After some trial and error I found that "f.76" is actually "page 144", but that it is numbered as f. "75" in the manuscript! (I note that you plan to re-foliate the manuscript, but this will potentially cause even more confusion, since the new foilation will not appear in the images, while the potentially 'incorrect' foliation will!) I am delighted that you have produced a 'full' facsimile, but regret that you have omitted what is for me one of the main areas of interest: the endleaves and the binding, which are a primary source of information for provenance. (Ask David Pearson!) Even if the endleaves are blank, and the binding is modern, a user won't know this unless it is stated in the catalogue description, or recorded in the images."
- C42. Congratulations. You've chosen a good way to make your holdings accessible to the public. More pictures are good, but a basic information about the manuscript reproduced is necessary. To stark building up an electronic double of your manuscript library with the digitalisation of pictures is fine. But is it such a problem to make available existing descriptions of the manuscripts or an existing bibliography. If the handling is in question to be adapted one might consider, that different users might prefer different scales. For example I would have appreciated thumbnails to be a bit larger, and the open book accessible without scrolling. Then a function for ever detailed view might be fine but isn't a main necessity. I am sure you know the project in Cologne: <http://www.ceec.uni-koeln.de/> With my best congratulations Martin Roland.
- C43. Gallica at the BNF seems to me to be leading the way in this area. Their approach should be evaluated prior to future decisions - not that they have got everything right. EEBO is also very good and so is <http://www.hti.umich.edu/cgi/t/text/text-idx?c=moa;cc=moa;sid=d3761301a2a94c351bd4887044380eee;tpl=home.tpl>
- C44. Images are fine, but were created in connection with a text, and any digitalization project should respect that. Medieval texts are not picture-books: they are texts accompanied by images. That balance should be maintained. "
- C45. Congratulations on an excellent project. My responses to part 1 of the questionnaire are manuscript specific. In this instance, the digital reproduction was sufficient for my interests. This would be true for the majority of the manuscripts in the Wellcome Library. But there is a small number for which consultation of both the digital reproduction and the original might be necessary. In some instances, seeing the digital image might bring a manuscript to my attention the palaeographical and codicological significance of which I had been unaware, and hence might prompt a request to see the original. I can also envisage using the website for teaching the history of the book; this would be unlikely to result in numerous requests to see the books themselves, but reproductions of complete codicological units will be invaluable, given the expense and limitations of access to hard-copy facsimiles in academic libraries."
- C46. I strongly welcome this initiative. This would be the kind of on-line resource that I would definitely wish to use, for teaching history of early medicine. I cannot over-emphasise how important this is to researchers as well as teachers in history of medicine."
- C47.** Personally, I am not especially interested in medical or scientific manuscripts, but I think your project is very useful and should be adopted in many other libraries."
- C48. I find the Physician's Handbook website excellent as it is, the only thing I am missing is a short codicological description (book cover and binding, type and quality of paper, structure of quires etc.)."
- C49. I just want to congratulate the staff in charge of digitalisation for their impressive job done with the publication of this MS. I am very interested in medical recipe collections earlier than C15TH."
- C50. I do not think that thumbnails are the best way to access individual folios; instead, brief analyses would be more efficient. As a palaeographer, I am very disappointed that the scale

does not allow any serious examination of the script. Specimens of each hand (if several) should be provided at a VERY LARGE scale (approx. 100 pixels/cm)

- C51. I think this is a very good effort! Thank you. It would however also be of interest to see Alchemical Texts and particularly Imagery in good pixel quality-and other medieval efforts at illustrating the transformative powers of nature. Being able to zoom in closely or cut and paste sections to have copied to CD-Rom or other media would also be an advantage."
- C52. My (mild) dissatisfaction with the PH website was due to my inability to find a listing of contents, and to the apparent discrepancy between folio numbers given in the introduction and the page numbers attached to the thumbnail digitizations (I tried dividing them by two, and then tried taking them as given); thus I tried to find the text on bloodletting veins cited as being on fol. 18, but I wasn't successful. Perhaps I gave up too soon--or perhaps I was simply obtuse today (it does happen).
- C53. I think this is a great idea that would be singular with respect to making texts on the history of medicine available free of charge on the internet. I had never heard of the Wellcome library until today but I will be visiting often if you implement this tool as I am a medical student with a fervent interest in medical history. Thank you.
- C54. I would love to be able to read the text of the Physician's handbook. I am doing an MA in Transpersonal Arts and Practice. My dissertation will be on chronic pain. I am researching alchemical texts, the liberal arts of the Renaissance, so the handbook is of great interest to me.
- C55. Thank you for putting it online --- what a wonderful tool! My wish to see it in person does not mean the digital image is inadequate . . . just that I love having the option to view it both ways. A higher magnification option would be very handy."
- C56. The Image only approach would be most useful. But nevertheless the basic codicological informations should be given (for example: paper (watermarks)/parchment, measurements, binding (gatherings?)... Some basic information about the texts and illustrations should be searchable by the time, the corpus of digitized items grows too large for simply browsing through the "thumbnails".
- C57.** Image too small to read even when Large, and then only half right hand page is shown. If this Ms is so important because of its date it is worth transcribing and indexing, rather than as it is

## **Appendix B – Creating future e-texts: the role of Innopac, CALM and MedPhoto**

*This appendix attempts to identify the workflow – and how each of the three Library systems feeds into this – that would be needed if the Library was to scale up the digitisation of its manuscript holdings.*

- Step 1. Curator identifies object for digitisation.
- Step 2. Item passed to Preservation & Conservation Department to ensure it can be digitised and make any necessary preparations (loosening the binding etc.).
- Step 3. Item catalogued in CALM. [This assumes it is a Western Mss. If the item is Oriental, and the item is catalogued directly into Innopac, this step can be omitted.]
- Step 4. CALM record harvested by Innopac. At this point the item is assigned (by Innopac) the unique B number.
- Step 5. Object passed to MPL for scanning.
- Step 6. Item scanned by MPL and incorporated into MIRO through the Image Acquisition Pipeline. At this point each folio in the manuscripts is assigned a unique image number. (e.g. L0001234).
- Step 7. Each folio is then catalogued in MIRO. I anticipate that this will be done by the relevant curator, and not by MPL. In addition to briefly describing the folio (or providing an incipit) the cataloguer will add-in the Innopac .b number and assign the image another value, based on the folio/recto position. i.e. L0001234 will also be assigned 1V2R.
- Step 8. MPL decide which of the images (or all of them) are to be made available through MedPhoto.
- Step 8. MPL produce four files for each image (thumbnail, 800x600, 1200x800 and 1500x1000) for use on the e-texts Web site. These images could live on the library.wellcome.ac.uk Web site, or live in a new directory in the image arena on Aquarius. It is important, however, that these images are not visible watermarked.
- Step 9. This catalogue data is exported from MIRO and used to build the browseable version of the e-texts Web site.
- Step 10. The e-text Web site is build. This is independent from MedPhoto – but if users want to order images etc – there will be a hyperlink to MedPhoto.
- Step 11. The original CALM record is edited to reflect the fact that a digital facsimile of this object can now be downloaded from the e-texts Web site.

### ***How does the user access the resource?***

As the above indicates, there will be a variety of access points to these digital objects. The archivist who accesses CALM will find a reasonably detailed description of the resource, with a link to the e-texts Web site.

The reader who undertakes a search In Innopac, will (courtesy of OAI) have access to the same metadata as CALM. Additionally, however, as the MIRO records contain the Innopac b number, thumbnail images will be also be accessible in Innopac. Although there will only be one bibliographic record in Innopac, all the images associated with that records will be displayed. If a user clicks on a thumbnail, they will be taken through to the medium view in MedPhoto.

The user who accesses MedPhoto will find all the images (and be able to search on the folio-specific metadata) that have been added to this database. The Library may wish to make a decision that every image is added to MedPhoto.

The user who wishes to browse our collection of e-texts, will simply go the Library web site and navigate to the e-texts section. The metadata that will be used to structure these pages will come from MIRO. Data will be entered one and used many times.

Finally, as CALM, Innopac and MedPhoto will all be searchable through the seamless access system, this will provide yet another route to these digital objects.