

Unexpected fame: Conservation approaches to the preparatory object.
Proceedings from the International Conference of the Icon Book &
Paper Group, Oxford 1–2 October 2018

<https://icon.org.uk/unexpected-fame-conservation-approaches-to-the-preparatory-object>

Frankenstein unbound: the conservation of Mary Shelley's draft notebooks

Robert Minte

Copyright information: This article is published by Icon on an Open Access basis, after a 3 month embargo period, under a Hybrid Creative Commons Attribution-NonCommercial-NoDerivatives License (CC BY-NC-ND) <https://creativecommons.org/licenses/by-nc-nd/4.0/>. After the embargo is over, you are free to copy and redistribute this material in any medium or format under the following terms: You must give appropriate credit and provide a link to the license (you may do so in any reasonable manner, but not in any way which suggests that Icon endorses you or your use); you may not use the material for commercial purposes; and if you remix, transform, or build upon the material you may not distribute the modified material without prior consent of the copyright holder.

You must not detach this page.

To cite this article: Robert Minte, 'Frankenstein unbound: the conservation of Mary Shelley's draft notebooks' in *Unexpected fame: Conservation approaches to the preparatory object. Proceedings from the International Conference of the Icon Book & Paper Group, Oxford 1–2 October 2018* (London, The Institute of Conservation: 2020). <https://icon.org.uk/unexpected-fame-conservation-approaches-to-the-preparatory-object> (accessed date).

Robert Minte

Frankenstein unbound: the conservation of Mary Shelley's draft notebooks

Abstract

This year marks the 200th anniversary of the publication of Mary Shelley's novel *Frankenstein; or, the Modern Prometheus*, on 1 January, 1818. The autograph draft manuscripts now held at the Bodleian Library, University of Oxford, comprise the surviving leaves from two draft notebooks, in which Mary Shelley—with the collaboration of Percy Bysshe Shelley—drafted a two-volume novel, and three of an estimated eleven fair copy notebooks. The notebooks are central to the understanding of how the texts of *Frankenstein* evolved, but the history of why they survived is uncertain, possibly more the result of circumstance than intention. In their original format they existed as loose leaves, deliberately torn (and in the case of fair copy, cut) during the drafting and typesetting of the novel. Their physical condition is vulnerable, in part caused by iron gall ink corrosion. Yet they have become an icon of literary culture and therefore one of the great treasures of the Bodleian. This paper will look at how the conservation approach to these manuscripts was influenced by numerous, sometimes competing factors, in which the needs of preservation had to be reconciled with the pressures for access to the original manuscripts in a working university library.

Keywords

Frankenstein; drafts; manuscript; iron gall ink; fascicule

Introduction

This talk was given on the occasion of the bicentenary of the publication of Mary Shelley's *Frankenstein; or, the Modern Prometheus*. The earliest-surviving autograph drafts of Mary Shelley's novel are preserved in four notebooks held at the Bodleian Library, Oxford.¹ This paper describes their 2008 conservation and, with the benefit of a decade's hindsight, evaluates its efficacy. The notebooks are central to an understanding of how the text of *Frankenstein* evolved. But as 'Frankenstein' itself developed into a global cultural phenomenon, the manuscripts have been transformed from ephemeral working drafts into revered artefacts. The conservation of the notebooks, therefore, had to reconcile the needs of preservation with pressures for access to the famous originals, despite the wide availability of facsimile and digital surrogates.²

The Genesis of *Frankenstein*

In the introduction to the 1831 third edition of *Frankenstein*, Mary Shelley gives an account of the conception of her novel during the summer of 1816, in a story now almost as well known as the novel itself. Confined in the Villa Diodati on the shores of Lake Geneva by incessant rain, Mary Wollstonecraft Godwin, her future husband Percy Bysshe Shelley, Lord Byron and John Polidori occupied their time reading ghost stories, leading to Byron's proposal that they each write their own. Inspiration came to the eighteen-year-old Godwin in the form of a waking dream during the early hours, influenced by conversations overheard between P.B. Shelley and Byron on the principle of life and scientific experiments in electricity and reanimation:

I saw the pale student of unhallowed arts kneeling beside the thing he had put together. I saw the hideous phantasm of a man stretched out, and then, on the working of some powerful engine, show signs of life, and stir with an uneasy, half vital motion.... On the morrow I announced that I had thought of a story. I began that day with the words 'It was on a dreary night of November', making only a transcript of the grim terrors of my waking dream.³

Frankenstein; or, the Modern Prometheus was published anonymously on 1 January 1818 as a three-volume edition, which ran to just 500 copies, but it was to become one of the most well-known and influential works of early nineteenth-century Romantic fiction. Although it received mixed reviews on its publication, within five years it had been adapted for the first of many stage productions; a two-volume second edition with 'Mary Wollstonecraft Shelley' acknowledged as author followed in 1823, and a one-volume third edition was published in 1831. It was in this edition that the first illustration depicting Frankenstein's creature appeared.

And this is how the story of *Frankenstein* comes to most of us: not through Mary Shelley's original novel, but in iconic images of later reincarnations. Her literary creation continues to

¹ Oxford, Bodleian Library, MSS. Abinger c. 56–57 [Draft Notebooks A & B]; and MS. Abinger c. 58 [Fair Copy Notebooks C1 & C2].

² Charles E. Robinson, *The Frankenstein Notebooks*, (New York & London, Garland Publishing Inc., 1996) I & II; and New York Public Library and the Maryland Institute for Technology in the Humanities, in cooperation with the Bodleian Library, Oxford, 'The Shelley-Godwin Archive', <http://shelleygodwinarchive.org/> (accessed 30 January 2019). See also <https://digital.bodleian.ox.ac.uk> to search the Bodleian's digital collections.

³ Mary Shelley, 'Introduction', *Frankenstein; or, the Modern Prometheus* (1831), ed. M. K. Joseph (Oxford: Oxford University Press, 1969), 9–10.

live through countless new editions, novels, films, comics, musicals, TV programmes, and tacky merchandise. James Whale's film of 1931 with Boris Karloff's portrayal of Frankenstein's 'monster' has perhaps established *Frankenstein's* place within popular culture more than any other interpretation, associating the name of Frankenstein with the creature rather than the creator, Victor Frankenstein, himself.

From dream to document

The *Frankenstein* notebooks consist of the surviving disbound leaves from two working draft notebooks (A and B) and two fair copy notebooks (C1 and C2).

Mary Shelley was encouraged by P.B. Shelley to expand and elaborate her Diodati story into a two-volume novel, beginning in Draft Notebook A—the 'Geneva' notebook. However, the now famous words with which she started to transcribe her dream don't appear at the beginning of this draft, but rather in Volume I, Chapter 7, suggesting that she copied from an earlier text.⁴ Vertical cancel lines in several places in the draft suggest that she miscopied; in one instance repeating the cancelled words further down the page.⁵ The notebook, therefore, not only supplies evidence about the draft itself, but also points to the existence of an earlier, now lost ur-text—a preliminary 'story' or draft, possibly the transcript which she refers to in her account.⁶

On her return to England in August 1816, Mary Shelley resumed drafting her novel in Draft Notebook A, before continuing in a second notebook purchased in Bath—now known as Draft Notebook B—which she completed in Marlow the following year. The break between Mary Shelley's two-volume draft does not correspond exactly with the two physical notebooks; she merely continued in a second when the first became full, and Draft Notebooks A & B together preserve the earliest extant version of the novel at this stage of its composition. From April to May 1817 she then transcribed this draft as a three-volume novel in fair copy for publication—the surviving leaves from two fair copy notebooks are now identified as Fair Copy Notebooks C1 & C2.

Provenance: the notebooks and the Bodleian

What happened to the notebooks following publication of the novel is not clear and their preservation seems to have been more a result of circumstance than intention. Although parts of the fair copy most likely remained with the printer or publisher, it is possible that the surviving leaves of Draft Notebooks A and B and a few leaves of Fair Copy Notebooks C1 and C2 were among letters and papers left behind at Marlow, when Mary Shelley and P.B. Shelley left England for Italy in March 1818.

The earliest reference to the manuscripts appears in a letter from Richard Garnett to Sir Percy Florence Shelley (Mary's only surviving son) in 1887, in which he mentions papers that he had purchased for him from a Mr. Bradford, including 'A portion of the MS. of Frankenstein, and the fragment of your father's Chancery paper. They had, according to his account, come to him from a picture-cleaner named Godwin ...' The presence of the Chancery papers suggests that they came from the Shelleys' personal papers, rather than a publisher.⁷

The Shelley family archive had been preserved after Mary's death in 1851 by Sir Percy Florence Shelley and his wife Jane, Lady Shelley, at Boscombe, near Bournemouth. In 1893–94 Lady Shelley donated some of the manuscripts and relics to the Bodleian.⁸ The remainder was divided by bequest to the heir to her husband's baronetcy and the children of her adopted daughter, the Scarlett family—the Barons Abinger. The former was received by the Bodleian through bequests from Sir John Shelley-Rolls in 1946 and 1961, and the latter, including the Frankenstein notebooks, through deposit by the 8th Baron Abinger in 1974 and 1976. Following his death, the Abinger collection was purchased in 2004, reuniting the remaining manuscripts with the rest of the Shelley family archive.

Composition and collaboration

The study of drafts is central to the understanding of how texts evolve, and whilst Mary Shelley gives an account of the genesis of her novel in her 1831 Introduction and refers to the writing and drafting of Frankenstein in her journal, it is in the autograph drafts that the novel is revealed in the very process of composition. Crucially, the extent and nature of Percy Bysshe Shelley's annotations to the text can clearly be seen (see Fig. 1). Speculation over the novel's authorship had been raised as soon as it was first published and has continued to this

4 Oxford, Bodleian Library, MS. Abinger c. 56, fol. 21r [Draft Notebook A].

5 Ibid., fol. 56r [Draft Notebook A].

6 See 'Hypothetically Reconstructing an Ur-text of Frankenstein' in Robinson, *The Frankenstein Notebooks*, op. cit. I, lx–lxii.

7 Bruce C. Barker-Benfield, *Shelley's Guitar: An Exhibition of Manuscripts, First Editions and Relics to Mark the Bicentenary of the Birth of Percy Bysshe Shelley, 1792/1992: the Bodleian Library, Oxford, 27 April–8 August 1992* (Oxford, Bodleian Library, 1992), 68.

8 Stephen Hebron and Elizabeth C. Denlinger, *Shelley's Ghost: Reshaping the Image of a Literary Family* (Oxford: Bodleian Library, 2010).

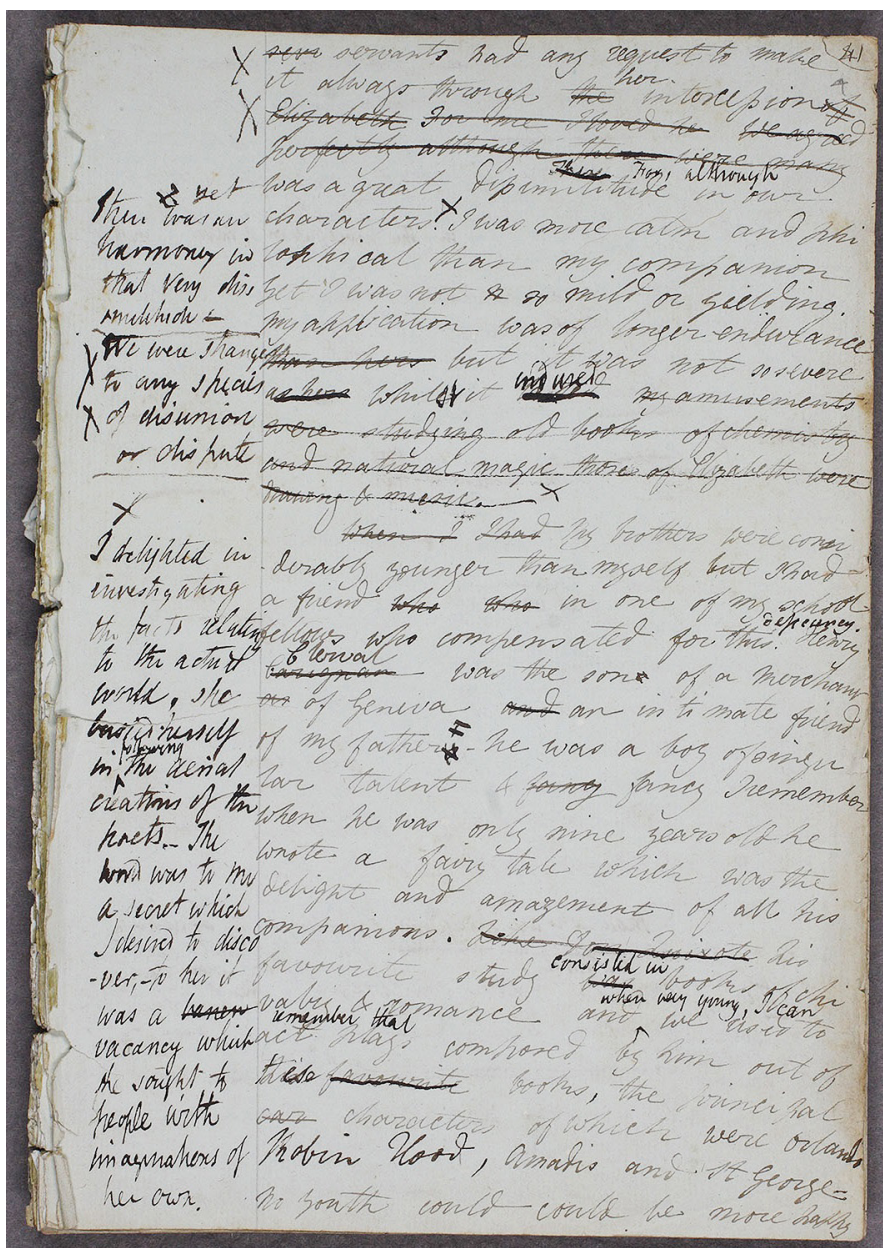


Fig. 1 Draft Notebook A, showing main text in Mary Shelley's hand, with marginal and interlineal suggestions and corrections by Percy Bysshe Shelley (Bodleian Library, MS. Abinger c. 56, fol. 4r). © Bodleian Library, University of Oxford.

day, highlighting authentication of literary works as another reason to justify close study of their preparatory drafts.

Although Mary Shelley later downplayed her husband's involvement, she acknowledged his encouragement in developing her story into a novel and his authorship of the 1818 preface:

At first I thought but of a few pages—of a short tale; but Shelley urged me to develop the idea at greater length. I certainly did not owe the suggestion of one incident, nor scarcely of one train of feeling, to my husband, and yet but for his incitement, it would never have taken the form in which it was presented. From this declaration I must except the preface. As far as I can recollect, it was entirely written by him.⁹

But discrepancies between Mary Shelley's 1831 Introduction and P.B. Shelley's Preface, and between their journals and correspondence and the journals of Polidori, add to the spec-

⁹ Mary Shelley, 'Introduction,' *Frankenstein; or, the Modern Prometheus* (1831), op. cit. 10.

10 Although Mary Shelley wrote the majority of the fair copy, the final 12¾ pages were written by Percy Bysshe Shelley, in which he took greater liberties than Mary Shelley with his transcribing of the Draft into the Fair Copy. These pages were then re-transcribed by Mary Shelley before circulation to the publishers (the leaves in Percy Bysshe Shelley's hand show signs of damage caused by careless cutting of the pages from Draft Notebook C2, but no evidence—ink fingerprints, compositors' initials and notations, and folds seen on the other extant Fair-Copy pages—of having been sent to the printer. See also 'Evidence in the Draft Notebooks and Fair Copy Notebooks' below.

11 Charles E. Robinson, *The Frankenstein Notebooks*, op. cit. I, lxvi–lxxi.

12 Charles E. Robinson, 'Percy Bysshe Shelley's Text(s) in Mary Wollstonecraft Shelley's *Frankenstein*' in Weinberg, Alan M. and T. Webb, eds., *The Neglected Shelley* (Surrey, England, Ashgate Publishing Limited 2015), 135–136 and footnote 39.

13 See Appendix. For an overview of the composition of the novel see Charles E. Robinson, 'Frankenstein: Its Composition and Publication' in Andrew Smith, ed., *The Cambridge Companion to Frankenstein*, (Cambridge, Cambridge University Press 2016) 13–25; and for a full transcription of texts with and without Shelley's contributions see Charles E. Robinson, ed., *The Original Frankenstein, Mary Shelley (with Percy Shelley)*, (Oxford, Bodleian Library 2008).

14 Leaves were torn out and used for other works, for example, a fragment of the same paper from Draft Notebook B has been found to have been used by Percy Bysshe Shelley in his 'Speculations on Morals and Metaphysics', New York Public Library, Pforzheimer 339.

15 Oxford, Bodleian Library, MS. Abinger c. 58, fol. 9r [Fair Copy Notebook C1]; see 'Hypothetically Reconstructing the Fair Copy of *Frankenstein*' in

ulation, making manuscript evidence all the more important. Some critics have argued that the manuscripts are final drafts rather than preparatory works that reveal stages of the novel's composition. Moreover, handwriting alone as proof of her authorship has been contested, positing her simply as P.B. Shelley's amanuensis; the collaborative nature of their literary relationship being well-known, with many works by P.B. Shelley surviving in Mary Shelley's hand. However, the evidence in the surviving drafts helps to refute both of these claims.

Their highly-amended text reveals the extent of the collaboration between Mary Shelley and P.B. Shelley, whose contribution included an estimated 4,000–5,000 out of the novel's 72,000 words; the editing of nearly every page; correction of proofs; advice on the narrative, and the rewriting of many of Mary Shelley's sentences into fair copy.¹⁰

Although considerable, P.B. Shelley's involvement can be considered as no more than an editor's stylistic changes and corrections or those of colleagues reading each other's works in progress.¹¹ Whilst it may be difficult to distinguish the Shelleys' collaborative voices in the texts, *Frankenstein* is Mary Shelley's novel, with corrections and additions by P.B. Shelley.¹² The notebooks convey a wonderful sense of the young couple working on the text together; capturing the speed of their writing and correcting, the passing of the notebooks back and forth, and sometimes the sharing of the same pen.¹³

Structural evidence

The surviving disbound leaves from the notebooks preserve not only textual evidence about the composition of the novel and the collaboration between the Shelleys, but also evidence in their physical form from which the original structure of notebooks can be established, further revealing the creative process involved in the making of *Frankenstein*—

- The loose leaves of Draft Notebooks A and B were torn out of now-lost commercially bound notebooks, most likely by the Shelleys at the time of drafting and fair copying.¹⁴
- The surviving leaves of Fair Copy Notebooks C1 and C2 were in contrast, cut and torn out of single-section notebooks and used as printer's copy; some roughly cut, possibly by the Shelleys at the time of transcribing the fair copy, and others more neatly cut and torn, possibly by the compositor at the time of printing. The majority of leaves of fair copy show evidence of their use by the compositors to set type for the novel—inky fingerprints, compositor's initials and notations, and folds in paper, some crumpled and re-flattened. The close pagination of the extant Fair Copy Notebooks C1 & C2 to the pagination of the 1818 first edition, and a printer's note on one leaf—'Vol. III-G 121'—indicating the volume number, signature and page, matching exactly the type-setting of Volume III in the printed edition, help to prove that the first edition was printed directly from this fair copy.¹⁵

DRAFT NOTEBOOK A QUIRE VII ¹²			MS. Abinger c. 56 (Dep. c. 477/1) = Arch F. b. 5/1 Fols. 46 - 57					Box 1, Fasc. 4 Archive text		
FORMAT	DESCRIPTION	CONDITION	TREATMENT					OTHER		
	Bodl. Folia BMS Pages Paper Types (1,2,3...)	Inks Surface Dirt/Animal/Glue (Head/Tail/Fore-edge/Spine-edge) (R/V) Distortions/Fold/Crises (Head/Tail/Fore-edge/Spine-edge) Tears/Lacuna (Head/Tail/Fore-edge/Spine-edge)	Divide/Remove Glue (Head/Tail/Fore-edge/Spine-edge)	Humidity/Leakage size (Head/Tail/Fore-edge/Spine-edge)	Glue repair (Paper/Support/Ink)	Glue repair (Head/Tail/Fore-edge/Spine-edge)	Glue (R/V)	Images (Colour/Transparency/Digital)	NOTES	
	46 127/128 2	G-Sp F-Sp	T/L-Sp*	X	H/F-Sp	X	P-Sp	Y	R	Recto: glue-marks;*
	47 129/130 2	G-Sp	T/L-Sp	X	H/F-Sp	Y	P-Sp	Y	V	*Fragm. Conjoint with
	48 131/132 2		T/L-Sp*	X	H/F-Sp	Y	PS-Fe/T	Y	V *	*Fragm. Conjoint with
	49 133/134 2		L-Sp*	X	H/F-Sp	Y	P-Sp	Y	R	*Fragm. Conjoint with
	50 135/136 2		F-Sp	X	H/F-Sp	Y	P-Sp	Y	V	
	51 137/138 2	SD-T/Sp	L-Sp	X	H/F-Sp	Y	P-Sp	Y	V	Paper faded?
	52 139/140 2		T/L-Sp;	X	H/F-Sp	Y	P-Sp/Fe	Y	V	Paper faded?; Hair-Sp
	53 141/142 2	SD-Sp	T/L-Sp	X	H/F-Sp	Y	P-Sp/Fe; S	Y	V	*Hasegawa 1.6
	54 143/144 2		F/C-Sp	X	H/F-Sp	Y	P-Sp	Y	V	
	55 145/146 2		F/C-Sp	X	H/F-Sp	Y	P-Sp	Y	V *	
	56 147/148 2	G-Sp	F/C-Sp	X	H/F-Sp	Y	P-Sp	Y	V *	Horizontal pleat in
	57 149/150 2	G-Sp	T/L-Sp	X	H/F-Sp	Y	P-Sp	Y	V *	Verso: glue-marks;

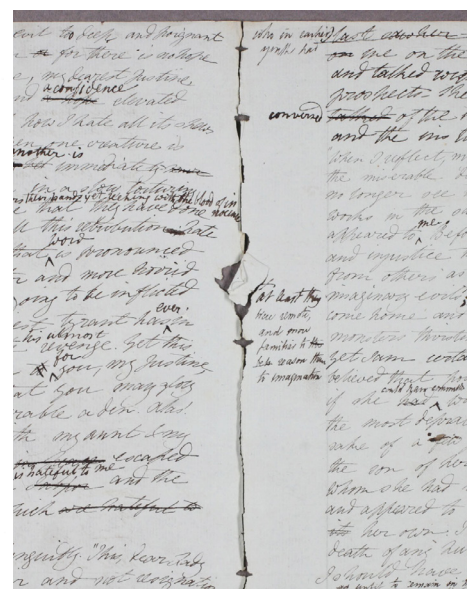


Fig. 2 Collation diagram, Quire VII, Draft Notebook A, with corresponding example of originally conjoint leaves (Bodleian Library, MS. Abinger C. 56, fols. 49v–54r). © Bodleian Library, University of Oxford.

- The nature of the writing in the notebooks shows that the drafting by Mary Shelley and subsequent corrections by Mary Shelley and P.B. Shelley were done whilst the notebooks were still bound. Some pen strokes cross from one (reconstructed) bifolia to another, while others overlap the edges from the recto of one leaf to what would have been the underlying leaves in the splayed out pages of the bound notebooks. The writing on the verso of some leaves is constricted and trails off, as if the writer's hand was impeded by the gutter of the still-bound notebook. Furthermore, offset ink blots can be seen from both now-missing leaves and on leaves from later quires or from other sources inserted into the main sequence of the (bound) notebook, the notebooks having been closed with the ink of P.B. Shelley's corrections still wet. Evidence that Mary Shelley fair copied whilst leaves were still conjoint in sewn notebooks can be seen where the writing on many leaves was torn or cut through when the notebooks were disbound.

All surviving loose leaves are 'singletons' except for two intact bifolia, but evidence from tears and watermarks enabled originally conjoint leaves to be matched; and glue residues on the outside leaves of quires, sewing holes, and wet offset ink blots, helped establish the notebooks' original quiring structures.¹⁶ Collation diagrams were made to record the structure and condition of the manuscripts prior to conservation, and to document the conservation treatment in detail.

The makeup of the notebooks can be summarised as follows:

1. Draft Notebook A

Draft Notebook A has 77 surviving leaves, 270–271 x 186–187 mm, written in iron gall ink on a pale blue, continental laid paper, and was originally made up as a quarto notebook. It has three sawn-in sewing stations for recessed, most likely cord, sewing supports, with two holes head and tail for kettle stitches.

One of the notebook's two watermarks which spans the reconstructed folds can be read from the mould side of the paper as 'at Divonne,' locating the paper to a town not far from

Charles E. Robinson, *The Frankenstein Notebooks*, op. cit. I, lxii–lxv; and Bodleian Library, Oxford, 'The Shelley-Godwin Archive', <http://shelleygodwinarchive.org/> (accessed 30 January 2019).

¹⁶ For a detailed analysis and description of the physical makeup of the Draft Notebooks see 'The Makeup of the *Frankenstein* Draft Notebooks'—Quiring charts and technical descriptions based on a text prepared by Dr. Bruce C. Barker-Benfield, former curator of the Shelley collection at the Bodleian, in Charles E. Robinson, *The Frankenstein Notebooks*, op. cit. I, xxxiv–xlvi.

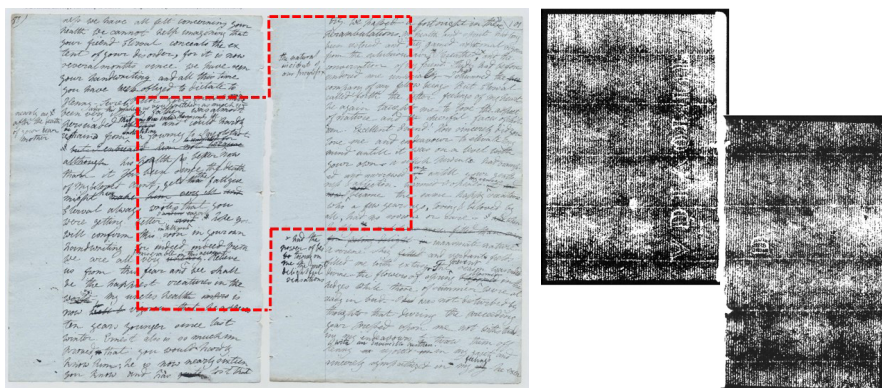
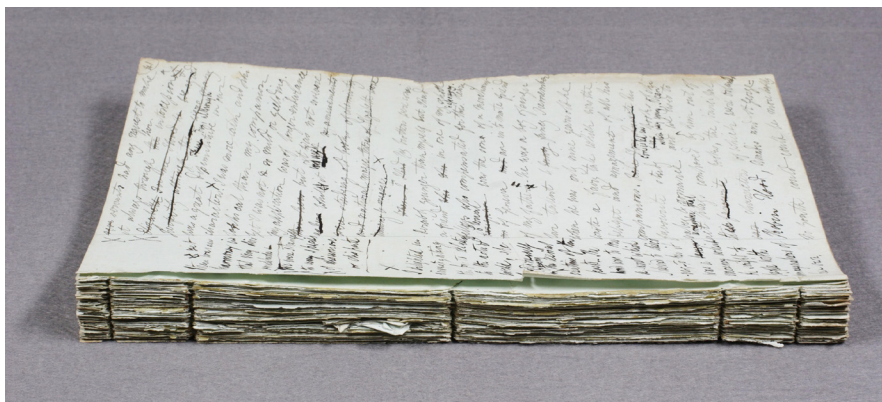


Fig. 3 (top) Draft Notebook A: Spine showing sawn-in sewing holes for recessed cord sewing supports and kettle-stitches; residues of animal glue; (lower left and right) watermark across pair of originally conjoint leaves, "D"; "ADIVONNE", viewed from from "mould" side. (Bodleian Library, MS. Abinger c. 56, fols. 27v–33r). Photocopy of Beta-radiograph. © Bodleian Library, University of Oxford.

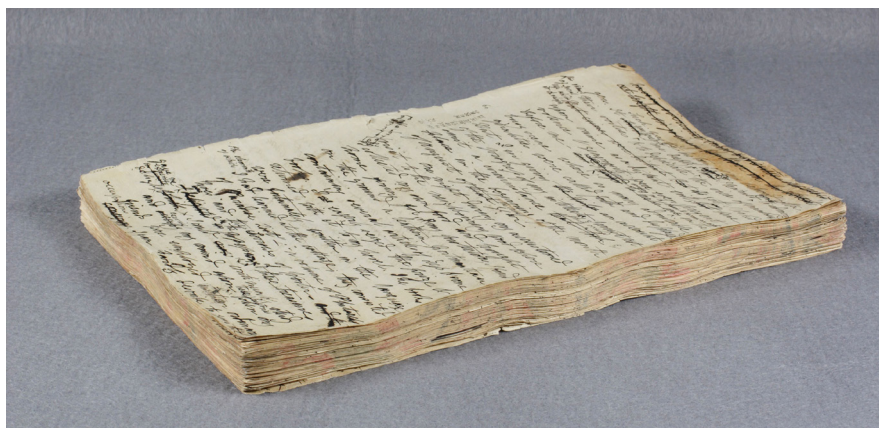


Fig. 4 Draft Notebook B: Fore-edge and tail edge, showing blue and red marbled edge decoration. (Bodleian Library, MS. Abinger c. 57). © Bodleian Library, University of Oxford.

¹⁷ For Beta-Radiographs of all watermarks in the notebooks see Charles E., Robinson, *The Frankenstein Notebooks*, op. cit. I, xlix–lvi.

Lake Geneva on the Swiss/French border, offering convincing proof that Mary Shelley bought the blank notebook during the summer of 1816.¹⁷

2. Draft Notebook B

Draft Notebook B has 75 surviving leaves, 310–311 x 199–202 mm, written in iron gall ink on a cream, British laid paper, and was originally made up as a folio notebook. It has three pairs of sewing holes indicating tape sewing supports, with two holes head and tail for kettle stitches.

Draft Notebooks A and B provide strong evidence of substantial ‘in-board’ bindings, revealed through glue residues on the folds of the outer leaves of quires along the torn spine edges of leaves, their few remaining intact bifolia, the remains of sewing holes, and in the case of Draft Notebook B, traces of blue and red marbling decoration on the edges of leaves. From the roughly torn leaves, the bindings of the notebooks with their remains of sewing threads and roughly torn stubs can easily be imagined.

The leaves of Draft Notebooks A and B account for approximately 87% of the 1818 published text.

3. Fair Copy Notebooks C1 and C2

Fair Copy Notebooks C1 and C2 have 29 surviving leaves, 223–225 x 176–191 mm, written in iron gall ink on a cream, British laid paper, originally made up as quarto notebooks, each with a quire of 24 leaves and sewn at three sewing stations.¹⁸

In contrast to Draft Notebooks A and B, their quiring structure, paper size, and the absence of any glue residues indicate that they were bound in single-section, soft-covered ex-

¹⁸ There are other 24-leaf single-quire, soft-cover notebooks (or exercise books) still intact in their decorative paper covers in the Abinger collection, which were available from many British stationers at this time: Oxford, Bodleian Library, MS. Abinger e. 33; and Oxford, Bodleian Library, MSS. Abinger d. 21–22.

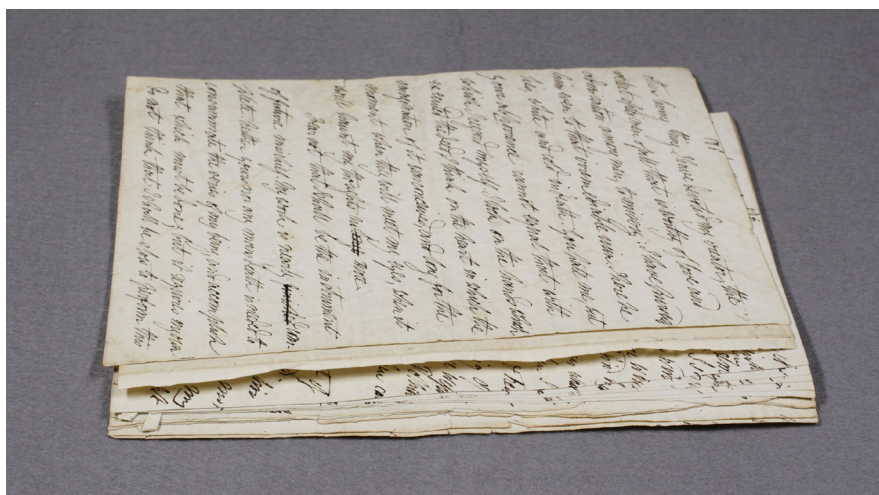


Fig. 5 Fair Copy Notebook C1: leaves showing torn and cut spine edges (Bodleian Library MS. Abinger c. 58). © Bodleian Library, University of Oxford.

ercise notebooks. The notebooks' watermarks, Mary's own pagination, and word count per page, show that the surviving leaves are from two of an estimated eleven notebooks, representing approximately 12% of the 1818 published text.

In addition to the leaves from bound notebooks, there are also a number of insert leaves—three in Draft Notebook A, two in Draft Notebook B, and one in Fair Copy Notebook C2; and an additional substitute leaf after Fair Copy Notebook C2—written insertions on papers of a different type and size, including some bifolia.¹⁹

Condition Assessment

When assessed for conservation, the condition of the *Frankenstein* notebooks was consistent with an archive from the period, considering the history of their use, their disbound format, and the manner of their arrival at the Bodleian in suitcases—the first part of the working draft, already recognized as such, in a fancy book-box, and the second part in an unidentified folder, which turned out to contain the rest of the working draft and fragments of fair copy.

Detached fragments within the boxes and folders highlighted the vulnerability of the loose leaves to handling, and fading of the blue paper observed in some leaves in Draft Notebook A emphasized the paper's susceptibility to light-induced fading.²⁰

1. Physical damage to paper

The most significant tear damage to the leaves of the notebooks was along their spine edges, almost certainly caused at the time of disbinding by the Shelleys during the drafting and re-drafting of the novel, with only a few intact bifolia remaining. The loose disbound leaves had suffered varying degrees of edge tear damage, folding and creasing, caused by handling either by the Shelleys or subsequent handling prior to and after their arrival at the Bodleian; some of the fair copy leaves had been crumpled and re-flattened possibly by the compositor.

2. Iron gall ink corrosion

Variation in the appearance of ink was observed throughout the notebooks, but a distinct difference in condition noted between Draft Notebooks A and B.

The novel was drafted by Mary Shelley from start to finish with occasional cancellations and insertions in Draft Notebooks A and B, more or less continuously over a period of around eight months. The correcting process by herself and P.B. Shelley took place simultaneously,

¹⁹ This was of particular significance in decisions regarding the conservation treatment undertaken (see Conservation below).

²⁰ For example, the most famous and most frequently viewed single page—the beginning of the creation scene where the monster is first brought to life (Oxford, Bodleian Library, MS. Abinger c. 56, fol. 21r)—appears less blue than other leaves. However, no systematic study has been carried out and it has not been possible to determine if the fading is due to the leaf being exhibited on numerous occasions since 1954, when a short-term display of selected items at the New York Public Library probably included leaves from the first part of Draft Notebook A. The frequency and duration of subsequent displays at the Bodleian were not recorded until conservation display standards were introduced in the 1980s.



Fig. 6 (left) Draft Notebook B, fol. 19r showing condition of iron gall ink (compare with Draft Notebook A, Fig. 1); (right) Detail of leaf from Draft Notebook B, with the light brown shadow of ink offsetting from facing page, and cracking of the paper substrate at the fore-edge (Bodleian Library MS. Abinger c. 56). © Bodleian Library, University of Oxford.

though maybe more sporadically. It is therefore unlikely that the same ink was used from beginning to end, but probable that they must have obtained or made up a different batch of ink from time to time. The pen-stroke and amount of ink also varies throughout.

Differences in the age of ink can affect ink-layer morphology—fresh ink penetrating into a paper substrate, and pigment in older inks remaining on the surface.²¹ But it seems unlikely that the change in appearance from Notebook A to Notebook B coincided with any major change in the age or type of ink. The difference between the two can almost certainly be attributed to a difference in paper quality and its constituents, such as sizing. The blue Continental paper in Notebook A fares much better in relation to ink corrosion than the cream British paper in Notebook B, which exhibits sharp breaks, indicating brittleness and short fibre length, both conditions being less able to withstand continued ink corrosion.

Visual characteristics of iron gall ink in the manuscripts were used to assess their condition and stage of degradation, using condition ratings developed by the Netherlands Institute for Cultural Heritage.²² Draft notebook A was assessed as condition rating 1, where there is no discolouration in the inked areas and where careful handling does not cause any damage (see Fig. 1); and Draft Notebook B as condition rating 2–3, where there is brown discolouration in the inked areas, haloing, offsetting on adjacent leaves, cracking in heavier areas of ink stroke or ink blots, ink ‘burn’ through the paper substrate, and where handling would continue to cause further mechanical damage (see Fig. 6). As Draft Notebook B was more significantly affected, its inks were further tested—a pH reading of 2 was recorded, and the presence of Iron (II) ions confirmed using indicator strips on representative areas.²³

Conservation

1. Approach to the treatment of iron gall ink corrosion

At the Bodleian, past treatments of manuscripts with iron gall ink have included non-aqueous deacidification using methyl magnesium carbonate, and to a much lesser extent, treatment with calcium phytate.²⁴ Both treatments have associated risks—magnesium-containing solutions can have a detrimental effect on inks, changing their appearance, and can cause a change in the colour and texture of paper as well as dimensional changes if applied locally. Solubility of inks can be problematic with an aqueous calcium phytate treatment (followed by calcium bicarbonate), with the possible formation of white crystals from residual phytate if not washed out sufficiently, and whilst it addresses some of the main degradation processes involved in iron gall ink corrosion—acid-catalysed hydrolysis and iron (II)-catalysed oxidation—caution in its use is recommended, especially when treating valuable or unique artefacts.

Whilst the condition of iron gall inks can be assessed using the condition ratings described above, a risk assessment should always be undertaken to establish at what point an interventive treatment is warranted. The point of deterioration reached can be assessed with reasonable accuracy, but it is difficult if not impossible to predict the degree of future deterioration. As well as being associated with ink and paper type, iron gall ink degradation can usually be attributed to a specific event in an object’s history, such as storage in a poor environment. Although the vulnerable condition of Notebook B was of concern, it was therefore felt that if kept in good environmental conditions, it may not degrade significantly in the future.

Consequently, given the manuscripts’ status, the risks of an interventive treatment of inks in Draft Notebook B were weighed against those of less invasive options. Considering limitations in the long-term efficacy of treatments, and with an assessed condition rating of 2/borderline 3 in just a few areas, it was felt that an interventive treatment could not be justified, and a more passive approach should be taken.

2. Approach to the re-construction of the notebooks

Whilst the condition and continuing physical and chemical deterioration of the notebooks were important considerations in their conservation, their disbound state and, importantly, the circumstances of their disbinding, were central issues in the approach taken in their treatment. The least interventive option—simply to leave the loose manuscript leaves untouched in a box—though perhaps desirable, was impossible due to the anticipated high demand for access and use, and for security reasons.

Whilst the usual approach taken at the Bodleian would be to try to reconstruct a text-block by re-joining previously-conjoint leaves to maintain an original book structure, re-construction of the *Frankenstein* notebooks was inappropriate for a number of reasons:

21 The Cultural Heritage Agency of the Netherlands (RCE), *The Iron Gall Ink Website*, <https://irongallink.org/> (accessed 8/1/19).

22 Birgit Reifland and Judith Hofenk de Graaff, *Condition rating for paper objects with iron-gall ink*, The Netherlands Cultural Heritage Agency (2001), PDF can be downloaded from <https://cultureelerfgoed.nl/publicaties/condition-rating-for-paper-object-with-iron-gall-ink> (accessed 28/1/19).

23 Bathophenanthroline Indicator Paper for Iron (II) ions: https://irongallink.org/images/file/pdf%20iron_ii_test_ok.pdf

24 At the time of treatment in 2007–8, research into iron gall ink corrosion in manuscripts had led to development of a new treatment with calcium phytate, which soon became widely adopted; see The Cultural Heritage Agency of the Netherlands (RCE), *The Iron Gall Ink Website*, <https://irongallink.org/> (accessed 8/1/19).

1. Most importantly, the circumstances of the notebook's disbinding and their use in the drafting and type-setting of the novel
2. The notebooks are incomplete and contain inserts of a different paper and size
3. Evidence of their original structure and of tear damage caused by their disbinding would have been obscured
4. Leaf order would have been problematic as the Shelleys had rearranged their order during drafting and fair copying
5. The poor condition of paper and inks in Draft Notebook B
6. The loss of folds in torn-out singletons, which had they survived would have allowed a more honest resewing and reconstruction

In discussions of treatment options, Dr. Bruce Barker-Benfield, former curator of the Shelley collection at the Bodleian, suggested that the rebinding or reconstruction of the notebooks would have been a 'simulacrum'—an unsatisfactory imitation—making it a Frankenstein monster!

3. Fasciculing

It was therefore decided to house the loose manuscript leaves in fascicules. One of many innovative techniques developed by Chris Clarkson at the Bodleian in the late-1970s and 80s, fascicules have proved to be a highly effective way to house and protect single sheet material.²⁵ Each leaf or bifolium is guarded on to a support sheet of archival paper within a single-section fascicule using a Japanese paper guard, incorporating compensation guards to allow for the thickness of material guarded within it.

Areas weakened by iron gall ink corrosion in the Frankenstein notebooks were supported using a fine Japanese paper, prepared as a solvent-reactivated tissue.²⁶ As it was not entirely possible to distinguish between damage caused when the leaves were torn out of the bound notebooks by the Shelleys and later general damage caused by handling, a minimal amount of paper repair was desirable—the protection afforded by support within the fascicules enabled folds and tears to be left mostly untouched.

A major advantage of fasciculing was that it enabled Microchamber paper to be incorporated as interleaving—its proven efficacy in absorbing off-gassing degradation products providing the best possible environment for the manuscripts. At the Bodleian, Microchamber paper had been used for interleaving extremely degraded text-blocks, with a noticeable reduction of odour as a result. The added advantage in separation of leaves was particularly important as acidic papers are known to deteriorate at a faster rate within an enclosed environment due to acidic gases being trapped.

Research has shown that sealing acidic documents, for example within a polyester enclosure, can be damaging. Whilst such encapsulation offers effective protection against external pollutants, it can have a detrimental effect on the degree of polymerisation in cellulose due to decomposition products within the paper accelerating the rate of deterioration within the enclosed environment.²⁷ The same research, however, demonstrated the advantage of inclusion of a paper containing an alkaline reserve in contact with the document, or deacidification of the document. Where deacidification is not possible, the inclusion of Microchamber paper to neutralise or absorb degradation products was effective, and even if not in direct contact with an acidic paper it was proven to absorb degradation products diffused through other papers. Microchamber may also help to slow down oxidation of cellulose by preventing gaseous degradation products from causing further damage to the substrate.

At the time of treatment this was the only independent research known which had studied the effects of Microchamber paper, although research by Conservation Resources, the company who developed the product in the 1990s, and the National Archives and Records Administration in Washington, had demonstrated its efficacy.²⁸ Although it is not known when Microchamber paper may have reached the limits of its capacity, it was felt that it would have sufficient capacity to absorb the relatively small amount of volatile compounds being given off by the leaves in Draft Notebook B.

A sample fascicule made with Microchamber paper, rather than the usual archival paper used at the Bodleian, emphasised physical limitations—relatively poor tear strength being prone to tear-back at the sewing holes; vulnerability to creasing, the stub guards being easily damaged; dimensional instability, distorting where guards were pasted and where in contact with the distorted leaves of the notebooks; and its bright white tone being visually less sympathetic against the cream toned paper of the manuscripts. It was felt that the primary aim of support and protection of the manuscript leaves within the fascicule was being compromised

²⁵ Helen Lindsay and Christopher Clarkson, 'Housing single sheet material: The development of the fasciculing system at the Bodleian Library', *The Paper Conservator* 18 (London, Institute of Paper Conservation 1994), 40–48.

²⁶ *Tengujo*, prepared as a solvent-set tissue with Plextol acrylic resin (Plextol B500, M360, H₂O [2:1:4]), reactivated in ethanol. Since the treatment was undertaken, research into treatment of iron gall ink manuscripts has led to use of re-moistenable tissues prepared with type B gelatine, which is known to have an inhibiting effect on iron gall ink corrosion: see Gesa Kolbe, 'Gelatine in Historical Paper Production and as Inhibiting Agent for Iron-Gall Ink Corrosion on Paper' (*Restaurator*, Vol. 25, 2004), 26–39.

²⁷ Research undertaken by the Association for Scientific Research in Graphic Arts (Association pour la Recherche Scientifique sur les Arts Graphiques): Daniel F. Hatzigeorgiou V., Copy S., Flieder F. *Étude de l'efficacité d'un nouveau produit d'archivage: le "Microchamber" de la société américaine "Conservation resources"* Nouvelles de l'AR-SAG, n° 12 (1996), 11.

²⁸ The properties of zeolites—natural minerals contained within the paper structure—and their ability to act as molecular traps with a capacity to absorb degradation products are explained in Conservation Resources International, LLC. <http://conservationresources.com/Main/S%20CATALOG/MicroChamber.htm> (accessed 9/1/19).



Fig. 7 (left) Japanese paper guard profiled and cut ready to be attached; (right) Example of leaf from Draft Notebook B guarded into fascicule, showing the spine-fold, torn spine edge, and glue deposits preserved. © Bodleian Library, University of Oxford.

29 'Archive text' paper—125 gsm, and Microchamber® 'MicroLeaf Endleaf Endpaper'—130 gsm.

30 Minogami 100% Japanese *Nasu Kozo*—c. 1.6 monme (= 6 gsm).

and that distortion of the Microchamber paper support leaves may in turn cause further distortion of the manuscript leaves. However, the chemical attributes of Microchamber paper and its potential to slow down the rate of degradation was felt to outweigh these physical limitations and so as a compromise, fascicules were constructed with alternating leaves of archival paper and Microchamber paper in such a way that all support leaves and stub guards were of the more robust archival paper, with interleaves of Microchamber paper.²⁹

As the leaves of the Draft Notebooks and Fair Copy Notebooks, torn and cut from their original bindings, had particularly uneven edges, Japanese paper guards were profiled to the leaves' irregular, torn spine edges, using a template made from scanned images of the manuscript leaves printed to scale.³⁰ The shaped guards were adhered with a c.1mm overlap using wheat starch paste. This enabled spine folds, the shape of tears, and original glue deposits to be preserved.

With the *Frankenstein* notebooks, fasciculing posed one major disadvantage: that of the loss of the physicality of the notebooks, potentially changing the interpretation of the notebooks especially by someone unfamiliar with their original format (see Figs. 3, 4, & 5).

However, as a solution to the conflicting demands of preservation and continued access to the notebooks, fascicules had many overriding advantages:

- They gave a commanding, protected presentation of the manuscripts.
- They enabled safe, frequent handling, as the vulnerable leaves are not directly handled.
- They provided security when consulted.
- The manuscripts can be studied and read in order—they are presented in the original page order, accommodating the larger bifolia inserts.

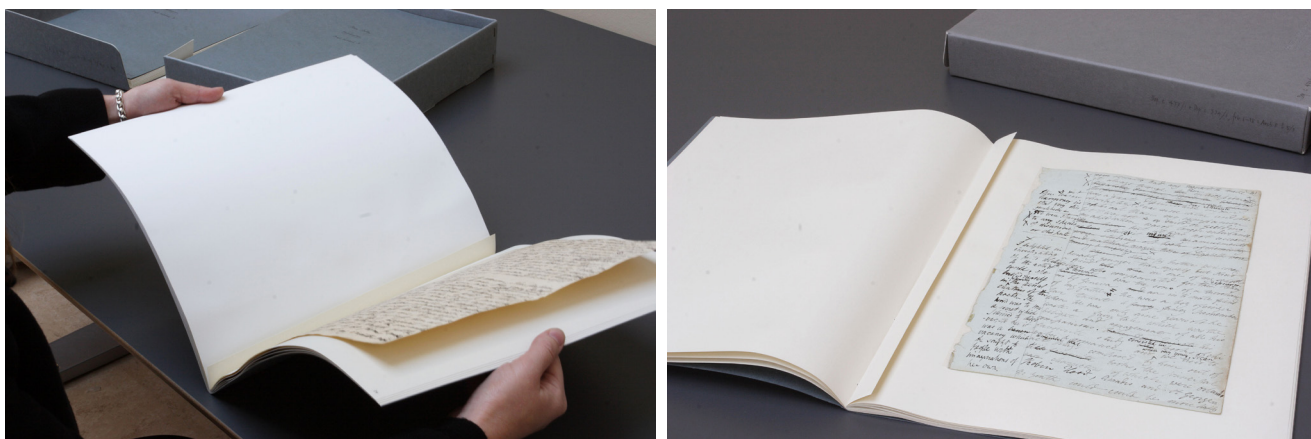


Fig. 8 Finished fascicules showing (left) minimal handling of original manuscript leaf and (right) guarded leaf. © Bodleian Library, University of Oxford.

- They provided the best possible storage environment for the iron gall inks with the use of Microchamber interleaving.
- They enabled a minimum amount of paper repair to be undertaken, retaining evidence of the disbinding of the notebooks, and subsequent use by the Shelleys.
- Evidence of the original notebook structure—tears, folds and glue residues—has been preserved.
- They can be displayed open at one leaf, or easily disbound allowing multiple leaves to be displayed in multiple venues simultaneously. The leaves can be mounted on boards or mounted and framed, still guarded onto their support sheets.

Access and use

Despite the availability of digital surrogates, there continues to be extremely high demand for access to the original notebooks for scholarly study, visiting VIPs, media appearances such as TV documentaries, and for exhibition and loan.

It is perhaps not surprising that during 2018 alone, the bicentenary year, various leaves of the notebooks have been frequently brought out for visitors, viewed at a masterclass at the Oxford Literary Festival, and shown to groups of visiting school children. Leaves were returned from loan to the Rosenbach Museum & Library, Philadelphia; others were displayed in the Weston Library Treasury Gallery, and yet more lent for display at the Morgan Library, New York.

Conclusion

Over the intervening ten or so years since the conservation of the notebooks was completed in 2008, the efficacy of the treatment has been re-evaluated. The advantages of fasciculing have continued to prove effective, especially considering the manuscripts' heavy use, though the fascicules themselves are beginning to show signs of wear through frequent handling and repeated disbinding and resewing for display.

The fascicules with their Microchamber paper interleaving offer the best possible environment for long-term storage, whilst providing protection from the repeated handling of the vulnerable manuscript leaves. The treatment is fully removeable; the Microchamber paper interleaving can be replaced if necessary, and the manuscript leaves easily removed from the fascicules and their Japanese paper guards removed, should more interventive treatments be developed and considered appropriate in the future.

The *Frankenstein* notebooks have been transformed from ephemeral drafts to revered artefacts, and although Mary Shelley may not have accorded this same value to the manuscripts after they had served their purpose in the drafting and fair copying of her novel, they have been elevated by *Frankenstein's* later notoriety, phenomenal success and fame. All manuscripts are unique, but the iconic status of the *Frankenstein* draft manuscripts has inevitably affected the approach taken to their conservation.

Postscript

As well as housing the notebooks, the Bodleian is connected with *Frankenstein* in a number of interesting ways and specifically by way of the Clarendon Building, formerly home of the Clarendon Press—the University Press—now part of the Bodleian.

In 1815 Mary Godwin visited Oxford with her step-brother Charles Clairmont, her future husband Percy Bysshe Shelley, and Thomas Love Peacock; and whilst there “saw the Bodleian Library, and the Clarendon Press...”³¹ In the *Frankenstein* notebooks, in a passage unused in the published novel, Victor Frankenstein visits the Clarendon Press with his friend Henry Clerval.³² In 1996 Charles Robinson recalled the close study of the notebooks with Bruce Barker-Benfield in the Clarendon Building in preparation for the facsimile edition. And in 2007–8, the notebooks were conserved in the Conservation workshop in the Clarendon Building!

³¹ *The Clairmont Correspondence: Letters of Claire Clairmont, Charles Clairmont, and Fanny Imlay Godwin*. Ed. Marion Kingston Stocking (Baltimore, The John Hopkins University Press, 1995), I, 14–15; and Bruce Barker-Benfield, ‘Shelley's Bodleian Visits’, *The Bodleian Library Record* 12 (Oxford, Bodleian Library, 1987), 392–393.

³² Oxford, Bodleian Library, MS. Abinger c. 57, fols. 47v–48r [Draft Notebook B].

Acknowledgements

I would like to acknowledge the support of Alison MacKay during the conservation of the notebooks, and the work of Bruce Barker-Benfield and the late Charles E. Robinson in the facsimile edition of 1996. I acknowledge with much appreciation the late Chris Clarkson for his great influence in the treatment used in this project; my colleagues Judith Priestman, Stephen Hebron, and Bruce Barker-Benfield for their help in the preparation for the writing of this paper; and Julia Bearman, Fiona McLees and colleagues in Conservation & Collection Care.

Biography

Robert Minte ACR is a senior conservator at the Bodleian Library, University of Oxford, specialising in the conservation of East Asian books and art on paper. He studied book and paper conservation under Chris Clarkson and Judy Segal before completing an internship in advanced book conservation at West Dean College in 1989. At the Bodleian he has worked on a wide range of early printed books and manuscripts, and his interest in East Asian collections led to the study of Chinese bookbinding and scroll mounting in Hong Kong; work at the Far Eastern Conservation Centre, Leiden in 1996; and the study of Japanese scroll mounting and conservation at the Usami Shokakudo, Kyoto, Japan in 2001–02. As an accredited member of Icon, he became an assessor for the Professional Accreditation of Conservator-Restorers in 2003, and has lectured on conservation in the United Kingdom, Hong Kong, and Japan.

Materials & suppliers

*Note: where materials are no longer available (marked with an *), an alternative is given where possible.*

Bathophenanthroline Indicator Paper for Iron (II) ions

Preservation Equipment Ltd.
Vinces Road, Diss
Norfolk
IP22 4HQ
UK
+44 (0) 1379 647400

https://irongallink.org/images/file/pdf%201%20iron_ii_test_ok.pdf

Microchamber® 'MicroLeaf Endleaf Endpaper'—130 gsm

Conservation Resources UK Ltd

15 Blacklands Way

Abingdon, Oxon.

OX14 1DY

UK

+44 (0) 1235 553166

sales@conservation-resources.co.uk

(Not currently available in the UK)

*'Archive text' paper—125 gsm, wood-free pulp, buffered with calcium carbonate to pH 9.4, neutral sizing

R.K. Burt & Company Ltd

57-61 Union St

London

SE1 1SG

UK

+44 (0) 20 7407 6474

Alternative: Heritage Archival Photokraft—Timecare Heritage 140 gsm, Old Grey Ivory

Conservation By Design

2 Wolsley Road, Kempston

Bedford

MK42 7AD

UK

+44 (0) 1234 846300

Minogami—c. 1.6 monme (= 6 gsm), 100% Japanese Nasu Kozo, cooked with soda ash, and board dried

[Hasegawa Washi Kobo](#)

183-3 Sekiguchi Yabiki

Tsuruoka-city, Yamagata-pref

999-7545 Japan

+81 235-64-1177

Also available from:

[Hiromi Paper Inc.](#)

9469 Jefferson Blvd, Suite 117

Culver City, CA 90232

USA

+1 310-998-0098

orders@hiromipaper.com

Contact

Robert Minte ACR

Conservation & Collection Care

Room 3.06, The Weston Library

Bodleian Libraries

Broad Street

Oxford

OX1 3BG

UK

+44 (0) 1865-277080

robert.minte@bodleian.ox.ac.uk

Appendix

The Eleven Texts of *Frankenstein* (A stemma prepared by Charles Robinson)³³

Ur-text: Draft(s) of a 'story' written between [?17] June and [?August] 1816—not extant



1816–17 MWS Draft: 2-vol. novel drafted into two hard-cover notebooks between [?August] 1816 and 17 April 1817—hypothetically reconstructed without the PBS interventions—printed as the second text in *The Original Frankenstein*³⁴



1816–17 MWS/PBS Draft: 2-vol. novel drafted into two hard-cover notebooks between [?August] 1816 and 17 April 1817—most of the now disbound Notebooks "A & B" survive (Draft Notebooks 'A' & 'B'; Bodleian Library, MSS. Abinger c. 56–7)



1817 Fair Copy: 3-vol. novel copied into ?eleven soft-cover notebooks between 18 April and 13 May 1817—parts of the now disbound Notebooks 'C1 & C2' survive (Fair copy Notebooks 'C1' & 'C2'; Bodleian Library, MS. Abinger c. 58)



Proofs 3-vol. novel printed in proof sheets between [?23] September and [?3] November 1817—not extant



Revises 3 or more sheets of revised proofs printed between [?23] September and [?20] November 1817—not extant



1818: 3-vol. novel (1st Edition), published 1 January 1818 by Lackington et al. in 500 copies



1818 Thomas: "Thomas" copy of 1st Edition, corrected by MWS and preserved in the Pierpont Morgan Library in NYC (corrections made before 1823)



1823: 2-vol. novel (2nd Edition), published on 11 August 1823 by G. and W.B. Whittaker (but not set from 1818 Thomas) in ?250 copies



[1826]: [?Re-issued 2nd Edition]—apparently issued 4 April 1826 by Henry Colburn



1831: 1-vol. novel (Revised 3rd edition) published 31 October 1831 by Henry Colburn and Richard Bentley in 4,020 copies

³³ Charles E. Robinson, *The Frankenstein Notebooks*, op. cit. I, xxvii.

³⁴ Charles E. Robinson (ed.), *The Original Frankenstein, Mary Shelley (with Percy Shelley)*, op. cit. 253–429.

*The author wishes to note the following sources which were consulted, but not cited, for this paper.

Miranda Seymour, *Mary Shelley* (London: John Murray, 2000).

Oxford, Bodleian Library, in association with the New York Public Library, 'Shelley's Ghost: Reshaping the image of a literary family' exhibition webpage, <http://shelleysghost.bodleian.ox.ac.uk/home-page> (accessed 30 January 2019).