

BOYLE'S BOOKS:
THE EVIDENCE OF
HIS CITATIONS

Jordan Avramov
Michael Hunter
Hideyuki Yoshimoto

Robert Boyle Project
Occasional Papers No. 4

gatione, sine
Sudoriferis, sine
Diureticis, sine
Alterantibus,
sine Corrobo-
rantibus,
Topicis, &
quid pro
unico fer-
dicamen-
Præcipit
Deo inpr
benedicen-
rari: no
siderando,
Febris si
termittens, an
Continua, an
Tertiana vel
Quartana (quæ tamen difficilius curatur quàm aliæ) ne
expectatâ Coctione, nec habito respectu sexus, (ne puerperis
quidem exceptis) ætatis, anni, temporis, vel aliarum Cir-
cumstantiarum: & quidem paucorum dierum spatio sine
Recidiva vel aliquo notabili incommodo, nisi ubi æger ipse
per Incontinentiam de novo Paroxysmos provocarit. Kerge-
rus de Fermentatione, sect. 3. cap. 3. Pag. mihi 250.

others sorts) by a single
precipitating Remedy. I
endeavour'd to obtain
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receive
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to believe it
to be true.

I shall much the more easily be
induc'd to think, that great and de-
sireable changes may be wrought

Boyle's Books: The Evidence of his Citations

Robert Boyle's extensive library was irrevocably dispersed within fifteen months of his death in 1691, and only a few volumes from it can now be identified. However, clues to Boyle's ownership of books are provided by his citations of the writings of others by page, sometimes using the formula 'pagina mihi', 'page in my copy'. This publication collects such evidence both from Boyle's published writings and from his manuscript reading notes to give details of some 125 books which he is likely to have owned. It thus offers a significant contribution to the reconstruction of Boyle's library.

The authors are Jordan Avramov, Research Fellow at the Centre for Science Studies and History of Science, Bulgarian Academy of Sciences, Sofia; Michael Hunter, Professor of History at Birkbeck, University of London, and Director of the Robert Boyle Project; and Hideyuki Yoshimoto, Professor in the Division of Culture and Literary Studies at the Tokyo University of Foreign Studies.

* Ego ab anno 1649. in hunc diem per integros 14 annos ultra mille Febricitantes sine Vinæse-
 gatione, sine Purgatione, sine Sudoriferis, sine Diureticis, sine Alterantibus, sine Corroborantibus, sine Topiis, & si quid præterea unico fere medicamento Præcipitante, Deo imprimis benedicente, curavi: non considerando, an Febris sit Intermitteus, an Continua, an Tertiana vel

Quartana (que tamen difficilius curatur quam alia) ne expectat à Coctione, nec habito respectu sexus, (ne puerperis quidem exceptis) ætatis, anni, temporis, vel aliarum Circumstantiarum: & quidem paucorum dierum spatio sine Recidiva vel aliquo notabili incommodo, nisi ubi æger ipse per Incontinentiam de novo Paroxysmos provocavit. Kergerus de Fermentatione, sect. 3. cap. 3. Pag. mihi 250.

I shall much the more easily be induc'd to think, that great and desirable changes may be wrought

in

declares *, that for fourteen years he cur'd above a thousand Febricitants without bleeding, purging, or sweating Medicines, (to which he adds some others sorts) by a single precipitating Remedy. I endeavour'd to obtain from Germany an account of the truth of the matter of fact, but did not receive it; only I found that a Physician of this Emperours, does, in a lately publish'd Book, declare himself inclin'd to believe it to be true.

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Robert Boyle, *Of the Reconcilableness of Specifick Medicines to the Corpuscular Philosophy* (London, 1685), p. 70, showing a typical example of a citation by him in the form 'Pag[ina] mihi', 'page in my copy'. Wellcome Library, London, 15066/B.

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Introduction

The almost complete loss of Boyle's library has been a tragedy for Boyle scholarship. At his death in 1691, we know that his collection of books was large, comprising a total of 3,571 volumes, 330 of them in folio, 801 in quarto and 2,440 in octavo and duodecimo.¹ It was thus comparable in size with libraries like those of John Locke, Samuel Pepys and Robert Hooke, and significantly larger than that of Isaac Newton and other contemporaries.² It was clearly also choice in its content, reflecting Boyle's wide-ranging curiosity and discrimination. Typically, Boyle tells us of a work by Benvenuto Cellini that 'though the Book were very scarce, I had purchas'd it at a dear Rate, for the sake of a few considerable passages I met with in it'; we also know that most of the books in the library were well bound.³ Indeed in 1692 Boyle's friend John Evelyn professed himself 'much displeas'd' by the dispersal of such a collection 'where there is no necessitie for it'.⁴ It is as if he visualized it being preserved for posterity intact, either in the hands of his family (as occurred until the twentieth century with Evelyn's own books⁵) or through institutional ownership. Certainly, the practice of bequeathing books to institutions had become increasingly common in the years preceding Boyle's death: just at this time, the earlier examples of William Harvey and the Marquess of Dorchester (who left their books to the College of Physicians) and the Dukes of Norfolk (who gave the Arundel Library to the Royal Society) were followed by the gifts of books and other items to the Museum that Elias Ashmole had recently founded at Oxford by

¹ The figures are recorded in the commonplace book of Zachary Merrill in Bodleian Library, Oxford, MS Rawlinson D 1120, fol. 62v.

² See John Harrison and Peter Laslett, *The Library of John Locke* (2nd edn., Oxford, 1971), esp. pp. 11-12; John Harrison, *The Library of Isaac Newton* (Cambridge, 1978), p. 1 and passim; *Bibliotheca Hookiana* (London, 1703), reprinted in Leona Rostenberg, *The Library of Robert Hooke* (Santa Monica, CA, 1989). For the Pepys Library see Robert Latham (ed.), *Catalogue of the Pepys Library* (7 vols., Cambridge, 1978-94). See also H. A. Feisenberger, 'The Libraries of Newton, Hooke and Boyle', *Notes and Records of the Royal Society*, 21 (1966), 42-55; Giles Mandelbrote, 'Scientific Books and their Owners: A Survey to c. 1720', in Andrew Hunter (ed.), *Thornton and Tully's Scientific Books, Libraries and Collectors* (4th edn., Aldershot, 2000), pp. 333-66; Scott Mandelbrote, 'Professional Collections: Libraries for Doctors and Scientists', and Giles Mandelbrote, 'Personal Owners of Books', in Giles Mandelbrote and K.A. Manley (eds), *The Cambridge History of Libraries in Britain and Ireland, vol. 2, 1640-1850* (Cambridge, 2006), pp. 158-72, 173-89; Noel Malcolm 'The Library of Henry Oldenburg', *eBLJ*, 2005, pp. 1-55; William Poole, 'A Fragment of the Library of Theodore Haak', *ibid.*, 2007; and id. and Felicity Henderson, 'The Library Lists of Francis Lodwick', *ibid.*, 2009.

³ *Works*, vol. 4, p. 192. The comment about the bindings comes from the source cited in n. 1.

⁴ Evelyn to Tenison, 16 July 1692, British Library Add. MS 78299, no. 668.

⁵ For the survival and dispersal of Evelyn's library see Nicolas Barker, 'The Sale of the Evelyn Library, 1977-8', and Michael Hunter, 'The British Library and the Library of John Evelyn', in *John Evelyn in the British Library* (London, 1995), pp. 74-81, 82-102, and the Christie's catalogues, *The Evelyn Library*, 4 parts, 22-3 June 1977, 30 Nov.-1 Dec. 1977, 15-16 March 1978 and 12-13 July 1978. See also Giles Mandelbrote, 'John Evelyn and his Books', in Frances Harris and Michael Hunter (eds), *John Evelyn and his Milieu* (London, 2003), pp. 71-94. For Evelyn's approving attitude towards public libraries, see his *Diary*, ed. E.S. de Beer (6 vols., Oxford, 1955), vol. 4, pp. 367-8, and his letter to Pepys of 26 Dec. 1689 in Guy de la Bédoyère (ed.), *Particular Friends* (Woodbridge, 1997), pp. 198ff.

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John Aubrey, Martin Lister, Sir William Dugdale and Ashmole himself.⁶ Further examples of such benefactions in the early years of the eighteenth century included Pepys' bequest of his books to Magdalene College, Cambridge, where they still remain.⁷

In fact, however, Boyle's books were irrevocably dispersed within fifteen months of his death, a process that has been tabulated by J.F. Fulton, Douglas McKie and R.E.W. Maddison.⁸ The library was seen by one Zachary Merrill, evidently a nonconformist divine, on 1 April 1692, and it was he who recorded the number of books in it and the quality of their bindings. He noted that 'they may be had for £3 or 400 (tho' worth 1000) because they must not be sold by Auction', evidently a decision by Boyle's chief executor, his brother Richard, Earl of Burlington.⁹ In July 1692 they were offered for private viewing at the house in Pall Mall where Boyle had lived in his later years with his sister, Katherine, Lady Ranelagh, as was advertised in the *London Gazette*. But however much of the library was disposed of at this point, it clearly left a residue, part of which was sold in an auction on 5 April 1693 in which the books were irrevocably confused with those of the heraldic author, Sylvanus Morgan, while others were exposed on the bookstalls in Moorfields.¹⁰

What is surprising is not so much the dispersal itself, but the fact that Boyle's library has vanished almost without trace. Frustratingly, even a catalogue of its content which once existed and was known to Henry Miles in the eighteenth century has failed to survive. This appears in one of Miles' inventories of Boyle's papers, which include many items which passed through his hands but are now lost.¹¹ In 1991 John Harwood rekindled hopes in this respect by suggesting in his *The Early Essays and Ethics of Robert Boyle* that he had found a listing of Boyle's library among the miscellaneous

⁶ See Sir Geoffrey Keynes, *The Life of William Harvey* (Oxford, 1966), ch. 42; C.E. Newman, 'The First Library of the Royal College of Physicians', *Journal of the Royal College of Physicians of London*, 3 (1969), 299-307; L.M. Payne and E.E. Newman, 'The History of the College Library 1688-1727', *Ibid*, 5 (1971), 385-96; Linda Levy Peck, 'Uncovering the Arundel Library at the Royal Society', *Notes and Records of the Royal Society*, 52 (1998), 3-24; Michael Hunter, *Science and the Shape of Orthodoxy* (Woodbridge, 1995), pp. 43-4 (cf. also *ibid.*, pp. 135ff.).

⁷ For Pepys' library, see above, n. 2. For the libraries set up at this time by Narcissus Marsh and Thomas Plume, see W.J. Petchey, *The Intentions of Thomas Plume* (Maldon, 1985) and the relevant essays in Muriel McCarthy and Ann Simmons (eds), *The Making of Marsh's Library* (Dublin, 2004) and *Marsh's Library - A Mirror of the World* (Dublin, 2009).

⁸ See J. F. Fulton, *A Bibliography of the Hon. Robert Boyle* (2nd edn., Oxford, 1961), pp. iv-vi; D. McKie, 'Three Historical Notes', *Nature*, 163 (1949), 627-8; R.E.W. Maddison, *The Life of the Hon. Robert Boyle* (London, 1969), pp. 198-200.

⁹ Rawl. MS D 1120, fol. 62v. Evelyn in his letter to Tenison (above, n. 4) refers to 'the Auction of Mr Boyles Books', but, since he had not been able to be present, he may have misunderstood the nature of the dispersal.

¹⁰ *Bibliotheca Morganiana* (London, 1693). The link with Boyle is made by Hooke in his diary entry for 28 March 1693; for the books in Moorfields see the entries for 21 and 23 March: R.T.Gunther (ed.), *Early Science at Oxford* (14 vols., Oxford, 1923-45), vol. 10, pp. 223-6. The title-page of the catalogue implies that it was particularly Latin titles which came from 'the Library of an Honorable Gentleman, lately deceased'; Fulton, on the other hand, suggested that they might have appeared among the 'Libri omissi' at the end (*Bibliography*, p. v). Either way, although the catalogue lists certain titles which it seems quite plausible *did* derive from Boyle's library, the argument is unfortunately a purely circular one and evidence from this source has not been pursued here. See also Feisenberger, 'Libraries of Newton, Hooke and Boyle', pp. 52-4.

¹¹ BP 36, fol. 157; cf. *ibid.*, fol. 149. On this see *Boyle Papers*, pp. 72, 77, 81-2, 91, and 73ff., *passim*.

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manuscripts associated with Boyle at the Royal Society.¹² However, further research on the manuscript by Michael Hunter showed that this was in fact almost certainly a listing, not of Boyle's books, but of those of John Warr, his servant and one of the executors of his will.¹³ Virtually the only clue to Boyle's ownership of books from a source of this kind comes from a short list made by Miles of 'Bound books' linked to Boyle, which is mainly of manuscripts but also includes five printed volumes which are no longer extant.¹⁴

Equally frustrating is the fewness of surviving volumes known to have been possessed by Boyle. Of these, three bear ownership inscriptions in his hand. One is a copy of Cicero which he owned as a boy at Eton. This is still in the college library, evidently because Boyle discarded it when he left the school.¹⁵ Another item which he probably owned in his early years is a copy of Thomas Horne's *XEIPAIΩΓIA, sive manuductio in ædem palladis, quâ utilissima methodus authores bonos legendi indigitatur* (London, 1641), now in the Medical Historical Library at Yale.¹⁶ This has Boyle's signature on the title-page (it appears at its foot, on either side of the book's imprint), while a further volume which bears Boyle's signature is a copy of Gianfrancesco Riva di San Nazzaro's *Tractatus de peste* (Lyons, 1538); this also bears the name of Thomas Sydenham, to whom Boyle perhaps gave it.¹⁷

In other cases, however, books are only known to have been owned by Boyle because of endorsements by others. In one case, a book has been identified as possibly from Boyle's library because Robert Hooke, who subsequently owned it, notes that he bought it at Moorfields at the time when Boyle's books were on sale there: this is a copy of J.J. Becher's *Novum organum philologicum* (Frankfurt, 1674).¹⁸ Two others have been endorsed to the effect that they were formerly owned by Boyle, presumably having been bought during the dispersal of his books in 1692–3: one of these is a copy of Joachim D'Alencé's *Traitez des baromètres, thermomètres, et notiomètres, ou*

¹² Royal Society MS 23; J.T. Harwood, *The Early Essays and Ethics of Robert Boyle* (Carbondale and Edwardville, 1991), pp. 249–81.

¹³ *Boyle Papers*, pp. 71–2.

¹⁴ See BP 36, fol. 196, transcribed in *Boyle Papers*, pp. 68–9. The printed works included are the Latin edition of Boyle's own *De ipsa natura* (1687) and the 4th edition of *Additions au traité de l'eau de mer douce* (London, 1684), a pamphlet stemming from a project with which he was associated (see William Lefanu, *Nehemiah Grew, M.D., F.R.S. A Study and Bibliography of his Writings* (Winchester, 1990), esp. p. 129), along with [Jacques Pousset de Montauban], *Zenobie Reyne d'Armenie, Tragedie* (Paris, 1653), *Acta novæ academïæ philo-exoticorum naturæ et artis* (Brescia, 1686) and Philippe Guide, *Observations anatomiques faites sur plusieurs animaux au sortir de la machine pneumatique* (Paris, 1674).

¹⁵ See the discussion in Michael Hunter, *Boyle: Between God and Science* (New Haven and London, 2009), p. 33; Boyle's ownership inscription is reproduced in *ibid.*, p. 34.

¹⁶ It should be noted that we doubt whether the copy of the 2nd edition of Robert Dallington's *Aphorisms, Civill and Militarie* (London, 1629) at the Houghton Library, Harvard (fSTC 6198), was Boyle's, despite the fact that it is inscribed 'Ex Libris Roberti Boylii April 5 1672' and 'Robert Boyle his Book'. The handwriting of these inscriptions is quite unlike Boyle's, and, though they could have been written by an amanuensis, it seems to us likelier that the book was owned by someone completely different, also called Robert Boyle.

¹⁷ Wellcome Library, 5756/D; described and the title-page reproduced in J.F. Fulton, 'Boyle and Sydenham', *Journal of the History of Medicine*, 11 (1956), 351–2; the title-page is also reproduced in K.D. Keele, 'The Sydenham-Boyle Theory of Morbific Particles', *Medical History*, 18 (1974), 240–8, facing p. 240.

¹⁸ Wellcome Library, 58210/B. It is inscribed: 'R.Hooke p^d 21^d. Mar. 25 1693 MF'. For the possible link with Boyle see McKie, 'Three Historical Notes', and Roger Gaskell, *Catalogue 28* (2001), item 25.

INTRODUCTION

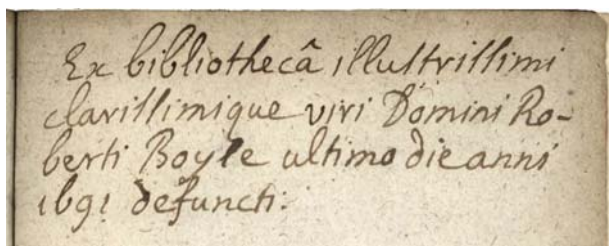


Figure 1. Inscription on the rear fly-leaf of Joachim D'Alencé, *Traitez des baromètres* (Amsterdam, 1688). University of Kent, Templeman Library, Special Collections M 2A5.

hygromètres (Amsterdam, 1688) now at the University of Kent (see Figure 1).¹⁹ Others bear presentation inscriptions, including a copy of Huygens' *Horologium oscillatorium* (Paris, 1673) with the letters 'R B' on its title-page, now at the Whipple Museum, Cambridge, and a copy of Evelyn's *Publick Employment and an Active Life Prefer'd to Solitude* (London, 1667) inscribed 'M: Boyle:' in Evelyn's hand.²⁰

The latter is now in the British Library, and it is possible here to divulge for the first time a number of other books in the British Library with inscriptions linking them to Boyle: these have come to light thanks to the work of the Sloane Printed Books Catalogue, which is attempting to reconstruct the library of Sir Hans Sloane from the evidence of extant copies and related sources.²¹ Sloane was active in buying books on the London market at the time when Boyle's library was dispersed, so it is not surprising that he acquired various volumes from it, notably works inscribed to Boyle by continental savants. For instance, there is a copy of a book by François Bernier endorsed on the title-page 'A Monsieur Boyle', along with similarly inscribed treatises by the Italian savants G.A. Borelli, Stefano Lorenzini, J.H. Sbaraglia and Diego Zerilli. No less interesting is a presentation copy of a work by Joachim D'Alencé, author of one of the volumes inscribed as being from Boyle's library that have already been described, while a copy of a 1669 Dutch doctoral dissertation has a manuscript dedication to Boyle by his young protégé, Samuel Colepresse, who was a medical student at Leiden at that

¹⁹ University of Kent, Templeman Library, Special Collections M 2A5. The inscription on its rear fly-leaf reads: 'Ex bibliothecâ illustrissimi clarissimique viri Domini Roberti Boyle ultimo die anni 1691 defuncti'. An identical inscription appeared on a copy of Louis de Montpignon, *La Politique des Jesuites* (London, 1688), bound with *La Decadence de l'Empire Papal* (Amsterdam, 1689), which was drawn to Fulton's attention by Leona Rostenberg. See J.F. Fulton, 'A Book from Robert Boyle's Library', *Journal of the History of Medicine*, 11 (1956), 103-4, where the inscription is reproduced. The current whereabouts of the latter volume is unknown.

²⁰ Whipple Library, University of Cambridge, Store: 69: 10; British Library Eve.a.15. In the latter case, Evelyn's inscription is at the top of the imprimatur leaf facing the title-page. On p. 1 is the signature 'Burlington': evidently Boyle's brother helped himself to this item while the library was being dispersed.

²¹ See www.bl.uk/catalogues/sloane. For background, see Giles Mandelbrote, 'Sloane's Purchases at the Sale of Robert Hooke's Library', in Giles Mandelbrote and Barry Taylor (eds), *Libraries within the Library: the Origins of the British Library's Printed Collections* (London, 2009), pp. 98-145.

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point.²² Fuller recording of the provenances of books in libraries around the world may lead to further such copies inscribed to Boyle coming to light, but for our purposes what is perhaps most significant is that none of the books referred to in this paragraph or the previous one bears any ownership inscription by Boyle himself. This suggests that he did not normally write his name in his books, which in turn means that volumes that he purchased for himself rather than being given by others are unlikely to be retrospectively identifiable at all.

To make up for the lack of evidence from surviving copies, certain other sources exist which give information about books which Boyle may have owned, and these may be itemized here.²³ First, we have the diaries and accounts of those associated with Boyle. From his childhood, there are references to books bought for him by his father, including the Bible and Aesop's *Fables*, while later he may be presumed to have owned copies of works which he recommended to such contacts of his as Samuel Hartlib, including Antonio Neri's *L'arte vetraria* (1612) which he was later to arrange to be translated into English; indeed, on one occasion Hartlib specifically reports how Boyle 'had also a booke very hard to come by of *Constitutiones Iesuitarum*', probably one of the many editions of *Quaedam ex constitutionibus Societatis Iesu excerpta* (Rome, 1567).²⁴

Later, we learn from the diary of Robert Hooke not only of books which Hooke obtained for Boyle, such as a set of the *Journal des sçavans* in June 1678, but also of books that Boyle lent to Hooke, for instance a copy of André Félibien's *Principes de l'architecture* (1676) which Hooke borrowed in November 1676, or a volume 'de *frigido*', loaned in July 1677 (Hooke left the name of the author blank, but it was

²² Colepresse refers to sending Boyle 'a few of our dissertations' in a letter of 3/13 April 1669 (*Correspondence*, vol. 4, p. 131). The works in question are as follows (with their BL classmarks):

François Bernier, *Doutes... sur quelques-uns des principaux chapitres de son Abregé de la Philosophie de Gassendi* (Paris, 1682), inscribed at foot of title-page 'A Monsieur Boyle' (1135.a.18)

G.A.Borelli, *Risposta... alle considerazioni... del R.P.F. Stefano de gl'Angeli* (Messina, 1668), inscribed: 'D. Roberto Boyle. Author' (537.c.21(3))

Joachim D'Alencé, *Traitté de l'aiman* (Amsterdam, 1687), inscribed on front fly-leaf: 'Pour Monsieur Robert Boyle De la part de son tres humble et tres obeissant serviteur D'alencé Secretaire du Roy, A La Haye le 18^e May 1687' (C.54.e.17)

Adrianus Gentman, *Disputatio optica de visione* (Leiden, 1669), with inscription to Boyle by Samuel Colepresse: 'Nobilissimo Clarissimoque V[iro] Roberto Boyle Arm. Hasce, [?] humillime D.D.D. S Colepresse' (537.f.27(23))

Stefano Lorenzini, *Osservazioni intorno alle torpedini* (Florence, 1678), inscribed on half-title: 'Al Sig' Roberto Boyle' (444.d.17(1))

J.H.Sbaraglia, *De recentiorum medicorum studio dissertatio epistolaris ad amicum* (Parma, 1690), inscribed 'Illustrissimo et Excellentissimo D^o Roberto Boyle' (1172.e.6(5))

Diego Zerilli, *Confermazione d'una sentenza dal Signo G.A.Borelli... di nuovo contraddetta del M.R.P. Fra Stefano de gl'Angeli* (Naples, 1668), inscribed: 'D. Roberto Boyle. Author' (exactly as in the Borelli item above) (537.c.22(1))

In addition, there is a copy of Robert Scott's auction catalogue of the books of Bishop Humphrey Henchman (London, 1677) inscribed on the fly-leaf 'For Mr Boyle' (821.i.13(3)).

²³ For the suggestion that Boyle might have owned a copy of the 1620 Amsterdam edition of Lucretius formerly owned by Ben Jonson on the grounds that Boyle apparently cites an unpublished annotation from it in *Seraphic Love*, see H-J. Real, 'Note 335: A Book from Robert Boyle's Library', *The Book Collector*, 19 (1970), 527-8.

²⁴ See Hunter, *Boyle: Between God and Science*, p. 25 (and pp. 342-3n. for the Neri translation); Hartlib, 'Ephemerides', Sheffield University Library Hartlib Papers, HP 28/2/69B, 29/5/43B, 29/5/70B, 29/8/10B. For further related references see HP 28/1/6A, 28/1/52A, 28/1/83B, 28/2/3B, 29/5/10B, 29/5/34B, 29/5/36B, 29/6/13A, 29/7/7B-8A, 31/22/18B.

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probably the work on the subject published in that year by Isaac Conratt, who had written Boyle a long letter about phenomena relating to cold in 1672).²⁵ It is perhaps worth noting here that there are also a couple of references to Boyle borrowing books from Hooke: both are very recent publications, Georges Guillet de Saint-Georges' *Athenes ancien et nouvelle* (1675) and Ignace-Gaston Pardies' posthumously published celestial atlas (1674),²⁶ and the works loaned by Boyle to Hooke seem similarly to have been predominantly recent. Apparently, it was only of such topical items that the two men made loans to one another, and there is no evidence that Boyle routinely supplemented his own holdings by borrowing books from Hooke's extensive library – as was evidently the case, for example, with Isaac Newton and his mentor, Isaac Barrow²⁷ – probably because Boyle's wealth meant that he could afford to purchase any older volume that he required so long as it was obtainable.

Further information concerning Boyle's book ownership is available from correspondence, either of Boyle himself or of those associated with him, which often gives details of books which were presented to him or acquired for him (here, too, it is revealing that such letters tend to provide evidence of Boyle's seeking to obtain his own copies of books, rather than to borrow them²⁸). For instance, Boyle was the recipient of a copy of Newton's *Principia* when it was published in 1687, and of Christiaan Huygens' *Traité de la lumière* in 1690.²⁹ Earlier, the evidence of the extant copy of François Bernier's *Doutes... sur quelques-uns des principaux chapitres de son Abrégé de la Philosophie de Gassendi* (1682) can be complemented by epistolary evidence that Boyle had been sent a copy of Bernier's *Abrégé* itself via the Huguenot savant, Henri Justel, in May 1678, while we would know that he was presented with a copy of Huygens' *Horologium oscillatorium* even had the extant volume not also survived: it is apparent from Henry Oldenburg's correspondence that in the summer of 1673 Huygens sent twelve copies of the newly published book to Oldenburg with a list of English scientists who were to receive a copy, including Boyle.³⁰

²⁵ Hooke, *Diary 1672-80*, eds. H.W. Robinson and W. Adams (London, 1935), entries for 26 June 1678, 18, 23 Nov., 1 Dec. 1676, 4 Jan., 19, 28 July 1677 (for Conratt's letter to Boyle see *Correspondence*, vol. 4, pp. 247-62: that Boyle had a copy of the book he published in 1677 is implied by his citation of it in the 2nd edition of *Cold: Works*, vol. 4, pp. 548-9). Cf. 30 Sept., 4 Oct. 1673 ('Gregorys book'), 8 July, 3 Aug. 1678 ('Lana booke'), 20, 31 May 1679 ('almanack French'). For ambiguous references see 8 Oct. 1673, 28 Feb. 1674, 20 July 1676, 20 Jan., 13 Oct. 1677.

²⁶ *Ibid.*, 3 Aug. 1675, 27, 30 March 1677.

²⁷ Harrison, *Library of Newton*, pp. 61ff.

²⁸ The one possible exception to this is a letter to Boyle of 26 October 1688 from the Cambridge don, John Ellys: forwarding a copy of Maimonides' *Guide for the Perplexed* which he had evidently purchased for Boyle, he explained how the only way in which Boyle could gain access to the Hebrew version of the book was to borrow it from the library of Emanuel College; whether Boyle followed up this suggestion is unknown. *Correspondence*, vol. 6, p. 275.

²⁹ See Halley to Newton, 5 July 1687, Newton, *Correspondence*, eds H.W. Turnbull et al. (7 vols., Cambridge, 1958-77), vol. 2, p. 481; Christiaan Huygens to Constantijn Huygens, 28 Feb. 1690, Huygens, *Oeuvres complètes* (22 vols., The Hague, 1888-1952), vol. 9, p. 379. We owe the latter reference to Scott Mandelbrote.

³⁰ See *Correspondence*, vol. 5, pp. 89-90 (interestingly, this is the book that the Halls surmised was referred to in *Oldenburg*, vol. 11, pp. 5-6); *Oldenburg*, vol. 10, pp. 58, 66. For other comparable examples, see *ibid.*, vol. 5, p. 411; vol. 6, p. 33; vol. 7, pp. 11-12; vol. 11, pp. 5-6; Locke, *Correspondence*, ed. E.S. de Beer (9 vols., Oxford, 1976- [in progress]), vol. 2, p. 4; and *Correspondence*, vol. 1, pp. 158, 161, 176, 179-80, 430 (cf. 433), 450, 461, 473; vol. 2, pp. 54, 410, 488, 567, 596; vol. 3, pp. 116, 259; vol. 4, pp. 402, 403, 405, 431; vol. 5, pp. 104, 151, 208, 323, 354. See also the references given in notes 33-4.

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In other cases, there are references in letters to books obtained for Boyle, particularly by Henry Oldenburg in London when Boyle was living in Oxford in the 1660s. In November 1667, for instance, Oldenburg reported the receipt of 'a packet of books from Hamborough' which included works which can be identified as Peter Lambeck's *Prodromus historiae litterariae* (1659), Johann Mathesius' *Sarepta oder Bergpostill* (1562 and subsequent editions) and Joachim Jungius' *Logica Hamburgensis* (1638), of which the last was certainly dispatched to Boyle while the others may also have been; a month later he promised to send Boyle a copy of Gilles de Launay's *Essais physiques*, and duly did so a few weeks later.³¹ Earlier, Hartlib had clearly served a similar function, enquiring about books on Boyle's behalf among the booksellers at St Paul's Churchyard.³² On the other hand, the evidence that correspondence provides on such matters is frequently far from conclusive. Often, a letter refers to a volume that is enclosed without specifying what it is, meaning that the exact identity of the work in question is a matter of surmise, while other references are equally vague, as with the 'Arminian books' which Hartlib obtained for Boyle with some difficulty in 1654.³³ In other cases when a book is discussed, it is unclear whether Boyle actually ever received it;³⁴ while, even when we can be certain of the title of a work that Boyle acquired, we can rarely be sure which edition he owned unless we are lucky enough to have clues from other sources, as is the case with the Mathesius item mentioned above, as we will see.³⁵

Additional clues are provided by published works that were dedicated to Boyle, since in such cases he almost certainly received a presentation copy of the book in question. Boyle was the recipient of many such dedications, reflecting his intellectual and social eminence: J.F. Fulton in his *Bibliography of Boyle* was able to record no fewer than forty-three books dedicated to him between 1651 and his death.³⁶ Some of these were evidently rather speculative dedications by men who hardly knew him, the most striking example of this being Thomas Jordan's *Wit in a Wildernesse* (?1665), a work that is missing from Fulton's list, probably because of the way in which the 'dedication' was executed in this instance. Jordan's book was printed with a dedication leaf which had a blank space where the name of the recipient appeared, and names were hand stamped onto this in different copies: a copy dedicated in this way to 'Rob: Boyle, Esq;' survives at the Houghton Library, Harvard University, and it is likely that this did indeed come

³¹ *Correspondence*, vol. 3, pp. 369, 380, 388-9; vol. 4, pp. 4, 8. See also *ibid.*, vol. 2, pp. 369, 391, for his earlier attempts to obtain a copy of Isaac de la Peyrère's *Relation de Groenland* for Boyle, and p. 549 for Boyle's interest in 'Galilæo's second Tome', evidently a reference to Thomas Salusbury's *Life of Galileo*, on which see Nick Wilding, 'The return of Thomas Salusbury's *Life of Galileo* (1664)', *British Journal for the History of Science*, 41 (2008), 241-65, on p. 248. See also nn. 33-4.

³² *Ibid.*, vol. 1, p. 294. Cf., for example, *ibid.*, vol. 1, pp. 158, 169, 321-2, 332, 351-2.

³³ *Correspondence*, vol. 1, pp. 158, 169. See also *ibid.*, pp. 332, 351-2, 386; vol. 2, pp. 369, 391, 567; vol. 3, p. 255; vol. 4, pp. 244, 345, 382, 467; vol. 6, pp. 286, 313, 391, 392. A further puzzling case is provided by the book on plague remedies that Boyle owned, referred to in *Correspondence*, vol. 2, p. 517, since the identity of the work in question has proved elusive.

³⁴ See, for example, *Correspondence*, vol. 1, pp. 322, 330, 352; vol. 2, pp. 403, 411, 488, 494, 496, 536, 539, 549, 567; vol. 4, pp. 25, 382. See also above, n. 30. In other cases it is unclear whether a book was intended for Boyle or for the New England Company or the Royal Society, e.g. *ibid.*, vol. 2, p. 122; vol. 4, p. 358.

³⁵ See below, p. xix.

³⁶ Fulton, *Bibliography of Boyle*, pp. 155-70. For background see Pat Rogers, 'Book Dedications in Britain 1700-1799: a Preliminary Survey', *British Journal for 18th-century Studies*, 16 (1993), 213-33.

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into Boyle's possession, though there is no evidence as to whether he retained it.³⁷ On the other hand, he almost certainly both received and retained copies of the books that were dedicated to him by close friends of his like Nathaniel Highmore, Robert Sanderson, Robert Sharrock and Richard Lower, while the same is true of books which he supported financially, such as Thomas Hyde's version of the gospels in Malay (1677).³⁸ Indeed, in at least some cases – for instance, Thomas Smith's *Sermon of the Credibility of the Mysteries of the Christian Religion* (1675) and the second edition of Thomas Sydenham's *Methodus curandi febres* (1668) – we have evidence from correspondence that Boyle did indeed receive a copy of the work in question.³⁹ A related category of books, most of them separately listed by Fulton, is of books addressed to Boyle rather than dedicated to him, and Boyle may well have owned copies of these, too, since similar evidence sometimes survives of their authors having sent him copies, as with John Wallis and his 1662 attack on Thomas Hobbes, *Hobbius Heauton-timorumenos*.⁴⁰

Further worthwhile evidence concerns books to which Boyle subscribed. The late seventeenth century was the first age of subscription publishing and printed lists often survive of the names of those who contributed towards the publication costs of a book in this way.⁴¹ As a wealthy patron of learning, Boyle's name often features in such lists, including those for Moses Pitt's *English Atlas* (1680–3), Nehemiah Grew's *Musæum regalis societatis* (1681) and his *Anatomy of Plants* (1682), Thomas Guidott's *De thermis Britannicis* (1691), Christopher Packe's translation of the works of Glauber (1689), and, perhaps more surprisingly, works like John Newton's *Herbal* (1681) or Richard Blome's *The Gentleman's Recreation* (1686).⁴² Though Boyle may have had

³⁷ See *ODNB* s.v. Thomas Jordan. The Houghton copy with Boyle's name inserted is EC65 J7667 665w. The Houghton has a further copy with a space at the same point: EC65 J7667 660d. Other copies of the same book dedicated to different individuals survive as follows: British Library (Solomon Seabright), Worcester College, Oxford ('Will. Clark Esq.' [sic]), Huntington Library (George Griffith, bishop of St Asaph), and the Pforzheimer collection, Austin, Texas (Sir Thomas Hussey). Louis Du Moulin's *Jugulum causæ* (London, 1671), with over 70 dedications, including one to Boyle, is not dissimilar: du Moulin twice later wrote to Boyle requesting support (see *Correspondence*, vol. 4, pp. 405-6; vol. 5, pp. 190-1). For his earlier work addressed to Boyle see n. 40.

³⁸ The same is true of the Irish translations of the Old and New Testament, for Boyle's role in relation to which see Hunter, *Boyle: Between God and Science*, pp. 197-9.

³⁹ *Correspondence*, vol. 4, pp. 55, 402.

⁴⁰ Fulton, *Bibliography of Boyle*, pp. 176ff.; *Correspondence*, vol. 1, p. 473. A further example of a work addressed to Boyle, overlooked by Fulton, is Louis du Moulin's 'Epistola ad Nobilissimum Virum Robertum Boyle de Usuris', in his *Corollarium ad Parænesim suam* (London, 1657), pp. 247ff.: see Hunter, *Boyle: Between God and Science*, p. 322 n. 60. This was originally discovered by Peter Anstey. Fulton's listing of the Boyle items among the group of works associated with John Pechey and published in 1694-5 (*Bibliography*, p. 181, entries 356-8) also needs to be supplemented by *Some Observations Made upon the Cylonian Plant Shewing its Admirable Virtues against Deafness. Written by a Physitian to the Honourable Esq; Boyle* (London, 1695), which is signed at the end 'James Mullins' (British Library 546.g.18 (23)).

⁴¹ For a helpful list, see F.J.G. Robinson and P.J. Wallis, *Book Subscription Lists: a Revised Guide* (Newcastle upon Tyne, 1975), pp. 1-2, with a few extra entries in P.J. Wallis' *Extended Supplement* (Newcastle upon Tyne, 1996).

⁴² Boyle's name appears in subscription lists as follows (in alphabetical order, with references to the location where copies of the lists survive, notably British Library Harleian 5946 and Bodleian Library Wood 658 and Johnson Prospectuses):

Blome, Richard, *The Gentleman's Recreation* (London, 1686) (Harleian 5946, 195-6; Johnson Prospectuses 5; also coat of arms in the book itself)

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purposes other than furnishing his library when subscribing for six copies of Robert Plot's *Natural History of Staffordshire* (1686), two of them on large paper, it seems likely that at least one of these went into his library, and that this was also the case with many of the other books to which he subscribed. In addition, we occasionally learn through correspondence that Boyle was a subscriber to a book although no printed subscription list survives.⁴³ Hence here too, we have clues as to the likely nature of a fraction of his large holdings.

Interesting as such evidence is, however, it mainly concerns works by Boyle's contemporaries which are therefore unlikely to have had a formative influence on him, and it does not take us very close to the core of the library in terms of the books on which he relied in formulating and expounding his novel and influential view of nature. This might induce a degree of pessimism about the possibility of ever being able to ascertain what books Boyle owned and read. Indeed, in 1966 H.A. Feisenberger concluded: 'It seems that, even if in the course of time a few more books inscribed by Boyle should appear, we can have little hope of ever knowing now, even approximately, of what the main library consisted'.⁴⁴ However, here a different and hitherto untried strategy seems appropriate, namely of examining Boyle's citations of books and seeing what can be learned from these about volumes of which he may have possessed a copy.

This is obviously only possible where Boyle's citations are sufficiently precise, which is by no means always the case. Sometimes, Boyle was very vague in his citations, for instance alluding to his source only as 'a great Philosopher' and leaving the reader to work out who was intended.⁴⁵ Matters are also complicated by his anxiety about being 'prepossessed' by the works of others, which meant that he was sometimes diffident about citing his sources at all.⁴⁶ Things get better when Boyle quotes an author by name and his book by its title, and better still when he adds references to volume and chapter.⁴⁷ The latter citation method is in fact that most widely used in the whole Boyle corpus, seen, for instance, in references like that to Thomas Bartolin's *Historiarum anatomicarum rariorum centuria I–VI* (1654–61) in the form: 'Hist. Anatom. Cent. 3.

Browne, John, *Compleat Treatise of the Muscles* (London, 1681) (Johnson Prospectuses 9; also in the book itself)

Grew, Nehemiah, *Anatomy of Plants* (London, 1682) (Harleian 5946, 164-5)

Grew, Nehemiah, *Musæum regalis societatis* (London, 1681) (Harleian 5946, 162-3)

Guidott, Thomas, *De Thermis Britannicis* (London, 1691) (Wood 658, 783, 808)

Newton, John, *Complete Herbal* (London, 1681) (Harleian 5946, 104)

Packe, Christopher, *The Works of... Glauber* (London, 1689) (list in book itself)

Pitt, Moses, *English Atlas* (London, 1681) (Harleian 5946, 191-4; Wood 658, 791, 795)

Plot, Robert, *Natural History of Staffordshire* (Oxford, 1686) (Johnson Prospectuses 11)

Boyle also paid for two plates (F3 and F4) to Francis Willughby, *De historia piscium libri quatuor* (Oxford, 1686); see the book itself and also the Royal Society's accounts for 1685-6.

⁴³ See Wallis to Oldenburg, 25 Sept. 1673, *Oldenburg*, vol. 10, p. 258. In this case the work in question was Matthew Poole's *Synopsis criticorum aliorumque S. Scripturae interpretum* (London, 1669-76), of which Boyle evidently subscribed for two copies.

⁴⁴ Feisenberger, 'Libraries of Newton, Hooke and Boyle', p. 55.

⁴⁵ *Works*, vol. 2, p. 14. The reference is to Bacon, as is elucidated by the editors at the appropriate point.

⁴⁶ See the discussion in Michael Hunter, *Robert Boyle (1627-91): Scrupulosity and Science* (Woodbridge, 2000), pp. 144ff., and in Peter Anstey and Michael Hunter, 'Robert Boyle's "Designe about Natural History"', *Early Science and Medicine*, 13 (2008), 83-126, on pp. 102-7.

⁴⁷ On Boyle's citation method, see further Hideyuki Yoshimoto, 'Reading, Citing and Writing of Robert Boyle: An Analysis of Boyle's Marginalia', *Area and Culture Studies* (Tokyo University of Foreign Studies), 68 (2004), 129-51, at pp. 135-6 [in Japanese].

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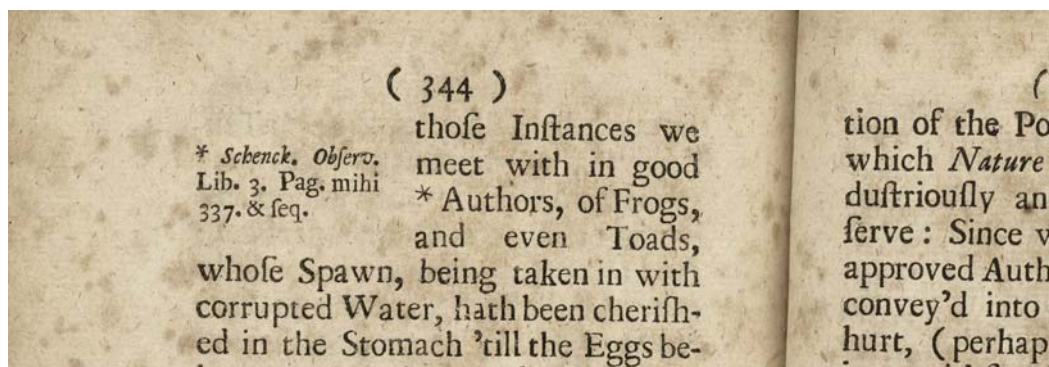


Figure 2. Robert Boyle, *A Free Enquiry into the Vulgarly Receiv'd Notion of Nature* (London, 1686), p. 344 (detail). Wellcome Library, London, 15071/B.

Hist. 44', or that to Olaus Worm's *Musæum Wormianum* (1655) in the form 'Musæi Wormiani. Cap. 17'.⁴⁸ On the other hand, though it could be argued that Boyle was thus being helpful to his readers, in that his reference was equally applicable to any edition of the work in question, the drawback with citations in this form is that they make it impossible to identify the specific edition that he used and are therefore of limited value in trying to reconstruct his library.

On other occasions, by contrast, Boyle was much more precise in his citations. In his 'Designe about Natural History' of 1666 he even advocated that, for significant works frequently deployed, it was appropriate 'to express what Edition of it 'tis, that is in the History employ'd'.⁴⁹ Though he hardly ever went as far as that, he frequently gives exact page references for his quotations from books, which means that the edition that he used can often be identified. Indeed, in a number of cases he actually specified that the edition in question was the one that he owned, using the formula 'pagina mihi', which may be translated as 'page in my copy', a significant usage first identified by the editors of *The Works of Robert Boyle* which has since been commented on in more detail by Hideyuki Yoshimoto.⁵⁰ This was evidently a practice which Boyle learned from certain of the authors he read. One such was the Swiss scholar, Johann Hottinger, who used just this method of citation in his *Historia orientalis quae ex variis orientalium monumentis collecta* (Zürich, 1651).⁵¹ It is perhaps not coincidental that the earliest work by Boyle in which he deployed this style was his 'Essay of the

⁴⁸ *Works*, vol. 4, pp. 76, 189.

⁴⁹ Michael Hunter and Peter Anstey (eds.), *The Text of Robert Boyle's 'Designe about Natural History'* (Robert Boyle Project Occasional Papers, No. 3, 2008), p. 2.

⁵⁰ *Works*, vol. 3, p. 351; vol. 4, pp. 130, 394, 402, 405, 430, 480 (2 examples), 486, 509; vol. 5, p. 293 (2 examples); vol. 6, pp. 204, 309; vol. 8, pp. 24, 147, 148, 150, 151, 274; vol. 10, pp. 73, 334, 357, 381, 432, 474, 477, 547, 550; vol. 11, pp. 203, 251; vol. 13, pp. 209, 298, 340. See also Yoshimoto, 'Reading, Citing and Writing', p. 136, though his figures for vols. 8 and 13 need to be emended slightly to take account of all the references given here.

⁵¹ See, for example, pp. 141 (a reference to p. 244 of Adriano Romano's *Theatro urbium*) and 191 (a reference to p. 21 of Elmacinus's *Historia Arabica*), among many others. Hottinger also quotes by page (see, for example, pp. 73 (a reference to p. 135 of Kassæus' *in vitis Patrum*), 191 (a reference to p. 23 of Elmacinus's *Historia Arabica*) or 195 (a reference to p. 109 of Selden's *De diis Syris*). Hottinger mixed this style with quoting by book and chapter, and Boyle may also have learned from this juxtaposition.

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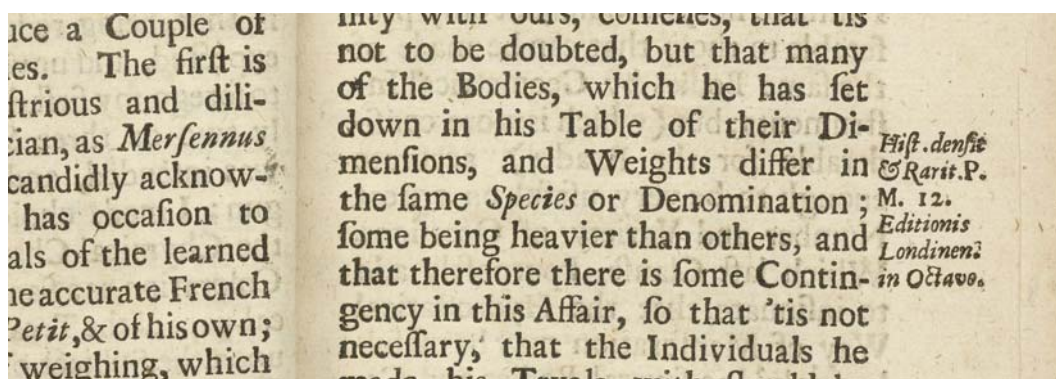


Figure 3. Robert Boyle, *Medicina Hydrostatica* (London, 1690), sig. A7 (detail). Wellcome Library, London, 15082/B.

Holy Scriptures' of c. 1652–4, and that Hottinger's was the work cited in this way.⁵² On the other hand, he might have met such a usage in other works of the period, including scientific ones.⁵³

Boyle uses an abbreviation of the formula 'pagina mihi', most commonly 'p.m.', some thirty-four times in the course of his published writings, which means that we thus obtain a significant but hitherto neglected insight into books that he must have owned. In addition, there are many more places when he accompanies his quotations or citations by page numbers, and, though in these cases we lack a specific statement on his part that the copy was his, it seems plausible that in these cases, too, the page reference may lead us to the edition of the work that Boyle actually owned. That this is the case is suggested by instances where a 'p.m.' reference is followed by a further reference to the same work in the form of a simple number, or a number preceded by 'Pag.'⁵⁴ (see Figure 5) As has already been noted, except in the case of very recent works there is little evidence of Boyle borrowing books as against relying on his own holdings, and this too makes it seem likely that the books that he cited by page were copies that he actually possessed.

Hence we have extended our study to include all citations in his published *Works* that include page numbers, thus adding significantly to the number of books involved, since references of this kind occur some 363 times in his published writings.⁵⁵ The incidence of this practice varies. It is hardly surprising to find him giving such references in a polemical context, particularly in his controversial writings against Francis Linus, Thomas Hobbes, Henry More and George Sinclair. Otherwise, a particularly large number of examples – no less than 118, in other words nearly a third of all such references – occur in his *New Experiments and Observations touching Cold* (1665), the work which most fully exemplifies the ethos of exact citation that he put

⁵² *Works*, vol. 13, p. 209.

⁵³ For instance, Simon Pauli, in his *Παρεκβασις; seu Digressio de vera, unica, & proxima causa februm* (Frankfurt, 1660), quoted by Boyle in *Languid Motion* and in the text for the second edition of *Human Blood* (*Works*, vol. 10, pp. 261, 300; *Human Blood Unpublished Material*, p. 9), also used the 'p.m.' format: see, for example, p. 57 in his book referring by 'p.m.' to p. 74 in Celsus, *De re medicâ*, among many others.

⁵⁴ For instance, in *Cold*, *Works*, vol. 4, pp. 394, 405.

⁵⁵ For totals by volume, see Yoshimoto, 'Reading, Citing and Writing', p. 136, and for a commentary see *ibid.*, pp. 136-7.

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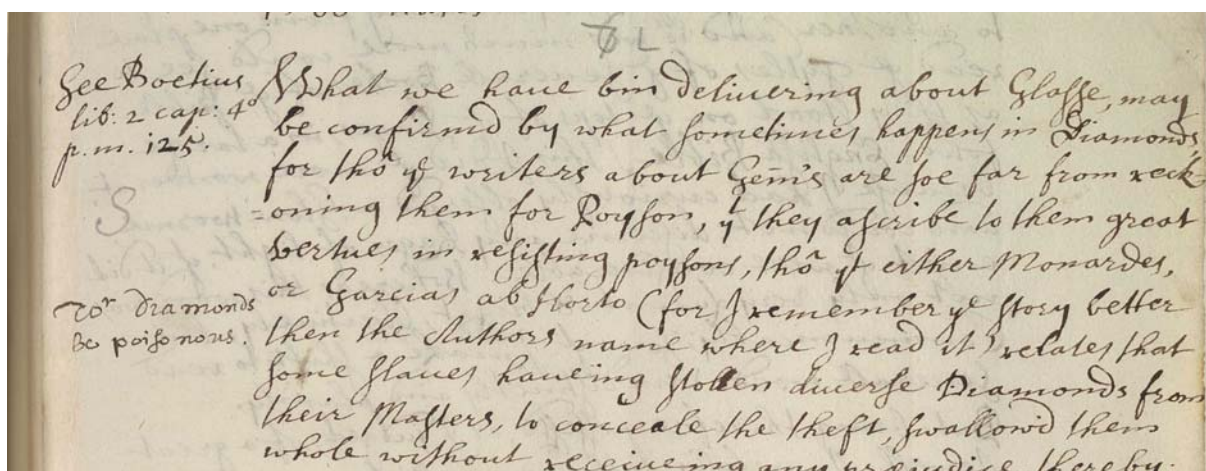


Figure 4. Part of entry 71 in Workdiary 22, showing the usage of 'p.m.' Royal Society Boyle Papers 8, fol. 83 (detail). © The Royal Society.

forward in his 'Designe about Natural History'.⁵⁶ Here and elsewhere, he sometimes uses page references and sometimes references by book, chapter, etc., even for the same work, and there seems no particularly clear pattern as to which style of citation he used and why.

Further to supplement the number of such citations, we have also drawn on two other types of material in the Boyle corpus.⁵⁷ Both of these are manuscript rather than printed texts, but in both of them Boyle refers to his sources by page number, thus helpfully extending the range of works cited in this way; he also occasionally uses the formula 'p.m.', thus adding a further four examples to the tally of that usage.⁵⁸ One such source is part of Boyle's workdiaries, the sheaves of paper sheets on which he entered records of his experiments and observations, information given him by others and notes on books.⁵⁹ One of these documents in particular, Workdiary 22, compiled in the late 1660s and early 1670s, is almost entirely devoted to extracts from printed books. It is entitled at the start 'Promiscuous Addenda to my severall Treatises', subsequently being extended under the title 'A Continuation of (Printed) Addenda to my severall Treatises'.⁶⁰ In it, Boyle had his amanuenses copy out sections of books dealing with topics that interested him either because he had already published on the subject in question, or because he intended to deal with it in a future work. (The workdiary is juxtaposed with one of several copies of a document entitled 'The Order of

⁵⁶ See Anstey and Hunter, 'Boyle's "Designe"', p. 109.

⁵⁷ We have also drawn on two publications of manuscript texts by Boyle comparable to those included in vols. 13-14 of the *Works*, namely his early 'Reflexions on the Experiments vulgarly alledged to evince the 4 Peripatetique Elements, or the 3 Chymicall Principles of Mixt Bodies', published in Marie Boas, 'An Early Version of the *Sceptical Chymist*', *Isis*, 45 (1954), 153-68, on pp. 158-68, and the material that he prepared for the second edition of *Human Blood* published in Michael Hunter and Harriet Knight (eds), *Unpublished Material relating to Robert Boyle's 'Memoirs for the Natural History of Human Blood'* (Robert Boyle Project Occasional Papers, No. 2, 2005).

⁵⁸ WD 22-71, 117; WD 40-2; BP 24, p. 348.

⁵⁹ See www.livesandletters.ac.uk/wd/index.html. For a commentary see *Boyle Papers*, ch. 3.

⁶⁰ We have also included in the table one comparable entry from a much later workdiary, WD 40.

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my *Severall Treatises*, which listed Boyle's writings in order of publication and continued with a listing of his works in progress.⁶¹) Included in this workdiary are notes from a large number of books, some of them overlapping with ones which Boyle either already had or was later to cite in his published writings, while others illustrate his perusal of works to which he never alluded in print.⁶²

Secondly, within the Boyle Papers at the Royal Society there are two groups of what we have described as Boyle's 'reading notes'. One, comprising BP 24, pp. 307–74, is a series of extracts from books mainly on mineralogical topics. The most significant group is entitled 'Varia', while among the rest are some in the hand of Henry Oldenburg (including extracts specifically identified as being from the edition of Mathesius' *Sarepta* 'printed at Nurnberg 1571', thus providing evidence as to which edition Boyle may have accessed which was not available from his correspondence).⁶³ The latter must precede Oldenburg's death in 1677, and handwriting and other evidence shows that various of the other notes also date from the 1660s or 1670s. Secondly, BP 39 includes many pages of extracts from travel books, including Samuel Purchas' *Hakluytus Posthumus or Purchas his Pilgrimes* (1625) and J-B. du Tertre's *Histoire générale des Antilles* (1625). These are mainly in the hands of two of the amanuenses on whom Boyle chiefly depended in his later years, namely Robin Bacon and Hugh Greg, and they were probably compiled at that date, though at least some may be recopied from earlier exemplars.⁶⁴

Taking the corpus of citations thus established, what we have attempted to do is to use Boyle's page reference to locate the actual edition of each work that he apparently used and hence presumably owned. This work was begun for the references in the published *Works* by Hideyuki Yoshimoto, and it has subsequently been extended both for them and for the related manuscript material by Jordan Avramov and Michael Hunter.⁶⁵ In each case, we have examined as many sixteenth- and seventeenth-century editions of books that Boyle cites as possible in order to establish with which his page references tally and with which they do not.

Obviously, in cases where a book appeared in multiple editions with the same pagination, we are unable to specify which of these he might have owned: an extreme case of this is provided by the version of Abraham Zacutus' *Praxis medica admiranda* in his collected *Opera*, of which four editions with identical pagination were published in

⁶¹ BP 8, fols. 64v and 65ff., passim. For a commentary on this document and its significance, see *Works*, vol. 1, pp. xxxiv-xxxvii, and *Boyle Papers*, pp. 181ff.

⁶² See further Jordan Avramov and Michael Hunter, 'Reading by Proxy: The Case of Robert Boyle (1627-91)' (forthcoming).

⁶³ 'Observations out of Matthesii Sarepta, printed at Nurnberg 1571', BP 24, pp. 367-70; title on p. 367. See also above, pp. xiii.

⁶⁴ For further information on the reading notes as itemised in the text, see Avramov and Hunter, 'Reading by Proxy', and *Boyle Papers*, pp. 395-6, 481-2; on Boyle's amanuenses, see *Boyle Papers*, pp. 47-56. It should be noted that we have ignored a few rather scrappy notes elsewhere in the Boyle archive which might possibly also have been placed in this category, e.g. BP 35, fols. 182-3, BP 37, fols. 106-7, or BP 41, fols. 39-44: see *Boyle Papers*, pp. 441, 462, 490. We have also not included books extracted in Royal Society MS 22, a commonplace book which Boyle may have used although he did not compile: for a discussion of this document, see Avramov and Hunter, 'Reading by Proxy', appendix.

⁶⁵ For the work by Yoshimoto see, in addition to his 'Reading, Citing and Writing', his *Origins and Background of Robert Boyle's Scientific Ideas and his Research Style, Report of Grant-in-Aid for Exploratory Research granted by the Japan Society for the Promotion of Science* (Tokyo, 2007), pp. [50-71] and passim [partly in Japanese and partly in English].

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Lyon in 1644, 1649, 1657 and 1667.⁶⁶ In addition, in some cases allowance has to be made for obvious errors that crept into the text of Boyle's citation through miscopying or careless typesetting: for instance, in the case of one of Boyle's manuscript citations of Georg Agricola's *De re metallica* the reference 'pag. 154' is obviously intended for '54', while in a printed reference in *Certain Physiological Essays* the reference to 'lib. 20 p. 28' is obviously erroneous in referring to 'lib. 20' since the work in question has only twelve books, and must be intended for 'lib. 2' or perhaps 'lib. 2^o'. In a handful of other instances, Boyle's citations are bafflingly at odds with the pagination of all known editions of the work in question, and the cases involved (which are indicated in our notes) remain to be resolved.⁶⁷ We have also made due allowance for the extent to which Boyle may sometimes have 'cheated' in his citations by including references that he obtained from an intermediate source, for instance by citing Galen on one occasion through the sixteenth-century commentaries of Caspar Hofmann.⁶⁸

In a perhaps surprising number of cases, however, we have been able to be fairly certain as to which edition of a book Boyle used and which he therefore probably owned. For instance, he seems to have used the edition of Galileo's *Sidereus nuncius* which appeared in the 1656 Bologna edition of his writings rather than any of the numerous other seventeenth-century versions of this work, while his copy of Descartes' *Meditationes de prima philosophia* was of the quarto edition published at Amsterdam by Johann Jansson in 1658 rather than of any of the numerous other editions published in the mid-seventeenth century. We are also able to pinpoint the version of Galen that he used when he cited him directly as being a Lyon edition of 1547 or 1561 rather than any of the many other collections of Galen's writings published during the period, while it is interesting that he seems to have used Leiden editions of Francis Bacon, Jacob Bontius and O.G de Busbecq rather than the editions of those authors produced in other centres either at home or abroad. We further show that Boyle used the 1649 English translation of Ambrose Paré rather than those of 1634 or 1665, the 1665 edition of Thomas Herbert's *Travels* rather than the original editions of the 1630s, and the 1661 edition of Walton's *Compleat Angler* rather than earlier ones. Other similar cases include Eugene Roger's *La terre sainte*, where his pagination tallies with the edition of 1664 as against that of 1646, or Johann Zwelfer's *Pharmacopeia Augustana reformata*, where it tallies with that of 1653 but not that of 1672.

In other instances, Boyle used more than one edition of the same work and may well have owned both. Thus it is interesting that he sometimes cited the Spanish naturalist José de Acosta via Samuel Purchas' *Pilgrimes* and sometimes directly, while in the case of the writings of Adam Olearius, he seems to have upgraded his holding of by replacing the one-volume edition of 1656 by the version in two volumes published in

⁶⁶ Very occasionally, it is possible to venture a plausible guess as to which edition Boyle actually used on such occasions. For example, it is likely that he owned the 1591 edition of Prospero Alpini's *De medicina Ægyptiorum* as against the edition of 1645, since he used the 1642 edition of Jacob Bontius' *De medicina Indorum*, and not the 1645 edition of the same book, which was issued with Alpini's. Similarly, Boyle probably deployed the 1647 edition of Anselmus Boetius de Boodt, *Gemmarum et lapidum historia*, as against the edition of 1636, since in *Usefulness II, sect. 1* (1663) quotations from this book appear alongside citations from John de Laet's *De gemmis et lapidibus* (1647), which was published with de Boodt's book: see *Works*, vol. 3, p. 418 (with editorial note suggesting as much) and *passim*. It should be noted, however, that such arguments are always tentative.

⁶⁷ See the entries for Fracastoro, Hartman, Kromer, Werner and one each of the references to Sennert and Zeiller.

⁶⁸ See further Hiro Hirai and Hideyuki Yoshimoto, 'Anatomizing the Sceptical Chymist: Robert Boyle and the Secret of his Early Sources on the Growth of Metals', *Early Science and Medicine*, 10 (2005), 453-77.

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1659. With Pierre Gassendi, Boyle cited his *De apparente magnitudine solis* directly, although it was also available in Gassendi's collected works (which he also cited on various occasions), while in the case of J.B. van Helmont, he mainly used the 1648 Amsterdam edition of his *Ortus medicinæ*, but in his *Memoirs for the Natural History of Humane Blood* (1684) he deployed the Lyon edition of 1655. An equally interesting example is of Monardes' *De simplicibus medicamentis*, of which he used the 1574 (as against 1579) edition in *The Usefulness of Natural Philosophy* (1663), whereas in his *Of the Reconcilableness of Specifick Medicines to the Mechanical Philosophy* (1685), he used the edition included in Carolus Clusius' *Exoticarum libri decem* of 1605, a book which he is therefore also likely to have owned.

All told, we are able to suggest a total of some 125 books which may have formed part of Boyle's library, and what is interesting is that these include many authors who had a significant influence on him. Among these are well known figures of the Scientific Revolution, ranging from Bacon, Galileo and Tycho Brahe to Paolo Casati, Athanasius Kircher, Marin Mersenne, Pierre Petit, Gaspar Schott, and Simon Stevin. There are medical authors like Prospero Alpini, Thomas Bartholin, Henri de Heer, Felix Platter and Johann Schenk; writers on chemistry like A.G. Billich, Johann Hartmann, Paracelsus and Daniel Sennert; authors on mineralogy like Georg Agricola, Ulisse Aldrovandi, Christoph Enzelt, Johann Gerhard and Johann Mathesius; and botanical writers like Jean Bauhin. In addition, the fact that Boyle was keeping up with current news in the Republic of Letters is underlined by the presence of copies of various scientific periodicals – from flagship publications like *Philosophical Transactions* and the *Journal des sçavans* to more popular journals like the *Bibliothèque universelle*; also included are memoirs of scientific academies such as the *Miscellanea curiosa* of the Academia Naturae Curiosorum.⁶⁹

Other books comprise learned works by scholars like Johann Hottinger and polemical ones by such authors as the Socinian, Jonasz Schlichting, while in addition there are more miscellaneous authors whom Boyle met or by whom he was influenced as a writer, such as Menassah ben Israel and Isaac Walton. Perhaps above all, there are numerous travel books and books about exotic lands by authors like Willem Bontekoe, Henri de Feynes, Thomas James, Richard Jobson, Jan de Laet, Martinus Martini, Adam Olearius, Guilelmus Piso, J.B. Tavernier and Martin Zeiller, showing an enthusiasm for material of this kind which parallels that which has been remarked in the case of John Locke.⁷⁰

We also gain some hints about Boyle as a collector of books. Some of the works that he cites by page are works of great rarity, such as Schlichting's Socinian *Questiones duae* (1636) or Samuel Chappuzeau's *Histoire des ioyaux et des principales richesses de l'orient & de l'occident* (1665): significantly, the copy of Chappuzeau's book in the Goldsmiths' Library in the Senate House Library at the University of London bears an anonymous handwritten note in French reading: 'Rare, et tres cher', 'Rare and very dear'.⁷¹ Indeed, this bears out the evidence of Boyle's fastidiousness as a purchaser illustrated by his comments on Cellini's *Due trattati* (1568), as cited at the start of this introduction, and it is also worth recalling here Zachary Merrill's remark about the

⁶⁹ For *Philosophical Transactions*, see s.v. Beale, John; for the *Bibliothèque universelle*, see s.v. Thévenot, Jean de. See also above, n. 14 and p. xi.

⁷⁰ See Harrison and Laslett, *Library of Locke*, pp. 27-9. See also Daniel Carey, 'Locke, Travel Literature and the Natural History of Man', *The Seventeenth Century*, 11 (1996), 259-80.

⁷¹ These words appear on a slip of paper pasted to the first front fly-leaf, probably derived from an earlier fly-leaf when the volume was given its current *fin de siècle* binding. On the title-page are the words 'Rare, cher'.

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books being 'most of them well bound'.⁷² Through such hints we advance beyond simply documentating the volumes which Boyle studied either at first hand or through an amanuensis as he produced the writings which made up his large and influential corpus. Instead, we gain a flavour of the actual volumes which he accumulated to form the massive library which is now so sadly lost.

In sum, this represents a significant advance on the rather scrappy survivals outlined at the start of this introduction in terms of getting us closer to the actual content of Boyle's working library. Though overall that will continue to elude us, the present study represents a worthwhile contribution towards its reconstruction. It may also be justified on more general grounds, as an exemplar of the potential for reconstructing early modern libraries from textual sources, something hitherto barely attempted.⁷³

⁷² See above, p. vii.

⁷³ For studies of libraries of the period, see above, n. 2.

Acknowledgments

The work on this project by Iordan Avramov and Michael Hunter was assisted by a grant by the British Academy, which we here gratefully acknowledge. Hideyuki Yoshimoto similarly wishes to thank the Japanese Society for the Promotion of Science. In our research on the Boyle archive, we have been greatly helped by the library staff of the Royal Society, especially Keith Moore and Joanna Corden. Both Peter Anstey and Scott Mandelbrote have provided us with useful references and commented very helpfully on drafts of the introduction and text. Giles Mandelbrote not only gave us helpful comments and suggestions but also drew our attention to the Boyle books that appear in the Sloane Printed Books Catalogue and assisted us in accessing the volumes in question. The assistance of Roger Gaskell has been invaluable: in addition to designing the book, he has made innumerable suggestions for improving it. We would also like to thank Toby Appel, Sue Crabtree, Thomas Falco and James Hyslop for their help concerning surviving books once owned by Boyle; Richard Oram, Joanna Parker and John Overholt for help concerning copies of Thomas Jordan's *Wit in a Wilderness* (and the latter also for help concerning other items in the Houghton Library); Julie Anne Lambert for advice concerning material in the John Johnson Collection; and Janet McMullin of Christ Church College Library, Oxford, and Stéphanie Charreaux of the Bibliothèque Interuniversitaire de Médecine, Paris, who went well beyond their duties to help our research. The illustrations are reproduced by courtesy of the Wellcome Library, London (Frontispiece and Figures 2, 3 and 5); the Templeman Library, University of Kent (Figure 1); and the President and Fellows of the Royal Society (Figure 4).

Abbreviations

BP	Boyle Papers, Royal Society
<i>Boyle Papers</i>	Michael Hunter, with contributions by Edward B. Davis, Harriet Knight, Charles Littleton and Lawrence M. Principe, <i>The Boyle Papers: Understanding the Manuscripts of Robert Boyle</i> (Aldershot, 2007)
<i>Correspondence</i>	Michael Hunter, Antonio Clericuzio and Lawrence M. Principe (eds.), <i>The Correspondence of Robert Boyle</i> , 6 vols. (London, 2001)
<i>Human Blood Unpublished Material</i>	Michael Hunter and Harriet Knight (eds.), <i>Unpublished Material relating to Robert Boyle's 'Memoirs for the Natural History of Human Blood'</i> (Robert Boyle Project Occasional Papers, No. 2, 2005)
<i>Oldenburg</i>	A.R. and M.B.Hall (eds.), <i>The Correspondence of Henry Oldenburg</i> , 13 vols. (Madison and London, 1965–86)
<i>Works</i>	Michael Hunter and Edward B. Davis (eds.), <i>The Works of Robert Boyle</i> , 14 vols. (London, 1999–2000)
WD	Workdiary. For an edition of Boyle's Workdiaries, see www.livesandletters.ac.uk/wd/index.html .

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Note on Table

Each column in the Table contains the following information:

WORK: the author and title of the work cited and details of the edition Boyle used, including date and place of publication and format. Where there are multiple editions with the same pagination, any of which Boyle might equally easily have used, this information is given here; further ancillary information is occasionally also included.

REFERENCE: the source within Boyle's corpus. References are given to published writings by short title and date of publication, accompanied by volume and page number in *The Works of Robert Boyle*; Boyle's reading notes in the Boyle Papers by volume and folio or page number, with a note of the date of the text in question based on its handwriting (see *Boyle Papers*, p. 281); and entries in Workdiary 22 in the form 'WD 22-8'. Workdiary 22 dates from the late 1660s and early 1670s; this has not been separately noted in relation to each reference.

For details of the reading notes and of Workdiary 22, see above, pp. xviii-xix (and n. 57 for the unpublished material relating to *Human Blood*).

CITATION: an exact quotation of Boyle's actual citation or citations. An attempt has been made to position the entries in this column so that they are aligned with the reference that applies to them in the previous one. Where Boyle cites a single work ten times or less, we give the citations in full. Where his citations are more extensive, we have used the formula 'etc.', accompanying this by samples of his different citation styles.

Boyle often gives only a single page reference although his quotation extends over more than one in the original; it has not seemed appropriate to note each instance of this.

NOTES, clarifying details in the previous columns. Sometimes information is given about editions which Boyle cannot have used because his citations fail to match them. Sometimes suggestions are made as to likely errors by copyists or type-setters in Boyle's citations. Sometimes intractable problems in tracing the edition used by Boyle are noted. It may be presumed unless a note to the contrary appears here that Boyle's page reference tallies with the place where the quotation or citation appears in the edition(s) given in the first column.

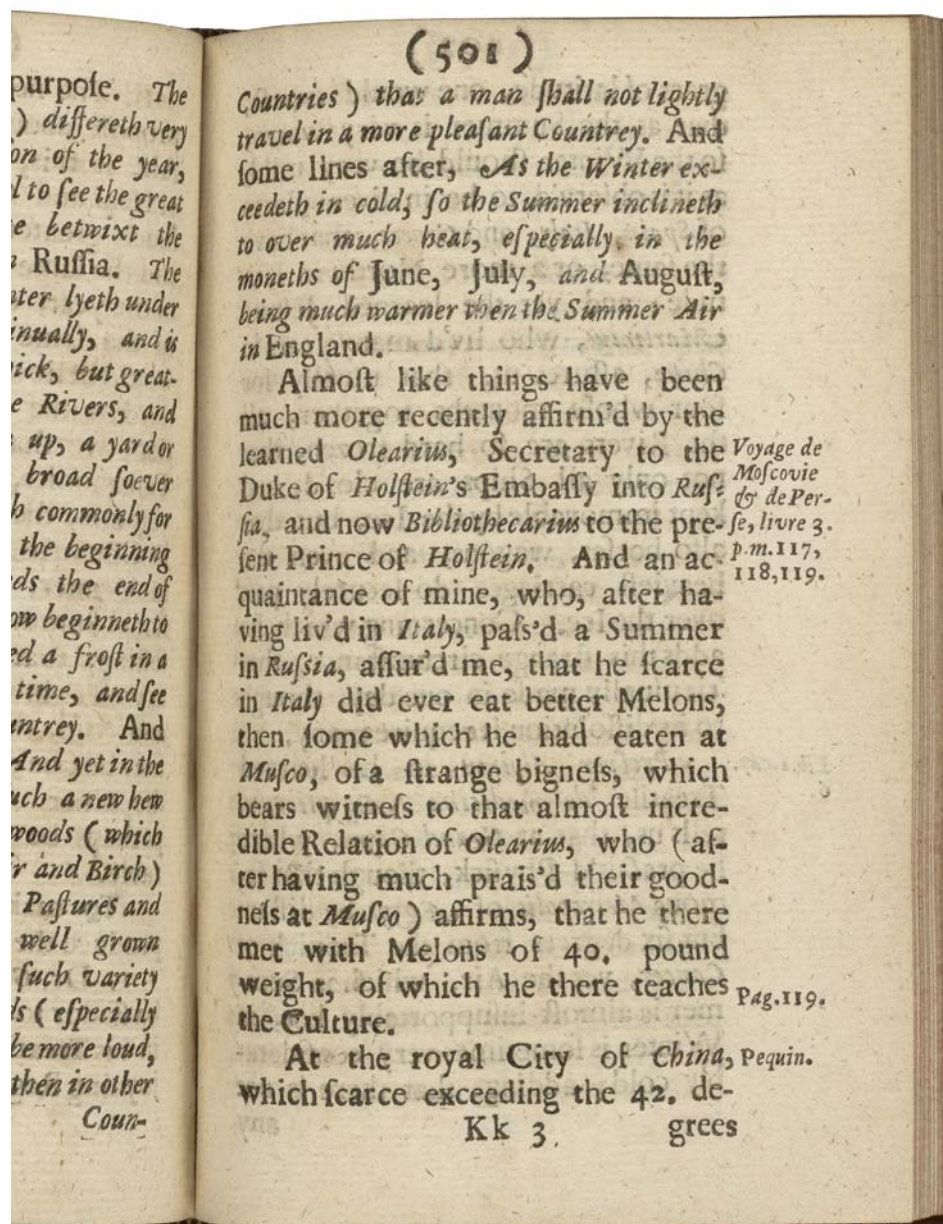


Figure 5. Robert Boyle, *New Experiments and Observations touching Cold* (London, 1665), p. 501, showing a 'p[agina]' m[ihi]' reference in juxtaposition with a reference to the same book by 'Pag.' Wellcome Library, London, 15022/A.

TABLE OF WORKS TO WHICH BOYLE
REFERS BY PAGE NUMBER

WORK	REFERENCE	CITATION	NOTES
Work cited and details of the edition Boyle used	Source within Boyle's corpus	Boyle's actual citation or a summary of multiple citations	Clarifying details in previous columns
Academia Naturae Curiosorum <i>Miscellanea curiosa decuriae II annus primus</i> 4to, Nuremberg, 1683	BP 39, fols. 78-80 (1670s-1680s) (10 refs.)	Ephemer: German Dec: 2 ^{dae} Annus 1 ^{mus} D. Geor: Everh: Observ: 22. p. 56. D. Joh: Georg: Som: Observ. xlili. p. 120. D. Joh: Ludov: Observ. 75. p. 179. etc.	
Acosta, José de <i>The Naturall and Morall Historie of the East and West Indies</i> 4to, London, 1604	<i>Sceptical Chymist</i> (1661), <i>Works</i> , vol. 2, 353; <i>Cold</i> (1665), <i>Works</i> , vol. 4, pp. 391, 392 (2 refs), 397, 484; <i>Forms and Qualities</i> (1665-6), <i>Works</i> , vol. 5, p. 465;	<i>Acosta</i> Natural and Moral history of the Indies, L. 3. c. 5, p. 212. Acosta lib. 2. cap. 9. pag. 101. Pag. 109. Josephus Acosta lib. 2. pag. 111, 112. Lib. 3. cap. 2. p. 120. Joseph. Acost. Hist. Ind. pag. 174. <i>Acosta</i> lib. 4. p. 269.	

WORK	REFERENCE	CITATION	NOTES
Acosta, <i>The Naturall and Morall Historie</i> , entry continued	<i>Lapidescient Juice</i> (1660s), <i>Works</i> , vol. 13, p. 380 (8 refs.)	173	'The Learned Josephus Acosta has this memorable Relation.'
Agricola, Georg <i>De re metallica libri XII Folio</i>, Basel, 1556 Or the identically paginated editions of 1559, 1621 or 1657	<i>Certain Physiological Essays</i> (1661), <i>Works</i> , vol. 2, p. 68; <i>Forms and Qualities</i> (1665-6), <i>Works</i> , vol. 5, pp. 363-4; WD 22-206 (3 refs.)	De re Metallica lib. 20 p. 28. Georg: Agricola de re metall. lib. 12. p. 462. See Agricola De Re Metal. Lib. 3 ^o . pag. 154.	Copyist mistake in the <i>CPE</i> quote: '20' should be '2' or '2 ^o '. The reference in WD 22 is a memorandum by Boyle with no actual text quoted; it seems that '154' is an error for p. 54.
Agricola, Georg <i>De natura eorum quae effluunt ex terra</i> 8vo, Wittenberg, 1612	<i>Effluviums</i> (1673), <i>Works</i> , vol. 7, p. 291 (2 refs.) (2 refs.)	<i>Agric. de Nat. eorum quae effluent è Terra</i> , Lib. 12. pag. 236. <i>Agric. de Nat. eorum quae è Terra effluent</i> , Lib. 12. pag. 263.	Both quotations actually stem from p. 268 of Agricola's book. 'Lib. 12' is an error for 'ch. 12' (of Book 3). The Latin edition has the reference as 'l. 3 p. 236 edit. prius in 8' (<i>Works</i> , vol. 7, p. 291). This suggests that Boyle used the first octavo edition for this quotation.
Aldrovandi, Ulisse <i>Musaeum metallicum in libros III distributum</i> Folio, Bologna, 1646	WD 22-48	Ulissis Aldrovandi Musæi Metallici. lib. i: pag. 134.	

WORK	REFERENCE	CITATION	NOTES
<p>Alpini, Prospero <i>De medicina Ægyptiorum libri quatuor</i> 4to, Venice, 1591 Or the identically paginated edition of 1645</p>	<p><i>Cold</i> (1665), <i>Works</i>, vol. 4, pp. 395, 397 (2 refs.)</p>	<p>Pag. 9. Ibid. lib. 1. cap. 7. pag. 11.</p>	<p>Boyle cites '<i>Prosper Alpinus</i> in his learned Treatise <i>de medicina Ægyptiorum</i> in the text on p. 394. It seems likeliest that Boyle used the 1591 edition since he did not use the edition of Bontius with which the 1645 edition of Alpini's book was issued.</p>
<p>Bacon, Francis <i>Historia vitæ et mortis</i> 12mo, Leiden, 1636 Or the identically paginated Leiden edition of 1637</p>	<p><i>Usefulness, II, sect 2</i>, (1671), <i>Works</i>, vol. 6, p. 409.</p>	<p><i>Verulam</i> Hist. v. & Mort. pag. 237.</p>	<p>The London editions of 1623 and 1638 have a different pagination.</p>
<p>Bacon, Francis <i>Historia densi et rari</i> In <i>Opuscula varia posthuma</i> 8vo, London, 1658</p>	<p><i>Medicina Hydrostatica</i> (1690), <i>Works</i>, vol. 11, pp. 203, 251 (2 refs.)</p>	<p>Hist. densit & Rarit. P. M. 12. Editionis Londinen. in Octavo. Verulam in <i>Historiâ densi & rari</i>, p. m. 8. &c.</p>	
<p>Balbìn, Bohuslav <i>Miscellanea historica regni Bohemiæ</i> 5 vols folio, Prague, 1677-1687</p>	<p>General History of Air (1692), <i>Works</i>, vol. 12, pp. 109, 157 (2 refs.)</p>	<p>Balbini Hist. Bohem. l. 1. c. 9. De montibus, & de valle Lavezka, p. 29. L. 1. c. 8. De Mont. Bohemiae, p. 26.</p>	<p>Both references are to vol. 2 published in 1679.</p>
<p>Barlow, William <i>Magnetical Advertisements</i> 4to, London, 1616 Or the identically paginated edition of 1618</p>	<p>WD 22-63 to 68 (6 refs.)</p>	<p>Magnetical Advertisements by W: Barlow pag: 7th: By the same Author page the 9th: The same Author page the 17th:</p>	

WORK	REFERENCE	CITATION	NOTES
Barlow, <i>Magnetical Advertisements</i> , entry continued.		By the same Author, page the 1: and 19th: Page 53d, 54th, 55t. Page the 11th: 12: 13: 14th: Page the 33d: and 34th:	
Barretto, Francesco <i>Relatione delle missioni alla provincia de Malavar</i> 8vo, Rome, 1645	<i>General History of Air</i> (1692), <i>Works</i> , vol. 12, pp. 114, 151 (2 refs.)	P. Francesco Barretto Relatione della Provincia di Malavar. p. 52. Relatione della Provincia di Malavar pag. 54 & 55.	This quotation actually appears on pp. 64-5 of Barretto's book.
Bartholin, Thomas <i>De nivis usu medico observationes</i> 8vo, Copenhagen, 1661	<i>Cold</i> (1665), <i>Works</i> , vol.4, pp. 277, 294, 295 (2 refs), 355, 448 (6 refs.)	Cap.6. pag. 42. Barthol. de usu Nivis pag. 80. Barthol. de figurâ nivis pag. 79. Barthol. de usu Nivis pag. 83. Inquit T. Barthol. De nivis usu, pag. 43. Tho. Bartholin de usu Nivis, pag. 17	The first reference on p. 295 incorrectly cites Erasmus Bartholin, <i>De figura nivis dissertatio</i> (1661) a treatise by Thomas Bartholin's brother Erasmus, which was published with <i>De nivis usu</i> . In fact, the quoted passage is from p. 79 of the latter. The reference on p. 448 of <i>Cold</i> wrongly refers to p. 17 of Bartholin's book; in fact, the quoted passage is on page 57.
Bauhin, Jean and Johann, Heinrich Cherler <i>Historiae plantarum universalis</i> 3 vols folio, Yverdun, 1650-51	WD 22-18	Bauhin t. i p. 2 lib. 7 page 91.	Boyle's reference is to 'tome 1, part 2', i.e. the second pagination of volume 1, where book 7 does indeed appear. The text in WD 22 seems to be a very general rephrasing of Bauhin's original, but the sense is the same.

WORK	REFERENCE	CITATION	NOTES
<p>Beale, John 'A Relation of some Mercurial Observations, and New Results' <i>Phil. Trans.</i> 1 (1666), 153-9 4to, London, 1666</p>	<p>'Some Observations and Directions about the Barometer', <i>Phil. Trans.</i> 1666, <i>Works</i>, vol. 5, pp. 504, 506 (2 refs.)</p>	<p>See Number 9. <i>Phil. Transact.</i> p. 157.5.8. & 9. where the Word, <i>Generally</i>, signifies no more, than <i>for the most part</i>.</p>	<p>Boyle alludes to Beale's '<i>Barometrical Observations</i>' in the text on p. 504.</p>
<p>Bérigard, Claude Guillermet de <i>Circulus pisanus... de veteri et peripatetica philosophia</i> 4to, Padua, 1661</p>	<p><i>Cold</i> (1665), <i>Works</i>, vol. 4, pp. 434 (2 refs), 449, 514. (4 refs.)</p>	<p>pag. 572. pag. 571. Pag. 573. Pag. 673.</p>	<p>Boyle cites 'the <i>Circulanus Pisanus</i> of <i>Berigardus</i> upon <i>Aristoteles Meteors</i>' in the text on p. 433. The edition of 1643 has a different pagination. The last reference, 'Pag. 673', was a mistake by Boyle; in fact, '573' was clearly intended.</p>
<p>Bernier, François <i>The History of the Late Revolution of the Empire of the Great Mogol</i> 4 vols 8vo, London, 1671-2</p>	<p>WD 22-182, 183 (2 refs.)</p>	<p>Page the 39. History of the Late Revolution of the Empire of Mogol. Pag: the 51.</p>	<p>Boyle's reference is to vol. 2 of Bernier's work.</p>
<p>Billich, Anthon Gunther <i>Thessalus in chymicis redivivus</i> 8vo, Frankfurt, 1640 Or the identically paginated edition of 1643</p>	<p><i>Sceptical Chymist</i> (1661), <i>Works</i>, vol. 2, pp. 282, 332-3. (2 refs.)</p>	<p>Quercet. apud Billich. in <i>Thessalo redivivo</i>. pag. 99. In <i>Thessalo redivivo</i>. Cap. 10. pag. 73. & 74.</p>	<p>In the first reference, Boyle cites Quercetanus (Joseph du Chesne) via Billich.</p>

WORK	REFERENCE	CITATION	NOTES
<p>Bontekoe, Willem <i>Relation ou journal du voyage de Bontekoe aux Indes orientales</i> In vol. 1 of M. Thévenot, Relations de divers voyages curieux 4 vols folio, Paris, 1663-72 Also reissued with all 4 vols dated 1672.</p>	WD 22-49	Voyage de Bontekoe. pag. 22.	See below under Thévenot for another citation of this collection.
<p>Bontius, Jacob <i>De medicina Indorum</i> 12mo, Leiden, 1642</p>	<p><i>Original version of 'Usefulness' (early 1660s), Works, vol. 13, p. 316.</i></p>	<p>Bontius de Medicin Indorum lib: 1, Not: in cap: 45 Garsia ab Orta Pag: 44: 45</p>	<p>Boyle's reference is to Bontius' notes on the earlier work of Garcia d'Orta. The passage appears on a different page in the 1645 Paris edition and in Piso's 1648 and 1658 Amsterdam editions.</p>
<p>Boodt, Anselmus Boetius de <i>Gemmarum et lapidum historia</i> 8vo, Leiden, 1647 Or the identically paginated edition of 1636, but not that of 1609</p>	WD 22-71	See Boetius lib: 2 cap: 4 ^o p. m. 125.	'Boyle almost certainly cites the 3rd edition (1647), which also contained John de Laet's <i>De gemmis et lapidibus</i> , a work Boyle cites on the next page.' (<i>Works</i> , vol. 3, p. 418.)
<p>Brahe, Tycho <i>Tychonis Brahe mathem: eminent: Dani Opera omnia, sive Astronomiæ instauratæ progymnasmata</i> 4to, Frankfurt, 1648</p>	<p><i>Certain Physiological Essays (1661), Works, vol. 2, pp. 75-6</i></p>	<p>Tycho Brahe, lib. 2 de Cometa An. 1577. p. 133.</p>	<p>In the 1588, 1603, and 1610 editions of Tycho Brahe, the relevant passage appears on page 204.</p>
<p>Brosse, Gui de la <i>De la natura, vertu, et utilité des Plantes</i> 8vo, Paris, 1628</p>	WD 22-133	De la Nature des Plantes Livre 2. P. 169	

WORK	REFERENCE	CITATION	NOTES
Busbecq, Ogier Ghislain de <i>Omnia quæ extant</i> 12mo, Leiden, 1633 Or the identically paginated edition. Amsterdam, Elzevier, 1660	<i>Usefulness, II, sect. 2</i> (1671), <i>Works</i> , vol. 6, p. 501	Aug. Busbequii Epist. 1. pag. 69.	The passage appears on a different page in the Frankfurt edition of 1595 and the Oxford edition of 1660.
Casati, Paolo <i>Terra machinis mota</i> 4to, Rome, 1658	<i>Cold</i> (1665), <i>Works</i> , vol. 4, p. 249	They are the words of <i>Paulus Casatus</i> in his <i>Terra Machinis mota</i> , Pag. 143.	
Casati, Paolo <i>Mechanicorum libri octo</i> 4to, Lyon, 1684	<i>General History of Air</i> (1692), <i>Works</i> , vol. 12, p. 16	Casati Mechanicorum, lib. 8. cap. 5. P. 792, 793, &c.	
Castelli, Pietro <i>Hyæna odorifera</i> 12mo, Frankfurt, 1668	WD 22-121	de Hyæna Odorif. Cap 2. P. 13.	The passage appears on a different page in the 4to edition of 1638.
Cellini, Benvenuto <i>Due Trattati, uno intorno alle otto principali arti dell'oreficeria, l'altro in materia dell' arte della scultura</i> 4to, Florence, 1568	<i>Colours</i> (1664), <i>Works</i> , vol. 4, p. 192; <i>Gems</i> (1672), <i>Works</i> , vol. 7, p. 21 (2 refs.)	Benvenuto Cellini nell'Arte del Gioiellare, Lib. 1 pag. 10. Page 10	In the text Boyle refers to 'That famous Gold-Smith, <i>Benvenuto Cellini</i> , in his little <i>Italian</i> Tract of his own Profession'.
Chappuzeau, Samuel <i>Histoire des ioyaux et des principales richesses de l'orient & l'occident</i> 12mo, Geneva, 1665	WD 22-70a, 71a, 72a, 73a;	Pag. 42.43. 44 17.18. 14.	Boyle attributes this 'Tract' to an 'Anonymous, but Curious Author' (<i>Works</i> , vol. 7, p. 27). The author is identified in the review of the book in <i>Philosophical Transactions</i> , 2 (1666-7), 429-32.

WORK	REFERENCE	CITATION	NOTES
Chappuzeau, <i>Histoire</i> , entry continued	<i>Absolute Rest in Bodies</i> (1669), <i>Works</i> , vol. 6, p. 204;	Egrezes, pag. m. 17. 18.	The quotation in <i>Absolute Rest</i> repeats the one in WD 22-72a. Its reference to 'Egrezes' keys to Boyle's translation of this term in the text as ' <i>ground by mutual Attrition</i> (if I understand the Term he uses)'
	<i>Gems</i> (1672), <i>Works</i> , vol. 7, p. 28 (3 refs) (8 refs.)	Pag. 9. Page 18. 19. Page 37.	
Conradt, Israel <i>Dissertatio medico-physica de frigoris natura et effectibus</i> 12mo, Danzig, 1677	<i>Cold</i> , appendix (1683), <i>Works</i> , vol. 4, p. 549	Conradi Dissertat. Medicophys. de Frigoris Natura & Effectibus, pag. 51.	
Descartes, René <i>Meditationes de prima philosophia</i> 4to, Amsterdam, Johann Jansson, 1658	<i>Excellency of Theology</i> (1674), <i>Works</i> , vol. 8, p. 24	Des Cartes Responsione ad Objectiones secundas pag. m. 95.	This is the only edition of this work with which the pagination given by Boyle tallies. It differs from that found in the much-reprinted 4to Amsterdam edition by Elsevir (1650, 1654, 1663, 1670, 1678), where the passage in question appears on p. 81, as also from the original 1641 Paris 8vo edition (where it appears on pp. 207-8). Copies of the Jansson edition of this work were sometimes combined with other titles by Descartes to form an <i>Opera omnia</i> ; however, since Boyle cites the work as a separate entity, it seems likeliest that that was the form in which he owned it.

WORK	REFERENCE	CITATION	NOTES
Du Tertre, Jean-Baptiste <i>Histoire générale des Antilles</i> 4 vols 4to, Paris, 1667-71	BP 39, fols. 54 - 73, passim (1670s-1680s) (77 refs.)	Du Tertre Hist. Nat. des Antilles. p. 72. p. 73. p. 65. p. 66. etc.	All references are to the second volume of the 1667-71 edition; they are not to the earlier edition of 1654.
Entzelt, Christoph <i>De re metallica, hoc est, de origine, varietate, et natura corporum metallicorum, lapidum, gemmarum</i> 8vo, Frankfurt, 1551 Or the identically paginated edition of 1557	BP 24, pp. 347, 348 (1660s); WD 22-74a, 75a, 76a (5 refs.)	Encel. pag 135. Encel. Lib. 3°. p. m. 258. [Encel] P 18. Senschifer P 32 P 33	
Eunonymus, Pancratius <i>Pyretologia mystica</i> 8vo, Padua, 1686	<i>Human Blood Unpublished Material</i> (c. 1684-8), p. 13.	Pancratii Eunonymi Pyretologia mystica, s. de Febr. Petech. pag. 256.	
Fabricius, Georgius <i>De metallicis rebus</i> In Gesner, Conrad, De omni rerum fossilium genere, gemmis, lapidibus, metallis, et huiusmodi 8 parts 8vo, Zurich, 1565-1566	WD 22-77; BP 24, pp. 347, 350 (2 refs), 351 (1660s) (5 refs.)	apud. Fab. Obs. pag.3, Fab. Observ. Tit. Feurum. Pag. 22, 23. Fabric. Observ. de re metall. pag. 15; pag: 16; Fabric: pag. 10.	

WORK	REFERENCE	CITATION	NOTES
<p>Feynes, Henri de <i>Voyage par terre depuis Paris jusques la Chine</i> 8vo, Paris, 1630</p>	<p>WD 22-85 to 96, 98 (13 refs.)</p>	<p>'Out of the Voyages of Monsieur De Feynes made <by land> from Paris to China Printed in the year 1630' pag 26 27 Id page 35 36 pag: 48 etc.</p>	
<p>Fonseca, Rodrigo da <i>De tuenda valetudine & producenda vita liber</i> 4to, Florence, 1602</p>	<p><i>General History of Air</i> (1692), <i>Works</i>, vol. 12, p. 149.</p>	<p>Roderici Fons. de Sanit. tuend. pag. 105, 106.</p>	<p>The reference is not to the 8vo Frankfurt edition of 1603.</p>
<p>Fracastoro, Girolamo <i>De sympathia et antipathia rerum</i> Edition not identified</p>	<p>WD 22-52</p>	<p>Hieronymus Fracastorius, de Sympathia, et Antipathia, pag. 45.</p>	<p>The quoted passage does not correspond to any edition of Fracastoro's work from 1546 onwards. Though the marginal reference is quite unambiguous, it is possible that it has been accidentally misplaced.</p>
<p>Gaffarel, Jacques <i>Curiositéz inouyes sur la sculpture talismanique des Persans, horoscope des patriarches et lecture des estoilles</i> 8vo, Rouen, 1631 (some copies are dated 1632) Or the identically paginated editions of 1637 and 1650</p>	<p><i>Essay of the Holy Scriptures</i> (c. 1652-4), <i>Works</i>, vol. 13, p. 206.</p>	<p>Gaffar ibid. p.101.</p>	<p>Boyle cites the work more fully on the previous page. The octavo edition of 1629-30 published in Paris has the quoted passage on p. 112.</p>

WORK	REFERENCE	CITATION	NOTES
<p>Galen <i>De simplicium medicamentorum facultatibus</i> 12mo, Lyon, 1547 Or the identically paginated edition of 1561</p>	WD 40-2 (1680s)	Gal. De Med. Fac. lib. IX pag. m. 581	The passage appears on a different page in various other 16 th -century editions of the work that we have consulted.
<p>Galen <i>Casp. Hofmanni commentarii in Galeni de usu partium corporis humani lib. XVII</i> Folio, Frankfurt, 1625</p>	WD 22-191	Gal. de us. par. p. 229 L. 7 sent. Hip. et Plat. cap. 4.	In these commentaries on Galen, Hofmann supplies references to various authors and to other works by the ancient physician. Most notably, on p. 229 of his book he gives the following reference: 'Hoc. 7. Sent. Hipp. 4.', as reflected in Boyle's own reference.
<p>Galilei, Galileo <i>Sidereus nuncius</i> In Opere di Galileo Galilei 2 vols 4to, Bologna, 1656</p>	WD 22-160, 161 (2 refs.)	Gal: obs sydereæ p. 8. Idem p. 9.	The reference is to vol. 2 of this edition. The passage appears on a different page in the various separate editions of the work published earlier in the 17 th century.
<p>Gassendi, Pierre <i>Physica</i> In his Opera omnia 6 vols folio, Lyon, 1658</p>	<p><i>Defence against Linus</i> (1662), <i>Works</i>, vol. 3, pp. 26, 51;</p> <p><i>Cold</i> (1665), <i>Works</i>, vol. 4, pp. 377, 378 (4 refs.)</p>	<p><i>Gass. Phys. Sect. 1. Lib. 2. Pag. 204. De nupero Inanis Experimento.</i></p> <p><i>Gassendus Tomo 1. pag. 211.</i></p> <p>Gassendi Phy. Lib. 6. Sect.1. pag. 399. Ib. pag. 400.</p>	Boyle's references are to vol. 1 of the <i>Opera omnia</i> .

WORK	REFERENCE	CITATION	NOTES
<p>Hackspan, Theodor <i>Fides et leges</i> <i>Mohammædis</i> 8vo, Altdorf, 1646</p>	<p><i>Style of</i> <i>Scriptures</i> (1661), <i>Works</i>, vol. 2, p. 453.</p>	<p>J. Scaliger Epist. 362. apud Theod. Hackspan in libro cui Titulus, Fides & Leges Mohamædis. pag. 2.</p>	<p>This is in the last part of <i>Fides et Leges</i>, entitled: <i>Fides et leges Mohammædis ultimi, si Deo placet, prophetarium</i>, where Hackspan quotes extensively from different authors. The copy consulted is without page numbers, but the quoted passage would have been on page 2 had the book been paginated.</p> <p>The cited sentence of Joseph Juste Scaliger Epistola 362 is on p. 703 of Scaliger, <i>Epistolæ omnes quæ reperiri potuerunt, Lib.IV</i> (Leiden, 1627).</p>
<p>Hartmann, Johannes <i>Praxis chymiatrica</i> Edition not identified</p>	<p><i>Usefulness, II,</i> <i>sect. 1</i> (1663), <i>Works</i>, vol. 3, pp. 492, 508 (2 refs.)</p>	<p>Hartm. prax. Chym. p. 12. Pract. Chym. p. 190.</p>	<p>The first of the quoted passages is on pp. 18-19 of the 1633 (Leipzig) and 1647 (Mainz) editions; on pp. 36-7 of the 1635, 1639, 1647 and 1659 editions published in Geneva; on pp. 32-3 of the 1663 edition (Leiden) and on pp. 50-1 of the 1677 edition (Nuremberg). The second passage similarly fails to match (it is on p. 179 of the Geneva editions).</p> <p>It is not clear which edition Boyle deployed.</p>
<p>Heer, Henri de <i>Observationes medicæ</i> <i>raræ in Spa</i> 12mo, Leipzig, 1645</p>	<p><i>Usefulness, II,</i> <i>sect. 1</i> (1663), <i>Works</i>, vol. 3, p. 423</p>	<p>In observa. Medic. oppido raris. pag. 194.</p>	

WORK	REFERENCE	CITATION	NOTES	
Helmont, Jan-Baptista van <i>Ortus medicinae</i> 4to, Amsterdam, 1648	<i>Reflexions on the Experiments vulgarly alledged to evince the 4 Peripatetique Elements, or the 3 Chymicall Principles of Mixt Bodies</i> (c. 1654-6), p. 166	Helm. p. 109	<i>Reflexions</i> is published in Marie Boas, 'An Early Version of Boyle's <i>Sceptical Chymist</i> ', <i>Isis</i> , 45 (1954), 153-68. All of these page references tally with this edition of van Helmont rather than the folio editions of 1651 (Venice) and 1655 (Lyon) or the 4to Elzevier edition of 1652 (Amsterdam).	
	<i>Sceptical Chymist</i> (1661), <i>Works</i> , vol. 2, pp. 282, 294, 301, 311, 341, 343;	Helmon. pag. 409. Helmont. <i>Aura vitalis</i> , pag. 725. Helmont pag. 412. Helmont. <i>Tria Prima Chymicorum</i> , &c. pag. 412. etc.		
	<i>Usefulness, II, sect. 1</i> (1663), <i>Works</i> , vol. 3, pp. 375, 389, 537 (2 refs) (11 refs.)	Helmont pag. 466. Helmont <i>Pharm & Dispens.</i> Nov. p. 458. Helmont in <i>Arcan. Paracels.</i> pag. 787. pag. 790.		
Helmont, Jan-Baptista van <i>Ortus medicinae</i> 4to, Lyon, 1655	<i>Human Blood</i> (1684), <i>Works</i> , vol. 10, p. 73	<i>Spiritus Vitae</i> N. 16. Pag. M. 122.		
Herbert, Thomas <i>Some Yeares Travels into Divers Parts of Asia and Afrique</i> Folio, London, 1665	WD 22-159	Herbert p. 265	The pagination tallies with the 1665 edition and not the editions of 1634 or 1638.	

WORK	REFERENCE	CITATION	NOTES
Hernandez, Francisco <i>Rerum medicarum Novae Hispaniae thesaurus</i> Folio, Rome, 1649 Or the identically paginated edition of 1651	WD 22-83, 84, 99	Franciscus Nydermaier auctori Chamæleontem discribit 723 725 850 Anton Ricch in Lync. Innotaones.	The reference in WD 22-99 corresponds to the 1649 and 1651 editions but not to that of 1628 which makes it likely that Boyle used one of the former for the other references as well.
	BP 24, p. 353 (1660s);	Joh. Faber Linceij <in> Expositionem pag. 743.	The amanuensis made a mistake in BP 24, fol. 353: '743' should be '745'.
	<i>Usefulness, I</i> (1663), <i>Works</i> , vol. 3, p. 227;	Jo: Faber Lynccus in his Exposition of some Passages of p. 568.	
	<i>Original version of Usefulness</i> (1650s), <i>Works</i> , vol. 13, p. 306. (6 refs.)	Pag. 558	
Hobbes, Thomas <i>Dialogus physicus de natura aëris</i> 4to, London, 1661	<i>Examen of Hobbes</i> (1662), <i>Works</i> , vol. 3, pp. 112, 122, 126-33, 135, 141, 144-50, 152-6, 158-63, 167, 169, 171-3 (53 refs.)	Mr. <i>Hobbs</i> in his Dialogue of the Air, page 11. See also page 5. and elsewhere. <i>Pag.</i> 18. Pag. 15. etc.	
		Mr. <i>Hobbs</i> Lesson 6. page 64.	
Hobbes, Thomas <i>Six Lessons to the Professors of the Mathematiques, one of Geometry, the other of Astronomy</i> 4to, London, 1656	<i>Examen of Hobbes</i> (1662), <i>Works</i> , vol. 3, p. 114.	Mr. <i>Hobbs</i> Lesson 6. page 64.	

WORK	REFERENCE	CITATION	NOTES
Hottinger, Johann Heinrich <i>Historia orientalis quae ex variis orientalium monumentis collecta</i> 4to, Zürich, 1651	<i>Style of Scriptures</i> (1661), <i>Works</i> , vol. 2, pp. 450 (2 refs), 452; <i>Essay of the Holy Scriptures</i> (c. 1652-4), <i>Works</i> , vol. 13, p. 209 (4 refs.)	Kessæus, pag. 99. See Psal. 114. 4. [and] Psal. 19. Surat. 37. Vide H. Hotting. p. 62, and 63. H. Hotting. Hist. Orient. pagina circiter 300. Hott. pag mihi 254	In the first of the references on p. 450 of <i>Style of the Scriptures</i> Boyle quotes Hottinger's reference to Kessæus on p. 63 of his book (i.e., as cited in the following quotation), which in the original takes the form: 'Unde Kesæus p. 99.'
James, Thomas <i>The Strange and Dangerous Voyage of Captain Thomas James in his intended Discovery of the Northwest Passage into the South-Sea</i> 8vo, London, 1633	<i>Cold</i> (1665), <i>Works</i> , vol. 4, pp. 294 (2 refs), 296-8, 305, 323, 340 (2 refs), 352 (2 refs), 353, 355, 363, 388, 389 (4 refs), 390, 392, 395, 396, 400-1, 404-6, 410, 441 (2 refs), 465, 483 (3 refs) (37 refs.)	Pag. 74. Pag. 79. Capt. James's Trav. pag. 76. See James voyage, pag. 61. & 81. and elsewhere. etc.	James' work is initially introduced on p. 221.
Jobson, Richard <i>The Golden Trade, or a discovery of the River Gambra</i> 4to, London, 1623	BP 39, fols. 89-91 (1670s-1680s) (12 refs.)	Jobsons Golden Trade Pag. 17. Pag. 18. Pag. 19. etc.	
Journal des sçavans, issue 16 (28 June 1683), pp. 186-8 4to, Paris, 1683	<i>Human Blood Unpublished Material</i> (c. 1684-6), p. 17.	Les Ouvrages Des Savans p. 196. 197.	The passage is paraphrased rather than quoted verbatim; the page reference must have been accidentally miscopied.

WORK	REFERENCE	CITATION	NOTES
Kentman, Ioannes <i>Nomenclaturae Rerum fossilium</i> In Gesner, Conrad <i>De omni rerum fossilium</i> 8 parts 8vo, Zürich, 1565-1566	BP 24, pp. 347, 348 (2 refs), 349 (1660s); WD 22-73b (5 refs.)	Tit. eodem. subtit. Calcaria. p. 56. Tit. Gemmæ Subtitul. Amethystiis Subtitulo – Sarda p. 48. pag. 51. Tit. eodem. Pag. 36. Titul. 2. pag. 17	Reference is made to 'Kentm.' immediately above this reference.
Kerger, Martin <i>De fermentatione liber physico-medicus</i> 4to, Wittenberg, 1663	<i>Specific Medicines</i> (1685), <i>Works</i> , vol. 10, pp. 357, 381 (2 refs.)	<i>Kergerus de fermentati Sect. 3. cap. 3. p. mihi 250.</i> Kergerus de Fermentatione, sect. 3. cap. 3. Pag. mihi 250.	
Kircher, Athanasius <i>Musurgia universalis, sive ars magna consoni et dissoni</i> 2 vols folio, Rome, 1650	<i>Spring of the Air</i> (1660), <i>Works</i> , vol. 1, p. 216.	Kirch: Art: Mag: Con: & Disson: lib. 9. p. 309.	The quotation is from the second volume of this book.
Kircher, Athanasius <i>Athanasii Kircheri China monumentis</i> Folio, Amsterdam, 1667	WD 22-100	China illustrata 177	

WORK	REFERENCE	CITATION	NOTES
<p>Kromer, Marcin <i>Polonia: sive de origine et rebus gestis Polonorum libri XXX</i> Edition not identified</p>	<p><i>Cold</i> (1665), <i>Works</i>, vol. 4, p. 572 (2 refs) (2 refs.)</p>	<p><i>A Note taken out of Martinius Cromerus his Polonia, lib. 1. I. p, 53, 54.</i> <i>A Note taken out of Cromerus's Polonia, lib. 1. p. 68.</i></p>	<p>The two passages quoted in <i>Cold</i> are to be found in various editions of <i>Polonia</i>, yet none seems to be the one used by Boyle. For example, the first passage (on the power of frost) is on pp. 21-2 of the 1577 8vo edition (Cologne), on p. 80 of the 1582 folio edition (Basel), and on pp. 44-5 of the 1642 duodecimo edition (Amsterdam).</p>
<p>Laet, Jan de <i>Novus orbis, seu Descriptionis Indiae occidentalis libri XVIII</i> Folio, Leiden, 1633</p>	<p>WD 22-76</p>	<p>Joannis de Laet descriptio Indiae Occident. Lib. 1^o cap. 4. pag. 6</p>	
<p>Leblanc, Vincent <i>The World Surveyed; or the Famous Voyages and Travailes of V. Le Blanc</i> Folio, London, 1660</p>	<p><i>Forms and Qualities</i> (1665-6), <i>Works</i>, vol. 5, p. 390; BP 24, p. 353 (2 refs) (1660s) (3 refs.)</p>	<p>Vincent le Blanck's <i>Survey of the World</i>. Part. 2. p. 260. Vincent le Blanc part. 3 chap. 13. 387; Ibid.</p>	
<p>Ligon, Richard <i>A True and Exact History of the Island of Barbadoes</i> Folio, London, 1657 Or the identically paginated editions of 1670 and 1673.</p>	<p><i>Usefulness, II, sect. 1</i> (1663), <i>Works</i>, vol. 3, p. 351; <i>Forms and Qualities</i> (1665-6), <i>Works</i>, vol. 5, p. 389;</p>	<p>History of the <i>Barbado's</i>, pag. 29, 30, 31, 32. Ligon's <i>History of Barbados</i>. pag. 67. 68.</p>	

WORK	REFERENCE	CITATION	NOTES
Ligon, <i>True and Exact History</i> , entry continued	WD 22-41 to 47	The History of the Iland of Barbadoes pag. 71. etc.	Since WD 22 is dated by its editors to the late 1660s/early 1670s, it is unlikely that Boyle quoted from the 1673 edition in this case.
	<i>Medicinal Experiments</i> (1693), <i>Works</i> , vol. 12, p. 252 (10 refs.)	<i>The Stone, and the Cure. Taken out of the History of the Barbadoes, written by Rich. Lygon, Gent. p. 118, 119.</i>	
Linus, Franciscus <i>Tractatus de corporum inseparabilitate</i> 8vo, London, 1661	<i>Defence against Linus</i> (1662), <i>Works</i> , vol. 3, pp. 19-22, 24 (2 refs), 27-31, 34, 37-9, 42-3, 46-50, 55 (2 refs), 57, 74 (34 refs.)	Pag. 20. Pag. 16. Pag. 17. etc.	
Magnen, Jean Chyzostôme <i>De manna liber singularis</i> 12mo, Pavia?, 1658	<i>Cosmical Qualities</i> (1670), <i>Works</i> , vol. 6, p. 309.	<i>Magnenus de Manna</i> P. M. 49.	The passage appears on a different page in the editions published in Ticini in 1648 and The Hague in 1658.
Magnus, Olaus <i>Historia de gentibus septentrionalibus</i> 12mo, Amberg, 1599	<i>Cold</i> (1665), <i>Works</i> , vol. 4, pp. 221, 354, 430, 481, 489 (5 refs.)	Lib. 1. Titulo de frig. Asperitate, pag. 9. Olai Mag. lib. 3. cap. 2. pag. 334. Lib. 1. pag. mihi 23. Olaus Mag. lib. 13. p. 382. Lib. primo, pag. 23.	Though one reference is anomalous, four passages appear in this edition on the pages cited, whereas they appear on different pages in other editions of the work that we have consulted.

WORK	REFERENCE	CITATION	NOTES
Marini, Giovanni Filippo de' <i>Histoire...des royaumes de Tunquin et de Lao... traduite de l'Italien</i> 4to, Paris, 1666	BP 39, fol. 85 (2 refs) (1670s-1680s) (2 refs.)	Relation de Tunquin et de Lao. P. Marini p. 56. p. 277.	
Martini, Martinus <i>Novus atlas Sinensis</i> Folio, Amsterdam, 1655	<i>Cold</i> (1665, 1683), <i>Works</i> , vol. 4, pp. 234, 571. (2 refs.)	Pag. 27, 28. <i>A Note out of Martinius in his Account of China</i> , p. 27.	Boyle refers in the text to ' <i>Martinius</i> in that Noble piece of Geography which he calls <i>Atlas Chinensis</i> '
Mathesius, Johann <i>Sarepta, darinn von alerley Bergwerck</i> Folio, Nuremberg, 1571 Or the identically paginated edition of 1578	BP 24, pp. 307-35 passim (date uncertain) (39 refs.)	fol. 2. pag. 2. fol. 15 pag. 2. fol 16. pag. 1. etc.	The identity of the edition used by Boyle is indicated by the title of the (unpaginated) extracts by Henry Oldenburg headed: 'Observations out of Matthesii Sarepta, printed Nurnberg 1571', BP 24, pp. 367-71. These editions are foliated, not paginated. The scribe extracting from the book therefore used his own notation indicating the folio and 'pag. 1' and 'pag. 2' for 'recto' and 'verso', respectively. The references do not match the 1679 Freiberg 4to edition.
Menasseh ben Israel <i>De creatione problemata XXX</i> 4to, Amsterdam, 1635	<i>Notion of Nature</i> (1686), <i>Works</i> , vol. 10, pp. 474-5	Pag. M[ihi]. 98.	Boyle refers in the text to this author and 'his Problems, <i>De Creatione</i> '.

WORK	REFERENCE	CITATION	NOTES
Mersenne, Marin <i>De magnetis proprietatibus</i> in his <i>Cogitata physico-mathematica</i> 4to, Paris, 1644	<i>Reason and Religion</i> (1675), <i>Works</i> , vol. 8, p. 274	In his little Tract <i>de Magnetis Proprietatibus</i> . p.m. 350.	
Mersenne, Marin <i>Harmonicorum libri XII in quibus agitur de sonorum natura, causis et effectibus</i> 2 parts folio, Paris, 1635 Or the identically paginated edition of 1648.	WD 22-51, 53, 57 (3 refs.)	Eodem Autho. Corollarium i. Pag. 51. Harmonicorum lib. quart. de Campanis. Corollarium 3 Pag. 155. Propositio 9 pag. 157.	In WD 22-51 Boyle refers to the previous entry where he quotes Mersenne's <i>Harmonicorum libri XII</i> without indicating the exact pagination.
Monardes, Nicolás <i>De simplicibus medicamentis ex occidentali India</i> 8vo, Antwerp, 1574	<i>Usefulness, II, sect. 1</i> (1663), <i>Works</i> , vol. 3, p. 367	Apud Monard: de simplic: Medic. pag. 84.	The passage appears on a different page in the 1579 edition.
Monardes, Nicolás <i>De simplicibus medicamentis</i> In Carolus Clusius, <i>Exoticorum libri decem</i> Folio, Leiden, 1605	<i>Specific Medicines</i> (1685), <i>Works</i> , vol. 10, pp. 402, 432 (2 refs.)	Nic. Monard <i>Simpl. Med. Hist. cap.36. p.329.</i> See <i>Nicol. Monard Simpl. Med. Histor. Cap. 36. P. m. 329.</i>	
Montanari, Geminiano <i>Speculazioni fisiche</i> 4to, Bologna, 1661	WD 22-198	Montanaris. page. 18.	

WORK	REFERENCE	CITATION	NOTES
More, Henry <i>Enchiridion metaphysicum</i> 4to, London, 1671	<i>Hydrostatical Discourse</i> (1672), <i>Works</i> , vol. 7, pp. 148-53, 156 (2 refs), 158 (2 refs), 160, 183 (3 refs) (15 refs.)	139. p. 139. p. 140. etc.	Boyle cites 'the Learned Doctor <i>More's Enchiridium Metaphysicum</i> ' in the text on p. 145.
Moretus, Theodorus <i>Tractatus physico-mathematicus de æstu maris</i> 4to, Antwerp, 1665	WD 22-108	Theod: Moretus: de æstu maris Cap: 4 pag: 22	
Morin, Jean-Baptiste <i>Nova mundi sublunaris anatomia</i> 8vo, Paris, 1619	<i>Cold</i> (1665), <i>Works</i> , vol. 4, pp. 480 (2 refs), 481 (3 refs), 486. (6 refs.)	p. m. 130. p. m. 130. Pag. 142, & 143. Pag. 125. Pag. 128. see also pag. 125. P. m. 136.	Boyle cites 'a small narrative, consisting of about two sheets of paper of <i>Joh. Baptista Morinus</i> , published in the year 1619, and titled, <i>Relatio de locis Subterraneis</i> ' in a note on p. 368.
Morisot, Claude-Barthélémy <i>Relations veritables et curieuses de l'isle de Madagascar et du Brasil</i> 4to, Paris, 1651	WD 22-104, 109, 110, 112 (4 refs.)	Relation de voyage de Francois Cauche page 47. Relation du Voyage de Sieur Cæsar Lambert Pag. 24. Idem Pag: the 25. Relat: du Voiage d Francois Cauche pag 19.	

WORK	REFERENCE	CITATION	NOTES
<p>Olearius, Adam <i>Relation du voyage de</i> <i>Moscovie, Tartarie, et de</i> <i>Perse</i> 4to, Paris, 1656</p>	<p><i>Usefulness, II,</i> <i>sect. 1</i> (1663), <i>Works</i>, vol. 3, pp. 301, 326, 351; (3 refs.)</p>	<p>Voyage de Moscovie & de Perse, pag. 128. Voyage de Moscovie & de Perse, pag. 334. Voyage de Moscovie & de Perse, p.m. 23.</p>	<p>There were at least three Paris editions of this book in 1656. All of them are in 4to and with identical pagination, yet one of them was published by Gervais Clouzier (e.g. British Library 567.g.21), another was produced by Pierre Aubovin (e.g., British Library Eve.a.153), while still another one was printed by Antoine de Sommaville.</p>
<p>Olearius, Adam <i>Relation du voyage ... en</i> <i>Moscovie, Tartarie</i> <i>et Perse</i> 2 vols 4to, Paris, 1659</p>	<p><i>Cold</i> (1665), <i>Works</i>, vol. 4, pp. 394 (2 refs), 402, 404-5 (2 refs) (5 refs.)</p>	<p>Voyage de Moscovie & de Perse, livre 3. p. m. 117, 118, 119. Pag. 119 Olear. lib. 3. p. m. 117. Livre 3. p. m. 117. Livre 3. 116.</p>	<p>In these citations, Boyle makes reference to the work by 'livre'. Since the 1656 editions of the book are not so subdivided, he must have used the 1659 edition in which these appear in the running titles and table of contents. (They also appear in the edition of 1666.)</p>
<p>Paracelsus <i>Operum medico-</i> <i>chimicorum sive</i> <i>paradoxorum</i> 4to, Frankfurt, 1603-5</p>	<p><i>Sceptical Chymist</i> (1661), <i>Works</i>, vol. 2, pp. 318-19 <i>Colours</i> (1664), <i>Works</i>, vol. 4, p. 130 (2 refs.)</p>	<p>Paracel. de Mineral. Tract. 1 pag. 141. Paracelsus de Mineral. tract. 1 pag. m. 243.</p>	<p>The passage quoted in <i>Sceptical Chymist</i> comes from p. 241, not p. 141, in Paracelsus' book.</p>
<p>Paré, Ambroise <i>The Workes of that</i> <i>Famous Chirurgion</i> <i>Ambrose Parey</i> Folio, London, 1649</p>	<p>WD 22-60</p>	<p>Ambrose Parey of Monsters: cap. 20: pag 676:</p>	<p>The passage appears on a different page in the English editions of the work published in 1634 and 1665.</p>

WORK	REFERENCE	CITATION	NOTES
Pauli, Simon <i>Παρεκβασις; seu Digressio de vera, unica, & proxima causa februm</i> 4to, Frankfurt, 1660	<i>Languid Motion</i> (1685), <i>Works</i> , vol. 10, pp. 261, 300; <i>Human Blood Unpublished Material</i> (c. 1684-6), p. 9 (3 refs.)	<i>Simon Pauli</i> in his ingenious Tract <i>de Febribus malignis</i> , pag. 71. <i>Simon Pauli, in his ingenious Treatise of Pestilential Fevers</i> , p. 71. Simon. Pauli De Febribus malignis. pa. 13	The references do not match the 1678 edition.
Pelleprat, Pierre <i>Relation des missions des PP. de la compagnie de Jesus dans les Iles, & dans la terre ferme de l'Amerique meridionale</i> 8vo, Paris, 1655	BP 24, p. 373 (1660s-1670s)	Un observation tirée de la Relation dela Terra ferme de l'Amerique par Pelleprat Pag. 7 etc.	The reference is to a passage in the second part of the book, which has a separate pagination.
Petit, Pierre <i>Dissertations academiques sur la nature du froid</i> 12mo, Paris, 1671	WD 22-192	Dissertation Academique du froid. p. 31	
Piso, Gulielmus <i>Historia naturalis Brasiliae Folio, Leiden-Amsterdam, 1648</i> Or the identically paginated edition of 1658.	<i>Usefulness, II, sect. 1</i> (1663), <i>Works</i> , vol. 3, pp. 451, 459; <i>Forms and Qualities</i> (1665-6), <i>Works</i> , vol. 5, p. 466 (3 refs.)	Histor. Nat. Med. lib. 2. cap. 5. pag. 33. Hist. Nat. & Med. Lib. 2. pag. 23. <i>Piso Natur. Hist. cap. 21. pag. 199.</i>	

WORK	REFERENCE	CITATION	NOTES
Platter, Felix <i>Observationum in hominis affectibus plerisque</i> 8vo, Basel, 1641	<i>Languid Motion</i> (1685), <i>Works</i> , vol. 10, pp. 263, 300;	Plater. Observ. Lib. 1. p. 185. Platerus in the <i>First Book of his Observations</i> , p. 185.	The passages quoted do not appear on the same pages in the earlier edition of 1614.
	<i>Salubrity of the Air</i> (1685), <i>Works</i> , vol. 10, p. 334 (3 refs.)	Lib. 2. P. M. 323	
Purchas, Samuel <i>Hakluytus Posthumus or Purchas his Pilgrimes</i> 4 vols folio, London, 1625	<i>Cold</i> (1665), <i>Works</i> , vol. 4, pp. 190, 297, 351, 353, 371, 373, 386 (3 refs), 387 (3 refs), 391-3, 401-6, 435, 441(2 refs), 509;	Purchas's Pilgrim. lib. 1. cap. 4. pag. 104. Marcus Polus in Purchas's Pilgrims, lib. III. p.m. 71. etc.	
	<i>Forms and Qualities</i> (1665-6), <i>Works</i> , vol. 5, p. 370;	Purchas. Pilgr. part. the first. p. 152.	
	<i>Hydrostatical Discourse</i> (1672), <i>Works</i> , vol. 7, pp. 171-2, 401;	See Purch. Tom. IV. Lib. 8. p. 1587. In Lib. 7. page 1378. of <i>Purchase</i> ; out of Sir <i>R. Hawkins</i> his Voyage.	
	WD 22-75, 190, 197a, 203;	Purch: pilgrim part. 3: page 983. Oviedo. Bart. de las Casas. pag. 1589 Libr. 8 Cap. 4. Purch. Tom. IV. Lib. 8. pag 1587.	
		Purch: Pilg. Par. 3. Lib. 1 Cap. 10. Sec. 3. pag. 176.	

WORK	REFERENCE	CITATION	NOTES
Purchas, <i>Hakluytus Posthumus</i> , entry continued	BP 39, fols. 2-48 passim (1670s-1680s) (302 refs, of which 262 are in BP 39)	Purchas's Pilgrims Part 47. Chap. 1. §. 4 pag. 1301. ibid. 1302. etc.	The following notation was applied for the Purchas extracts in BP 39: in the margin at the beginning of a series of extracts are given author, title, part, chapter and paragraph references, while precise page references are included after each extract in the main text.
Purchas, Samuel <i>Purchas his Pilgrimage</i> Folio, London, 1626	WD 22-4, 5, 6, 155; <i>Mechanical Production of Light</i> (?1670s), Works, vol. 14, p. 40 (5 refs.)	Purch: pilgr. 995 page. Purchase pilgrimage pag. 999. Purchase pilgrimage pag. 998. Purchas. Asia cap. 3 Pag. 495 Navig. Jacob. Neccii. Purch: Asia c. 12. p. 566.	
Riccioli, Giovanni Battista <i>Geographiæ et Hydrographiæ reformatæ libri duodecim</i> Folio, Bologna, 1661	WD 22-156	Ricciol Lib: 8vo pag. 344.	The passage appears on a different page in the edition of 1672.
Rochefort, Charles de <i>The History of the Caribby-Islands</i> Folio, London, 1666	BP 39, fol. 201 (date uncertain)	The History of the Caribby Islands Cap: 6: p: 29.	

WORK	REFERENCE	CITATION	NOTES
Roger, Eugene <i>La terre sainte</i> 4to, Paris, 1664	BP 39, fols. 92, 93, 94 (1670s-1680s) (3 refs.)	Roger de la Terre sainte lib. I. cap. 17. pag. 220 La Terre sainte par F. E. Roger p. 89. La Terre sainte par F. E. Roger lib. 1. cap. 12. p. 90.	The passages appear on different pages in the edition of 1646.
Schenck, Johann <i>Observationum medicarum rariorum Folio, Freiburg im Breisgau, 1584-97</i> Or the identically paginated edition published in Frankfurt in 1665, though not that of 1644.	<i>Notion of Nature</i> (1686), <i>Works</i> , vol. 10, pp. 547, 550 (2 refs.)	Schenck. Obser. l. IV. pag. m. 633. & seq. Schenck. Observ. Lib. 3. Pag. mihi 337. & seq.	
Schlichting, Jonasz <i>Quaestiones duae...Contra Balthasarem Meisnerium... disputatae</i> 12mo, Raków, 1636	<i>Seraphic Love</i> (1659), <i>Works</i> , vol. 1, pp. 110-11	pag. 97.	Boyle cites only the author, 'Schlichtingius', on p. 110; the work cited is that given here, not the one suggested by the editors in <i>Works</i> , vol. 1, p. 111n.
Schott, Gaspar <i>Mechanica hydraulico-pneumatica</i> 4to, Würzburg, 1657	<i>Defence against Linus</i> (1662), <i>Works</i> , vol. 3, pp. 126, 158 (2 refs.)	<i>Exper. Magdeburgicum apud Schotum</i> , pag. 446. <i>Schot. Mech. Hyd Pneumat. pag.</i> 61.	
Schouten, Williem Corneliszoon <i>The Relation of a Wonderfull Voiage made by William Cornelison Schouten</i> 4to, London, 1619	WD 22-162 to 172 (11 refs.)	Schoutens Voiage about the world p. 29. idem p. 31. idem. p. 38. etc.	

WORK	REFERENCE	CITATION	NOTES
<p>Sennert, Daniel <i>De chymicorum cum Aristotelicis et Galenicis consensu et dissensu</i> 4to, Wittenberg, 1629 Or the identically paginated editions of 1633 and 1655, though not the 1st edition of 1619.</p>	<p><i>Sceptical Chymist</i> (1661), <i>Works</i>, vol. 2, pp. 281, 328, 337, 338 (4 refs.)</p>	<p>Sennert. lib. de. cons. & dissens. pag. 147; Senn. de Cons. & Dissen. p. 165; De Cons. & dissen. cap. 11. pag. 186; Sennert. de Consens. & Dissens. pag. 165. 166.</p>	
<p>Sennert, Daniel <i>Epitome naturalis scientiae</i> 8vo, Oxford, 1632</p>	<p>WD 22-207</p>	<p>Epit. Nat. Scient. Sennerti. De Terris Lib. 4^o. Cap. 8^o. pag. 341. & 342.</p>	
<p>Sennert, Daniel <i>Practica medicinæ</i> Edition not identified</p>	<p><i>Salubrity of the Air</i> (1685), <i>Works</i>, vol. 10, p. 338</p>	<p>Senn. M.P.E. vi. p. 66.</p>	<p>In the 1635-9 Wittenberg edition of Sennert's <i>Practica medicinae</i> (and the identically paginated edition of 1652-4), this topic is dealt with on p. 270 of book 6. However, it is quite possible that (following the editors of the <i>Works</i>) we have incorrectly identified Boyle's slightly enigmatic reference.</p>
<p>Servius, Petrus <i>Dissertatio philologica de odoribus</i> 12mo, Rome, 1641</p>	<p><i>Sections of Usefulness, II</i> (?1660s), <i>Works</i>, vol. 13, p. 340</p>	<p>P. S. de Odoribus: p. m. 115. R[ecipe] 10 partes Ambrae, 3 Zibet: & succi limonum exiguum.</p>	
<p>Severino, Marco Aurelio <i>Trimembris chirurgia</i> 4to, Fankfurt, 1653</p>	<p>WD 22-59</p>	<p>M. Aureli. Severini Trim. Chirurgia. pag. 20</p>	

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Sextus Empiricus <i>Adversus mathematicos in Sexti Empirici opera quæ extant</i> Folio, Geneva, 1621	<i>Notion of Nature</i> (1686), <i>Works</i> , vol. 10, p. 477	P. M. 326	Boyle cites 'Sextus Empir. adversus Mathemat. lib. 8' in the previous note on p. 476. This is a bilingual edition in Greek and Latin. The references do not match the 1569 Antwerp edition.
Sinclair, George <i>The Hydrostatics</i> 4to, Edinburgh, 1672	<i>Hydrostatical Letter</i> (1672), <i>Works</i> , vol 7, pp. 185, 189, 192, 193 (4 refs.)	In his <i>Hydrostaticks</i> , printed at <i>Edenburg</i> 1672, p. 146 ff. In his <i>Hydrostaticks</i> , printed at <i>Edenburg</i> 1672, p. 146 ff. Vid. page 151. page 152.	
Sinclair, George <i>Ars nova et magna gravitatis et levitatis</i> 4to, Rotterdam, 1669	WD 22-173, 174 (2 refs.)	Sinclari dial: philos. p. 223 idem ibid:	
Stevin, Simon <i>Hypomnemata mathematica</i> 2 vols folio, Leiden, 1608	<i>Hydrostatical Paradoxes</i> (1666), <i>Works</i> , vol. 5, p. 274	Stevinus Hydrostat. Lib. 5. pag. 149.	The reference is to the second volume of Stevin's work.
Suarez, Francisco <i>Metaphysicarum disputationum</i> 2 vols folio, Mainz, 1630	<i>Forms and Qualities</i> (1665-6), <i>Works</i> , vol. 5, p. 293	<i>Suarez disp. Metaph 40. p.m. 341. paucisque interjectis</i> , and: <i>p. m. 342.</i>	We follow the identification of this edition in M.A.Stewart (ed.), <i>Selected Philosophical Papers of Robert Boyle</i> (Manchester, 1979), pp. 8 and 243n. In the 1614 (Cologne) and 1636 (Geneva) editions the passages are on p. 268 of the second pagination, and in the 1619 (Paris) edition they appear mostly on page 270.

WORK	REFERENCE	CITATION	NOTES
Tavernier, Jean-Baptiste <i>The Six Voyages of John Baptista Tavernier</i> Folio, London, 1677-8	<i>Posthumous Papers in Phil. Trans.</i> 1693, <i>Works</i> , vol. 12, p. 173; BP 39, fol. 52r (1670s-1680s) (2 refs.)	Tavernier's <i>Travels</i> . Part II: Book II. chap. 23, pag. 156. Taverniers voyages part II. Book II. Chap. 23. pag. 156.	
Thévenot, Jean de <i>Relation d'un voyage fait au Levant</i> 4to, Rouen, 1665	<i>General History of Air</i> (1692), <i>Works</i> , vol. 12, p. 44	Voyage de Levant, p. 203.	The passage appears on a different page in the edition of 1664.
Thévenot, Jean de <i>Relation d'un voyage fait au Levant</i> In vol 13 (1689) of Leclerc, Jean <i>Bibliothèque universelle et historique</i> 25 vols 12mo, Amsterdam, 1686-94	<i>General History of Air</i> (1692), <i>Works</i> , vol. 12, p. 153	Thevenot dans le Bibliothèque Universel Tom. xiii. p. 266.	
Thévenot, Melchisédec <i>Relations de divers voyages curieux</i> 4 vols folio, Paris, 1663-73	<i>Observations on the Growth of Metals</i> (1674), <i>Works</i> , vol. 8, p. 150	Voyage du Sieur au Peru, pag. 15.	The voyage to Peru was made by Acarete du Biscay. It is published in vol. 4 of this collection.
Varenius, Bernhardus <i>Geographia generalis, in qua affectiones generales telluris explicantur</i> 12mo, Amsterdam, 1650	<i>Spring of the Air</i> (1660), <i>Works</i> , vol. 1, p. 248	Varenius Geo: Genevat. lib. III Propo: 7. pag. 648.	

WORK	REFERENCE	CITATION	NOTES
Walton, Izaak <i>The Compleat Angler</i> 8vo, London, 1661	WD 22-9 to 15 (7 refs.)	188: Waltons Compleat Angler. 188. 141. 226. Pag. 72. pag 246. 190	Some of the passages in question appear on a different page in earlier editions of Walton's work.
Ward, Seth <i>In T. Hobbii philosophiam exercitatio epistolica</i> 8vo, Oxford, 1656	<i>Examen of Hobbes</i> (1662), <i>Works</i> , vol. 3, p. 125	<i>Wardi Exer. in Philosoph. Hobbian.</i> pag. 188.	
Werner, Georg <i>De admirandis Hungariae aquis</i> Edition not identified	<i>Cold</i> (1665), <i>Works</i> , vol. 4, pp. 487, 488 (2 refs); <i>Saltness of the Sea</i> (1673), <i>Works</i> , vol. 7, p. 394 (4 refs.)	Pag. 74. Pag. 57. Pag. 65. Pag. 65.	In <i>Cold</i> Boyle refers to this work as 'a very small, but curious Dissertation, <i>De admirandis Hungariæ aquis</i> ', by an 'Anonymous Author' about whose identity he gives some clues; in <i>Saltness of the Sea</i> he refers to him as 'the Curious <i>Hungarian</i> Governour' (<i>Works</i> , vol. 4, p. 487; vol. 7, p. 393). The passages are definitely from Werner's book, but the actual edition is unclear. For example, the first quoted passage is on fol. 10v of the 1551 edition (Vienna), p. 186 of the 1556 (Basel) edition, p. 68 of the 1595 (Cologne) edition, and p. 600 of the 1600 (Frankfurt) edition.

WORK	REFERENCE	CITATION	NOTES
Worm, Olaus <i>Musæum Wormianum seu historia rerum rariorum</i> Folio, Leiden, 1655	<i>Colours</i> (1664), <i>Works</i> , vol. 4, pp. 195 (2 refs);	Olaus Wormius in Musæ. 18°. pag. 186. Musæ. Worm. pag. 99.	In the first reference the page number is incorrectly cited: it should be p. 106. The second reference is also erroneous: the quoted passage appears on p. 96 of Worm's book.
	<i>Cold</i> (1665), <i>Works</i> , vol. 4, p. 299 (3 refs.)	Lib. 1. Sect. 3. Cap. 5. pag. 122.	The reference in <i>Cold</i> is correct.
Zacutus, Abraham <i>Praxis medica admirandum</i> In his Opera omnia 2 vols folio, Lyon, 1644 Or the identically paginated editions of 1649, 1657, or 1667, all published in Lyon	WD 22-61	Zacuti Lusitani lib: 1 Observatio CIX. pag. 26.	The reference is to vol. 2 of one of the Lyon folio editions of the <i>Opera omnia</i> . The edition produced in Amsterdam in 1642-3 has a different format.
Zeiller, Martin <i>Regnorum Sueciae, Gothiae, Magnique Ducatus Finlandiae, ut et Livoniae ... descriptio nova</i> 12mo, Amsterdam, 1656	WD 22-39, 40	Regni Sueciæ nova descriptio pag. 32. Regni Sueciæ nova descriptio Pag. 106.	The two references in WD 22 tally with the edition of Zeiller's book, but the passage quoted in <i>Cold</i> appears on p. 204.
	<i>Cold</i> (1665), <i>Works</i> , vol. 4, p. 410 (3 refs.)	Livoniae nova descriptio, Pag. 303.	
Zwelfer, Johann <i>Pharmacopoeia Augustana reformata, et eius mantissa</i> 8vo, Gouda, 1653	<i>General History of Air</i> (1692), <i>Works</i> , vol. 12, p. 144	Zwelfer, pag. 800.	The passage appears on a different page in the 4to edition of 1672.

WORK	REFERENCE	CITATION	NOTES
Unidentified	<i>Notes on the 27th Section</i> (c. 1665-8), <i>Works</i> , vol. 14, p. 82	In the above quoted Treatise pag 1003	A passage on a method of making fresh water from salt water by the author of 'a particular little Discourse concerning the Saltnes of the Sea'.
Unidentified	WD 22-8	Don Antonio Adann' della è Roccocantedo p. 177	Italian passage on fishes.
Unidentified	WD 22-79	...br 1 pag 22	Very unclear (due to ink smear) passage on a mineralogical topic. It does not seem to be on p. 22 of either Monardes <i>De simplicibus medicamentis</i> (1574) or Fabricius <i>De metallicis rebus</i> (1565), although extracts from these books immediately precede this passage in WD 22.
Unidentified	WD 22-117	Cent. IV p.m. 451	Latin passage concerning stone.
Unidentified	WD 22-120	Lib. 4. Mag. Sympath. P. 365.	Latin passage on influence of moon.
Unidentified	WD 22-189	Pag. 4	Lengthy account of a strange birth from a work in French.
Unidentified	BP 24, p. 352 (1660s)	2 Liber: Geograph: prop. 9. pag. 59.	Latin mineralogical passage.
Unidentified	BP 39, fols. 81-2 (1670s)	Livre II de l'Histoire des Indes Orientales. p. 375.	Long passage in French on pearl fishing.

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