

Kent Academic Repository

Shaw, David J. (2025) *Paper for Octavos: innovation in early sixteenth-century book production*. The Library: Transactions of the Bibliographical Society, 26 (1). pp. 38-47. ISSN 0024-2160.

Downloaded from

https://kar.kent.ac.uk/107867/ The University of Kent's Academic Repository KAR

The version of record is available from

https://doi.org/10.1093/library/fpae051

This document version

Publisher pdf

DOI for this version

Licence for this version

CC BY (Attribution)

Additional information

Versions of research works

Versions of Record

If this version is the version of record, it is the same as the published version available on the publisher's web site. Cite as the published version.

Author Accepted Manuscripts

If this document is identified as the Author Accepted Manuscript it is the version after peer review but before type setting, copy editing or publisher branding. Cite as Surname, Initial. (Year) 'Title of article'. To be published in *Title* of *Journal*, Volume and issue numbers [peer-reviewed accepted version]. Available at: DOI or URL (Accessed: date).

Enquiries

If you have questions about this document contact ResearchSupport@kent.ac.uk. Please include the URL of the record in KAR. If you believe that your, or a third party's rights have been compromised through this document please see our Take Down policy (available from https://www.kent.ac.uk/guides/kar-the-kent-academic-repository#policies).

Paper for Octavos: Innovation in Early Sixteenth-Century Book Production

by

DAVID J. SHAW

HE PAPER USED FOR PRINTING BOOKS in the fifteenth century has been better documented than for the following century. This article seeks to build on the work of incunabulists (and on that of Paul Needham in particular)¹ to examine developments in sheet sizes for octavo editions produced in the early sixteenth century, a format which grew in popularity but was not so common in the previous decades.

Aldus Manutius introduced his innovative series of octavo editions of classical texts in 1501.² It is well-known that he commissioned an italic type-face especially for the project. It is also well known that printers in Lyon had within a year produced an imitation of the Aldine italic face and were marketing counterfeit copies of these texts, much to Aldus's annovance.³ It

This article is based on a paper given in a lecture to the Bibliographical Society on Tuesday 15 December 2020 via Zoom during the Covid lockdown. A recording of the lecture is available: see the list of recorded lectures at https://bibsoc.org.uk/recorded-lectures/. The author is grateful to the Society's peer reviewer for a number of helpful suggestions and corrections and to Paul Needham for useful additional data and several pertinent queries.

¹ Paul Needham, 'ISTC as a Tool for Analytical Bibliography', in *Bibliography and the Study of 15th-Century Civilisation*, ed. by Lotte Hellinga & John Goldfinch, British Library Occasional Paper, 5 (London: British Library, 1987), pp. 39–54; id. 'Res papirea: Sizes and Formats of the Late Medieval Book', in *Rationalisierung der Buchberstellung im Mittelalter und in der frühen Neuzeit*, ed. by Peter Rück & Martin Boghardt (Marburg an der Lahn: Institut für Historische Hilfswissenschaften, 1994), pp. 123–45 (pp. 141–45): Appendix III, 'A Note on the History of Format Names'; and Paul Needham, 'The Formats of Incunable Broadsides', in *Buch – Bibliothek – Region: Wolfgang Schmitz zum 65. Geburtstag*, ed. by Christine Haug & Rolf Thiele (Wiesbaden: Harrassowitz, 2014), pp. 127–44.

² Antoine-Augustin Renouard, Annales de l'imprimerie des Alde, ou, Histoire des trois Manuce et de leurs éditions (Paris: Chez Jules Renouard, 1834), pp. 27–32. The Aldine Press: Catalogue of the Ahmanson-Murphy Collection of Books by or relating to the Press in the Library of the University of California, Los Angeles, incorporating Works Recorded Elsewhere (Berkeley, CA: University of California Press, 2001), pp. 501–524. The catalogue discusses watermarks in great detail (pp. 29–31 and 575–635) but does not consider leaf size or sheet size.

³ Renouard, Annales, pp. 301–5. David J. Shaw, 'The Lyons Counterfeit of Aldus's Italic Type: A New Chronology', in The Italian Book 1465–1800: Studies Presented to Dennis E. Rhodes on his 70th

Birthday, ed. by Denis V. Reidy (London: British Library, 1993), pp. 117–33.

The Library, 7th series, vol. 26, no. 1 (March 2025)

© The Author 2025. Published by Oxford University Press on behalf of The Bibliographical Society. This is an Open Access article distributed under the terms of the Creative Commons Attribution License (http://creativecommons.org/licenses/by/4.o/), which permits unrestricted reuse, distribution, and reproduction in any medium, provided the original work is properly cited.

is less well known that Aldus must also have commissioned a special size of paper for his octavo classics. When folded, sheets of this new size of paper produced octavo pages which were taller (and therefore slimmer) than traditional octavos.4 In the catalogue for an exhibition at the Morgan Library in 1995, George Fletcher described 'the quintessential Aldine' as 'a light small book of elongated format that would fit comfortably in the hand'.5

Papermakers in medieval Europe seem to have produced sheets of papers to a small number of standard sizes since at least the late fourteenth century. A stone slab, now in the Museo Civico Medievale of Bologna, was apparently used as a quality standard for the four main sizes of sheets, known in present-day English scholarship in descending order of size as Imperial, Royal, Median, and Chancery. These four sizes have remarkably useful properties in that the ratio of their height to width is approximately equal to the square-root of two $(\sqrt{2})$, a ratio of 1: 1.41. When a sheet is folded (once for folio, twice for quarto, three times for octavo, etc.), the resultant leaves of the folded sheet retain the same shape, i.e. the same relative height-to-width ratio.⁷

This property of invariance of height-to-width ratio also applies to the modern 'A' classes of paper sizes which were designed to have exactly the 1 : √2 ratio, so that an A4 page folded in half gives an A5 page with the same height-to-width ratio, and similarly an A3 sheet cut in half gives two A4 half-sheets. This property does not, of course, apply to less usual formats such as duodecimo where one of the dimensions is folded into three instead two.8 An additional feature of the medieval system of sheet sizes was that a median sheet was (approximately) half the size of an imperial sheet, and a chancery sheet half the size of a royal sheet, which helped book producers who could (if required) use a half-sheet of royal paper as if it were a full

⁴ Paul Needham, 'Aldus Manutius' Paper Stocks: The Evidence of Two Uncut Books', Princeton Library Chronicle, 55 (1994), 287-307 (pp. 287-88); reissued in The Same Purposeful Instinct: Essays in Honour of William H. Scheide, ed. by William P. Stoneman (Princeton, NJ: Princeton University

Library, 1994), pp. 135–55.

St. George Fletcher, In Praise of Aldus Manutius: A Quincentenary Exhibition (New York, NY:

Pierpont Morgan Library, 1995), p. 49.

6 Paul Needham, 'Format and Paper Size in Fifteenth-Century Printing', in Materielle Aspekte in der Inkunabelforschung, ed. by Christoph Reske & Wolfgang Schmitz (Wiesbaden: Harrassowitz, 2017), pp. 59-108 (p. 67); Neil Harris, 'The Shape of Paper', in Paper and Watermarks as Bibliographical Evidence, 2nd edition (2017) .

Needham, 'Aldus Manutius' Paper Stocks', pp. 287–88.
 My colleague David Macfarlane provides the following commentary on the height-to-width ratio: 'The mathematical reason why a sheet with proportions of 1: 12 maintains its proportions when it is folded in half also shows that a sheet with a ratio of 1: n has a ratio of 1: 2/n when folded in half. This allows you to calculate easily the ratio for all even and odd numbers of folds: even folds are the ratio of the original sheet and odd folds are 2/ratio (for example if you have a sheet with a ratio of I: 1.70, the ratio of the folio page will be I: 1.18).' (personal communication).

sheet of chancery, except that the chain lines would bibliographically be in the 'wrong' direction.

Paul Needham has done extensive work on the study of printing papers in the incunable period and recommends as part of standard cataloguing practice for incunabulists that leaf dimensions should be recorded and be used to calculate the original sheet size and determine its name. A quarto incunable volume would not simply be recorded as 'quarto' but as a 'chancery quarto' or a 'median quarto', etc. The Schoenberg Institute for Manuscript Studies at the University of Pennsylvania Libraries has produced an online tool for identifying what it terms 'flavors' of paper sizes for book formats, based on Paul Needham's work. From the direction of the chain lines and the height and width of the leaf in millimetres, their 'Needham Calculator' will tell you the most likely format and sheet size for a book printed before 1501.

In addition to the four paper sizes mentioned above, the Calculator also takes account of four intermediate paper sizes which Needham has identified and which he calls Super-Royal, Super-Median, Super-Chancery and Half Median. These all produce further variants in leaf dimensions of the folded sheets. The Schoenberg Institute web page introducing the Calculator has a table showing all the resultant 'flavors' from the combination of format and sheet size. ¹¹ Paul Needham has published articles documenting the date of first occurrence of various of these sheet sizes in the output of fifteenth-century printers. ¹²

To return to the Aldine octavos, the sheet size which Aldus appears to have commissioned for his new publishing venture of pocket-sized classical texts in 1501 has been identified by Paul Needham as a further variant sheet size which he calls Narrow Median. However, there seems to be no evidence of incunabula octavos printed on Narrow Median sheets, which would tend to confirm that this sheet size was an innovation introduced by Aldus Manutius for his new octavo series. There remains an unanswered question whether Narrow Median paper was used for manuscript production in the late fifteenth century or whether parchment manuscripts were written with leaf sizes corresponding to Narrow Median octavos. The

The Needham Calculator, https://www.needhamcalculator.net/.

⁹ Needham, 'Format and Paper Size', p. 107.

¹¹ Background to the Calculator and its use is described in an online article: George Gordon and William Noel, *The Needham Calculator (1.0) and the Flavors of Fifteenth-Century Paper* (January 2017) https://schoenberginstitute.org/2017/01/30/the-needham-calculator-1-o-and-the-flavors-of-fifteenth-century-paper.

¹² Needham, 'Format and Paper Size', pp. 59–108.

¹³ Paul Needham confirms that he knows of no incunable Narrow-Median octavos (personal communication).

¹⁴ Needham, ⁴Aldus Manutius' Paper Stocks', pp. 303–4, mentions humanist manuscripts on parchment written by, for example, Sanvito which are somewhat taller than the Aldine octavos.

Schoenberg Institute Calculator was not designed to include sixteenth-century Narrow-Median 'flavors'.

Median sheets measure approximately 50×35 cm; Narrow Median sheets have the same width but a smaller height (approximately 42×35 cm). This gives a sheet which, when folded three times to form an octavo, has the slimmer page which Needham calls Narrow Median (a term which he also seems to apply to the whole sheet although that is in fact rather square than narrow). A typical uncut Aldine octavo leaf measuring 17·5×10·5 cm has a height-to-width ratio of approximately 1:1·67 (typically 1:1·63 when trimmed) instead of the ratio of 1:1·41 for a traditional octavo leaf from a Chancery sheet (54×31 cm), i.e. the Aldine sheet (ratio 1:1·2) does not retain the same invariant shape ratio when folded. By way of comparison, a Super-Median sheet gives an octavo leaf of 17×13 cm (uncut), with yet another ratio: 1:1·53. Figure 1 shows the relative sizes of Chancery and Narrow Median sheets and their derived octavo leaves.

Table I gives representative figures for sheet sizes, octavo leaf sizes and the relevant height/width ratios, based on figures derived from Needham's articles, Gaskell's *New Introduction to Bibliography*, and Needham's contributions to BMC volume XI.¹⁶ The four paper sizes are given in descending order of the height-to-width leaf ratio (and inverse sheet ratio), with Narrow Median having the slimmest appearance and Chancery the least slim.

Table	I.	Sheet	sizes,	octavo	leaf	sizes,	height-to-width	ratios	(dimensions	in
centim	etre	es).								

Name	SHEET SIZE	LEAF HEIGHT	LEAF WIDTH	LEAF RATIO	SHEET RATIO
Narrow Median	42 × 35	17.5	10.2	1.67	1.50
Super-Median	50 × 37	18.5	12.5	1.48	1.35
Super-Chancery	46 × 33	16.5	11.2	1.43	1.39
Chancery	45 × 31	15.2	11.25	1.38	1.45

The data in Table 1 are of course those for ideal uncut copies. What do measurements of actual surviving copies of Aldus's octavos show? One of the first classical texts printed by Aldus in his new format was the Satires of Juvenal and Persius, published in August 1501. Data for copies are available

¹⁵ See the discussion at Table 4.

¹⁶ Needham, 'Aldus Manutius' Paper Stocks', pp.287–307; Gaskell, New Introduction to Bibliography (Winchester: St Paul's Bibliographies, 1995), pp.73–75; Catalogue of Books Printed in the XVth Century now in the British Library (BMC). Part XI: England ('t Goy-Houten: British Library, 2007), pp. 311–34 (p. 312).

Innovation in Early Sixteen	th-Century Book Production
Chancery sheet	Narrow median sheet
45 x 31 cm	42 x 35 cm
Ratio 1.45	Ratio 1.20
Chancery octavo leaf	Narrow median octavo leaf
15·5 x 11·25 cm ratio 1 · 1 4	17·5 x 10·5 cm ratio 1 · 1 67
гапо 1 : 1.4	rano 1 : 1.67

42

Fig. 1. Chancery and Narrow Median sheet ratios (above) and leaf ratios (below, not to the same scale).

in an online database of editions of Juvenal printed before 1601.¹⁷ Measurements of leaf sizes and ratios for nine copies of this edition are given in Table 2 below.¹⁸

Table 2. Data for nine copies of the Satires of Juvenal and Persius, Venice, Aldus Manutius, 1501.

HEIGHT	WIDTH	RATIO	
17.5	10.5	1.67	ideal copy with uncut leaves
17.2	10.6	1.62	New York, Morgan Library
16.3	10.0	1.63	Brooker sale, 2024, lot 808
16.3	9.7	1.68	UCLA
16.1	9.7	1.66	Brooker sale, 2024, lot 809
16.0	9.5	1.68	London, British Library
15.5	9.5	1.63	New York, Public Library 1
15.5	9.5	1.63	New York, Public Library 2
15.5	9.5	1.63	Oxford, Magdalen College
15.0	9.3	1.67	Oxford, Bodleian Library

The evidence of the height/width ratios of these nine actual copies, each trimmed down to a greater or lesser extent, shows that they can safely be said to be printed on 'Narrow Median' paper on the basis of a height-to-width ratio approximating to 1:1.67 as opposed to the traditional Chancery paper (ratio 1:1.45). This ratio seems to be constant for the remainder of Aldus's octavo classics.

George Fletcher in his *New Aldine Studies* (1988) had discussed the octavo paper and sheet sizes without noting that a new sheet size and shape is involved. ¹⁹ Unfortunately, the measurements which he gave do not seem to be entirely reliable. On p. 89 he gives a typical leaf as measuring 163 × 102 mm (ratio 1:1.6), with a sheet size of 412 × 332 mm which he says is an example of *la mezzana* [i.e. Median] paper. His proposed sheet size might possibly be Narrow Median (42 × 35 cm) but his reported typical page width of 10·2 cm does not match the figures for the Aldine Juvenal in Table 2, with the exception of the Morgan copy (10·6 cm) which seems to have been cut down very little.

Manutius (San Francisco, CA: 1988), pp. 88–90.

¹⁷ David J. Shaw, *Bibliography of Editions of the Satires of Juvenal Published in Europe up to the Year 1600* (2021), online at https://juvenal-wiki.bibsoc.org.uk/. The 1501 Aldine edition is Juvo56 in this database, surviving in at least 141 copies (August 2023). Relevant measurements for leaf sizes in the present article have all been made by the author.

 ¹⁸ Î am grateful to Paul Needham for providing the dimensions of the Morgan and UCLA copies and two copies from the 2024 Brooker sale at Sotheby's (personal communication).
 ¹⁹ H. George Fletcher, New Aldine Studies: Documentary Essays on the Life and Work of Aldus

44 Innovation in Early Sixteenth-Century Book Production

As with other Aldine editions of classical texts printed by Aldus Manutius in 1501, the Aldine Juvenal was quickly followed by a counterfeit edition produced in Lyon (beyond the reach of the privilege for the new venture which had been issued to Aldus by the Venetian Senate).²⁰ When planning their series of Aldine counterfeits in 1501, the printers in Lyon needed to produce page-by-page facsimiles of the Aldine editions in order to pass them off to customers as plausible substitutes. They were faced with a double problem. They successfully produced a lookalike italic to resemble Aldus's innovation. But in order to maintain the same overall typographic appearance with the same pagination, margins and text layout, they needed to keep the same shape of page, the same number of lines per page and the same margins. This could be done by using a wider Median paper and cutting down the outer edges, which would be somewhat uneconomical. The producers in Lyon must have recognized that Aldus was using a new sheet size and proceeded to order a similar sheet size from their paper suppliers, an easy request to fulfil, requiring simply an investment in a pair of moulds of the appropriate dimensions.

Table 3 shows data from a sample of twenty-seven copies of Lyonese Aldine counterfeits produced between 1501 and 1505, which prove to have height-to-width ratios consistent with use of Narrow Median paper, even in copies which have been substantially cut down in rebinding. The average ratio is 1:1.65, extremely close to the theoretical figure of 1.67. (The ratio for Chancery or Median paper would be 1:1.41.) The ratio for even the smallest of these counterfeit Aldines could not easily be thought to be printed as a Chancery or Median octavo.

Table 3. Height/width ratios and dimensions from twenty-seven copies of counterfeit Aldine classics printed in Lyon.

	RATIO	ACTUAL DIMENSIONS
Average ratio :	1:1.65	(17·5 × 10·5)
Smallest ratio:	1:1.20	(15·2 × 10·1 cm)
Largest ratio:	1:1.83	(16·5 × 9·0 cm)

A separate sample of seventy-five copies of Aldine counterfeits recorded by Paul Needham shows an average ratio of 1:1.66 (with a range of 1:1.33 to 1:1.79).²²

This new 'flavor', Narrow Median octavo, was very quickly adopted by other printers of octavo classical texts, who were not necessarily aiming to

²⁰ Shaw, 'Lyons Counterfeit of Aldus's Italic Type', pp. 117–33.

²¹ These data are taken mainly from copies in the British Library, London.

²² Personal communication.

produce Aldine counterfeits. The new Narrow Median paper must have become readily available from papermakers in Europe from the first decade of the sixteenth century and been regularly purchased by printers producing this category of text.

Neil Harris has discussed Needham's identification of sheet sizes for incunable printing papers and noted that 'this squarer shape [Narrow Median] was imitated in the course of the sixteenth century in many other centres'.23 Harris goes on to say that 'as far as understanding sheet-sizes goes, the sixteenth century is mostly uncharted territory'. I hope to be able to indicate something about the role played by Narrow Median and related paper sizes for books in octavo format in that subsequent period.

In the course of a project to create a typographical catalogue of French post-incunables in the British Library's collections, I recorded measurements from just over 300 octavo editions printed in France between 1501 and 1520.²⁴ The results of this survey are shown in Table 4

Table 4. Paper sizes of French octavos, 1501–1520	, with octavo leaf dimensions and
ratios.	

SHEET SIZE	NO.	%	8° leaf	RATIO
Narrow Median	63	20%	17·5 × 10·5	1.67
Narrow Super-Median	67	22%	18·5 × 12·0	1.24
unidentified	I	0.3%	22·5 × 15·0	1.20
Super-Median	37	12%	18·5 × 12·5	1.48
Super-Chancery	81	26%	16·5×11·5	1.43
Median	3	ı %	17·5 × 12·5	1.40
Chancery	61	20%	15·8×11·5	1.38

I have identified a possible second size of Super-Median paper, which for convenience I have labelled 'Narrow Super-Median' as when folded it produces a taller, slimmer page than Super-Median, just as Narrow Median does with respect to Median. Paul Needham informs me that he believes that these copies are simply further examples of Super-Median rather than a genuine new sheet size.²⁵ This may be so, but I am inclined to think that it is an example of the proliferation and modification of sheet sizes which gradually took place during the following decades, as can be seen from

²⁵ Personal communication.

²³ Harris, 'The Shape of Paper'.

²⁴ A website based on the data from this project is currently under development (October 2023) as a Mediawiki implementation at https://frenchpostincunables.djshaw.co.uk/.

examination of the chronological data given by Philip Gaskell in his Table 3 in his chapter on paper.²⁶

Table 4 suggests that within twenty years of Aldus's introduction of Narrow Median paper, it had been adopted by French printers for twenty per cent of octavo editions produced, predominantly in Paris, with the other narrow size adding a further twenty-two per cent, again mainly in Paris (giving forty-two per cent in total for the production of narrow formats).

There were of course also at the same time markets for other categories of octavos for which producers or consumers did not want or expect the new Aldine aesthetic. The traditional Chancery sheet size still represents twenty per cent of the sample (mainly produced in Paris), Super-Chancery a further twenty-six per cent (mainly produced in Paris, with smaller numbers printed in Lyon and Rouen) and Super-Median twelve per cent (mainly produced in Lyon). The single example labelled 'unidentified' is anomalous: with a leaf height of 22.5 cm, it is far too large to have been printed on any sort of Median paper.²⁷

Another set of data for paper for octavos in sixteenth-century French book production can be obtained from measurements made for a bibliography of the press of the Parisian printer Pierre Vidoue.²⁸ Of fifty-four editions in octavo format printed by Vidoue between 1521 and 1544, nearly eighty per cent were printed on Narrow Median (1:1.67 ratio) and Narrow Super-Median paper (1: 1.54 ratio), with a marked preponderance for the latter size. Vidoue's output of octavos was particularly humanist in flavour, so this preference for these two narrower leaf sizes is significant. Traditional chancery sheets occur less frequently in his output (nine per cent).

A further sample of sixteenth-century octavos can be obtained from the study of the publication of editions of Juvenal mentioned earlier.²⁹ There are sixty octavo editions of the text printed between 1501 and 1600. Over ninety per cent of these are printed in one or other of the two narrow leaf sizes. Although Narrow Median paper originated in north Italy, most of

 26 Gaskell, New Introduction to Bibliography, pp. 73–75. 27 Claude de Seyssel, La grant monarchie de France (Paris: [Jacques Pouchin?] for Regnault

Chaudière, 1519); British Library 521.g.26.

See in particular https://juvenal-wiki.bibsoc.org.uk/index.php?title=Category:Paper and https://juvenal-wiki.bibsoc.org.uk/index.php?title=Category:Formats.

Bata compiled by the present author for a study of the output of the press of Pierre Vidoue (active 1517-44); see David J. Shaw, 'Book Trade Practices in Early Sixteenth-Century Paris: Pierre Vidoue (1516-1543)', in The Book Triumphant: Print in Transition in the Sixteenth and Seventeenth Centuries, ed. by Malcolm Walsby & Graeme Kemp (Leiden: Brill, 2011), pp. 335-46.

these editions are printed in France, particularly in Lyon, and also in Antwerp.

A specific contemporary identification of this size of paper can be found from one of the later octavo editions of Juvenal, printed in 1565 by Christophe Plantin in Antwerp. A full description of the edition can be downloaded from the online bibliography of Juvenal cited above.³⁰ Leon Voet records documents from the Plantin archives showing that the book was printed between 3 February and 10 March 1565 at a cost of 15fl. 9st. Plantin printed 1,250 copies requiring 27 reams of 'petit bastard' paper. The trade price was 1½ stuivers a copy.³¹ The 'petit bastard' paper can be identified as Narrow Super-Median (estimated sheet size: 46 × 30 cm; largest recorded page size from the copies examined: 16·5 × 11 cm, ratio 1: 1·5). This would be roughly equivalent to English 'crown' paper.³²

In conclusion, one can say that Aldus's innovations of 1501 were not just in the use of italic type and octavo format for classical texts, but also involved commissioning the manufacture of sheets of paper of a new size. This new sheet size was quickly recognized by competitors as part of the appeal of his new series of small-format classical editions.

Further questions arise about the trade in paper in the period in question. Was Narrow Median paper used for manuscript production in the late fifteenth century? Were there similar developments for new paper sizes during the sixteenth century (for folios, quartos, duodecimos, etc.)? More detailed research will be needed by specialists to answer these and similar questions. In order to facilitate research of this kind into the sheet sizes of printing papers, Paul Needham's recommendations about cataloguing practices for incunables would need to be adopted for all early printed books. Cataloguers and bibliographers would need to record the physical leaf dimensions of a book (dimensions of the paper, not just the text area or the dimensions of the binding) and accurately record the bibliographical format and then calculate the dimensions and the name of the 'flavor' of the sheets of paper used. Is this perhaps a forlorn hope?

Canterbury

³⁰ <https://juvenal-wiki.bibsoc.org.uk/index.php?title=Juv171>.

³¹ Leon Voet, The Plantin Press (1555–1589): A Bibliography of the Works Printed and Published by Christopher Plantin at Antwerp and Leiden, 6 vols (Amsterdam: Van Hoeve, 1980–83), III, 1293. 32 Gaskell, New Introduction to Bibliography, p. 74, gives the range of dimensions for crown paper as varying from 45 × 35 cm in sixteenth-century France to 48 5 × 37 cm in the later seventeenth century, with 'bastard' as one of its alternative names.