

**The typography of complex texts: how an early printer eliminated the scribes' red**

Margaret M. Smith

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## The typography of complex texts: how an early printer eliminated the scribes' red

Scribal conventions utilized red to articulate texts, and, for his printed edition of the Psalter of St Bruno in the late 1480s, Georg Reyser followed a manuscript model which used red in this way. Just a few years later Anton Koberger's edition of the same text had worked out a method of conveying the same complex sets of information using only black. This paper compares the typographic design of the two editions in order to expose the changes that Koberger needed to make. It argues that these editions serve as a case study for one of the most important differences between the design of the manuscript and the printed book – the use of colour.

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Editing the key texts in various fields of study is one way that modern scholars and academics make their reputations, but as an activity the editing of texts is not at all new. Editing can be undertaken at different levels and for different purposes. In the modern academic world much editing leads to the critical edition, which aims to present the best readings of the text in question. This is not the place to enter the lengthy debate about how 'best' is defined, because this article is not concerned with this kind of critical editing, but with editing which is related in that it involves many of the same steps and problems – the comparison of sources, the recording of different wordings (the 'variant readings'), and the recording of scholarly comments. The history of textual editing stretches back at least to late antique times: closely argued explanation of the Book of Psalms in Latin began in the fourth century AD with Hilary of Poitiers, Augustine worked in the fifth century and Cassiodorus in the sixth.<sup>1</sup> Despite the distinct possibility that electronic handling could soon make editing an outmoded activity, scholarly editions continue to be produced on paper, and thus many of the challenges confronting the designer of edited texts are still with us. This article will focus on one edited text that was produced at the beginning of printing in order to discuss some of the evolving traditions of presentation.

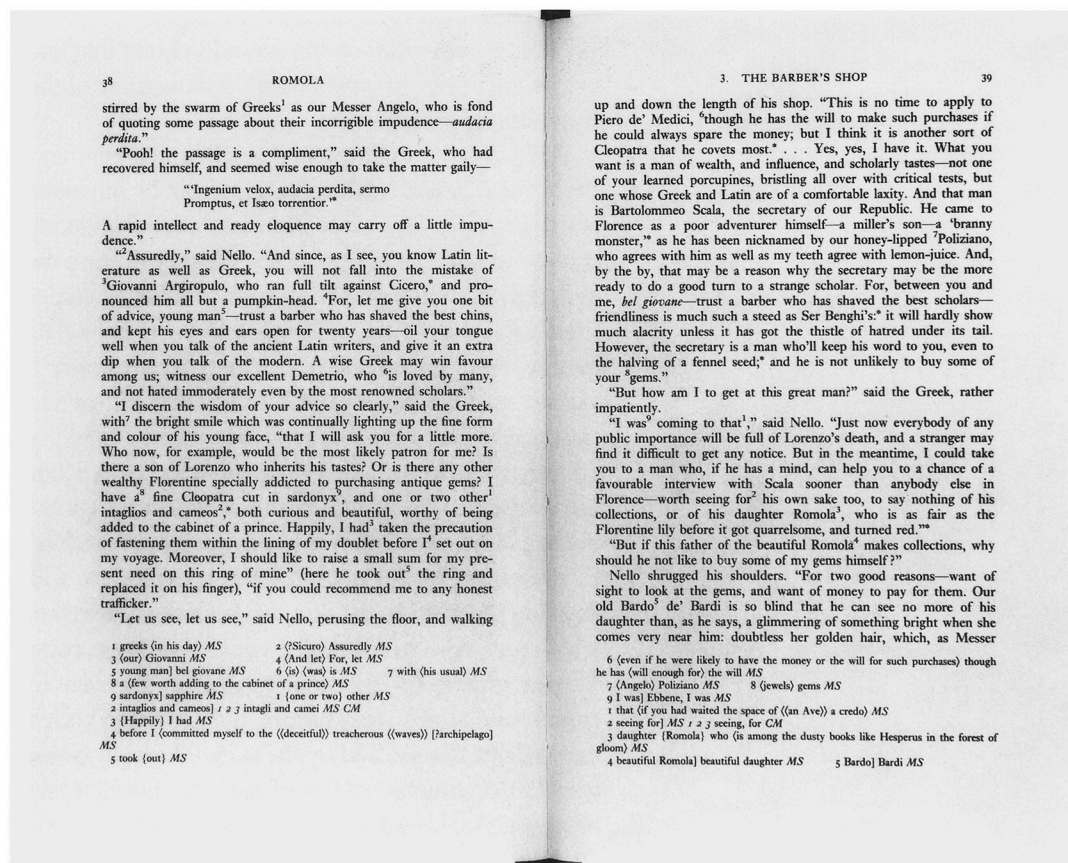
Although the analogy between fifteenth-century editions of the Psalter and modern critical editions can be pushed only so far, it seems worth continuing to place these late medieval examples within the context of modern concerns, for the sake of the parallels in problems of design. An example of a recently published critical edition is George Eliot's *Romola*, edited by Andrew Brown.<sup>2</sup> Brown's introduction of over seventy pages discusses, among other things, the way in which variant readings are recorded in the textual apparatus, using abbreviations to indicate the sources of the variants. Looking at the pages of the edition, it can be seen that the main text lies in a 'normal' position taking up most of the page, and the variant readings are treated as footnotes, placed on the same page as the main text. Each note is preceded by a numeral, from 1 to 9, which corresponds to a superscript numeral flagging the word in the text to which the note relates. Following the whole text, with its footnoted variant readings, comes a section titled 'Explanatory notes' (pp. 589–673). Here there are fuller notes of a discursive and explanatory nature, notes written both by the modern editor Andrew Brown, and by the author herself, George Eliot. Brown's notes are distinguished from Eliot's by special treatment of Eliot's – these are placed in quotation marks and also followed by a bracketed

1. For this, and other background information, I am directly dependent on Margaret T. Gibson, 'Carolingian glossed psalters', in Richard Gameson (ed.) *The early medieval Bible: its production, decoration and use* (Cambridge, 1994), p. 96.

2. (Oxford, The Clarendon Press, 1993.) The example was chosen because it is a recent work, issued by a pre-eminent academic publisher.

Figure 1. An opening from George Eliot's *Romola*, edited by Andrew Brown (Oxford, The Clarendon Press, 1993).

abbreviation: [GE]. The existence of such an explanatory note is signalled to the user of the edition by an asterisk in the main text, and each explanatory note itself is preceded by a page number to locate the relevant page within the main text. Although there are yet further elements to this particular edition, its principal parts can be categorized as: (i) the main text, with (ii) textual variants placed in footnotes on the same pages as the main text; both text and footnotes followed in the book by (iii) explanatory annotations, which are positioned as endnotes in relation to the main text. Footnotes are cued by superscript reference numerals and endnotes by asterisks. There is a main text, a system for recording variants from some ten sources, and a system for annotations both by the original author and by the modern editor. As modern critical editions go this is probably reasonably typical, although the sources of its variants are not particularly numerous and it is perhaps somewhat unusual to have authorial as well as editorial explanatory notes. Typicality is not particularly important here and probably ought not be sought, because every edited text presents a different set of problems to be solved by its editors and designer. There are parallels between the most recent edited texts and edited texts of all periods, including, as this paper hopes to show, some of the earliest edited texts to have been printed. The design problem is the presentation of several layers of information within a single volume and sometimes on a single page, layers which must be differentiated with clarity and consistency, if they are to achieve their purpose; this is an issue which may not be unique to critical editions, but which nonetheless must rank relatively high on a scale of difficulty for the designer.



The categories of text observed in the 1993 *Romola* can be found in earlier edited texts: a main text, plus variant readings of the text, and explanatory notes by more than one person. The means by which variants and notes are handled may have changed somewhat, but not the principles themselves. In the two fifteenth-century examples about to be discussed the main text is the Psalter, the textual variants derive from earlier versions of the Psalms and there are explanatory notes (commentaries) by several of the Fathers of the Church: St Jerome, St Augustine of Hippo, Cassiodorus, St Bede (the Venerable), and St Gregory (the Great). The text proper is differentiated from the explanatory notes, which are on the same page,<sup>3</sup> by the size of type, with the type used for the notes (not unexpectedly) of a smaller size than the text-type.<sup>4</sup> A parallel difference in size of type is found in the 1993 *Romola*, even though the text and the explanatory notes are not on the same page.<sup>5</sup> *Romola* uses special symbols to represent problems in the principal source of the text, angled brackets < > for deletions, double angled brackets « » for deletions within deletions, square brackets [ ] for illegible words, question marks for non-definitive readings, and braces { } for additions in the manuscript. The fifteenth-century editions in question use the asterisk \* and the obelisk ÷ to indicate the sources of the variant textual readings. The *Romola* edition indicates George Eliot's explanatory notes by her initials, and in a similar way the Psalter indicates the authors of the sections of commentary by using their initials.

Although it is valuable to set these two editions of the Psalter within the context of an activity that continues in the modern scholarly world, my purpose in comparing the two to each other is somewhat different. The editions offer the opportunity to discuss one way in which the solutions to the problem of presenting text and commentary on the same page were evolving, at least in part as a result of the new method of producing books, by means of movable metal type. Printing from movable type altered certain features of textual presentation for reasons arguably to do with economy of production, and in the case of these Psalters the earlier incunable edition makes use of red as part of its system of differentiating elements to a significantly greater degree than does the later edition. This is not the only difference between them, and it is possible that explanations for the use of red in the earlier, and for its near absence in the later, lie elsewhere than in the economics of book production, but the matter is particularly interesting because the movement away from the significant use of red in books is an important general development of late fifteenth-century book design.<sup>6</sup> These editions also allow some comments on two incunable methods, both borrowed from medieval manuscripts, of combining text and commentary on the same page, methods now somewhat unfamiliar at first sight. In fact the methods amount only to a difference in

3. The notes are not placed at the foot of the page, but in a separate column.

4. The use of a smaller size of type for footnotes is so common as to now be expected; commentaries, too, are normally in a smaller size; elsewhere I have commented that at the beginning of printing when a great many printers at first possessed only one size (indeed only one font) of type, the first problem that caused them to deploy a second type in their books was the presentation of text and commentary on the same page; see M.M. Smith, 'The pre-history of "small caps": from all caps to smaller capitals to small caps', *Journal of the Printing Historical Society*, 22 (1993), 79–106 (88).

5. The separation of text and notes might suggest that economy was reason enough

for the use of smaller type, and this possibility cannot be eliminated.

6. The decline of red in the incunable period was the context which led me to investigate the beginnings of small caps (see Smith, 'The pre-history of "small caps"') at a time that I was considering the role of italics as a functional equivalent to red; for some

comments and bibliography on the period when red was supplied by hand, see M.M. Smith, 'Patterns of incomplete rubrication in incunables and what they suggest about working methods', in L.L. Brownrigg (ed.) *Medieval book production: assessing the evidence* (Los Altos Hills, 1990), pp. 133–46.



placement on the page: we are quite used to footnotes and endnotes, and these commentaries could be thought of merely as long notes placed alongside rather than below or following the text.

### Two early editions of the Psalter of St Bruno

The earliest incunable edition of the Psalter of St Bruno was produced by Georg Reyser in Würzburg; scholars have not been able to date it more precisely than between 1485 and 1489. The later edition of concern here was produced in 1494 by Anton Koberger of Nuremberg.<sup>7</sup> Reyser's edition uses red and black in a way that might be characterized as binary. Red headings and rubrics are used within black text; and within the red headings themselves there are black abbreviations indicating sources. The opposite occurs within the commentaries: red abbreviations indicate sources within the black-printed text. The two colours alternate in a significant (as opposed to a decorative) manner.<sup>8</sup> Koberger's 1494 edition, although using hand-executed red in the copy to be discussed here, no longer depends on the purposeful use of red that is found in Reyser's edition. While it cannot be denied that the red is still used in a functional way, all the printed elements are in black, including most of the elements that had been printed in red in Reyser's edition.

Analysis of the design of complex texts, or of any text for that matter, is not commonly undertaken.<sup>9</sup> Such analysis might be considered a reversal of a designer's work. A designer receives copy, analyses the structure of the text, deploys his differentiating techniques and builds the page and the edition, often, to be sure, based on conventional models, especially in the fifteenth century. The process is reversed by readers as they observe the differentiations (or perhaps absorb them in a relatively unconscious manner), in order to perceive the structure of the text and ultimately to understand it. The process can also be reversed by the typographic historian for a different purpose – to understand how the fifteenth-century 'designer' worked, what devices he used to build the edition and why he used those devices rather than others. Reyser used red-printed elements as a key feature of his edition, and less than a decade later Koberger had all but eliminated red. Within the general pattern of the elimination of red in the late fifteenth century, it is possible that it was Koberger who was responsible for the changes in this particular text. Indeed it is not just possible, but probable because Koberger used Reyser's edition as the source of his text (his 'copy text'), as will be suggested below.

### The text: St Bruno's Psalter

The version of the Psalter that has been attributed to St Bruno, who was bishop of Würzburg for the period from 1034 to 1045, has been shown by the late Margaret Gibson to have had its origins in the eighth

7. Respectively Hain 4011 and 4012; Koberger reprinted in 1497 (Hain 4013), and together these three were the only incunable editions of this particular Psalter.

8. Decorative alternation is frequently encountered in late medieval books, especially the alternation of blue and red enlarged

initials, thus it is important to make the point that this alternation is functional rather than decorative.

9. This point is related to Robert Waller's that there is a 'lack of a technical linguistic metalanguage with which to handle graphic phenomena' [and] 'a lack of a common

framework for theoretical discussion', in his 'Typography and discourse', in Rebecca Barr, Michael L. Kamil, Peter B. Mosenthal, and P. David Pearson (eds), *Handbook of reading research*, (New York, Longman, 1991) vol. 2, pp. 341–80 (pp. 347–8).

century rather than in St Bruno's century, the eleventh.<sup>10</sup> The argument about St Bruno's personal relationship (or rather his lack of one) to the text is not particularly relevant to the current work; it is the nature of the text itself that needs to be explained in some detail, in order to allow a discussion of the design of the books that carry it. This Psalter includes the full text of the biblical Book of Psalms, and also various related texts: glosses (or commentaries) by five different patristical commentators, Jerome, Augustine, Cassiodorus, Bede and Gregory, and also prayers, or 'orationes', sometimes known as 'collects', which would be used when the Psalter was used in a church service. The Psalter text is St Jerome's second revision, known as the Gallican Psalter. For this, Jerome had depended upon the *Hexapla* of Origen, which was itself an elaborate gathering of texts of the Psalms presenting the Hebrew text, the Hebrew text transliterated into Greek characters, and four Greek versions, all arranged in parallel columns. From Origen's *Hexapla*, Jerome apparently imported into the Gallican Psalter the special critical symbols (the asterisk and the obelisk) showing which variant readings were present in the Greek source texts, but not in the Hebrew, and which had been added from the Hebrew contained in the version of Theodotion, a second-century translator of the Old Testament.<sup>11</sup> All this means that the base text of St Bruno's Psalter is quite complicated – with indications of Greek sources, and of Hebrew sources via Theodotion's translation. To the complicated main text in these editions are added the patristical commentaries and the prayers, making altogether some ten different categories of text:

- the text of the Psalms (Jerome's Gallican, hereafter the main text)
- the variant readings of the Psalms from Greek sources
- the variant readings of the Psalms from Hebrew sources
- indications of a strumming of the harp, known as the *dyapsalma*<sup>12</sup>
- the headings giving the Psalm number only
- the longer headings functioning as titles, or brief arguments, to the individual Psalms
- alternative readings of the titles, as used by the different patristical commentators
- the commentary on each whole Psalm, by the different patristical commentators
- the commentaries on specific words or phrases within the Psalms, by the different patristical commentators
- the prayers.

The two incunable editions use somewhat different systems to handle these elements, as will be discussed next. It seems likely that principal differences – the elimination of red-printing, and the re-arrangement of the relationship between text and commentary by Koberger – were both economy measures.

10. Margaret T. Gibson, 'The Psalter-commentary attributed to Bruno, bishop of Würzburg', *Studi Medievali* (cited as forthcoming, 1994, in her article in Gameson, *Early medieval Bible*, p. 97, but likely to be held up due to her death).

11. See *The Cambridge history of the Bible*,

ed. G.W.H. Lampe (Cambridge, 1969), vol. 2, p. 88; however *The concise Oxford dictionary of the Christian Church*, ed. E. A. Livingstone (Oxford, 1977), p. 240 relates the critical signs to the Septuagint.

12. Unfortunately, this interpretation is not secure, and liturgical scholars are uncertain

of the exact nature of the *dyapsalma*; see the *Oxford English dictionary*, and H. Leclercq, 'Diapsalma' in *Dictionnaire d'archéologie chrétienne et de liturgie*, (Paris, 1907–53, 15 vols) vol. 4 (1920), col. 747; Professor Richard Pfaff kindly advised on this point.



viuentiū non pecudū mēbra mortuorū. Vitulos quippe posuit: aut pro innocentibus aut pro p̄dicatozibus quorū imaginē in vituli figura euangelista lucas suscepit: vel illos qui aīas suas in hostiā suauitatis sacris altaribus obtulerūt

**P**re flue miseratōis ineffabile nomē trinitatis deus. qui hūani pectoris antrū emūdans vicijs. sup candore efficiis nūis. innoua qm̄s in visceribus nr̄is sp̄m̄ sc̄m̄. quo laudē tuā annūciare possimus: vt recto p̄cipaliquē sp̄ritu cōfirmati. mereamur eternis sedibus in ir̄m celesti aponi. Per. eiusd.

**H** Psalm⁹ iste cōtinet vocē p̄ph̄e ex p̄b:ācia p̄ctā iudaici p̄p̄li. Ad ip̄m em̄ loquit̄ dicēs.

**Q** Totus hic titulus ad aduentū dñi sc̄m̄. per tēpus antixpi iure referēdus est: qm̄ oīa ad ip̄i manifestationē cōpetenter aptātur. vt psalmo suo non discrepare videntur.

**Q** Quid gloriari in maliciā? Cum scriptura diuina nec in bonis actibus dicat esse gloriandū. sed p̄cipiat. qui gloriatur in dño gloriatur. nunc p̄pheta sceleratū virū redarguit. de sola se malignitate iactantem. cur velie de malis gloriari. vnde debuit confundi.

**Q** Tota die. totū tēpus vite significat. qz sine aliq̄ intermissione sp̄ malus malū et opatur et cogitat. In iusticiā cogitauit hic em̄ lingua dicit cogitasse. qz pessimo ē cōsuetudo vt aī loquātur lingua q̄ cogitēt corde. i. in cōsulta p̄ferre. Bñ ac opauit mali hoīs dolum acute nouacula. qz sicut illa pilos radit. et hominē nō ledit. ita nec dolus. aīe iusti nocē valebit qm̄ ei nititur auferre mūdāna. Terrena em̄ bona pilis opantur. qz pili supfluitates quedā sunt corpis. et t̄palia bona aīe

**Q** Ille em̄ diligit maliciā. qui cognoscit̄ diligere semp peccare. Super benignitatē. i. si animū maliuoli benignitas tangit. mox eā vt viciū detestabile p̄ciat. et magis diligit loqui iniquitatē q̄ verba equitatis p̄ferre

**Q** De antixpo vero dicitur qui confusus moribus diligit iniquitatē. currit ad oīa verba

tunc imponent super

altare tuum vitulos  
In finē intellectus dauid. cum venit doeche p̄dumeus. et annūciavit saul ⁊ dixit illi. ecce venit dauid in domū abimelech. **AB** **Q**or p̄ph̄e diuda v̄l̄ antixpo

**P**sal.

uid gloriā  
maliciā: ÷  
qui: po

tens ÷ es: iniquitate  
Tota die iniusticiam cogitauit lingua tua: sicut nouacula acuta fecisti dolum

Dilexisti iusticiā sup benignitatē: iniquitatem magis q̄ loqui equitatem. **De psalmo.**  
Dilexisti om̄ia verba

Figure 2. Reyser's edition of the Psalter, showing the final two lines of Psalm 50 and the beginning of Psalm 51, together with some comments and a prayer. (The Bodleian Library, University of Oxford, Auct. M. infra 2. 15, fo. [93] v.)



## Georg Reyser's edition of 1485–9

In Reyser's edition (figures 2 and 3), each page has two columns, with the column closest to the book's gutter (the right column on versos and the left column on rectos) containing text in the first seven categories: that is, the main text and its variants, the Psalm number heading, the longer heading (titles and alternative titles), and the indication *dyapsalma*. The other column has only three text categories: the commentaries to the Psalm as a whole, the commentaries to specific phrases or words within the Psalms, and finally the prayers.

Figure 3. Diagram of the page from Reyser's edition shown in figure 2.

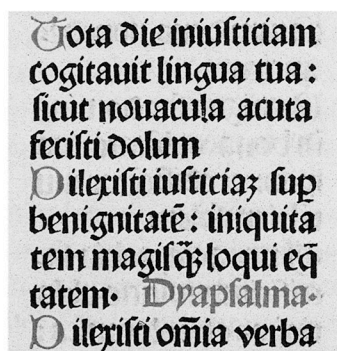
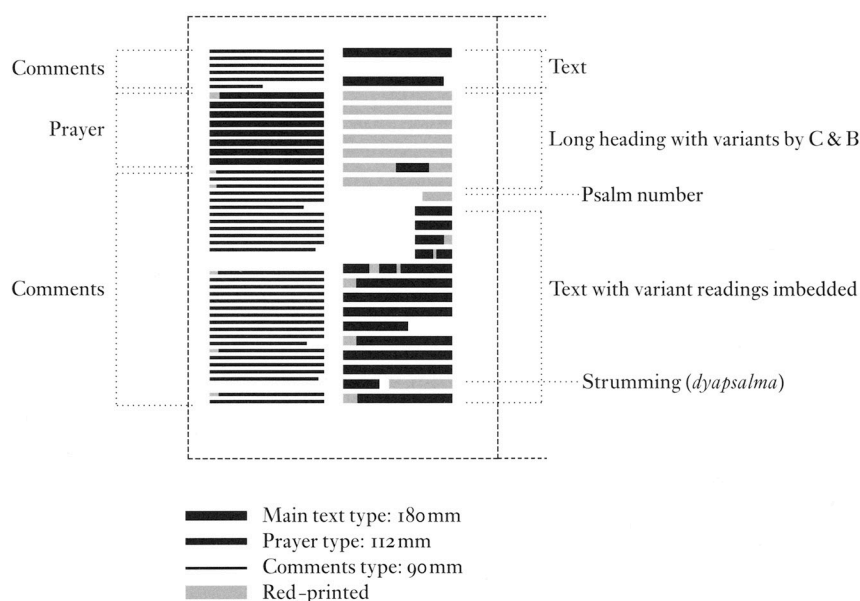


Figure 4. Detail of figure 2. Each new verse begins with a one-line lombardic letter, here the T of *Tota*, the D of *Dilexisti*, and the D of *Dilexisti* again. Note the resultant space after *dolum*.

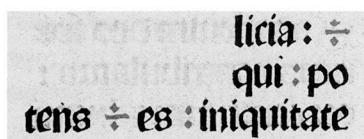


Figure 5. Detail of figure 2, showing *qui* and *es* isolated by ÷ and : (in red).

The main text of the Psalms is printed in black ink, using the largest and most formal of the edition's three types (a gothic rotunda measuring 180 mm for 20 lines), with the initials of each new verse of the Psalms printed in red using a one-line lombardic letter<sup>13</sup> (see figure 4). Each new verse of the Psalm begins a new line at the left margin of the column. See the space after *dolum* in line 4; although this page shows only one clear example, it is true for the whole edition.<sup>14</sup> Alternative readings of the main text from the Hebrew follow immediately after the word in question, they are also in black and in the same type as the main text, but they are set apart by a pair of distinctive symbols, which are printed in red: a red obelisk (like a modern division sign) ÷ precedes, and a red colon follows. In figure 5, there are two additions from the Hebrew using these signs, the addition of *qui* after *licia*, and the additions of *es* after *potens*. Alternative readings of the main text from the Greek (not shown here) also follow immediately after the word in question and are again in the same type in black, but they are set apart by a different opening symbol, a red asterisk \*, again a red

13. Lombardic letters, or lombards, are late medieval round gothic capitals; they are characterized by curved elements which swell to pronounced bulges on the curves; see Nicolette Gray, *A history of lettering* (Oxford, 1986), pp. 109–21 (p. 109).

14. This handling is the early medieval system known as *per cola et commata*, by which rhetorical phrases were isolated for oral presentation.

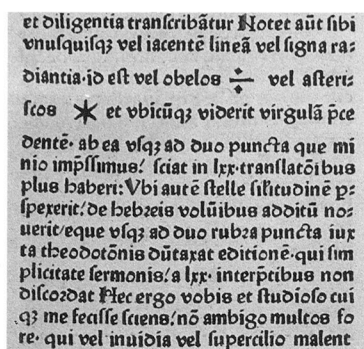


Figure 6. The obelisk and the asterisk are explained in the preface. (The Bodleian Library, University of Oxford, Auct. M. infra. 2. 15, fo. [7]r.)

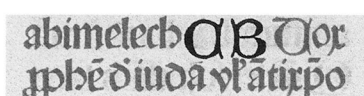


Figure 7. Detail of figure 2, showing the Cassiodorus and Bede indicators, C and B (in black).

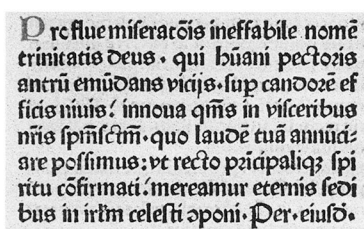


Figure 8. Detail of figure 2, showing the prayer with its first initial a lombard P (in red).

colon follows the variant reading. The obelisk and asterisk are explained in the preface; see figure 6.

The harp strumming, called the *dyapsalma*, is indicated by the use of the same type as the main text, but printed red, so the typographic signal comes from a change of colour only. Likewise the heading giving the number of the new Psalm is in the same type as the main text, but printed in red; here *Ps li* (figure 2, line 10). The harp strumming and the Psalm number are both 'rubrics'.<sup>15</sup> The harp strumming rubrics probably once functioned as instructions, whereas the Psalm number rubrics function as markers and identifiers of the change of Psalm, i.e. they function as headings. Also in the category of rubrics come the more extensive headings to each Psalm, which were apparently Jerome's, and which serve as titles and/or summaries of the Psalm. In some cases these were quite lengthy; for example, the heading in figure 2 is over five lines long. These headings are printed in the type of the main text, but in red. The patristical commentators on the Psalms did not always agree on the heading, and so variant headings had to be printed, and these were separated from Jerome's and assigned to specific commentators by the use of black lombard abbreviations: C for Cassiodorus, B for Bede, G for Gregory, A for Augustine (where Jerome is needed, H is used for the Latin form of his name Hieronymus).<sup>16</sup> (See figure 7 for the indication, CB, showing that Cassiodorus and Bede agreed on the alternative heading to Psalm 51, which follows, beginning 'Vox'.)

The system in Reyser's edition alternates between black and red in a systematic way: at base there is a black-printed main text, with variant readings sandwiched between red-printed symbols; then there are red-printed rubrics for the Psalm number, the strumming indicator, and the longer headings/summaries, with variant readings of the headings indicated by black-printed symbols. A similar alternation is found in the commentaries as will be shown, and this results in considerable intertwining of black and red on the page. In figure 2, it will be seen that fifteen lines on this page have both colours, which must have presented the printer with considerable headaches in printing the two colours in register.

The other three categories of text (commentaries on the whole Psalms, commentaries on specific parts, and prayers) are placed in the adjacent column, on the left in figure 2, and here the differentiation problems are fewer. All three categories are printed in black, with the commentaries distinguished from the prayers by a difference in type size. The prayers are in the book's intermediate type, a gothic fere-humanistica of 112 mm/20 lines; the commentaries use the smallest type in the edition, a gothic fere-humanistica of 90 mm/20 lines. The use of these types differentiates the prayers from the commentaries and also from the text's larger (180 mm/20 lines) type. Red-printed lombards are also used. Each prayer has a such a lombard for its initial (using the same colour pairing as the main text of black text together with red initial, only in smaller type; see figure 8); in the commentary

15. Rubrics, from the Latin *rubric*, meaning red, are headings; within books used in church services, these headings sometimes also function as instructions to the priest on

the conduct of the service.

16. The meanings of the symbols are set out in the preface, part of which is shown in figure 6.

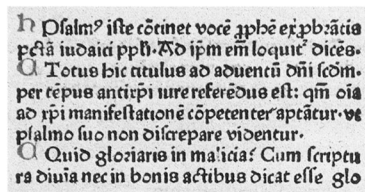


Figure 9. Detail of figure 2, showing the Jerome and Cassiodorus indicators, lombards H and C (in red).

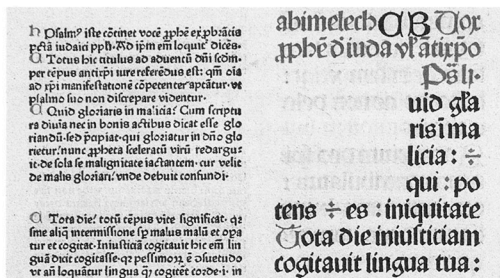


Figure 10. Detail of figure 2 showing juxtapositioning of comments to their respective texts, and also the resultant gaps in comments.

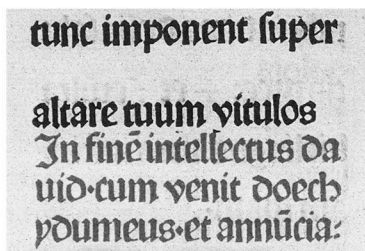


Figure 11. Detail of figure 2, showing the apparent double-spacing of the final two lines of Psalm 50.

sections, smaller red lombards are used in a different way – here they indicate which patristical author was responsible for each comment. In figure 9, H (Hieronymus, i.e. Jerome) provides the first two lines of comment on the whole of Psalm 51, then C (Cassiodorus) provides four lines on the whole Psalm, followed by six lines by C on the first phrase, *Quid gloriaris in malicia* (this phrase is a lemma, showing the words of the text that are about to be commented upon).<sup>17</sup>

As well as the functions of red, it is important to notice the method of coordinating the main text with the commentaries, not only for its own sake, but for comparison with the Koberger edition's method below. The principle governing the method is quite transparent and represents a common way of coordinating text and commentary in medieval books.<sup>18</sup> An attempt is made to start each section of commentary immediately adjacent to the piece of the main text to which it relates. So in figure 10 the *Quid gloriaris* commentary is more or less immediately to the left of the five-line space for the *Q* of *Quid* in the main text; and the commentary for *Tota die* is to the left of the same words in the main text. It has to be said that the attempt to keep the commencements of text and commentary horizontally level often leads to gaps, of the type seen here before the *Tota die* commentary. Indeed a considerable number of pages in this edition have more (and larger) gaps than would be appealing to the modern eye, or acceptable to the modern designer.<sup>19</sup> Gaps in the commentary column occur when the text requires more space than the commentary; when the opposite occurs and there is more commentary than text, then gaps occur between the lines of text. An example can be seen in figure 11, showing the top of the right-hand column (containing the final two lines of Psalm 50). On some pages of this edition, there are so many such gaps that the main text appears to be double-spaced.

Reyser did not develop this layout himself. It is almost certain that he borrowed it directly from a Carolingian glossed Psalter of the eleventh century. Margaret Gibson discussed a set of four luxury Psalters,<sup>20</sup> one of which (Oxford, Bodleian Ms Laud. lat. 96) has a Würzburg provenance. The presence of the manuscript in Würzburg at the time that Reyser was printing there does not of course prove that it served as Reyser's direct source, but he was brought to the city specifically to print service books for the church, so his relations with the Cathedral were very close and the likelihood that he used its manuscripts as sources for his book is very high. The design of this manuscript has similarities to Reyser's edition that are more than just striking. Both are in two columns, with the main text placed nearer

17. The lemma (plural lemmata) repeats the text-word to be commented upon in the commentary, immediately before the comment itself begins. On the use of reference letters, see Margaret T. Gibson, *The Bible in the Latin West* (Notre Dame, 1993), p. 56, where she notes that they were part of traditional scriptorium practice, along with size variations of script for the various categories of text.

18. The different layouts for text and commentary used in the manuscript period is a question that deserves more work than has yet been done. Two very interesting articles

by Gerhardt Powitz describe and provide examples of several layouts: a two-column type, a three-column type, the glossed Bible type, a four-column type, a 'readings' type (where the commentary passage follows the text passage), and a marginal gloss type. Powitz uses Reyser's Psalter as an example of an incunable with the two-column type of layout, and Koberger's Psalter uses his three-column type; unfortunately Powitz does not discuss the differences in actual linking of text and commentary which usually go with the different layouts. See G. Powitz, 'Textus cum commento', *Codices manuscripti*, 5

(1979), 80–89, and (the briefer version), 'Text und Kommentar im Buch des 15. Jahrhunderts', in *Buch und Text im 15. Jahrhundert*, ed. L. Hellmuth and H. Härtel (Hamburg, c. 1981), pp. 35–45.

19. As a result of keeping text and commentary level there are, in fact, hardly any pages which are without gaps, sometimes as many as four to six 2-line gaps, and sometimes with gaps up to three inches (70mm) deep.

20. Gibson, 'Carolingian glossed Psalters', especially plate 5.3.



the gutter on each page. Both differentiate text, prayers, and commentary by graduated size of letterform. Both begin main text and its commentary horizontally level. However it is the use of colour that relates the Carolingian manuscript to Reyser's edition most closely: both use red for the same elements and categories of text – the headings, the initials to the verses of the Psalms, the word *dyapsalma*, the symbols \*, ÷, and :, the initials to the prayers. While some of these similarities might be due to the general use of red in manuscripts, to find all of these features treated in the same way, especially the symbols surrounding the textual variants and the word *dyapsalma*, cannot be either wholly coincidental or wholly due to general usage.

To be sure there are also some differences between the manuscript and the incunable. First the manuscript uses 'hanging indents' for the verses of the Psalm, for the prayers and for the segments of commentary. Hanging indents are rarely encountered in incunables, possibly because they required considerable labour to achieve in type. Second, the scribe used two more script variants than are found in Reyser's edition. The first heading to each Psalm is in red rustic capitals in the manuscript, and this distinguishes it from the red carolingian minuscule of the variant heading. Red rustic capitals are also used for the *dyapsalma* indication. And finally, first lines of the Psalms are in uncial script. Altogether there are five script variations, three of size and two of style, in the manuscript, whereas there are only three variations in Reyser's edition. It is possible that the constraints of working with type were at work. In the 1480s it was relatively uncommon to find even three types used within any one printed edition. The use of five different types is almost never encountered.<sup>21</sup> As well as the differences in the use of types, Reyser's edition has elements not found in the manuscript – headings that give the numbers of the Psalms, and the use of initials to identify the sources of the variant readings of the headings, and initials to identify the sources of the segments of the commentary. Assuming these were added at the time of the edition, some learned editor would have to have made the identifications. (These initials are particularly important because it is their presence in Koberger's edition that suggests that he based his edition on Reyser's.)

Altogether the similarities in design details between the manuscript and Reyser's edition are striking enough to make a close relationship more than likely. If the manuscript did serve as Reyser's model, it led him to print in two colours in an unusually intricate and extensive manner, but it did not lead him to use five type variations, nor to use repeated hanging indents. Apparently he followed the model so far as he could, and then compromised.

21. In the sample of incunables used for my dissertation, 'Form and its relationship to content in the design of incunables' (Cambridge, PhD dissertation, 1984), the books of 1485–9 (633 total), included 16.1 per cent with three or four different types, so the large majority, 83.9 per cent, used only

one or two types (table 4.1); to support the point that it was the largest and most productive printers who used more than one type in the presentation of individual books, the dissertation includes a rank correlation statistic comparing the productivity of printers (measured in leaves rather than editions,

to correct for inequality of comparing 8-leaf quartos with 300-leaf folios), to the use of two or more types per edition – the Spearman's rho rank correlation of +0.453 indicates a close correlation between high productivity and the use of two or more types per edition (table 4.6).

## Anton Koberger's edition of 1494

There were to be only two more incunable editions of St Bruno's Psalter, both printed by Anton Koberger, the first in 1494 (see figures 12 and 13) and the second in 1497. Although it cannot be proved that the first Koberger edition used the Reyser edition as its model, it seems probable. Not only does Koberger use the same initials to indicate commentators, but they are in exactly the same form, i.e. the simple initials. In editions of other texts Koberger used longer abbreviations AUG, HIER, BEDA rather than A, H, and B; longer abbreviations were also used by other printers. While not conclusive, this is again suggestive, as is the fact that both printers used lombards for the initials.<sup>22</sup> The two printers' editions are quite different in their overall aspect, and in the means of achieving the tasks of combining text, commentary, and prayers. They are considerably different in size to begin with: Reyser's edition is a folio of 281 leaves, whereas Koberger's is a quarto of 174 leaves. One way to put the same text into a smaller book is to eliminate wasted space on the page, and Reyser's edition is uneconomical in its use of space, to say the least.

Before comparing the two editions further, it is worth describing Koberger's edition on its own. All the printing is in black ink. There are four rotunda types: the largest, 130 mm/20 lines, is used for only two elements – the headline, *Psalmus*, and the first line of the new psalm [*Q*] *Uid glori-*. The next largest type, 91 mm/20 lines, is used for the main text; the next, 74 mm/20 lines, is used only for the introduction to the whole book (not seen in figure 12); and the smallest type, 63 mm/20 lines, is used for the commentary and the prayers. The main text is placed in the centre of each page, with two columns of commentary/prayers flanking it and wrapping around it. Within the area of the main text are the longer headings, printed in black and in the same type and size as the main text itself, but marked by a black, printed paragraph mark. The variant longer headings are also printed in black, with the abbreviations for their sources marked by black lombards (see figure 14). The Psalm number heading is again in black in the text-type, but it is centred on a line by itself, marked by a hand-executed red paragraph mark (see figure 15).<sup>23</sup> The variants of the main text from the Greek and Hebrew sources are marked by the same special symbols that are in Reyser's edition, \* and :, or ÷ and :, but printed in black. The *dyapsalma* indication is printed in black in the text-type, and the preceding space has been filled by a hand-executed paragraph mark (see figure 16). In the two columns containing the commentaries and prayers, the latter are distinguished by the heading *Oratio* [prayer], which is further set apart by a hand-executed paragraph mark that extends to become underlining as well, and also by a space for a two-line initial P (see figure 17). The different commentators are indicated by lombards, printed in black (see figure 18 for H, C, and C again).

22. It would be nice to be able to claim that Koberger did not use lombards in other editions, but this appears not to be the case.

23. There are two treatments of the Psalm

numbers, either centred as in figure 12, or tucked into the end of the previous line using a common medieval method placement; the two treatments are used about equally often.



## Psalmus

**¶** **Q** Supplicat itaq; ppheta. vt qm̄ sinago-  
ga peccauit sub lege posita. succedens syon  
p gratiam xpi. hoc est carbolica firmet eccia  
Et edificent muri. si fm̄ historia velis ad-  
uertere. significat forte tpa theodosij. qm̄ eu-  
doria eius cōiunx semi-  
nar religiofissima. am-  
pliori muroꝝ circlo ie-  
rusalem coronauit.

**¶** **Q** Tunc acceptas  
o pꝛ sacrificiū. i. gl'iosū  
simā passionē filij tui.  
qui sacrificiū se p om̄i-  
bus obtulit. et est eius  
passio sacrificiū vera-  
cissimi iusticie. Obla-  
tiones et holocausta. p-  
tinent ad xpianos qui  
erant post aduentū dñi  
credituri significās im-  
molanda corda hoīm.  
viventiu. nō pecudum  
membra mortuorū. Vi-  
tulos q̄ppe posuit. aut  
pro innocentibꝫ aut p  
p̄dicatoribꝫ qm̄ imagi-  
nē in vituli figura euā-  
gelista lucas suscepit:  
vel illos q̄ aīas suas i  
hostiam suauitatis sa-  
cris altaribus obtule-  
rūt.

**¶** **Oratio.**  
**P**ost huc miseratio-  
nis ineffabile no-  
men trinitatis deꝫ. qui  
humani pectoris antꝫ  
emundās vicijs. sup cā-  
dozem efficit nūis. in  
noua qm̄s in visceribꝫ  
nr̄is spm̄ scm̄. quo lau-  
dē tuā annūciare possi-  
mus: vt recto principa-  
liq; spiritu cōfirmati:  
mereamur eternis sedi-  
bus in iŕlm̄ celesti com-  
poni. Per. eiusd.

**¶** **Psalmꝫ** iste cō-  
tinet vocē pphete exprobrātis pctā iudaici  
ppli. Ad ipm̄ ei loquit̄ dicens. **¶** **Totꝫ**  
hic titulus ad aduentū dñi scdm̄. p tps anti-  
xpi iure referendꝫ est. qm̄ oīa ad xpi manife-  
stationē cōpetentē aptant̄. vt psalmo suo nō  
discrepare vident̄. **¶** **Q**uid gloriaris  
i malicia. Cū scriptura diuina nec i bonis acti-

bus dicat esse gloriādū. sed p̄cipiat. q̄ gliaf  
in dño glief. nūc ppheta sceleratū virū re-  
darguit. de sola se malignitate iactantē. cur  
velit de malis gloriari. vnde debuit p̄fundi  
**¶** **Q** Tota die. tps vite significat. qz sine

aliqua intermissiōe sp̄  
malꝫ malū et opat̄ et co-  
gitat. Iniusticiā cogi-  
tauit hic ei linguā dicē  
cogitasse. qz pessimorū  
est cōsuetudo vt añ lo-  
quant̄ lingua q̄ cogi-  
tent corde. i. incōsulta  
pferre. **¶** **B**n̄ at̄ cōpauit  
mali hoīs doluz acute  
nouac̄le qz sic illa pilos  
radit. et hoīem nō ledit  
ita nec dolꝫ. anīe iusti  
nocē valebit qm̄ ei niti-  
tur auferre mundana.  
Terrena ei bona pilis  
p̄parant qz pili supflui  
tates quedā sūt corpis  
et tpalia bona anime.

**¶** **Q** Ille enī diligit  
maliciā. q̄ cognoscit di-  
ligere sp̄ peccare. **¶** **S**up  
benignitatē. i. si anīm  
maluoli benignitatē tā-  
git. mor eā vt viciū de-  
testabile p̄icit et maḡ  
diligit loqui iniquita-  
tē q̄ xba eq̄tat̄. pferre

**¶** **Q** De antixpove-  
ro dꝫ q̄ p̄fusus moribꝫ  
diligit iniquitatē. cur-  
rit ad oīa xba p̄cipita-  
tionis. iubet qd nullū  
iuvat et totū cū dolo lo-  
quit̄. a q̄ nulli pfutura  
censent̄. **¶** **O**m̄

nia hec iudaico popu-  
lo impleta sunt. q̄ a le-  
gis lra destruct̄ et euul-  
sus de ciuitate emigra-  
tus est de tabernaculo  
dei tpibꝫ Titi et vespā-

siani. **¶** **Q** In finē aut̄ q̄ dēstruet̄: eternis  
supplicijs deputat̄. **¶** **E**t radicē tuā qz sicut sa-  
cti sc̄tōꝝ. ita imitatores peccatū. radices eo-  
rū appellant̄. Radices erant antixpi. cōsen-  
tanei. et iō radicē ipsius cū ip̄o dicit̄ eē euē-  
lenda: qz cū sc̄tis dñi nec antixpus nec m̄stri  
ei? habebūt aliquā portionē in regno brōꝝ.

Figure 12. Koberger's edition of the Psalter, showing the same transition as Reyser's in figure 2: the final lines of Psalm 50 and the opening of 51. (The Bodleian Library, University of Oxford, Auct. 1 Q. 5. 19, fo. [50] v.)



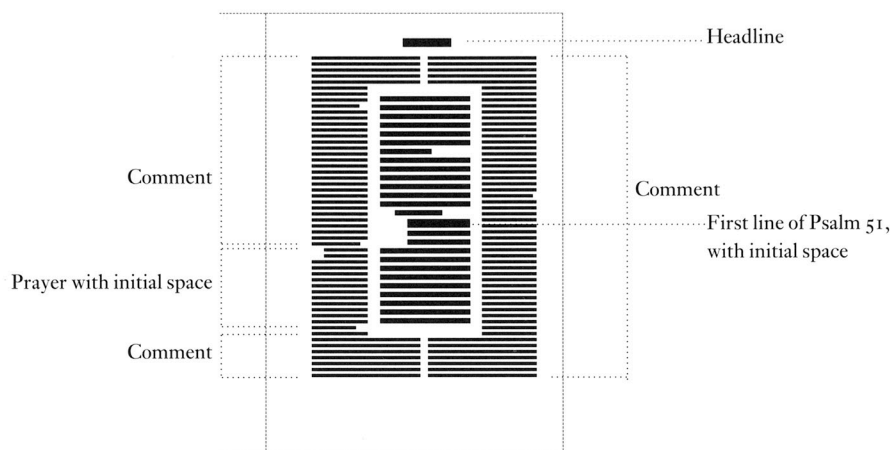


Figure 13. Diagram of the page in figure 12 (Koberger's edition, 1494).

Headline and first line type: 130mm  
Main text type: 91 mm  
Comment and prayer type: 63 mm

ecce venit dauid in domū  
abimelech. **Q** B. Glor p  
phete de iudavel antixpo.

Figure 14. Detail of figure 12 showing the Cassiodorus and Bede indicators (in black).

phete de iudavel antixpo.  
Psalmus. li.  
**Q** Did gloria  
ris i malicia: ÷ q: ÷  
potens ÷ es: ÷ iniq

Figure 15. Detail showing the handling of Psalm number.

nignitatē: iniquitatē magi  
q̄ loqui eq̄tatē. **Oratio.**  
Bileristi omnia verba pre

Figure 16. Detail showing the handling of the *dyapsalma* indicator.

cris altaribus obtule  
rūt. **Oratio.**  
**P**ostue miseratio  
nis ineffabile no  
men trinitatis de⁹. qui

Figure 17. Detail showing the *Oratio* heading and the hand-made two-line P.

A system of alphabetical reference letters also operates in Koberger's edition. These occur immediately to the left of the main text, using the lower-case of the smallest type, and at relatively regular intervals through each Psalm. In figure 19, t and v, for Psalm 50, are at lines 1 and 3 of the main text and lines 1 and 10 of the commentary.<sup>24</sup> It can be observed that this system, which is another common medieval system in both its layout and its basic working method, has two consequences for page layout: first, it allows the commentary columns to be completely filled with text and consequently to contain no gaps, and second, it often moves the comment quite a distance from the text to which it relates. In figure 12, the text phrase *Tota die* which occurs in the lower half of the main text has its comment near the top of the right-hand commentary column.

### Comparison of the two editions

The designs of these two editions have many points of similarity (see figure 20). To begin with they carry the same texts (the same prefatory material, the same main text, the same variants, the same headings with one exception to be discussed below, the same commentaries, and the same prayers). Each of the editions uses multiple sizes of type (three in Reyser's, four in Koberger's), with the text type larger than the commentary type; however, apart from using the same numbers of types on the page, the deployment differs a little and so will also be discussed below. Each new Psalm begins with an enlarged initial; lombards are used for the abbreviations for the commentators; the same special symbols are used to indicate sources of the textual variants. And in each edition the main text is in one column on the page.

24. We are in need of agreement on a term for such reference letters; ordinary scholars refer to the modern equivalent as a 'footnote', but this term should probably be reserved for the note itself, rather than for the superscript number serving as a flag; in the current

example, 'reference letter' is probably the best phrase; medieval scholars often use *signes de renvoie*, or 'tie-marks'; on *signes de renvoie*, see D. Muzerelle, *Vocabulaire codicologique* (Paris, 1985), item 421.11.

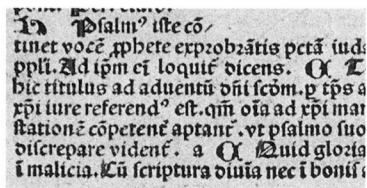


Figure 18. Detail showing the Jerome and Cassiodorus indicators, H, C, and C (in black).

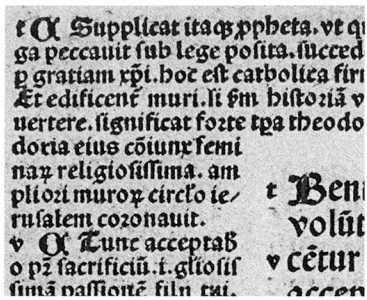


Figure 19. Detail showing the reference letters *t* and *v* in text and comment.

25. As mentioned above, the Koberger editions uses a fourth type, but it is reserved for the prefatory material and so does not feature on the text pages, where in each edition there are only three types.

The points of difference between the two editions are of somewhat more interest. The Koberger edition adds several features: a running headline indicating the place among the Psalms by its number, a heading *Oratio* to distinguish the prayers from the commentary, and the alphabetical referencing system. Types are deployed differently: in Koberger's the largest in the edition is used for the headline and for the first line of text; Reyser's edition has no headline and does not differentiate the first line of text. As can be seen in figure 20, Reyser's method of beginning Psalm 51 is to provide a five-line initial space, but not to enlarge the first line (which in any case is reduced to only a few characters due to the size of the initial space). Reyser's largest type is used for the main text and its headings. In Koberger's edition it is the second largest that is the text type, and the smallest is used for both the commentaries and the prayers. <sup>25</sup> In order to set the prayers apart, he has had to introduce the *Oratio* heading; he also begins the prayer with a two-line initial space, whereas Reyser had used a 'two-line' printed red lombard, and had not needed the *Oratio* heading because the commentaries and the prayers used different sizes of type. In Reyser's edition each new verse within a Psalm begins with a red-printed one-line lombard, and each verse also begins a new line; by contrast Koberger's new verses begin with an ordinary black initial and they do not begin a new line, but follow on immediately after the end of the preceding verse. This change eliminates some spaces (see the space after *dolum* in figure 20), but the practice of beginning each verse on a new line adhered to the medieval principle of presenting texts using the system of isolating rhetorical phrases (for oral presentation) known as *per cola et commata*, the rhetorical phrase here being the verse.

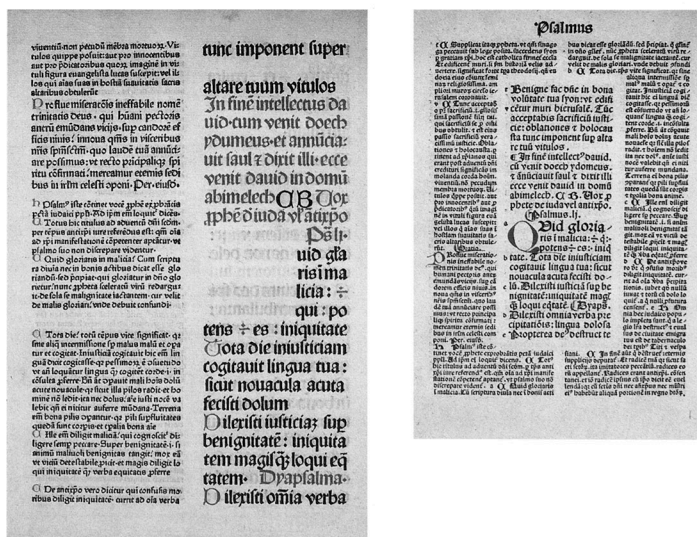


Figure 20. The two editions: Reyser's on the left, Koberger's on the right.

Probably the most striking difference between the two editions is in basic layout. Reyser's edition is in two columns to the page, the main text near the gutter, and the commentaries and prayers near the fore-edge. Koberger's, by contrast, has the main text in the middle of the page, with two columns of commentaries and prayers enclosing it. By electing this layout Koberger had to relinquish the principle of placing a section of commentary adjacent to the text to which it related, and this, presumably, is the reason for the use of the alphabetical referencing system. I do not mean to imply that Koberger devised the entire system anew, for there were medieval precedents for the layout of one column of text surrounded by two columns of commentary and perhaps even more layouts of two columns of text surrounded by two columns of commentary.<sup>26</sup> Some of these also used such referencing systems, although others coordinated text and commentary by the use of lemmata.<sup>27</sup> Lemmata are not so important when text and commentary are immediately juxtaposed and Reyser's edition appears to have used them only occasionally. To change to a lemmata-based system, Koberger would have had to supply them where they were lacking in Reyser's edition; instead he added the alphabetical referencing system.<sup>28</sup>

There are two further differences that need comment. The first concerns the use of space within the text area, and the second the use of red. As has already been mentioned, Reyser's principle of coordinating text and commentary allows spaces to develop – gaps often occur between sections of commentary, and even sometimes between lines of the main text. Koberger's layout uses space much more efficiently. With the referencing system, as long as text and commentary occurred on the same page, they could be placed anywhere, completely filling the text area with either text or commentary. If in some places there was a great deal more commentary than text, the depth of the main text could be adjusted. In Koberger's edition the main text varies between 20 and 37 lines, although usually between 22 and 26 lines to the page. Koberger has also eliminated the space that occurred in Reyser's edition when each verse began on a fresh line. It seems likely that one of the reasons for Koberger's layout was to improve the efficiency of the use of space.

The other important difference between these two editions is, as has already been suggested, in the way they use red. In Koberger's edition there is no printed red at all. Koberger has made provision for the use of some hand-executed red – the two-line initial space at the beginning of the prayer, and the three-line initial space at the beginning of the Psalm. He has also left spaces which could receive hand paragraph marks, such as the one before the word *dyapsalma*; furthermore the copy under discussion has hand paragraph marks at *Oratio* and at the Psalm number (see figures 12, 15, and 17). Spaces which might have been filled with paragraph marks, but which lack them

26. See Powitz, 'Textus cum commento'; between 1482 and 1494 Koberger had printed at least a dozen editions using two columns of text surrounded by two columns of commentary, mostly legal texts (based on manuscript precedents); he does not seem

to have used the layout of one column of text surrounded by two of commentary.

27. See note 17 above.

28. In 1493, Koberger's edition of the *Decretales* of Gregory IX had used small reference letters as superscript flags.



in the copy under discussion, are found at the beginning of each section of commentary, between the reference letter and the commentator's initial. Basically where Koberger has substituted black for red, the element remains differentiated by some other means. The special symbols ÷ and \* are recognizable whether in red or black, and the same is true of the lombards for the different commentators. The Psalm number depends on placement and proximity to the large initial that signals the beginning of a new Psalm. Koberger has sacrificed the signalling of each new verse – there is no lombard and no new line.<sup>29</sup> But two elements still did require differentiation: the headings to new Psalms and the *dyapsalma* indication. Here Koberger added a black-printed paragraph mark and a space for a hand paragraph mark, respectively. In the first case the use of red-printed text was replaced by a special symbol, a very common medieval one to be sure, but not used elsewhere in the edition. In the second case red was retained, but it would be hand-supplied rather than printed, and the 'printed' signal was in fact a space.

Koberger's changes, assuming that he did use Reyser's edition, were several and involved rethinking the text's system. He added a heading to cue the prayer, he added a referencing system to coordinate text and commentary, and he added a paragraph mark to distinguish heading from text proper. He eliminated the red printing, if not quite all the need for red. He reorganized the page layout. It is observable that his edition required much less paper per copy than Reyser's. Much of the saving in paper depended on the fact that the types used were considerably smaller in size. It is possible, although probably not provable, that Koberger's other changes were made specifically in order to reduce further the costs of production by saving space within the text area and by using only one colour of ink. If so, this is an example of an early printer rethinking an articulation system that depends on red, and coming up with solutions that nearly eliminate it. Even if such conscious decisions and specific motivation were lacking, the two editions, so close in time and yet so differently presented, represent an interesting case study in the movement of the printed book away from the manuscript tradition and its use of colour, towards the monochrome book of the following centuries. In the movement away from colour, edited texts, even with all their layers of information, are the same as simple texts.

29. Of course by not using lombards for new Psalm verses, he has reserved them for use as indicators of the commentators.

Table 1. Summary comparison of the articulation systems.

Category of text	Reyser's edition	Koberger's edition
main text	uses the largest type, in black, together with red-printed lombard initials	uses the 2nd largest type, in black, with black-printed initials (not lombards)
textual variants, Greek sources	uses special red-printed symbols around the variant reading	uses the same special symbols, but printed in black
textual variants, Hebrew sources	uses special red-printed symbols around the variant reading	uses the same special symbols, but printed in black
<i>dyapsalma</i>	uses the largest type, printed in red	uses the 2nd largest type, preceded by a space for a hand paragraph mark
heading to Psalm	uses the largest type, printed in red	uses the 2nd largest type, preceded by a black-printed paragraph mark (the only use of a printed paragraph mark)
variant heading to Psalm	uses the largest type, printed in red, preceded by a black-printed lombard indicator of source	uses the 2nd largest type, printed in black, preceded by black lombard indicator
Psalm number heading	uses the largest type, printed in red	uses the 2nd largest type, printed in black, sometimes centred (Psalm number is also signalled by a headline in the largest type)
beginning of new Psalm	5-line initial space	3-line initial space, sometimes (9 times only) followed by first line of text in the largest type
beginning of new verse	ranged left for each new verse, and beginning with a red-printed lombard; using the <i>per cola et commata</i> layout	not specially signalled, as there is neither the use of a lombard, nor of a new line
commentary on whole Psalm	uses smallest type, printed in black, together with red lombard indicator of source	uses smallest type, printed in black, with black lombard
commentaries on words/phrases	uses smallest type, printed in black, together with red lombard indicator of source	uses smallest type, printed in black, with black lombard
prayers	uses middle type, printed in black, with red-printed lombard initial (the only use of the middle type; note: no use of a heading)	uses smallest type (same type as commentary), printed in black with 2-line space for hand initial, and preceded by black-printed heading <i>Oratio</i>
coordination of text and commentary	text and commentary begin at the same horizontal level, sometimes with lemmata	alphabetical reference letter to the left of the text in intercolumnar space indicates the line containing words being commented upon; corresponding reference letters are at the start of relevant commentary

Table 2. Deployment of types compared.

Type	Reyser's (3 types)	Koberger's (4 types)
largest	rotunda 180 mm/20 lines: used for the prefatory material and the main text, including the textual variants, all in black; with the symbols for enclosing the variants, and the <i>dyapsalma</i> , in the same type, but all in red	rotunda 130 mm/20 lines: used for the headline (Psalm number) and for the first lines of nine of the Psalms
second largest	fere-humanistica 112 mm/20 lines: used only for the prayers, in black	rotunda 91 mm/20 lines: used for the main text, for the variant readings, for the headings and the <i>dyapsalma</i> , all printed in black
third largest	fere-humanistica 90 mm/20 lines: used only for the commentaries, in black	rotunda 74 mm/40 lines: used only for the prefatory material, in black
fourth largest	not applicable	rotunda 63 mm/20 lines: used for both the prayers and the commentaries, in black

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