

Introduction

LETTERPRESS PRINTING

This book is not really about the history of printing. Some aspects of that mechanical process must inevitably be considered; but the primary purpose of *Historical Types* is to show, as clearly as possible, what the classic ‘landmark’ typefaces actually looked like, and to facilitate an awareness of how the design of printing types changed over time.

Making type

One important thing to remember is that every single historical page shown in this book, from Gutenberg to Ashendene, was printed from individual pieces of metal type. The making of metal type relied a great deal on handcraft skills and required a lot of technical precision.

First, a punch is engraved with the form of the letter in relief at actual size, but reversed left to right (see *Fig. 1*). (Check the actual size of the type illustrated in *B5*, and note that this is by no means the smallest type ever cut.) The form of the letter is achieved by counter-punching, engraving and/or filing the end of a steel bar, which for medium letters, might be 2½ to 3½ inches long and, say, ¼ inch square. Once the letter has been cut satisfactorily, the steel bar is hardened and tempered. It is then struck into a bar of copper to create the indented strike. The strike, when adjusted, forms the matrix which is inserted into an adjustable hand mould, and the individual type cast (also see *Fig. 1*). From this one matrix thousands of ‘identical’ type letters (sorts) can be produced. (For a fuller explanation of this process see, for example, Warren Chappell, *A Short History of the Printed Word*, chapter III.)

Each sort is then individually picked out from a typeset, assembled into lines of text, locked in a chase, inked by hand, and printed on a handpress (like an Albion). This form of printing, called letterpress, began with the experiments of Johann Gutenberg and was the common trade practice for nearly 500 years.

Some mechanisation of the manufacture of type occurred in the 19th century. David Bruce Jr of New Jersey patented his typesetting machine in 1838, and this was imported into Britain from 1849. In fact, the *Old Style* type of Miller & Richard (see *G3*), and the types for the Private Presses (*H1–H3*) actually had their type cast by machine. But, in all other respects, their type was handmade and hand set in the manner described. Although Linn Boyd Benton invented a mechanical punchcutter in 1884, and the first functional typesetting machine (the Linotype) was built in 1886, no use of them was made by any of the types shown here.

The punchcutter

Perhaps the single most important influence on the design of historical printing types was the work of the punchcutter. The modern concept of the ‘type designer’ just did not exist

in the very early days of printing. Then, the punchcutter *was* the designer, often forming the unique characteristics of the letters in the process of his engraving. And very early in printing history, punchcutting, and even typefounding, became independent occupations.

In one sense, *Historical Types* could well be described as a celebration of the skill and art of the punchcutter. That explains why Johann Fleischman is smiling at us from the Frontispiece, and why the punch of Baskerville’s marvellous letter Q forms our tailpiece!

THE FORMAT OF THIS BOOK

Historical Types began life as part of my ‘Introduction to Typography’ course for graphic designers. When exposed to a proper historical perspective, students not only become aware of the origins of modern font designs, but are also able to grasp the subtle differences between one typeface and another. And through this understanding they can develop the skills necessary to use type in their designs in an appropriate, attractive, and more assured manner. In order to provide this historical perspective in a format designed to capture students’ interest and imagination, I soon realised the need for a book like this one. None of the existing books on printing history seemed suitable. So this survey follows the format and style of my earlier work, *Historical Scripts*.

Each of the spreads features a single design, identified with an easily recognised eponym – usually the designer, punchcutter, founder, or publisher related to that particular type. For ease of reference, the 40 examples are grouped into eight sections with headings of my own devising. Classification of historical types is notoriously difficult. The traditional system has long since been an anachronism; it makes no sense to go on describing late 18th-century types as ‘Modern’, and more recent attempts at categorising have degenerated into labels like ‘Garaldes’ or ‘Didones’ (nonsense worthy of Edward Lear). My section headings are not intended to be the *definitive* attempt to classify historical typefaces, but are simply offered as a plain and pragmatic ordering of the examples shown.

The selection of historical types has been chosen with a great deal of care. Yet, while this selection is quite comprehensive, I cannot claim that it is ‘collectively exhaustive’. Some worthy type designers like Pierre Haultin, Hendrik

Fig. 1 The process of making metal type. From left to right: a steel punch, a copper strike, and a justified matrix of a decorative capital A. At the back: a cast type with its jet still attached, and a cast type dressed to form the finished sort at type height.



van den Keere, and Antoine Augereau are missing. But as well as the more famous names of Gutenberg, Granjon, and Bodoni, I have been able to include some lesser-known designers like Erhard Ratdolt, Simon de Colines, Johann Fleischman, and Alexander Phemister.

Four elements

Like the format of *Historical Scripts*, each spread has four elements – an illustration of a whole page from the selected book, an enlarged detail of the type, a small actual size sample, and a brief descriptive commentary.

An enormous amount of effort has been expended in order to find authentic, early examples of the historical types and, as far as possible, to show them used in ‘normal’ books. This is, after all, the way the types were intended to be used. Some types have proved rather elusive so, occasionally, I have had to resort to showing examples from type specimen books in order to be sure that the types illustrated are genuine. Finding authentic early examples of even the famous types of Garamont is not that easy, and many mistakes have been made in the past. The roman types of Jean Jannon bought by the Imprimerie royale in 1641 are almost impossible to find in actual use. The researches of James Mosley (see his *Typefoundry* blog, 3 February 2012), have shown that they were never used by the Imprimerie royale during the 17th century, despite the claims of Beatrice Warde and Henri-Jean Martin that they ‘were used in splendid works during the early years of this institution’.

Every single image in this publication has been specially commissioned. The best pages for photography have been carefully selected from each book, not only to show an attractive page but also one which was cleanly printed. Often pages which have actually been *under-inked* show the type most clearly. Usually, the whole page with complete margins is shown, to set the type in its intended context. But a few of the book pages are so large and their types so small that, in order to facilitate better study of the type itself, in those cases an inset has been provided of the whole page and an extra section of the text shown at least at actual size.

The illustrations

Each enlarged detail of the type shows five lines of text, carefully chosen not only for its clarity of print but also to include as many different letters of the alphabet as possible. A missing letter from the enlargement is often included in the actual size detail.

These macro-enlargements are new high-resolution digital images captured with raking light. This reveals the impression of the metal type into the surface, the ink ‘squeeze’, and even the surface quality of the paper or vellum with a clarity and vividness which I believe has not been seen before. Each image has been scaled very accurately to a specified enlargement, one most appropriate for the particular type size and interlinear space of the example shown.

An actual size sample, conveniently positioned at the bottom of the second column of text, allows ready comparison with other types in the book.

The commentaries

As the primary aim is to provide a visual (and therefore more accessible) survey of historical type designs, space for commentary is limited. Nevertheless it is hoped that both student and teacher will find the notes helpful and detailed enough to enable further research. Background information has been provided where it has seemed to me to be relevant or interesting. My three-fold aim for the commentaries has been to be concise, accurately up-to-date, and worthwhile.

But having begun new research, it was not long before I realised that my brief college summaries were mere caricatures of the truth, and that I had totally overlooked some very important type designs. Even more significant, and disturbing, was the revelation that the traditional ‘authorities’ like Daniel Updike, Stanley Morison, Harry Carter, and others are now (perhaps inevitably) not always reliable. Much new research has been done since their laudable efforts, and so acquainting myself with the most recent and accurate ‘palaeotypography’ has been an essential part of my preparation for this book. Because of this, *Historical Types* has taken much longer to complete than I originally anticipated, but I have felt it right to spend the necessary extra effort and time to ‘get it right’, or at least as right as I can make it. After all, as I said in my Introduction to *Historical Scripts*, ‘the student is not well-served by the nonchalant repetition of unsubstantiated ideas!’ The motto of Aldus Manutius, *Festina lente* (‘hurry up slowly’), has provided me with wise counsel throughout the more than three years of intense research.

THE NINETEENTH CENTURY

Surprisingly, one of the most difficult periods to survey has been the 19th century. Although it was an era of vigorous printing activity and prolific diversity of types, especially for display (some theatre and circus posters of the time incorporated a positive riot of ornate typefaces, all screaming for attention), book work remained more sober. Roman types were considered most appropriate, though even these varied hugely. Sometimes ‘retro’ traits were favoured, occasionally artificially ‘antiqued’ with toned paper stock and the revived use of long s (ſ), or even a return to medieval textura types, often with outrageously distorted forms (*Fig. 2*). Fortunately, the latter were mostly reserved for ‘ecclesiastical’ use, perhaps under the (surely mistaken) impression that such types suggested a sense of Authority. It is amusing to note, even today, the mastheads of some national newspapers set in out-dated blackletter types, perhaps in the attempt to delude their readers into thinking that they purvey Truth.

Sans-serif types, capitals only, were first seen in the William Caslon IV Specimen of c. 1819. These were soon expanded into lowercase letters and were used in display situations everywhere. But when I discovered some sans-serif types, caps and lowercase, shown as *text sizes* (6pt–12pt) in *An Abridged Specimen of Fonts of Type* made at George Bruce’s New York Type Foundry, dated November 1865 (*Fig 3*) it was a tantalising moment. Surely these sans-serifs were intended for far nobler things than business cards,

classified ads, and railway timetables? Yet, despite searching high and low, I have found no 19th-century example of sans-serif type used for the text of journals or books.

GUTENBERG AND HIS METHODS

Gutenberg has been celebrated as the ‘Inventor of the Millennium’ in the popular poll organised by the BBC in January 2000 and rightfully so, for the invention of a fully integrated system of printing from movable type was a seminal development. It enabled the much wider sharing and preservation of information, all across Europe, and made possible the multiplication of books with identical texts. Rival claims to the invention have been raised in the past, perhaps sometimes due to nationalist pride or local legend, but the documentary and circumstantial evidence is now overwhelmingly in support of the long-held traditional view that Johann Gutenberg of Mainz was indeed the first to print a substantial work by means of movable type. Questions remain, however, regarding the specific details of his working methods.

Most recently, scholars Paul Needham and Blaise Agüera y Arcas, have drawn attention to the fact that Gutenberg’s printed letters vary considerably, quite apart from the deliberate inclusion of extra sorts like ligatures and abbreviations. Their new observations, documented by remarkable photographs and digital images, also reveal minute variations within individual letters, which seem to suggest that they were not made by striking a matrix with a punch. Their

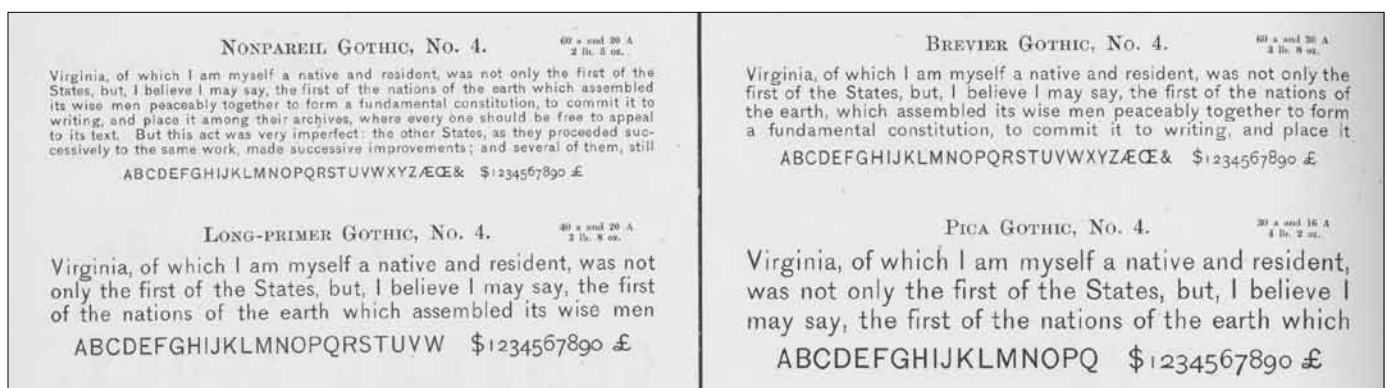
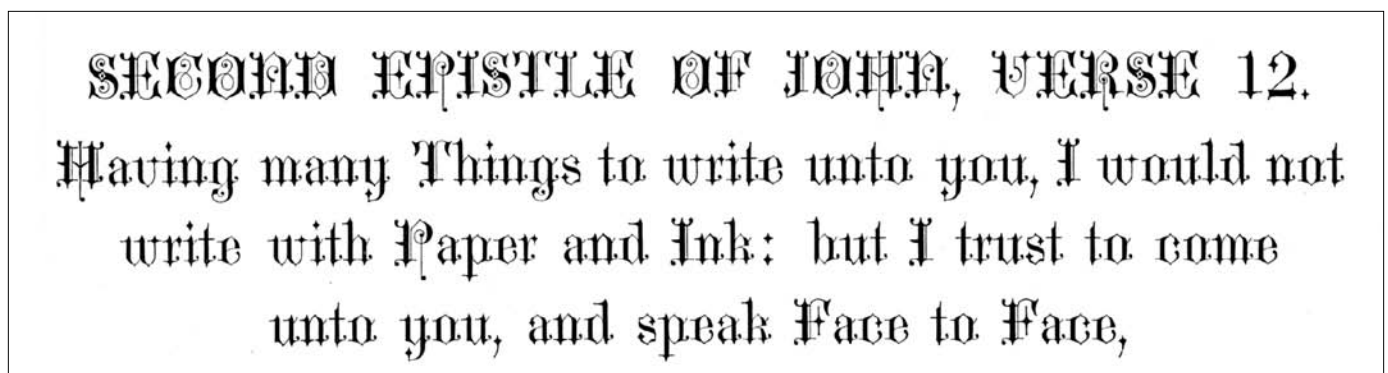
research raises valid questions about how Gutenberg actually cast his type, but their guesses about the use of clay moulds or sand casting, for example, are neither very practical nor will they result in the details of letter variations which they themselves observed.

Other evidence

Many scholars of typography, especially those who have practical printing experience, are not yet prepared to give up the traditional view that Gutenberg produced at least some of his types by means of punch, matrix, and adjustable mould. It certainly seems likely, as emphasised by De Vinne as far back as 1878, that Gutenberg must have used some form of adjustable mould to cast his type.

And there is some documentary evidence for very early use of punches and matrices in the making of type. Melissa Conway (1999) has published and transcribed a 15th-century document concerning the activities of a printing press in a convent at Ripoli. This records that goldsmiths from Florence cut punches and made matrices for the Ripoli press during the 1470s. In addition, there is an account of a visit of Nicolas Jenson to Mainz in October 1458 (an earlier date, so even more significant). Jenson was sent by Charles VII of France to discover more about the ‘people skilled in cutting punches’. Lotte Hellinga (2003) re-examines the evidence and argues that it should be taken seriously.

Much further research, both practical and observational,



Top: Fig. 2 *Victoria* textura type, double-english size (c. 28pt), from *An Abridged Specimen of Fonts of Type*, George Bruce, New York, November 1865. Chicago, The Newberry Library, Wing Z 40583 .1245.

Bottom: Fig. 3 *Gothic No. 4*, sans-serif type in four sizes (c. 6pt, 8pt, 10pt, and 12pt), from *An Abridged Specimen of Fonts of Type*, George Bruce, New York, November 1865. Chicago, The Newberry Library, Wing Z 40583 .1245, page 42.



Fig. 4 The so-called 'Giant Bible of Mainz' (1452-1453), a handwritten manuscript produced about the same time as the printed 42-line Bible of Gutenberg (see A2). Note the similarities between them – the *mise-en-page*, double columns, textura letterforms, running heads, and large initials added by a rubricator. Washington DC, Library of Congress, Ms 8, folio 176R, showing the beginning of the Book of Job.

will be needed before the puzzle of Gutenberg's methods can be fully resolved. Meanwhile, we can still stand in awe at the remarkable ingenuity which resulted in those early types, and the extraordinary high level of printing he achieved.

CALLIGRAPHY AND THE FIRST TYPES

The earliest printed documents closely imitated the form of contemporary manuscripts. They had the same codex format

with its sewn gatherings, the same *mise-en-page*, and the same letterform style. Compare the appearance and script of the 'Giant Bible of Mainz', which is a manuscript book (Fig. 4), with Gutenberg's printed 42-line Bible (A2). These were both produced in the same region, at about the same time, and the similarities are manifest. For one thing, the 42-line Bible follows scribal practice by incorporating a multitude of abbreviations, ligatures, and suspensions, far more

Fig. 5 Apocalypse Sancti Johannis, considered to be the earliest-known European blockbook. It was produced in Germany and dates from c. 1451. The whole of the text and the line illustrations were cut into the woodblock, in reverse, and printed on one side of each of the 48 leaves of this book. The lively illustrations were then delicately hand-coloured. Manchester, The John Rylands Library, JRL 3103, folio 44r, the 'Heavenly Jerusalem'.



than the basic 50 or so 'glyphs' needed for Latin text with caps and lowercase. Like many contemporary illuminated manuscripts Gutenberg's printed Bible was sold as loose gatherings, with spaces left for an illuminator to decorate, and for a rubricator to complete the coloured initial caps and running heads, before it was bound. Indeed, for the guidance of the scribe, he printed an eight-page supplement listing all the required headings.

The first printers, and their customers, were fully conscious of the symbiotic relationship between their printed books and the manuscripts they were replacing. The Mainz Psalter of 1457 (see A3) has a colophon which not only acknowledges that it has all the characteristics of a handwritten manuscript, but also emphasises that it was 'given this

form artificially by means of a contrivance for printing and inscribing without any use of a pen'.

PRINTING BEFORE GUTENBERG

Of course, the technique of printing was not invented by Gutenberg. Books printed from woodblocks were made long before the 15th century. To produce these the design of the whole page, both illustrations and text, would be cut into a flat block of wood (in reverse). This would then be inked, and the image transferred to the paper by burnishing the back of the sheet. Until recently, the *Diamond Sutra* has been considered the earliest block book with text; it was printed c. 868. But now even earlier examples, from Korea, have been dated to the mid-8th century. The complex nature of orien-

tal scripts is not conducive to the process of movable type, so printing by means of woodblocks like these continued for many centuries in the Far East. However, actual movable types, probably made from ceramic tiles, have been credited to Bǐ Sheng in China from early in the 11th century. And types cast in bronze were used to print documents in Korea more than 70 years before the experiments of Gutenberg.

Printing books with woodcuts developed surprisingly late in Europe. The earliest-known European book to be printed from woodcuts, the delightfully hand-coloured Apocalypse of John (Fig. 5), has the text cut into the block just like its illustrations. It is now considered to date from c. 1451 – just prior to Gutenberg’s novel use of type.

THE POINT SYSTEM

The accurate specification of the tiny increments of type sizes, by means of a universal point system, is a convenient one. Of course, the first printers cast their own type ‘in house’, so in fact there was little need at that time for similar type sizes between one printer and another. However, when typesetting became established as an independent activity, late in the 15th and early 16th centuries, more consistency in the various sizes of type became necessary. Towards the end of the 16th century, founders began to apply names to commonly used sizes of type. The specimens of Christophe Plantin and the Le Bé foundry, for example, gave names such as *brevier*, *canon*, and *great primer* (probably reflecting an ecclesiastical origin for the use of those particular sizes). Nevertheless inconsistencies in naming and sizing continued through most of the 17th and 18th centuries, especially from region to region. Complaints about this situation were aired by both Joseph Moxon, *Mechanick Exercises* (1683) and John Smith, *The Printer’s Grammar* (1755).

Fournier & Truchet

In his *Modèles des Caractères* of 1742, Pierre-Simon Fournier included a standardised table of type measurements, later claiming, in his *Manuel Typographique* published in 1764, that he was the first to rationalise the existing confusion. But, much earlier, the Bignon Commission, which had been set up in 1693 to produce the new *romains du roi* for the Imprimerie royale, had also worked on a scheme for standardising the relationship between one size of type and another. Sébastien Truchet, a member of that Commission, drafted several versions of a scale of proportions to be followed for the 20 sizes to be cut for the *romains du roi*. Basing his scheme on the legal standard of the *pied-de-roi* (c. 32.5 cms), he divided the *pied* into 12 *pouce*, the *pouce* into 12 *lignes*, and then sub-divided each *ligne* into 12 *lignes seconde* (a unit measuring 0.188 mm). Instead of naming the incremental sizes of type he gave them a simple number (1st being the smallest and 16th the largest), with some half sizes in between. Not all the sizes in the scheme were actually cut. Philippe Grandjean was responsible for cutting 13 sizes of the *romains du roi*, beginning with the *Alphabets Neuvième* (c. 16pt) and *Dixième* (c. 20pt), both used for the sumptuous book, *Médailles de Louis le Grand* printed in 1702 (see *E1*).

The Truchet system seems to have been followed throughout the 18th century for all sizes of the *romains du roi* and, of course, this pre-dated Fournier’s ‘invention’ by nearly 50 years. It is hard to believe that Fournier was completely unaware of the Commission’s scheme.

Didot

François-Ambroise Didot established his foundry about 1783. It was at this time that he published his own system for type measurement. Fournier’s earlier ‘Table of proportions’ seems to have been just the rationalisation of existing foundry practice and had no independent standard of measurement. He simply printed an arbitrary typescale as a guide for others to follow. Didot, however, tied his point system to the old legal standard of the *pied-de-roi* (previously used by Sébastien Truchet for the Bignon Commission), but his basic unit of the point was twice the size of Truchet’s *ligne seconde*.

It took a long time for the Didot point to gain general acceptance, but by 1840s it was adopted as the official standard in France, and then Germany in 1879. Later it was also adopted by Scandinavia, Russia, Spain, Italy, South America, and the Near East. The Anglo-American point was the accepted measurement in areas of English-speaking influence (despite the irrationality of 72 points equalling 0.9936 of an inch). Now the *digital* Anglo-American point has been rounded up to exactly 72pts to the inch (12pts to the pica, 6 picas to the inch).

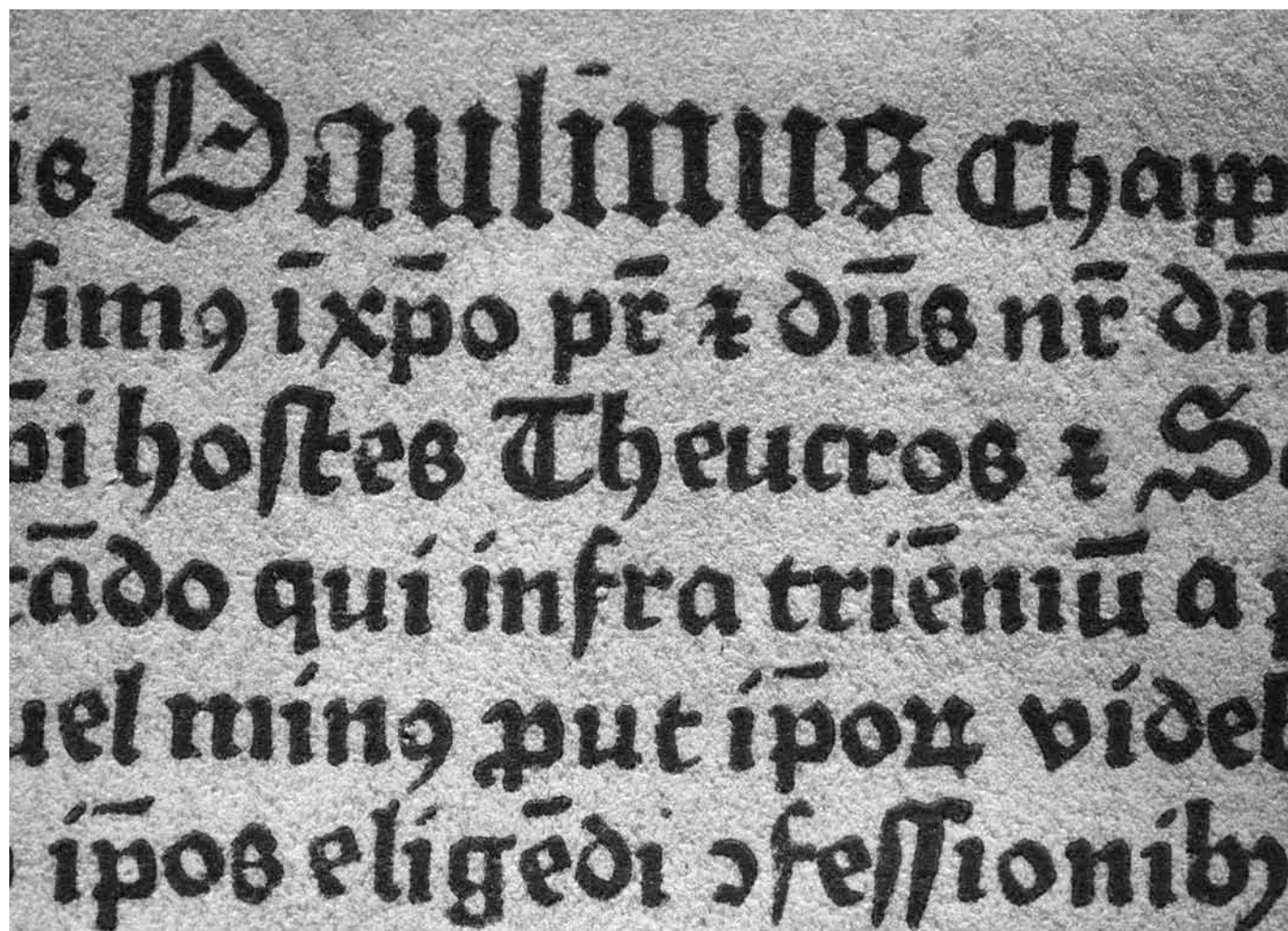
The meticulous researches of James Mosley have clarified and disentangled the complex and often confusing accounts of the historical standardisation of the measurement of type (see, for example, his *Typefoundry* blog, 30 April 2008).

ORTHOGRAPHY

In *Historical Types* I have adopted the manner of referring to type styles and calligraphic hands without an initial capital – ‘roman’, ‘italic’, ‘uncial’ etc. Of course this leads to a certain awkwardness when applied to ‘greek’ and ‘hebrew’ types. But whichever usage is applied, some awkwardness occurs. With ‘sans-serif’ I have played safe, tempting though it is to render it as ‘sanserif’.

And, after a lifetime of doing otherwise, I have now deferred to Hendrik Vervliet and others, regarding the spelling of ‘Claude Garamont’ for the famous 16th-century French punchcutter; retaining ‘Garamond’ to identify the modern typefaces named after him (only a couple of which are actually derived from his work). The historical evidence is mixed and far from conclusive (see Mosley, *Typefoundry* blog, 1 April 2011, for an extensive discussion of the question), but in the imprints of books he himself published with Jean Barbé in 1545, he signed himself ‘Claude Garamont’. So maybe that is enough. The real irony is that in French, at least, they both sound exactly the same.

Stan Knight
Bonners Ferry, Idaho
on the Feast of Pentecost, 2012



Manchester, The John Rylands Library, JRL 17250.1. *Certificate of Indulgence*. Printed in Mainz, Germany in 1454 by Johann Gutenberg (c. 1400–1468). The size of the vellum sheet is 7⁷/₈" x 11" (201 x 279 mm). The text measure is 9" wide (228 mm). The enlargement is shown at four and a half times actual size.

While Gutenberg's 42-line Bible is, without question, his most important printed work, it seems inconceivable that he would *begin* his ground-breaking endeavours with such a mammoth undertaking. He must have experimented first with other, much less ambitious, pieces of printing.

This Letter of Indulgence was certainly printed before the Bible was completed, yet it is a sophisticated piece of printing. It uses two different sizes of type, and wood- or metal-engraved initial letters inserted into the forme with the type.

By 1454 Gutenberg's work in developing a means of printing by type must have become known beyond Mainz. He was commissioned to make this Indulgence, and his press proved to be the perfect method of reproducing a large quantity of identical documents. Spaces were left in the printed text (lines 18 and 20) for the name of the donor and date to be inserted by hand at the time of purchase.

More than thirty copies of this Gutenberg Indulgence are known, and all were purchased between 22 October 1454

and 30 April 1455. Among them, variant editions of the Indulgence have been noted, each with slightly different wording, layout, and types. This one in the John Rylands Library is unique, and has the earlier printed date of 1454 ('Mccccliiii', line 20). It was issued to a certain Georgius de Arnisbergh of Cologne and his wife Frederica on 27 February 1455 (note the written amendment to the printed year).

The textura display type is the same as that used for the text of the 42-line Bible (see A2). The tiny gothic type is unusual; note its round a and d, 'uncial' h, cursive f, and long s (ſ). It has an x-height of just 2 mm. The letters are actually not well-aligned (in his Bible printing this was improved), and some over-inking and ink squeeze is apparent.

Many extra sorts are employed, all typical of current scribal practice. There are numerous ligatures, including ct, ff, pp, ff, ff, ft, and an unusual ij (line 4); lots of abbreviations (indicated by a horizontal line over the word); and some suspensions (such as **ꝛ**, **ꝙ**) and contractions (like reversed **ꝛ**), representing missing syllables (the last word in the enlargement above, for example, is 'confessionibus'). Note alternate forms of r and s, and the rare y (lines 2 and 6, see detail below). The **ꝛ** character is a medieval form of ampersand.

ut c̄fessores ydonei seculares uel regulares p̄ ip̄os