

Chapter Two

THE MAKING OF A PRINTED BOOK. COMPOSITION, IMPOSITION, PRINTING, ETC.

SUCH knowledge of the mechanical side of book-production as is possessed by the majority of students of literature has as a rule been picked up bit by bit as chance decreed, and this makes it difficult to know where to start in attempting a cursory account of the subject as a whole. It is dangerous to assume that any one fact will be known to all possible readers and to pass it over in silence, and even at the risk of offending some by telling them things with which they have long been familiar, it seems safest to begin at the very beginning—and for this I shall make no further apology.

We will begin then by passing very briefly in review the whole series of processes which go to make the completed book. But, it will be asked, what sort of book and when produced? for the craft of printing, like every other craft, has undergone changes and developments, and a description of the methods followed at one period would not be correct in detail of any other period. This is true enough, but fortunately, so far at least as the purpose of the present study is concerned, the development of the art of printing has been somewhat peculiar. After a comparatively short period of experiment, methods were evolved which remained extraordinarily constant for centuries, so that we can say that in all essentials of book production there was little difference between the methods of 1500 and those of 1800. Indeed, until within the last thirty years the methods of composition, imposition, folding of paper, and so on, were in ordinary book-work very much the same as in the sixteenth century, though there had of course been innumerable improvements in detail, in regularity and finish of the

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type and of the other materials used in printing, in quality of ink, in methods of inking, and in the efficiency of the press. It is, I think, not too much to say that if the staff of John Day's printing-house could have revisited the world of 1850 and been set down in the house of some jobbing printer of that date, they would have found very little that they did not understand at sight, and would have been capable of taking it over and running it without further instruction—except perhaps in the use of the ink-roller and in certain details of the adjustment of the press.

It results from this that we can, without inconvenience, base our study on the books of the end of the sixteenth century, the period in which bibliographical knowledge is generally most important for students of literature. If we understand how books were produced in 1600, we shall have very little difficulty in understanding the methods of any other period, and it will be easy with this as the point of reference to complete the story backward or forward.

We will therefore begin by considering the production of a book in the year 1600 or thereabouts, and to avoid confusion we will in the first instance confine our attention to the ordinary 'quarto' book, as this format is especially common in those dramatic and poetical tracts with which the student of literature is generally most concerned. Other sizes will be considered later, when we shall also consider certain processes in somewhat more detail and the modifications made in them at various times.

Let us suppose that a printer has a manuscript to print, and that all such details as the size of the type, length of lines, and number of lines to the page are settled, and that he is about to begin the actual composition of the matter; and let us follow the compositor at his work.

He takes in his left hand a composing-stick which is so adjusted that it will exactly hold lines of type of

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the length required. He then picks up with his right hand, one by one, the types required to form the first word from the case¹ in which they lie, and as he does so, inserts them in the stick, beginning from the left side and holding them in place with his left thumb, as shown in figure 3.² The types are of course put

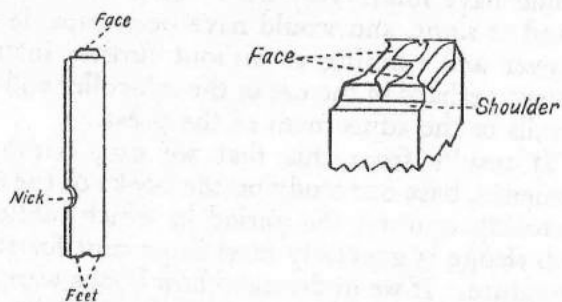


FIG. 1. A type.

¹ The 'case' is the receptacle in which type is kept. A pair of cases are always used together; the 'upper case' contains the capitals, numerals, and certain other characters, the 'lower case' containing the 'small' letters and the spaces. Each case is a sort of shallow tray, about 2' 9" long by 1' 4½" broad and about 1¼" deep, divided by cross-partitions into 'boxes' for the different types, there being 98 boxes in the upper case and 53 to 56 in the lower. The divisions in the upper case are all of the same size, while those in the lower case vary according to the frequency of the type which they hold, the e-box being, for example, about five times the size of those for the capitals in the upper case, the o-box three and a half times, and so on. The arrangement of the lower case is not alphabetical, those types in most frequent use being towards the centre where they are handiest for the compositor. The seventeenth-century 'lay of the case' is given in figure 2. It remained much the same until quite recent times. The two cases were propped on a stand before the compositor, the lower case only slightly tilted, the upper resting above the lower one at a greater angle. At an earlier date, if we may trust the pictures which have come down to us, only a single case was probably used, or if there were two they were placed one above the other at the same slope. See figures 11 and 14.

² The figure is based, by kind permission of the publishers, on one in J. Southward's *Modern Printing*, Raithby, Lawrence & Co., London, 1898, pt. i, p. 164, and of course represents a modern composing-

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in the stick with the face upside-down, so that when printed the letters will be in their proper order. After each word the compositor puts a space, which is merely a short type without any letter on it.

A	B	C	D	E	F	G	â	ê	î	ô	û	σ	Δ
H	I	K	L	M	N	O	ä	ë	ï	ö	ü	*	♠
P	Q	R	S	T	V	W	á	é	í	ó	ú	□	
X	Y	Z	Æ	J	U		à	è	ì	ò	ù	♠	†
h	z	σ	⊙	♀	♁	Ⓜ	γ	ϝ	Π	⊖	♠	Ⓜ	*
1	2	3	4	5	6	7	⊖	Ⓜ	Ⓜ	Ⓜ	Ⓜ	Ⓜ	Ⓜ
8	9	o			ft	k	ff	ff	ff	ff	Ⓜ	Ⓜ	Ⓜ

j			æ	œ			s				fl	ff	
'	b	c	d		e		i	f	f	g	fh	ff	ff
&c													
ct	l	m	n		h		o	y	p	q	w		?
:												Ⓜ	□
z	v	u	t		Ⓜ		a	r		,	:		Ⓜ
x										.	-		

FIG. 2. The arrangement of the type ('lay of the case') in the upper and lower case in 1683, from Moxon's *Mechanick Exercises*.

stick, made of metal and furnished with a sliding-piece that can be set to the length of line required. Such adjustable composing-sticks were in regular use towards the end of the seventeenth century. They were in general principle exactly similar to the one here illustrated, but had the additional complication of a second sliding-piece which could be adjusted to the width of a column of marginal notes, so that these could be composed simultaneously with the body of the text (see Moxon, *Mechanick Exercises*, 1683, p. 32 and plate 2). The earliest composing-sticks were probably of wood and of fixed length, and such wooden composing-sticks seem to have always remained in use for special purposes, such as the setting of exceptionally wide measures.

When he comes to the end of his first line he may find that he has also come to the end of a word. If so, well and good; he proceeds to set the next line. The chances are, however, that he finds that there is not in the stick exactly room for a complete word. He may find that he has room for the first syllable of a word, with a hyphen. If so, he inserts this; if not, he must exactly fill the line in some other way. If his line is a letter or two short, he must fill it out with spaces. These cannot, of course, be added at the end of the line, as all the lines of type must end evenly,¹ so the



FIG. 3. A modern composing-stick. The size of the type is, of course, greatly exaggerated in order to show the faces.

additional space must be distributed over the spaces already standing between the words in the line. To do this he will take out the spaces already inserted, or some of them, and replace them by thicker ones. Or if he can nearly get another word or syllable in, he may take out the existing spaces and insert thinner ones. By this process, which is called 'justifying', he will eventually get his line of exactly the right length.

A modern printer generally has three spaces of varying thickness which can be used without the space between the words looking excessive or too small,² but it seems doubtful whether the Elizabethan printers used more than two in ordinary work.³ They had, however, a means of justifying the lines of type which

¹ Assuming that the book is prose.

² A very thick space can be used between two upright letters, as in the words 'tall house', or a very thin one between round letters, as in 'more open', without in the one case the words looking too far apart or in the other too close together.

³ It is impossible to be certain of this on account of the irregular casting of the type, the face of which (i. e. the top part which prints as a letter) was often not central on the shank, or 'body' as it is called.

is denied to modern compositors, namely, by varying the spelling of words.¹ If when nearing the end of a line the workman saw that he was going to have space to fill up, he could add an e to the end of some of the words, or could spell such terminations as -nes and -les as -neffe and -leffe, or could give 'dance' as 'daunce', or 'many' as 'manie'. If on the other hand he wished to save space, he could omit final e's or use a vowel with a line over it to indicate a following n, or in some founts² could use the y^c and y^t contractions for 'the' and 'that' and other similar ones.³

¹ Or when printing Latin or Greek by varying the number of contracted forms which they used.

² A 'fount' of type was originally the whole assortment of letters of the same style, or 'face', and body which were cast at one time. In ordinary use, however, the word has now no relation to the time of casting, but merely to the style of the letter and size of the body. Thus the roman type in which the text of this book is printed is all one fount, the italic another. If type of these faces were cast on bodies of a different size, so that the spaces between the lines of print or between the letters were different, these would be other 'founts'.

³ It is not possible to say exactly to what extent the printers relied on variations in spelling as a means of justification; it seems, however, not unlikely that it was their chief expedient. In a review of this book in its original form in the *Jahrbuch der Shakespeare-Gesellschaft*, 1916, p. 211, Professor Max Förster cited a most interesting passage from the grammarian W. Salusbury, which shows that variation of spelling for this purpose was quite well recognized. The passage (quoted by Ellis, *E. E. Pronunciation*, iii. 752) is to be found in Salusbury's *Plain . . . Introduction teaching how to pronounce . . . Welch*, 1567. He is complaining that people unnecessarily write (in English) 'manne, worshippe, Godde', &c., and advising a change to 'mann, worshipp, Godd', &c. A marginal note adds 'An obseruation for wryting of English whych in pryntyng cānot so well be kept', and Salusbury continues, 'And though thys principle be most true *Frustra id fit per plura, quod fieri potest per pauciora*, that is done in vayne by the more, that maye be done by the lesse: yet the Printers in consideration for justifying of the lynes, as it is sayde of the makers to make vp the ryme, must be borne wythall'. It may further be noted that when in one copy of a sheet we find that a correction involving a change in the number of letters has been made in a particular line, we commonly find that the spelling of other words in the line has been varied to compensate for it. Lastly, the great difference in spelling (apart from

Having now got one line of type in his 'stick' the compositor would, providing the work was not to be 'leaded', proceed to set the next line, laying the types above those already in position.¹ If, however, it was to be 'leaded', that is to say, if there were to be blank spaces between the lines of type, he would insert a strip of type-metal, or possibly of wood, above his first line of type, and lay the second upon that.²

'Leading' (it is convenient to keep the term 'leading' whether the actual 'leads' were metal or wood, though strips of wood used in this way are properly called 'reglets') is, of course, a very common practice nowadays; the great majority of books in which there is no special desire to save space are leaded, as it is thought to make a book more readable. In Elizabethan times the practice seems, however, to have been unusual, if not non-existent. I do not indeed know of a single English book of the sixteenth century which is consistently leaded throughout; though leads may have been in occasional use for special purposes, e. g. to place between stanzas of poetry.³ Generally, how-
modernization) often found in reprints of different length of line or fount of type is most naturally thus accounted for.

¹ Actually before laying down the first line of type the compositor places in the stick a thin strip of brass, called a setting-rule, the length of a line of type and provided with a small projection at one end by which it can be lifted. As each line is completed the setting-rule is removed from below it and placed on the top of it, the next line being set on the rule, and so on. The purpose is to afford a smooth surface on which the types can be laid and on which they can more easily slide into place. The setting-rule was used in Moxon's day (cf. *Mech. Ex.*, p. 214), and though there is no direct evidence of its use by the earlier printers, it is such an obvious device and, as Blades points out (see p. 56 below), would be so especially needed with imperfectly cast type, that we can, I think, assume the existence of something of the sort whether in wood or metal.

² It is, of course, possible that leads, when and if these were used, were inserted after and not during composition.

³ Berthelet may occasionally have used leads, cf. Greg in *Transactions of the Bibliographical Society*, viii. 194, type 13. In this, however, as in some other cases of a similar kind, it is impossible to be sure that

ever, 'quads' seem to have been employed, i. e. pieces of metal similar to spaces, but much broader, so that a few—say half a dozen or eight—would fill an ordinary line.¹ Whenever the blank space is found to be of the same depth as an ordinary line (or two or three ordinary lines) of type, it is probable that the space has been made by inserting a line or lines of quads.²

When he had got some six or eight lines of type in his composing-stick, the compositor would transfer the mass to something corresponding to what is now termed a 'galley', i. e. a sort of shallow tray with edges on three sides somewhat lower than the height of the type. He

the type was not cast on a larger body than was usual for the size of face (a so-called 'bastard' fount). The earliest example of apparent leading known to me in English printing is in the Cicero *Pro Milone* printed at Oxford, c. 1482. It may be noted that Caxton seems never to have used any form of leading (Blades, *Caxton*, p. 123), but this occurs in the *Siege of Rhodes*, printed by an unidentified printer probably before Caxton's death. The leading here must have been either of thin and soft wood or very flexible metal, as crooked lines influence those above and below. Duff considered that leading was well understood by the early printers, and Professor Pollard tells me that leads were used in the fifteenth century in school books to permit interlinear glosses, but certainly in some such cases we may suspect the use of lines of quads. In Italian printing they are said to occur in the second quarter of the sixteenth century. How much earlier I do not know.

¹ Quads were no doubt originally square spaces, as broad as the height of a line. From the fact that the letter m (or M) used to be cast on a square body, such a square space is called an em-quad. It is difficult to prove that broader ones were in general use, but this may be inferred as highly probable from the fact that ornaments and rules of several ems in length were quite common, and from their obvious convenience. The sticking up of spaces so that they print as a black oblong—the only conclusive evidence as to their dimensions—is curiously rare in Elizabethan printing.

² The only certain proof of the use of a lead would be the sticking up of one end of it, when it would print like a short piece of black rule, the impression being much stronger at one end than the other. It is also to be noticed that if leads are used an irregularity in any line, such as an accidental space caused by letters falling apart, or any considerable want of straightness in the line, will not, normally, be continued in other lines up and down the page.

would then fill his stick again in the same way and again transfer the contents to the galley, and so on, until he had a sufficient number of lines of type to form a page. A modern printer uses long galleys, generally containing two or three pages of type, and does not as a rule divide up the matter into pages until proofs have been taken and at any rate the first corrections made. The reason of this is that the type can more easily be lifted for the purpose of correction when in a galley than when in the chase in which the pages are subsequently arranged; further, if large corrections involving additions to or subtractions from the matter are made after this has been divided into pages, the work of measuring it up and dividing it has to be done all over again.

There is, however, so far as I am aware, no evidence of the practice of proofing matter in long galleys in the Elizabethan period, while on the other hand there is evidence of work being arranged directly in pages, the signature¹ (if any) at the foot of the page, and the catchword, being added directly the page was composed.²

Each page of type as completed would probably be tied round with string and put aside to wait until the rest of the pages required to form a sheet³ of the book were ready. This in the case of an ordinary quarto book would be eight.

The requisite number of pages having been completed, the printer would next 'impose' them on a flat table or stone in such a manner that when an impression was taken from them on a flat sheet and the paper afterwards folded to form part of a book, the pages would be in the proper order. A modern printer, who works with larger presses and larger sheets of paper

¹ See p. 25 below.

² See p. 65, note 1.

³ Really a 'gathering', as will appear later (see p. 31). For example, in a folio the compositor would often have to set twelve pages of type before it was possible to proceed with the printing. In a quarto, however, the 'gathering' was usually a single sheet.

than the Elizabethans, will generally lay down the whole number of pages (let us suppose eight—for a quarto) at one time, and print them on one side of a sheet of paper of twice the size of the sheets forming the book (see p. 69 below). The Elizabethan would, however, arrange his eight pages of type in two separate groups, taking first the pages which are required to print one side of his sheet, namely, the 1st, 4th, 5th, and 8th page, or in the usual bibliographical notation,¹ pages 1, 2^v, 3, 4^v of the sheet. These he would arrange on the stone as in figure 4, the two upper ones being upside down. He would then place round them a bottomless frame called a 'chase' (indicated by the thick outer line of the figure),² and proceed to fill up the intervening spaces between the pages and between them and the chase with pieces of wood or metal below type-height called 'furniture'. It is to be noted that supposing AB, CD to be lines crossing the centre of the chase, the distance from AB to the top of the pages will give the height of the top margin of the page when the sheet is folded; and that the distance from CD to the sides of the pages will similarly give the breadth of the inner margin.

The four pages thus arranged in the chase are called a 'forme', and because this forme contains the pages

¹ i. e. counting by leaves instead of pages, the first page being called '1 recto' or simply '1', the second '1 verso', the third '2 recto' or '2', the fourth '2 verso', and so on. Another notation, more general in dealing with very early books, uses 1^a for the recto of the first leaf, 1^b for the verso, and so on. This in certain respects is better, but has the disadvantage that some writers use the same notation to refer to columns of print when a page has more than one. In purely bibliographical work there is seldom or never any danger of confusion, but in literary work this may easily occur.

² Modern chases intended for book-work have cross-bars in the position of lines AB, CD (in chases for quartos), which greatly facilitate the arrangement of the pages and the locking-up of the type. It seems probable that the Elizabethan chases had at least one cross-bar, but the point is of no importance in the present connexion, and we therefore need not discuss it.

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which, when the sheet is first folded, will be on the outside of the fold, namely, the 1st, 4th, 5th, and 8th

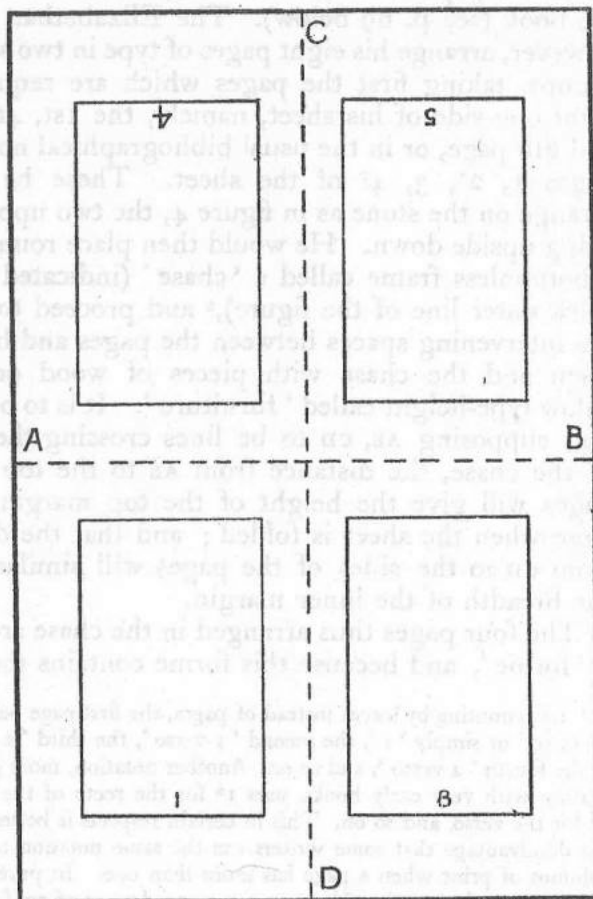


FIG. 4. Imposition of type-pages for a sheet in quarto (outer forme).

pages, it is called the outer forme, and pages 1, 4, 5, 8 (or 1, 2^v, 3, 4^v) are called pages of the outer forme.

The furniture employed to fill up the chase is 'locked up' by the insertion and driving home of

IMPOSITION

wedges or 'quoins', so that the type is tightly jammed and the whole may safely be lifted as if all in one piece.

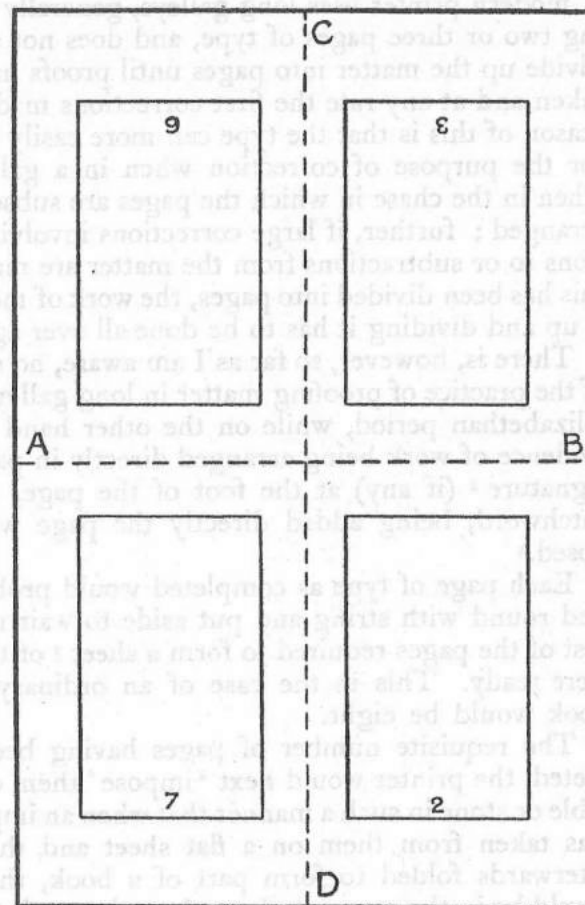


FIG. 5. Imposition of type-pages for a sheet in quarto (inner forme.)

The printer would next take the other four pages belonging to the sheet and lock them up in another chase, arranging them as in figure 5. The distance of the top and sides of the pages from AB and CD must

of course be the same as in the other forme. This forme contains the pages which in a folded sheet are within the fold, namely, 2, 3, 6, 7 (1^v, 2, 3^v, 4), and hence is called the 'inner forme'.

To make all clear, let the reader take a sheet of paper¹ and mark on it four oblongs on each side to represent the pages of type. Let him then number those on one side 1, 4, 5, 8, as if they had been printed on to this sheet from figure 4, i. e. 8 to the left and 1 to the right in the lower half of the paper, 5 (reversed) to the left and 4 (reversed) to the right in the upper part of the paper. Having done this, let him turn the paper over sideways (keeping the same edge to the top) and mark on the other side the numbers 2, 3, 6, 7, corresponding in a similar 'looking-glass' way to the numbers in figure 5.

If he now folds the paper into four by first bringing pages 2 and 3 and 6 and 7 together, and then by bringing 4 and 5 together, he will have a sheet folded as a sheet of a quarto book and will find that the pages are in the correct order from 1 to 8. It is therefore evident that if, having arranged the pages of type in the two formes in the manner indicated, the printer takes an impression from one forme on one side of the paper and from the other forme on the other side of the paper, laying the paper in such a way that page 2 falls on the back of page 1, the sheet when folded will have all the pages in the correct order.

Having thus imposed his pages correctly and locked them up in the two chases, the printer can proceed to the actual printing. One of the chases, probably first that containing the inner² forme, is placed on

¹ The ratio of the length to the breadth should be approximately as 4 to 3, in order that, when the paper is folded, the pages may be of usual proportions (see p. 103).

² According to Momoro, *Traité élémentaire de l'Imprimerie*, 1793, p. 147, there was in his day a strong, and in his view absurd, belief in some French printing-houses that the inner forme *must* be printed first.

the bed of the press and fixed there with wedges. The bed is so constructed that it will slide under the 'platen', a thick piece of beechen board perhaps reinforced with an iron plate, which, when brought down upon the type by means of a screw, presses the paper upon the type and so gives the impression.

The general form of the sixteenth-century press can be seen in the woodcuts reproduced on pages 39-47, and such description as seems needed for our purpose will be found in chapter v. For the present it must suffice to say that to the end of the wooden frame enclosing the bed of the press was hinged an iron frame covered with a sheet of parchment or thick paper. This frame, with or without the sheet of parchment attached thereto, was (and is) called the 'tympan'.¹ The hinges of the tympan allowed it to be turned back so that the sheet of paper to be printed could be laid on it. It was then turned over and brought down upon the type, which in the meantime had been inked

I know of no evidence as to any such notion among English printers. In most cases it would presumably be a matter of indifference which forme was laid on the press first, though, as pointed out on pp. 31-2, the inner forme must always be ready in advance of the outer one. Dr. Greg has been able to show that in one particular case, namely sheet K1 of the 1623 edition of the *Works of Samuel Daniel*, the inner forme was printed first (see *The Library*, 4th ser., vii. 216). In the First Folio of Shakespeare the printing of sig. D apparently began with the inner leaves of the gathering (see Pollard in *Sh. Folios and Quartos*, pp. 134-5), but as Dr. Greg has pointed out to me, an error in the headline of 2 *Hen. IV* shows that sig. 2 g was begun with the outer forme of the outside sheet. This, however, was an abnormal gathering (irregularly signed 'g g' between g and h, and 8 leaves instead of the usual 6). Similar evidence seems to show that in *Cymbeline* the outside sheet of sig. 3 a was printed last.

¹ In later times the tympan consisted of two sheets of parchment or other material, each stretched on a frame. One of these frames fitted within the other, and between the two sheets packing, consisting generally of a sheet of felt, was placed in order to soften and equalize the pressure of the platen. The arrangement was probably the same, or at least very similar, in Elizabethan times, but I am not aware of any evidence on the point.

by another workman.¹ The whole was then slid under the platen, and this was brought down upon the type by pulling the 'bar' or lever in order to make the impression. The lever was then released, raising the platen; the forme was slid away from under it, the tympan lifted, and the printed sheet removed and placed on one side.

The inking of the type was done by what were called 'balls'. These were in general similar to those still in use by etchers for spreading the 'ground', and continued to be used by printers until the introduction of the ink-roller, c. 1810. They were circular pads of cotton or hair, covered with some material such as leather, and provided with a stick or handle projecting from the back at right angles (see figures 10 to 14, pp. 39-47). The ink was first spread on a stone, from which it was taken up by the ink-balls (always used in pairs—one in each hand) and dabbed on the type.

It is, however, evident that with such a method of inking the forme there would be a great likelihood of part of the 'furniture' between the pages of type being inked, with the result that when the paper was brought down upon the forme it might come into contact with these accidental patches of ink and be soiled. To obviate the risk of this an attachment to the tympan, called a 'frisket', came into use.² This is a light frame attached by a hinge to the free end of the tympan in such a way that it can be folded down between the

¹ Two workmen must always have been necessary, or at least one and a boy, as the same person could not ink the type and lay on the paper. In most of the pictures of early presses it seems that one man did the inking, the other laid on the paper and worked the machine. In one or two, however, there is a boy in addition to lay on the paper, and in one the man who inked the forme seems also to have worked the press, a boy being employed to lay on the paper (*Bibliographica*, i, pl. xii).

² The use of the frisket in early printing has been questioned, but I think there is ample evidence of it, see pp. 46-8.

tympan and the forme. The frisket is covered with a sheet of paper in which holes are cut corresponding to the pages of type. After the sheet of paper to be printed is laid on the tympan, the frisket is folded down upon it, and thus all parts of the paper except those on which the impression is to fall are protected. The frisket and tympan together are then folded down upon the forme and the impression is taken.

Our printer has now a sheet printed on one side only and bearing the pages of one forme, say the inner. To complete it, the four pages of the other forme must be printed on the other side of the paper. Now if he has two presses, he may have placed the other forme on the second press; but he cannot at once proceed to 'perfect' the sheet by laying it, printed side downwards, on the tympan of that press and printing it on the back; for if he does so the result will be that the still wet ink of the first side printed will 'set off' on the tympan of the second press and thence will be transferred to the next sheet printed, and will spoil it. He must let the ink of the first printing dry before he attempts to print the sheet on the other side.¹ This necessary interval between the printing of the two sides of a sheet is, as we shall see later, of great importance in connexion with variations between copies of the same edition of a book.

As a matter of fact it is often evident from the occurrence of the same cut, ornament, or initial letter on both sides of a sheet, that the printer printed the whole number of impressions on one side before starting to perfect; for it is unreasonable to suppose that he would first print, say, 100 impressions on one side, then transfer the initial to the other forme and, after waiting for the ink of the first printing to dry, proceed to perfect the 100 impressions; then re-transfer his

¹ There are ways of avoiding this trouble by the use of 'setting-off sheets', but it is unlikely that the sixteenth-century printers were often sufficiently pressed for time to make such expedients worth while.

initial to the first forme, and so on. Such a process would in all ordinary circumstances be an absurd and purposeless waste of time. Indeed, although it is possible that, when two presses were available and there was especial need of haste, a printer may occasionally have begun to perfect when a few copies of the first side printed were dry, there is no reason for doubting that the normal procedure at all periods has been to print all the copies of a sheet on one side before perfecting was begun.

We must pause to discuss a question which will probably already have occurred to the reader, namely, by what means it was arranged that the pages on one side of the sheet should correspond in position with those on the other, or in other words how they were made to 'register'. Evidently if all the sheets of paper used were exactly of the same size, and had straight edges, it would be possible to mark the tympan-sheet for the two printings in such a way that if the paper was laid to the marks the register would be correct. Even if the paper varied somewhat in size this would be possible (provided that the marks were towards the opposite edges of the tympan in the two cases¹). Hand-made paper, however—and of course all early paper was made by hand—has uneven edges, and such a method would therefore prove, at best, unsatisfactory.

The method actually employed² seems to have been as follows. Two 'points', probably somewhat like ordinary drawing-pins, were attached to the tympan-sheet (by glue or otherwise³) so that when the tympan was folded down, the points would fall on the line equally

¹ So that the same edge of the paper, when it was turned over, would be laid to the marks.

² Essentially the same as that employed at present on hand-presses.

³ In later forms of the press the points are at the ends of thin strips of metal which can be screwed to the sides of the tympan-frame so that the points project over the tympan-sheet.

distant from the top of the pages (line AB in figure 4). When the sheet of paper was placed on the tympan these pins would pierce holes in it; and obviously if pins were similarly placed when the sheets came to be perfected, and the paper was so laid on the tympan that the pin-holes made when printing the first side fitted the pins, then, provided that the forme was correctly placed on the bed of the press, perfect register would be obtained. If a loosely bound folio book be examined, the pin-holes can usually be found in the fold, near the top and bottom of the leaves. In a quarto they would be in the top edge of the folded sheet and thus would generally have been cut off in binding. In an octavo they would be in the outer edge and are generally absent for the same reason.¹

Some of the early cuts of printing-presses seem to show that as a guide for the correct placing of the sheet on the pins of the first press, the sheets, before printing was begun, were all folded so as to form a crease across the middle. What appears to be such a crease can be clearly seen in the pile of flat sheets about to be printed.² If the sheet were so placed on the tympan that the pins pierced the crease it would be rectangular to the pages.

The drying of the sheets between the printing of the first and second side, and after the second, was done by hanging them on strings or wooden battens across the room,³ a process that was probably rendered easier by the crease already mentioned. When dry they were ready to be folded and sewn to form the book.

A few words must be added as to the disposal of the type after the forme had been printed from. The

¹ In very early printing many more points were used. In the 42-line Bible there were as many as ten; later four were frequent (Duff, *Early Printed Books*, p. 49; Blades, *Caxton*, p. 130). In Caxton's early work they were placed at the four corners of the sheet (in all books printed with his type no. 1, but only once later).

² See figures 11 and 14.

³ See p. 40 below.

forme was first washed down with an alkaline solution, called 'lye', to remove the ink from the type, and then rinsed with clean water. It was then 'unlocked' by loosening the wooden wedges and removing the 'furniture'; the pages were separated and, unless distribution was to take place at once, they were tied round with string to prevent the type from falling apart and set aside in a safe place. Distribution was effected by taking a few lines of the type, supported on a setting-rule, in the left hand in such a way that the nick was outward, or away from the distributor, and the face of the letter consequently inverted (as it was in the composing-stick). The type would therefore read from left to right but upside down. The distributor next took a word at a time with the finger and thumb of his right hand, read it, and proceeded to drop the type letter by letter into the appropriate divisions of the case. It is probable that so far as possible each compositor would distribute the type which he had himself composed into the case from which it originally came, or at any rate into a case under his own charge, though we need not suppose this to have been a universal rule.

chain-lines would be normally placed, would

titles connected with so complicated to be titles is connected with which the chain-marks there is, for example, printed by Grafton first twelve sheets of er, i.e. the gatherings marks run vertically, of the inner margins, that of an ordinary book (and the prelims.) gatherings being still watermarks in each horizontally. It is not so paper was a sheet, or whether in the same reason or other which was usual.³

There seems to be not gatherings I could find each gathering, we might on a press of double the late. *and London*, p. 52, mentions 'leaves' are on quarto, octavo and partly octavo, 6 and 8vo are not infrequent in the eighteenth century, and a puzzling example *lands*, of which, while *mos*, vol. iv (1755) is 758) are apparently—no watermarks in these unless all the volumes

Chapter Three

ON THE MEANING OF 'EDITION', 'IMPRESSION', AND 'ISSUE', AND ON DETERMINING WHETHER TWO BOOKS ARE OF THE SAME EDITION OR NOT

NO precise definition of 'issue' or 'edition' is possible, but there is among bibliographers a well-recognized difference in the use of the two words. In modern times we can define 'edition' as the whole number of copies of a book printed at any time or times from one setting-up of type (including copies printed from the stereotype or electrotype plates made from that setting-up of type), and 'impression' as the whole number of copies printed at one time, i.e. in ordinary circumstances the total number of copies printed without removing the type or plates from the press. By 'issue' is generally meant some special form of the book in which, for the most part, the original printed sheets are used but which differs from the earlier or normal form by the addition of new matter or by some difference in arrangement.¹ Thus, if to an existing book of reference were added an appendix bringing it up to date, this appendix being bound up with sheets of the original edition and a new title-page, this would properly be described as a new issue. The word is, however, very loosely used, and a 'cheap re-issue' may merely mean the old book quite unchanged, except perhaps for the substitution of a cheaper binding, but at a reduced price.

When dealing with early books, 'edition' and 'impression' as a rule are the same thing, for the early printer normally distributed his type immediately it had been printed from, though there were, as we shall see, exceptions to this; and therefore if a reprint was

¹ Parts of an impression printed on different paper are also sometimes referred to as different 'issues'.

required the whole had to be re-set and a new *edition* was created. It is thus only necessary to consider the difference between an 'edition' and an 'issue'.

The general principle is that when we talk of a new 'edition' of a book we mean that the type of the whole book, or at any rate of the text as distinguished from the preliminary matter, has been set up afresh; while when we speak of a new issue, we mean that what were left of the old sheets of the text have been bound up with a new title-page¹ or with new preliminary matter.

A difficulty arises in connexion with books the edition of which was shared among several publishers, a certain number of copies of the title-sheet being printed with each publisher's name. Thus some copies of the undated edition of Chaucer's works issued about 1545 have the name of William Bonham as 'printer', others that of Robert Toy, Richard Kele, or Thomas Petit,² and there are five different imprints of the 1632 folio of Shakespeare, stating that the book was printed respectively for Allot, Aspley, Hawkins, Meighen, and Smethwick. Instances of this practice are numerous. The question is, should these books be described as belonging to different issues or simply as having variant imprints? My own feeling is that when we are dealing with books essentially the same in contents, 'issue' implies the total number of copies put out *at one time*, and that the simultaneous publication of a book by a variety of people does not constitute separate issues; though no doubt if a book were after a while handed over to a new publisher who published it with his name

¹ The mere addition of new matter *without* a new title-page, especially if the addition only consists of a dedication or an epistle to the reader, is not generally regarded as constituting a new issue.

² They can hardly all have been the actual *printers* of the book, and we must assume therefore that each paid a share of the cost and took a certain number of copies. When we find an early work described as 'printed by' a certain person, we cannot by any means always assume that it was actually the work of a press owned by him. It often means no more than 'printed for'.

substituted for that of the original one, this *would* constitute a separate issue, as in the case of Barker's books mentioned below. The practice among bibliographers seems, however, not to be uniform.

The occasions of such reissues in early times were generally either: (1) for the purpose of indicating a change in the publishing arrangements, as when in 1578 Christopher Barker, on being appointed Queen's Printer, was ordered to supply new endings and titles for books printed by the former Queen's Printer (*Acts of the Privy Council*, n.s., x. 287-8); or (2) in order to add new preliminary matter, as in the case of the reissue of Thomas Nashe's *Christ's Tears over Jerusalem*, 1593, with a long new preface in 1594; (3) in order to make an old book appear a new one, as in the case of Lodge's *Scillaes Metamorphosis*, 1589, the sheets of which were reissued in 1610 with a new title as *A moste pleasant Historie of Glaucus and Scilla*; or (4) in order to make some correction or alteration in the preliminary matter which was thought desirable, as in the well-known case of the second issue of *Troilus and Cressida*. In this last group it is often questionable whether we ought to regard those copies with altered preliminary matter as a separate 'issue' or to consider the new matter merely as a cancel. Which we do should depend on whether the main intention seems to be to *correct* something (in which case it is a cancel) or to give a new life to the old sheets (in which case it is a reissue).

There are of course intermediate possibilities between the new 'edition' as defined and the new 'issue' consisting of old sheets with new title and preliminaries, and it is in the description of these that difficulties arise. For example, sometimes after the original publication of a book a lengthy addition or continuation—occasionally, indeed, as long as the original book—was printed and bound up with a new title and what remained of the original sheets. Is this a new edition or a new issue? It is often called a new edition, but

it is, I think, much preferable to call it 'a new issue with additional matter'; for it is clear that there is no new edition of what was originally printed, since we have merely the remainder of the old sheets; nor can it be a new edition of the added part, for that never appeared before. In fact all that can properly be said to be of a new edition is the title-page, which is not part of the book itself but merely, as we have seen elsewhere, a kind of label, the copy for which was sometimes—if not generally—furnished by the publisher.

Occasionally even before the printing of a book was finished, or immediately on publication and before the final sheets were distributed, it became apparent to the publisher that the demand was greater than he had anticipated. In such a case the best plan would obviously be to print additional copies of sheets still in type and re-set those which had been distributed. We may then get two issues (or editions), part of which is from the same setting-up of type and part from different settings; a state of affairs which gives rise to problems somewhat similar to those which we shall have to consider presently in connexion with books set in duplicate. An interesting example of this has been discussed in Part I, chap. vi, when we saw that the duplicate settings of certain pages of a Valerius Maximus of 1471 gave us valuable information as to a detail of the printer's technique. Another will be found in the two editions of Jasper Heywood's translation of Seneca's *Troas*, printed by Richard Tottel in 1559 in octavo; which are from different settings as far as the end of sheet C. In the final sheets, however, we find that the inner forme of sheet D, with the exception of D1^v, all of sheet E except E3 and E4, and all of sheet F (three leaves only) except apparently F2^v and the colophon on F3^v, are from the same setting in the two editions.¹ The pages seem, however,

¹ See de Vocht's edition in Bang's *Materialien*, pp. xxxix-xliii. The editor regards D1^v as identical in the two editions. Possibly in

to have been unlocked from the formes, as there are differences in the position of the headline and in other minor points of arrangement. It may be noted that the amount of type needed to keep so many pages standing at one time is not so great as might be supposed, as owing to the short lines of the verse there is unusually little to the page.

Several other examples of the same sort of thing might be instanced, but in principle all are much the same, and a single one may suffice. This is the case of Marston's *Parasitaster*, 1606, of which there are two editions in the same year, the second being corrected by the author. Dr. Greg points out to me the remarkable fact that large portions of the text scattered throughout the play, as well as two whole sheets (D and I), are from the same setting in both, the rest being re-set. It is difficult to imagine how this curious state of affairs can have come about.¹

In all such cases as these, I think we may quite fairly speak of separate *editions*, in spite of the fact that parts of the book are really only separate *impressions*. Even in those cases in which the printer may have decided that additional copies would be required before the final sheets were printed, and therefore printed the whole higher number at once so that *these* sheets in the second edition might properly be described as reissued, it seems, when there is really any considerable bulk of re-set matter, somewhat pedantic to insist on this aspect of them. From the printer's and publisher's point of view the increased number was a new enterprise not contemplated at the start of the work, and this seems of more importance than the fact that they in a few cases the apparent differences may be due to letters falling out and being replaced when the pages were re-imposed.

¹ J. P. Collier in his *Bibliographical Account*, i. 291, states that there were two issues of H. C.'s *Forest of Fancy*, both dated 1579, one consisting of 58 and the other of 80 leaves, and that part of the type was from the same setting in the two issues. I have had no opportunity of verifying this, and give the statement for what it is worth.

EDITION, IMPRESSION AND ISSUE

were able to save a few shillings by using an old setting of part of the book.

The most difficult cases to decide are those—fortunately few in number—where the printer has rearranged his type, but not re-composed it. For example, in one of the editions of the *Articles* printed by Grafton, a portion of text referring to the duties of bishops was omitted from its proper place and was added at the end under the heading, 'More for the Byshop'. This was apparently found unsatisfactory, and the formes were unlocked and the type reimposed with the addition correctly placed.¹ In Grafton's days such a thing as this could hardly happen save in the case of an official publication such as the *Articles*, of which large numbers would be printed and which only consists of six leaves (a sheet and a half in quarto), for ordinary books would, in the usual course, be distributed sheet by sheet as worked off. There are also in later times a few books such as Jasper Mayne's *City Match*, 1658-9,² which were issued both in quarto and, with the same type rearranged to a shorter page, in octavo. In some, at least, of such cases the two formats were probably worked simultaneously, each sheet as printed being reimposed for the other size, so that we need not suppose that the whole book was in type at the same time.

In all cases of such extensive alterations as these, we should, I think, be justified in speaking of different 'editions', in spite of the fact that strict adherence to our definitions would seem to constitute them different 'impressions' of the same edition.

The following hints on how to determine whether two copies of a book belong to the same edition, i.e. are from the same setting-up of type, may be of use to junior students. There is, of course, seldom any diffi-

¹ We can see that it is the original setting of the type by the broken letters and other peculiarities.

² Greg, *List of English Plays and Masques*, cxxvi and xii.

THE IDENTIFICATION OF EDITIONS

culty when we can compare the books, or even photographs of a few pages, side by side. This, however, is often impossible, and we may have to rely entirely on notes: it is well to know what can be most profitably noted.

First, of course, there is the 'collation' of the book. If one copy runs to, say, F4, and the other to G4 (both being perfect copies), they evidently belong to different editions, and the only thing left to make sure about it is that sheet G is not simply an extra sheet containing an appendix or other additional matter.

Assuming that the collation of the copies is the same, notes of the following points, or of some of them, will generally settle whether they belong to the same edition or not:

(1) The catchwords on certain pages. It is well to note the first catchword on each sheet and perhaps one or two others here and there, preferably towards the middle of the sheets. There is, however, little or no use in noting the final catchwords of the sheets, as in the very common case of a reprint being divided among two or more compositors to set up they will be bound to work so that the sheets shall each end with the same word as the original which they are following, for otherwise of course the sheets of the reprint would not follow one another properly.

(2) The last words of some dozen lines on one or two pages taken at random in different parts of the book. Even when a book is set up 'line for line' from another it often happens that the lines do not exactly correspond throughout. Slight differences in the founts used, especially the presence or absence of contractions, may cause a compositor sometimes to turn over a word into the next line. It is safer to take such line-endings from near the middle of a page, where the compositor generally allowed himself rather more freedom in this respect than elsewhere.

(3) The position of the signatures, i.e. how they

stand with respect to the words in the last line of print, may be noted on a certain number of pages.¹

(4) The size and design of any large ornamental initials used at the head of chapters or sections may be noted.

(5) It is worth while to look for punctuation marks belonging to wrong founts, e.g. italic or black-letter queries or colons in a Roman text. These are quite unlikely to be corrected at press, and the chance of their occurring in the same place in two separate editions is of course negligible.

(6) Most founts of italic types had two forms of capital letters, a plain form and one with flourished projections (the latter form being called 'swash letters'). These were generally used indiscriminately, and consequently the use of the one form or the other in particular words is often a good test as to the edition to which a particular copy of a book belongs.

(7) Broken letters may be looked for in the text and the place in which they occur noted. Broken letters are, however, not a very satisfactory means of identifying editions. In the first place, they may get broken during the actual printing and may therefore only print as broken in certain copies. Secondly, it is not always easy to distinguish between a broken letter and one that, for some reason or other, has failed to print properly. An example will illustrate the danger of relying too much on their evidence. Some years ago, wishing to decide whether two copies of a book, one at Oxford and the other at London, belonged to the same edition, I noted down certain peculiarities, including the fact that in a certain word, let us say 'sunne', the second limb of the first n failed to print and seemed to be imperfect. I had, I may say, made sure that other n's on the page printed correctly. The other copy showed exactly the same imperfection, but when I came to examine the other points noted, I saw that the editions

¹ For an example of the use of this method, see Bond's *Lytly*, vol. i, pp. 89, 94, 96.

were clearly different. Thinking that this was odd, I looked further and found that, though single n's printed correctly, in nearly every case of two n's coming together the second limb of the first one failed to take the ink. What had happened was evident. The matrix from which the letter was cast had not been struck perfectly true¹ and consequently one limb of all the n's of the fount was slightly higher than the other. In ordinary cases the difference of height was not enough to prevent the lower one from being inked and printing properly; but when two n's came together the unusually high first limb of the second n came against the unusually low second limb of the first n, and so prevented it from printing. We must therefore remember that such apparent faults of printing may sometimes be faults of the whole fount of type used, and be on our guard against taking these as faults of a particular impression.

(8) If these tests fail to satisfy us, there is one other that we may try. I have used it several times and have never known it fail to give a clear answer one way or the other. It is this: Take any page of the book and find in it two full stops at a distance of some ten or a dozen lines apart (if possible the lines should be towards the centre of the page). Note of course the page and the words before the stops so as to identify them. Now lay a ruler on the page from one of these stops to the other and note the letters or parts of letters that it cuts. If a rule placed in a similar position in the other copy cuts the same letters, the chances are many hundreds to one that the two pages were printed from the same setting-up of type; for however carefully a compositor followed his original, the irregularity in the casting of type and spaces would almost inevitably prevent the two prints corresponding in this respect.

¹ In type-founding the type is first cut on the end of a steel punch. From this a matrix is made by striking it into a piece of copper. The matrix is then fixed in a type-mould.

Chapter Four

ON BIBLIOGRAPHICAL EVIDENCE AS TO THE ORDER OF EDITIONS

WE may as a general rule assume that the handsomest edition of a book is the first.¹ The tendency of reprints has at all times been toward the saving of expense in production, for when the reputation of a book is once established, its appearance becomes a less important factor in its sale; while if it can be sold at a cheaper rate it may fairly be expected that a new public will be reached and a larger number of copies disposed of. Accordingly we sometimes find that books originally issued in folio or quarto are reprinted in a smaller size, in quarto, octavo, or even twelvemo; or when the original size is retained, paper is saved by the matter being compressed into a smaller number of sheets, while occasionally the paper itself is of a cheaper make. The actual quality of the workmanship is not by itself a safe guide, for in this respect so much depended upon the particular house from which the book issued.

In cases which form an exception to this rule it will generally be found that there is some special reason for the inferiority of the first edition. Either it is more or less surreptitious, a matter to which we shall have to refer later, or was issued in haste, or it was desired for some reason to produce it as cheaply as possible.

Handsomeness of 'get-up' is as a general rule much better evidence of priority than correctness of text, if by 'correctness' we mean the reproduction of what

¹ Unless, of course, in its later form it was part of a 'collected edition', or was intended to range with some handsomely produced edition of another work, or there was some other special reason for setting it out in a more luxurious manner.

MISPRINTS AND BAD READINGS

the author intended. On the other hand, a handsome edition is as a rule carefully produced and is comparatively free from *literal* errors. The words in it will as a rule be real words correctly spelt; but they may not be the correct words. Whether they are so or not would depend less on the care taken by the printer than on the correctness of the MS. (if a copy and not the original), on its legibility, and on whether the author read the proofs.

And here it is to be noted that there is a very important difference between errors of wording and errors of printing (which alone are properly called 'misprints'), and that the two kinds of errors vary quite independently of one another. A most carelessly printed book, absolutely swarming with literals, may contain important corrections, and from an editor's point of view give us the best text. Indeed if we may imagine an author making improvements from time to time in his own copy of his work (presumably a copy of the original edition) and sending lists of these to the printer to be inserted in reprints, or even inserting them in proofs himself, and if these reprints were in other respects not more carefully supervised than the general run of such things, we might have a series of editions steadily degenerating in correctness of printing and at the same time steadily improving in 'readings'. It was insufficient attention to this point that in the early days of editing led to the general assumption that the first edition of a work was necessarily the best to take as the basis of a modern edition, which we now see to be not by any means always the case.¹ We can indeed only assume it to be the case when we can be

¹ To prevent misunderstanding, I should perhaps say that I refer to those modern editions the purpose of which is simply to reproduce an author's work as literature, and especially to editions in modern spelling. The *literatim* reprint is a different matter. When we have to choose a single edition to reproduce, and there is no question of an eclectic text, the earliest (provided that it was not printed from an obviously corrupt MS.) will as a rule be preferable to any other.

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reasonably certain that the author had nothing to do with the later editions. In using 'correctness' as evidence of priority of issue we must therefore be careful to confine our attention to *mechanical* correctness, i.e. the absence of misprints, alone.

To turn now to the more special kinds of evidence as to priority which may be deduced from the comparison of editions of a book. The most conclusive evidence as to the order of editions and as to which was printed from which is often to be obtained by a comparison of readings, but this is a lengthy business, and even if in the end we find it necessary to undertake it, much time may generally be saved if we can first arrive at an approximate or *probable* order before we proceed to the actual collation of the texts.

It seems clear that in the great majority of cases a new edition of a book was printed from an earlier one, and not from the original MS.¹ or from a copy of it. In the first place it is easier for the compositor to read, and hence he could presumably work quicker. Even at present, the composition rates are 8 to 10 per cent. less for exact reprinting from a work already in type than for composition from a MS. In the second place, if it was intended to reprint page for page, as was usually done unless there was some special reason

¹ It has been held, I know not on what grounds, that the MS. of a book when once printed from was destroyed. This seems unlikely, as it would in most cases bear the signature of the licenser, and it would therefore be important to preserve it for a time in case any question should arise as to the book having been duly passed by the authorities. The only piece of evidence bearing on the matter which is known to me is Jaggard's epistle in Vincent's *Discovery of Errors*, referred to on p. 206, where the printer states that the original MS. of the work against which Vincent was writing was extant, and it could therefore be proved that the errors in the printed book were not due to the printer's carelessness. The small number of extant MSS. which appear to have passed through the hands of a printer is easily explained by the very slight value which in an unsentimental age would be attached to them when their practical utility was exhausted, and by the destruction caused by the Great Fire.

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against it, the book could conveniently be divided among two or more compositors, who could work simultaneously.¹

It may then generally be *assumed* that a later edition is printed from an earlier one unless there is clear evidence to the contrary; but one can often get direct evidence of the fact. For example, if two editions of a work in prose correspond line for line they must be of the same series (i.e. the later one must have been printed from the earlier or from one which itself was derived from the earlier). No two compositors working independently from a MS. would set line for line the same, even if they followed the spelling of the MS., which they probably seldom or never troubled to do, unless in the case of a few authors who made a special point of spelling, such as Churchyard, Stanyhurst, or Ben Jonson. The proof is as good if, as we sometimes find, the texts do not agree line for line throughout, but are brought to agreement at the end of each page so that the catchword is the same, for this could only be done by a compositor who had a printed page to work from.

In the case of verse, the lines of which do not as a rule occupy the full breadth of the page, the line-for-line test is of course useless, but the identity of catchwords is usually evidence enough that one printed text was set up from another; for even if by chance the second printer had determined to use the same number of lines to the page as the first, he would be almost sure to make some variation in the space between stanzas, or in turn-overs or at the head of sections or elsewhere, and this after a few pages would throw the correspondence out.

It need hardly be said that the more unthinkingly

¹ I do not mean to say that a MS. was never divided up among several compositors, for this was no doubt done when there was special haste (cf. pp. 128-30); but it would be much *easier* to arrange it when exactly reprinting a book already in type.

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and mechanically a compositor reproduces what is before him, the easier it is to show that he was following it. For example, in plays we occasionally find light thrown upon the relation of editions by a curiously stupid trick of compositors, who when a piece of prose is found among verse will sometimes when reprinting it treat each line as if it were a line of verse, not being careful to fill the lines out by spacing or, when necessary, bringing up part of the next line, but allowing them to remain short when differences in the fount of type used chance to make them so. Similarly in a reprint we sometimes find words carried over to another line, or stage-directions misplaced, because in the original edition there was no room for them where they belonged, even though the reprinter might easily have found space for them. Points like these, however, will easily be noticed. It is sufficient to warn an editor that whenever he comes across anything abnormal in the typographical arrangement of a text it will generally pay him to consider whether this may be due to the blind following of an earlier edition, in which perhaps the arrangement was for some reason or other quite justifiable.

Important evidence as to the order of editions can sometimes be obtained from a consideration of the signatures.

When a book is set up from MS., it is in most cases convenient to begin composition not with the title-page or preliminary matter, but with the commencement of the work itself. There are several reasons for this. It may be required that the preliminary leaves shall include a list of contents, with page-references; and these page-references cannot of course be inserted until the text of the book is in type. Further, an author often wishes to leave his preface or dedication until the last. Corrections also are often given in the preliminaries. Hence it was a general, though not a universal, rule in earlier times, and is practically a universal rule

SIGNATURES AS EVIDENCE

at the present day, to begin with the beginning of the text.

A printer setting up a book in this way would do one of two things. Either he would sign the first sheet of the text A, intending when he came to the preliminaries to sign these with an asterisk, or with letters of another fount; or he would begin the text with B, keeping A for the preliminaries. The second is the usual method at present, though indeed A is not now as a rule actually printed in the preliminaries, it being evident to the binder that these are to come first. In Elizabethan printing there seems to have been no definite rule. It probably varied with the printing-house, but the question has not, I think, been investigated.

The *safest* method was evidently to begin with A, for if the author afterwards came along with preliminary matter extending to several sheets, it was easy enough to find arbitrary signs such as *, **, ***, &c., for them, or to use letters of the lower-case alphabet. On the other hand, if the printer had begun the text with B, he had only A to go before it, and if the preliminaries needed more than one sheet a difficulty arose as to how he should sign those after the first.

Now let us consider a few possible cases of signatures. It will seem at first sight that the points raised are matters of very small importance, but I hope to show that they may sometimes give us useful information.

(1) Suppose the preliminary matter occupies one sheet signed A, the text beginning on B—what does this tell us? The answer is, nothing at all. The preliminaries may have been printed either before or after the text.

(2) But suppose the preliminaries only occupy three leaves and the text begins on the fourth leaf of the sheet (A4). This gives us the information that the preliminaries, including the title-page, were set up first.

Hence the printer had the whole of his matter in hand before beginning composition. Hence there is a considerable chance that the book is a reprint.

(3) So also if we find very long preliminaries signed A, B, or A, B, C, and the text begins on C or D, it is likely, though not certain, that the book is a reprint.

(4) Suppose that the preliminaries consist of two sheets signed A and a, and the text then begins on B. We should at once guess that the printer began with the text, and that when the preliminary matter came in he found it unexpectedly long. Having only left one signature for it, he found two were required and had to add 'a'. If he had been reprinting, beginning from A, he would naturally have signed the second sheet B, and so on. Hence in this case the book was probably printed straight from MS. and is likely to be a first edition.¹

From these considerations, we can deduce the general rule that an edition in which the signatures are all of one alphabet, beginning with A and proceeding regularly, is likely to be later than an edition in which the preliminary leaves have a separate signature.²

In the above cases we are only dealing with probabilities. The signatures give us a hint, which we must, if we can, turn into certainty by other evidence. But sometimes we can at least be certain that a book is a reprint.

For example, suppose that the preliminaries contain remarks by the author about the printer's haste or slowness, skill or carelessness; or corrections or additions; or a list of contents in which page-numbers are

¹ Provided that sheet a runs on from A. If not, the second sheet may be a later addition, as in Richard Harvey's *Lamb of God*, where sheet a contains an Epistle only found in a few copies.

² Excellent use of this point was made by Miss Henrietta C. Bartlett in her paper on 'Quarto Editions of Julius Cæsar' in *The Library*, 3rd Ser., iv. 128.

given; it is evident that the preliminary matter dates from after the book was originally put in type.

Now suppose also that the signatures are regular, beginning with A, but the text does not begin at the beginning of a sheet but, say, on A4 or on B2, we see at once that the printing must have begun with the title-page and gone straight forward, and hence our book cannot be a first edition, but must be a reprint. More than this, if in the preliminaries there are references to pages of the book, it must be a page-for-page reprint from an earlier edition.¹

One or two examples may make things clearer. To the second edition of Thomas Nashe's *Pierce Penilesse* is prefixed a letter from the author to the printer, in which Nashe says that he hears that the book is 'hasting to the second impression' and that if the printer 'had not been so forward in the republishing of it' he would have added something. He also asks him to shorten the title, which in the first edition had been too long. This the printer did. He had evidently begun printing with the text, which is signed A; the title and the above-mentioned Epistle, which we may assume not to have been written until the book was, at least partly, in type, being signed by a paragraph-mark.

In the third edition the arrangement of signatures is similar; but in the fourth the title-sheet is A, the epistle being on A2 and the text beginning on A3. Here then the Epistle was evidently set up *before* the text. Hence, even if the second and third edition had completely disappeared, we could have inferred the existence of one of them in which this letter was printed.

A still better example of what may be learnt from

¹ It is perhaps necessary to say that this would not be a valid inference in the case of modern books, where the whole might be standing in type at once; but such was not the custom with the earlier printers.

THE ORDER OF EDITIONS

signatures is to be found in the two undated editions of George Chapman's *Memorable Masque of the Two Honourable Houses or Inns of Court* [c. 1613]. The arrangement of the two editions is as follows:

1. Printed by G. Eld for George Norton.

Quarto. ¶², A⁴, a⁴, B-E⁴, F².

(¶1) Title, verso blank. ¶2 Dedication. A1—a2^v 'The Maske of the Gentlemen' (a general account of the performance). a3—3^v 'To answer certaine insolent obiections made against the length of my speeches, . . .' (a4) 'The aplicable argument of the Maske' and Errata (in which errors are referred to by the signatures of the text); verso blank. B1—F1^v The Names of the Speakers, followed by the text of the Masque.

2. Printed by F. K. for George Norton.

Quarto. A—G⁴.

(A1) wanting, probably blank. (A2) Title, verso blank. A3—3^v Dedication. (A4)—C1^v 'The Masque of the Gentlemen.' C2—2^v 'To answer certaine insolent obiections.' C3 'The applicable argument, . . .' verso blank. (C4)—G3^v The Names of the Speakers, followed by the text of the Masque.

In this edition the List of errata does not occur, but only one or two of them, and those the most obvious, have been corrected.¹

Now even from the make-up alone we might guess that Ed. 1 is the earlier, for the work itself begins on B1 and this is preceded by A and a, the latter signature strongly suggesting that the preliminary matter was more than the printer had expected and allowed for. But we have what amounts to absolute proof, for on a1^v, in the middle of the description of the masque, we find the following passage:

These following [i. e. certain descriptions of the setting and action of the masque] should in duty haue had their proper

¹ It may be noted that in this edition D1 is missigned B, perhaps owing to the fact that the corresponding leaf in Eld's edition had been B2.

SIGNATURES AS EVIDENCE

places, after euery fitted speech of the Actors; but being preuented by the vnexpected haste of the Printer, which he neuer let me know, and neuer sending me a prooffe, till he had past those speeches; I had no reason to imagine hee could haue been so forward.'

Now it is of course evident that this could not have been written until much of the play was in type; and therefore the preliminary matter must have been set up *after* the text. In Ed. 1 this, as we have seen, is possible; the arrangement even strongly suggests it. But consider the arrangement of Ed. 2. Here the passage just quoted is on sigs. B4^v and C1, and the masque itself begins on the last leaf of sheet C. It is therefore impossible that the text should have been set up before the preliminaries, and this edition *must* be a reprint.

Hence we cannot reasonably doubt that the edition printed by G. Eld preceded that by F. K.

Occasionally of course an author might deliver all the prefatory matter to the printer with the beginning of the work, and he might then begin composition with the title-page. We get an instance of this in another work by Nashe, *Strange News*, 1592, where as the text begins on B4 we might reasonably suspect that we have, not the original, but a reprint. Fortunately, however, the author settles the question by referring in sheet I to the word 'Gentleman' which the printer had added to his name on the title-page (without his consent or privity), thus showing that the title was already printed and that he had seen it, and incidentally informing us that he was sending his copy to the printer in batches, as he wrote it. In this book the corrigenda come of course at the end, and it is interesting to observe that, though Nashe appears to have been in the Isle of Wight at the time when the book was being printed, he was able to include in his list of corrigenda (in sheet M) errors in sheet K, which must therefore have been already printed off and a copy forwarded to him.

I have referred to the fact that in certain circumstances errors in signatures may afford us information as to the order of editions of a book. It frequently happens that a reprint follows the original page for page but that the signatures differ. Thus the original may have been signed *, A, B, &c., and the reprint A, B, C, &c. Hence sheet B in Ed. 1 will be sheet C in Ed. 2. Now we sometimes find that the compositor in setting up the reprint forgets that he has to alter the signature. A mistake of this kind is almost invariably corrected in the first leaf of a gathering, because it is important to the binder that these first signatures be correct, but it is sometimes left uncorrected in the later leaves of the gathering. Thus we may find a gathering signed B₁, B₂, B₃ in Ed. 1, and C₁, B₂, B₃ in Ed. 2. We at once guess that our Ed. 2 was printed from an edition in which this particular gathering was signed B, hence in the present case from Ed. 1 or an edition similarly arranged. And suppose we have also an Ed. 3 page for page the same, but this gathering correctly signed C₁, C₂, C₃, we shall be fairly safe in assuming that it was later than Ed. 2, or at any rate was not intermediate between Ed. 1 and Ed. 2.²

Other points that it is well to be on the watch for are the following:

The manner in which the editions end, i.e. whether they do or do not fill an exact number of sheets. Odd leaves, not forming a complete sheet, whether at the beginning or end of a book, are naturally disliked by any one who has to pay for the printing of a book, as they involve a waste of labour in machining.³ In a first

¹ But cf. p. 192, note.

² It may of course have been independently printed from Ed. 1.

³ A half-sheet or even a single leaf takes of course as much time and labour to machine as a full sheet. Evidence of the avoidance of these waste blanks may be found in the occasional addition of odd fragments of matter having little or no connexion with the book itself, which we sometimes find at the end. Thus Hake's *News out of Paul's Church*

edition, set up from MS., it may be impossible or not worth while so exactly to calculate the length that, using a particular size of page, it will fill an exact number of sheets. In reprinting, however, it is quite an easy matter to do this, and when a reprinter does not follow his original page for page it will generally be found that he adjusts his size of page to give this result.¹ Hence, if of two editions of a book one has a collation, say, *⁴, A-L⁴, M² (or M⁴, M₄ being blank) and the other *⁴, A-L⁴ only, both containing the same matter and being complete, we may be almost certain that the second one represents an attempt to save costs by getting the matter into an exact number of sheets, and is the later.

Differences in paragraph division. If these are only occasional and do not seem to have been dictated by any purpose of lengthening or shortening the matter,²

yard [1579] has on sigs. H₃-H₈ a 'letter written by the Author to his friende lying at the point of death' inserted 'for the fillinge vp of emptie pages'. Another instance of this filling up of waste space, though not at the end of the book, is to be found in *The Generall Historie of Virginia* by John Smith, 1624. The setting of the book was evidently divided between two compositors, one taking Books 1-3, the other Books 4-6. The second compositor began his work at page 105 (sig. P₁), but either some of the first man's material was withdrawn or a miscalculation had occurred, for his matter came to an end on page 94 (N₃^v). On page 95 (N₄) we therefore find the heading 'Now seeing there is thus much Paper here to spare, that you should not be altogether cloyed with Prose; such Verses as my worthy Friends bestowed upon New England, I here present you, because with honestie I can neither reiect, nor omit their courtesies'. Then follow verses to fill the two pages. There is no signature O. I am indebted for my knowledge of this book to Miss Albright's *Dramatic Publication*, p. 344.

¹ For an example of the readjustment of matter to save space, compare East's edition of Baldwin's *Moral Philosophy* referred to on p. 78, and, for saving by imposing oddments together, see pp. 158-60.

² A curious instance of difference in paragraphing may be found in the two editions of Nashe's *Unfortunate Traveller*. Here, perhaps with a view to the saving of time, the reprint seems to have been divided between two printers, and, it being apparently desired to get the book

it is worth noting whether in cases of running-on in one edition (A), it happens that the last line of the preceding paragraph in the other edition (B) is a full one. If this is so, it is probable that the compositor did not notice that a new paragraph was intended. The occurrence of several cases of the kind would strongly suggest that A was printed from B.

Evidence from superfluous hyphens. When a word in one edition happens to be divided at the end of a line, a printer setting up from this text, and not following it line for line, will sometimes carelessly repeat the hyphen when it is no longer required. Thus in the three editions of Nashe's *Pierce Penilesse* printed in 1592, we have in one place:

Ed. A. frantick (the word midway in a line).

Ed. B. fran-tick (the word divided at the end of a line and correctly hyphenated).

Ed. C. fran-tick (the word midway in a line and the hyphen incorrectly retained).

Knowing, as we do, that A is the first edition, we can see that it is highly probable that B was printed from A, and C from B.

Thus far we have been dealing mainly with editions which do not correspond line for line. In the case of exact reprints of this kind it may seem at first sight especially difficult to determine the order. There is, however, one consideration which will often help us greatly, namely the fact that unless a book is reprinted by the original printer within a very short time of its first appearance, the reprinter seldom has available all the original varieties of type, initial letters, ornaments, &c. The consequence often is that when he comes to an abnormal passage, a long heading in large type, or

into a smaller number of sheets, the page arrangement was not kept. It happened that one printer had rather more than the other to get into the same space, and consequently one tended to run his paragraphs together, the other to make new ones wherever he could (see my edition of Nashe, ii. 189-96).

a note or other passage in small type, or when he has to reprint a page containing an initial letter or ornament, he may have to substitute type, initials or ornaments of larger or smaller size than those in the copy. Now as his text runs page for page, at least, with the original, he must in his reprint make the matter occupy just the same space as it formerly did, either by crowding it or spacing it out. As the original printer was under no such compulsion, his text would be set in a perfectly normal fashion, and comparison of two such pages side by side will often show at once which was the original setting and which the copy. In dealing with line-for-line or page-for-page reprints, therefore, it is generally well to begin by looking for differences in the size of headings, &c., in the editions under consideration, and, if any are found, considering them from the point of view of normality or awkwardness of arrangement.

Lastly, we may sometimes require to decide which of two *issues* of a book is the earlier, e.g. when new introductory matter has been substituted for what was originally printed, the rest of the sheets being the same. Such substitutions are generally to be regarded as cancels (see chap. ix, below), but it may be said in passing that the best evidence of priority is often the watermark. If we find that in one issue the watermark of the introductory matter is identical with that of the paper of the text, while in the other issue it is different, we may be practically certain that the former is the original issue.

It will of course be recognized that evidence derived from points such as these, though often useful, is mainly of cumulative value. The relationship of editions can sometimes be most conclusively *proved* by full collation and comparison of readings, and with this I have nothing to do here. It may, however, be remarked in passing that the most satisfactory evidence in this respect is often to be obtained from wrong attempts

at correction on the part of a compositor or proof-reader. I may give a single example from a marginal note in *Pierce Penilesse* where a corrector has produced a reading which is really rather ingenious. Here the first three editions have correctly 'The confutation of Citizens obiections against Players'. The fourth edition accidentally drops the word 'obiections', producing 'The confutation of Citizens against Players'. This evidently puzzled the proof-reader of the fifth edition and he altered it to 'The coniuuration of Citizens against Players'.¹

But any careful student of works of the Elizabethan period will have come across numerous examples of this transformation of sense by the attempt to correct mistakes, and it is unnecessary to say more about the matter here. One rather curious instance of a difference in editions susceptible of what may be called a 'bibliographical' explanation, may, however, be given, as it throws some light on the casual methods of the Elizabethan printer.

It occurs in a translation from a French summary, by Pierre de Changi, of notable facts out of Pliny's *Historia Naturalis*. This was first published in English as *A Summarie of the Antiquities, and wonders of the worlde* [c. 1565], and again in 1585 as *The Secrets and wonders of the world*. The first edition is in 8vo, running to H8^v, the second in quarto, running to I1^v.² Now the two editions are, with the exception of certain changes in the preliminary matter, practically the same save for the ending, which is altogether different. The earlier edition has, beginning at the foot

¹ Miss Albright in her *Dramatic Publication*, p. 375, notes other instances of progressive corruption from *The Bloody Brother*, II. 1 (*B. & F. ed.* Dyce, x. 392), and *Richard III*, v. iii. 182.

² This is, by the way, a curious instance of a reprint both being larger in size and ending more irregularly (on the first leaf of a sheet) than the original. Had neither book been dated and had we no other evidence to go on we might reasonably guess that the 1585 edition was the earlier.

of the last leaf but one (H7^v-8), a passage about a certain tree as follows: 'The *Ciper* tree is slowe in growing with-¹/[H8] out fruit, hauing bitter leaues, violent smell, and naughty shadow.' This is followed by a page and a half more about various kinds of trees, and the book then ends.

In the edition of 1585, however, there is a remarkable difference in the information that is given about the '*Ciper* tree'. There we read [I1^v] 'The *Ciper* tree is slowe in growing without the ground be fat and fertile, then it spreadeth very large and long.' There is nothing more about trees. The page proceeds, 'And thus to conclude, I finish this abstract', and ends with a few words of praise to God for 'these his benefites and giftes geuen for the vse of mankinde'.

It is of course obvious what has happened. The printer was working from a copy of the earlier edition which lacked the last leaf. He came to the words 'The *Ciper* tree is slowe in growing without'—and there it ended. Did he trouble to find another copy, or to get some one to look up in Pliny what was said about the '*Ciper* tree'? Not he: it was much simpler to set his brains to work and guess what was missing!²

¹ Catchword 'out'.

² In this he was less honest than the printer of Thomas Scot's *Philomythie*, 1616, who having lost part of the copy and 'the Author being far from London' left a blank for it (on p. 126), promising to supply the defect in the next impression (Collier, *Bibliographical Account*, II. 327). The missing passage, 64 lines, was duly added in another edition, printed in the same year.

APPENDIX TWO

PRINTING TYPES. GENERAL SKETCH OF THEIR EARLY DEVELOPMENT. THE TYPES IN ENGLAND. THE SIZES OF TYPE-BODIES. THE EM

Type faces.

As was only natural, the style of letter adopted by the early printers was based, with such modifications as were necessitated by the process to be employed in making the type, on what were regarded as the best MSS. of the time and place at which they worked; the first types to be cut followed therefore the hand-writings current in Western Germany in the middle of the fifteenth century.¹ These were those developments of the Carolingian minuscule which came to be called gothic, and the type based thereon is called gothic² or black-letter.

¹ Much valuable material for the study of English printing types is to be found in Talbot Baines Reed's *History of the Old English Letter Foundries*, 1887, but all earlier general accounts of the history of type-forms have been superseded by D. B. Updike's *Printing Types*, Harvard University Press, 1922, 2 vols., which covers the whole subject of European and American types down to the present day and is illustrated by a most valuable series of 367 facsimiles. These facsimiles (line-blocks) are excellent, but for the early types the student should, when possible, consult collotypes, which, especially when the original press-work is not of the first class, often reproduce more faithfully the general effect. The portfolio of collotype *Facsimiles from Early Printed Books in the British Museum*, 1897, will be found useful, though it is limited in its scope, having very few examples after 1500. Facsimiles of all types used in the fifteenth century in England will be found in Gordon Duff's *Early English Printing*, 1896, and his *English Fifteenth-Century Printed Books* (Bibliographical Society, 1917); the former are in collotype, the latter in line. Many other series of facsimiles will be found mentioned in Mr. Updike's book, but unfortunately most of them are, on account of their price and the limited number issued, not available to those junior students to whom we must look for future bibliographical work.

² This use of 'gothic' to designate the earliest of the great families

THE EARLIEST TYPES

From the very earliest days of printing three main kinds of gothic type can be distinguished, namely, the so-called 'lettre de forme', 'lettre de somme', and 'lettre bâtarde'. The first of these, the *lettre de forme*, was derived from the most formal script, which was used especially in the writing of liturgical books, and is in general of a rather narrow and pointed character, tending everywhere to angularity. This came to be, though not the earliest, the usual form of English black-letter, towards the middle of the sixteenth century to the virtual exclusion of both the others. The *lettre de somme* shows little difference in the form of the individual letters, but the type as a whole is broader and less angular, and represents a somewhat less formal handwriting. It is not at all easy to draw a definite line between the *lettre de forme* and the *lettre de somme*, and Updike apparently does not admit any of the types used in England to the second group. The distinction is perhaps hardly worth attempting when intermediate forms are so numerous, but certain of the smaller sizes used by Wynkyn de Worde and Grafton, and such types as Berthelet's Nos. 5 and 6 (Greg in *B. S. Trans.*, vol. viii, with facsimiles)—to take a few examples at random—seem very definitely to have that feeling of breadth and openness which is characteristic of the *lettre de somme*.

The *lettre bâtarde* represents the cursive hand of its time, and in several respects differs from the other groups. Among its characteristics may be noted that the f and long f are prolonged to a point below the base line and slope slightly, instead of being rigidly upright; the short s is closed on the left hand, being somewhat like a b of which the top has been battered downwards; lastly, the final n and m usually, but not

of type-faces (gothic, roman and italic) is convenient provided that it is not confused with the so-called 'gothic' of the modern type-founder, where, as Updike says, it is purely an arbitrary name, 'unless it hints at the artistic abilities of its inventor'.

always, end with a tail below the base-line. Certain characteristics of the *lettre bâtarde* appear as early as in the 30-line *Indulgence* of 1455, the 31-line one being in *lettre de somme*, and Caxton's earlier types are also of this group. Later the *lettre bâtarde* was characteristic of French printing. It never attained to any great vogue in England, though it crops up here and there as in Berthelet's type 4 (Greg in *B. S. Trans.*, viii. 190, with facs.).

It is, of course, to be understood that these three groups of gothic letter represent merely tendencies; it must not be expected that all varieties of type can be definitely assigned to one or other of the groups, for there exist all degrees of transition between them as well as many founts which must be regarded as more or less mixed. Some bibliographers on this account object to the use of these terms altogether,¹ but they are well recognized and have at least the advantage of enabling us to give in a phrase some rough indication of the general character of a page of type.

Besides the 'gothic' hand used generally in northern Europe in the fifteenth century there existed in Italy another derivative of the Carolingian minuscule of a less angular character.² It is unnecessary to describe it, for on it was ultimately based the ordinary 'roman' type of to-day. To what extent this hand was used in fifteenth-century Germany I cannot say, but it must have been familiar to many classical scholars of the north who were in touch with the more active spirits of the Italian renaissance.³ In any case we find as early as 1460 a rounded gothic used by Gutenberg at Mainz and one used by Menthelin at Strassburg

¹ Professor A. W. Pollard, for example, tells me that he regards them as a mere nuisance.

² Actually an imitation of the later (twelfth century) Carolingian writing by the Italian scribes of the Renaissance.

³ It may be noted that roman type was in Germany specially associated with the classics and is still called 'antiqua' in German.

(Updike, figs. 17 and 21) which, while still distinctly gothic, have a marked tendency towards the simpler and more legible roman character; and some four years later, *c.* 1464, we find a definitely roman¹ type used by the so-called R-printer, now identified with Adolph Rusch at Strassburg (Updike, fig. 22). Later we find a good deal of roman type in use in Germany, but it never took the hold in Germany that it did in Italy, where it represented the favourite script of the time.

When in 1465 Sweynheim and Pannartz set up the first press in Italy in a Benedictine monastery at Subiaco it was natural that, instead of using the gothic type of their northern fellows, they should attempt to follow the script of the locality in which they had established themselves. The first fount which they produced, though certainly to be classed as roman, or at least transitional, had marked gothic features, especially in the slight angularity of the 'round' letters such as e, c, o, and is indeed less roman than the type used by Rusch at Strassburg in all probability several months earlier (Updike, fig. 24). Altogether it is too thick and clumsy to be called a success, and their second type used at Rome at the end of 1467, though much more roman in character, is hardly better in this respect. A curious feature of books printed in this type is the use of long f in all positions, finally as well as medially, a practice which may perhaps have been imitated from Neapolitan MSS. of the period (cf. *Brit. Mus. Reproductions from Illuminated MSS.*, Ser. 3, plates xxxviii, xl).²

¹ The most convenient point at which to make the division between 'semi-gothic' and 'roman' is perhaps at the stage where the short diagonal stroke over the i, like an acute accent, becomes the round dot. We must, however, take other characteristics into consideration, for we may find exceptional gothic founts with the round dot and roman ones with the stroke.

² It should, however, be remarked that other printers sometimes followed the same usage in roman type; thus, the first printer at Paris

Shortly after this, however, in 1469, we find a genuine roman type in the work of Wendelin of Speyer, the first printer at Venice. This is quite a respectable letter, but its effect is spoiled by bad justification of the matrices, so that the letters in certain combinations appear too close together, in others too far apart (Updike, fig. 26). With the advent of Nicholas Jenson, however, who began to print at Venice in 1470, we reach at a stride what is perhaps the perfection of roman type, a letter of such excellence that though it has been constantly imitated and 'improved upon' it has, in the opinion of some, never been surpassed.

The fortunes of roman type varied considerably in the various countries. In Germany it never took any great hold as a text type, and, indeed, from 1500 until quite modern times it was decidedly unusual except as a 'differentiation' type.¹ In Swiss printing, however, generally classed with German, it was common from the beginning of the sixteenth century. Both in France and Spain the earliest books were in roman, but there succeeded a period of gothic which lasted in France until somewhere about the second decade of the sixteenth century, when roman again came into favour; the change of fashion in Spain coming perhaps a little later. In the Netherlands the earliest printing is gothic, then there is a period in which both this and roman were used, but from early in the sixteenth century the great bulk of the better-class printing seems to have been in roman. In Italy, as might be expected, though Ratdolt and a few others of the earliest printers used gothic type of a modified form, by far the majority of books were either roman or

(1470-2) frequently though not invariably used long f finally. See *B.M. Facs. from E. P. B.*, plate xvii, and Claudin's *First Paris Press*, facsimiles on pp. 91-2, 97.

¹ i.e. for printing quotations—as we now use italic—for prefaces, &c., and in cases where two things printed parallel, e.g. a Latin text and a translation, require to be differentiated.

italic. In England roman type was introduced comparatively late, and a very long period elapsed before its final triumph, much longer than in any of the countries with which we have been dealing save Germany, but of this I shall have more to say later.

The third of the great families of type, the italic,¹ was introduced by Aldus Manutius at Venice in 1501. It used to be said that it was based by him on the handwriting of Petrarch, but this is perhaps due to a mere misinterpretation of a phrase used in the 1501 edition of Petrarch's *Cose Volgari*, 'tolto . . . dallo scritto di mano medesima del Poeta' (Updike, i. 128). It is no doubt actually derived from one of the forms of the Humanistic hand of which there are many examples at the time, and of which Aldus probably liked the appearance, while at the same time he doubtless knew the value of originality in book production. The Aldine italic is a genuine attempt to produce an appearance of script, and for this purpose contains some sixty-five ligatures (Updike, i. 129), such as *c*, *m*, *n*, *i*, with each of the vowels following, as well as the more usual *um*, *et*, and the ordinary *f* and long *f* ligatures, the latter including some unusual combination such as *fp*. Oddly enough, however, *is* and *us*, so common later, do not seem to be used. It was solely a lower-case fount and was used by Aldus in conjunction with small roman capitals which are much less tall than the ascenders, and are, in addition, at the beginning of lines of verse, always separated from the word to which they belong by more or less space. These peculiarities, both the roman capitals and the space after them, will also be found in MSS. of the period, and were doubtless taken over from them by Aldus as a matter of course; and though to us who are used to the modern forms these apparently wrong-fount capitals may be at first somewhat disconcerting, they were quite in accord with the taste of the time,

¹ Called by the Italians 'Aldino', by others Italic or Kursiv (Ger.).

and Updike even claims that they are artistically correct, as they give the page 'an agreeable perpendicular movement which italic capitals do not supply'.

The Aldine character found immediate favour with book-buyers, and was soon widely imitated in Italy and elsewhere, especially at Lyons, though the imitations are of varying degrees of closeness.¹ It is not necessary to discuss the complicated story of the development of italics, but one point of importance may be referred to which has recently been brought out in an excellent article by A. F. Johnson and Stanley Morison in *The Fleuron*, No. 3, which supplements and to some extent corrects Updike. In this they show that, parallel with the Aldine italic, there existed from 1524 onwards an altogether different italic face, originated by the writing-master and printer, Ludovico degli Arrighi of Vicenza. This family of italic can be most briefly characterized as more flowing and script-like than that of Aldus: the tail of the g is brought round in one sweep to the left (as in the modern written g), instead of being zig-zagged to left and then round to the right again as in the usual italic and roman g; the ascenders are curved over to the right, and the descenders to the left in a manner that seems suggested by the /, instead of being straight, and the h has a more marked bow.

The development of the small upright capitals used by Aldus with his italics into the sloping capitals of modern founts, of equal height with the ascenders, was slow and hesitating. The early users of italic, indeed, such as Froben at Basel, Simon de Colines at Paris,

¹ A badly cut italic type used by Denis Roce at Paris in 1513 in the *Viridarium Illustrium Poetarum* (the work which became later the *Flores Poetarum* of the Elizabethans) is remarkable for the fact that certain letters, including b, g, h, r, p, q, v, though italic in general character, are quite upright, while others, d, f, i, l, s, t, &c., have the usual slope, the result being an odd irregularity. An interesting example of almost upright italic is reproduced in *The Fleuron*, iii. 38, as used by G. A. Castiglione at Milan in 1541.

and others, only departed from their model in giving a very slight cant to their capitals, which remain roman in form, and in letting them be slightly larger than in the Aldine books, though they still do not reach to the height of the ascenders (cf. Updike, figures 81, 101, 139, 141). Examples of this practice can be found until 1580 at least, and probably much later. As early, however, as 1538, in the work of Sebastian Gryphius at Lyons, we find definitely sloped italic capitals of a modern form, inclined at the same angle as the lower-case ascenders and of an equal height with them,² and by the middle of the century many printers in Italy at least were using capitals of the form which became the normal tradition of italic down to the present day.

Alongside these normal sloped italic capitals there existed in most founts a more script-like or 'swash' form, ornamented with a certain amount of flourish. Thus we have *A* and *A*, *B* and *B*, *C* and *C*, *I* and *J*.³ These 'swash' letters seem to have been taken over from the non-Aldine group, for they are first found in Arrighi's italics of 1524, and though he afterwards abandoned them, they reappear in founts based on his which were used by Colines at Paris in 1528 and by Francesco Marcolini da Forli at Venice in 1536.³ By the middle of the century they were in general use with a lower-case of the Aldine form.⁴ Curiously enough there seems never to have been a complete alphabet of 'swash' letters, or, if there was one, certain characters never came into general use. There are, for example, no swash forms, so far at least as I can ascertain, of F, L, O, S, W, X in any of the italic

² See p. 48, fig. 18 of the *Fleuron* article already mentioned. Oddly enough the matrices seem to have been so justified that the letters are more upright than the designer intended, with the result that in such a letter as M the left-hand limb comes noticeably lower than the right. One suspects that the overhang was found inconveniently great.

³ The 'swash' forms of I and V (*J*, *V*) came later to be used for J and U.

⁴ *Fleuron*, iii. 24, 34, 44. ⁵ e.g. by Gabriel Giolito at Venice

founts in ordinary use in England in the earlier periods, nor can I point to a swash H, though forms with the first or second upright curled outwards occur in certain foreign founts.¹ These swash letters, whatever may have been their original purpose, seem to have been used at all times absolutely interchangeably with the plain letters in all positions, with the result that, though sometimes useful to the bibliographer,² they can hardly be said to add to the beauty of the work in which they appear.

It should be noted that italic was originally intended as a body-type for general purposes and was therefore not at first cut to range with gothic and roman. Books entirely composed in italic are very frequent in Italian printing of the sixteenth century, and there are examples of the same thing in other countries. Its main use, however, save in Italy, was as a differentiation type.

It only remains to mention the 'script' types which were intended to imitate as closely as possible current handwriting, and few words will suffice for these, as they are of no practical importance. The most famous and apparently the earliest of these types were the so-called *caractères de civilité*³ introduced at Lyons by Robert Granjon of Paris about 1557. They are an imitation of 'a gothic cursive handwriting which was in vogue at the time'.⁴ A somewhat similar attempt was made in certain cursive type used by Froschouer at Zurich in 1567 (Updike, fig. 77), and a few founts of this kind were cast in England, but they were never much used.⁵

¹ *Fleuron*, iii. 34, and in books printed by Giolito in 1554.

² See p. 182.

³ Thus named because they were early employed in two educational works entitled respectively *La Civilité Puérile* and *Civile Honesteté pour les Enfants* (Updike, i. 201).

⁴ Updike, u. s.

⁵ For some examples see Updike, fig. 254. The specimen gives us strong reason for suspecting that the compositor who set it up found the type difficult to read. Cf. also T. B. Reed, *Letter Foundries*, pp. 56, 289.

The types in England.

The earliest type-faces used here were of course of black-letter or 'gothic' character, roman type being first used as a text type by Pynson in 1518 in Richard Pace's *Oratio in Pace nuperrima composita*,¹ and italic not until 1524, when it is found in Wakefield's *Oratio de laudibus trium linguarum*, printed by Wynkyn de Worde, a book which also contains the first Arabic and Hebrew printing in England, though these are from woodblocks, not type. Until about the middle of the sixteenth century black letter remained the normal character for all purposes, though a certain number of Latin books were printed in roman, this being especially used for the Latin text of books printed in English and Latin. It is also commonly found in head-lines, chapter headings, &c. Early in the reign of Elizabeth roman began to be more popular, and by about 1580 the use of black letter in plays and the higher kinds of English verse,² as well as in Latin books, had almost ceased, and there seems to have been a tendency to abandon it in scientific and theological literature also. Popular prose and ballads, however, continued to be printed in black letter until well on in the seventeenth century, and law-books were still in this character in the eighteenth. Even in black-letter books, however, the preliminary matter (dedications, and epistles to the reader) were from about 1580 generally in roman or italic. The printers of this time seem seldom to have possessed any black letter type of a larger size than that used for the text of their books, and commonly used roman or italic for their title-pages, headings, &c. There are, however, a fair number of exceptions to the general rule.

Soon after the introduction of roman and italic type

¹ According to Updike, ii. 89, it was actually first used in Pynson's *Sermo fratris Hieronymi de Ferraria*, 1509.

² I suspect that the use of black letter in the *Shepherd's Calendar* of 1579 was an intentional bit of antiquarianism.

these began to be used for the purpose of differentiation. Thus, in a black letter text, proper names are often in roman, quotations from foreign languages generally in italic,¹ while in a roman text italic is generally used both for proper names and for quotations.

It is not of any importance to our subject that we should try to follow the course of type-designing or type-founding in England. Those desirous of full information on the subject should consult the work of Talbot Baines Reed, already frequently referred to, or that of Mr. Updike, which, although on account of its wider scope it goes into less detail concerning English work, supplements Reed in many important particulars. A few more or less random notes may, however, be not without interest.

The most important English printer of the sixteenth century, from our present point of view, was John Day, who about 1572 cast some excellent founts of roman and italic. He is stated to have been the first English printer to cast the two forms on similar bodies so that they would range properly with one another when used together. He was a man of great enterprise and was lucky also in his patron Archbishop Parker, for whom he cut the first fount of Anglo-Saxon, used in 1567. He also had a Greek fount which was superior to those hitherto in use in this country.

There is little to say concerning English type-faces from the time of Day for more than a century. During the whole period, although no doubt there were many type-founders at work in England—indeed several of the chief presses apparently had their own foundries

¹ In roman reprints of black-letter texts editors desiring to keep the distinction of the three types have sometimes used small capitals for original roman, using italic only for original italics (e.g. in the Hunterian Club reprints of Lodge, Rowlands, &c.). This gives rather an odd appearance to the text, and it is now, I think, more usual to ignore the distinction of original roman and italic, representing both by italic.

—the matrices or punches seem to have been imported, as a rule, from abroad, particularly from Holland, or at least to have been cut according to foreign patterns. From 1637 to 1640, and again from 1662 to 1693, the number of type-founders was officially limited to four, but there is no means of determining to what extent the restriction was effective. There was a fairly constant dissatisfaction during the seventeenth century with the type used in this country and attempts were made to remedy the state of affairs, notably by the famous Dr. John Fell, who in 1667 presented to the University of Oxford a complete type-foundry containing punches and matrices of a very large assortment of founts. The importance of Fell's gift has, however, I think, been somewhat misunderstood. It consisted rather in its extent, especially in the variety of 'learned' founts, Arabic, Syriac, Coptic, &c., than in any peculiar excellence of design in the roman and italics. These were doubtless the best that Fell could procure from Holland at the time, and there was a very useful range of sizes, but I venture to think that in spite of its present vogue, the 'Fell' roman type, though excellent for giving a pleasant flavour of antiquity to reprints of sixteenth- and seventeenth-century books, is not in itself particularly beautiful, and that the italic, mainly on account of the irregular slope of some of the characters and its appearance of being smaller than the roman to which it belongs, is, when used with roman, positively ugly, though it is by no means unpleasing, especially in the larger sizes, when standing alone.

Those who wish to form an idea of the dependence of the English printers of the pre-Caslon period on the Dutch type-founders¹ should read the amusing account given by Reed of the adventures of Thomas James, one of the chief English type-founders of the

¹ Moxon in 1683 wrote in high praise of the Dutch letters, which he liked for their 'commodious Fatness', rendering them more legible than any others (*Mech. Ex.*, p. 15).

early eighteenth century, who visited Holland in 1710 in search of matrices (apparently no offer would induce the Dutch founders to sell their punches). One is glad to know that he was successful in obtaining several good founts and prospered as the result, even though towards the end of his life he seems to have been badly hit by the superior productions of the Caslon foundry.

The most important English letter-founder since Day, namely, William Caslon, was born in 1692 and was first apprenticed to an engraver of gun-locks and barrels. His earliest work in the direction of type appears to have been the designing of tools for book-binders, and his first actual printing type an Arabic fount which he cut in 1720. In the same year or shortly after he cut the first of his roman and italic founts, and from this time to his death in 1766 he produced a great number of founts of very varied kinds.

Caslon's roman and italic were at once accepted as far superior to any others, and were even purchased by foreign printers. In England they were in very general use until the end of the eighteenth century, when for a time they went out of fashion.¹

After Caslon the most notable type-designer of the eighteenth century was probably John Baskerville

¹ It may perhaps be well to warn the reader that 'Caslon' as applied to type has not an absolutely precise connotation. Though, for example, the founts of different sizes cut by Caslon himself are all in the same general style, the forms of the letters do not correspond with mathematical exactness. Further, of some sizes Caslon cut two or more separate founts slightly differing in form (cf. Updike, ii. 104, note). When it is added that 'Caslon' founts have been repeatedly cut in modern times, it will be evident that we must be prepared for a certain range of variety.

The Caslon foundry itself produced, towards the end of the eighteenth century, type-faces more in accordance with the current demand for greater lightness and regularity. Indeed, their specimen of 1798 (Updike, figure 279) shows a roman and italic type more resembling a weakened and slightly condensed Baskerville than 'Caslon'. In 1805 they ceased to show the original types cut by the first William Caslon (Updike, ii. 196, note).

(1706-75), who was successively footman, writing-master, cutter of monumental inscriptions, and japaner. In this last business he prospered sufficiently to enable him, from about 1750, to experiment in printing, to which he seems to have been originally attracted by his interest in lettering. Baskerville's ideal was not, however, the production of a perfect type, but of a perfect book; he was concerned as much with the correctness of the text that he printed and with the excellence of paper, ink, and press-work as with the design of the type itself. This last, however, was of necessity specially cut to harmonize with Baskerville's preference for a somewhat open appearance, wide spacing, and leading between the lines. His lower-case letters are for the most part very similar to Caslon's in form, but are slightly wider, the chief difference being apparently in the greater width of body of some of them. The truth is, if I am not mistaken, that Caslon justified his type for Latin and Baskerville for English. The original Caslon type has a better appearance, at least in my opinion, in Latin than it ever has in English, which, I think, cannot be said of Baskerville types. In italic the difference is, however, far more noticeable. The Caslon italic retained something of the angularity of the current script, especially in the upper curves of such letters as *n* and the lower curves of *t* and *d*, the type of Baskerville being everywhere much more rounded. It is perhaps in this that his influence on later designers was most marked. The design of his type had, however, less to do with the effect produced by his books than his method of pressing the sheets, immediately after printing, between hot plates of copper. This gave a brilliant gloss both to the paper and the ink, which was no doubt very pleasing to those who liked it. Others, however, condemned the effect as too dazzling, as would most people at present.

Baskerville's work attracted a great deal of attention in his day, but he met with strong opposition from the

established type-founders and printers, and his press was by no means a financial success. After his death his types were sold in France where they were in use for some time. Eventually they seem to have been dispersed and the whereabouts of the punches and matrices is not known.¹ But in spite of this appearance of failure Baskerville's work exercised a marked influence in the direction of a greater neatness and lightness of character, as may be seen especially in the type of Alexander Wilson used by the brothers Foulis at Glasgow in the last quarter of the eighteenth century (cf. Updike, ii. 117-18, and Wilson's specimen in fig. 275) and in some of the later type of the Caslon foundry itself.

Towards the end of the century we find, however, a reaction from the rather weak and grey descendants of Caslon plus Baskerville, and a change begins which was to end in the production of the so-called 'modern face' type. Essentially this change was due to the attempt to attain greater brilliancy of effect by increasing the differentiation between the heavy and light portions of the letters. It is best represented in the work of William Martin (*f.* 1786-1815), whose types were used in the 'Shakespeare Press' established by Messrs. Boydell & Nicol in 1790, at which were printed the folio Shakespeare edited by George Steevens in nine volumes, 1792-1802, a three-volume Milton, and many other 'fine' books of the day.

The earliest type found by Mr. Updike which he would call actually 'modern face' is in 1804 (fig. 330), but my impression is that it was not in common use until about 1815. The greater differentiation between thick and thin strokes which accompanied and indeed led to the modern-face design² increased until it re-

¹ Cf., however, Updike, ii. 114. It appears that some of the types have recently come to light in French printing-houses.

² The two things are not the same but tend to go together, for in many of the Caslon types any considerable thickening of the strokes

sulted in the production of some forms of extraordinary ugliness. Hansard's *Typographia*, 1825, quoted by Updike, ii. 195-6, says: 'Caslon's fonts rarely occur in modern use, but they have too frequently been superseded by others which can claim no excellence over them. In fact the book-printing of the present day is disgraced by a mixture of fat, lean, and heterogeneous types, which to the eye of taste is truly disgusting.'

The period 1815-44 was perhaps the worst of all from the point of view of type-design, though at the same time it was one of the most prolific of novelties, and though the press-work is generally, and the layout occasionally, excellent. It was at this time that many of the fancy display types and ornaments so dear to the jobbing printer of the nineteenth century were introduced, and, if one can judge by their design, most of the conventional head- and tail-pieces of which even recent type-founders' specimen-books are full; but we need waste no time over them.

But the original Caslon founts were still remembered by a few persons of somewhat antiquarian tastes, and in 1840 we find them being used at the Chiswick Press in titles and half-titles of books printed for the well-known publisher William Pickering.¹ It is thus hardly correct to date the revival as beginning with the printing of *The Diary of Lady Willoughby* in great primer Caslon in 1844, though there can be little doubt that the success of this book led to the wider use of Caslon in other works of antiquarian character. It was used by Pickering in a number of publications from 1844 onwards, and appears also in Payne Collier's five-volume edition of Spenser, 1862, and in the eight-volume Milton and in other books printed at the

would necessarily render the counter, or hollow, liable to become choked with ink.

¹ See *William Pickering, Publisher*, by Geoffrey Keynes, 1924, pp. 25-6.

Chiswick Press. According, however, to Mr. Jacobi, 'the excellent design of these different founts [of Caslon] was not generally appreciated until about the year 1888, when the Arts and Crafts Exhibition Society first came into existence, and Mr. Emery Walker was perhaps more responsible than any one else for making known this series of type-faces'.¹

A brief reference should perhaps be made to the so-called 'revived old style', a type which is said (Updike, ii. 201, 232) to have been cut about 1850 and has been much used for reprints of our older literature, such as, for example, the Ben Jonson printed at the Chiswick Press in 1875. It is a somewhat colourless attempt to combine the general characteristics of a Caslon type with a slightly more open and more regular face, and like most modern types exists in a variety of slightly different cuttings.

Modern type-faces, however, are not our affair, whether the more elaborate and fanciful ones designed for private presses or those intended for general use in book-printing, and this is fortunate, for the subject is an intricate one and cannot be dealt with briefly. Studies of the best of them may be found in Mr. Stanley Morison's useful monograph, *On Type Faces*, 1923.

A brief note may be useful on some characteristics of the three styles last mentioned. The progress from Caslon, via Revived Old Style, to Modern Face—taking them in order of similarity, not in order of date—is accompanied by the descent of the cross-bar of the e, which in Caslon is very close to the top, with the resulting inconvenience of easily becoming choked with ink, in the modern face practically half-way up, the 'old style' being intermediate between the two. A sloping bar to the e is characteristic of many 'antique' founts. The Caslon s is considerably narrower than

¹ *A Note on the Caslon Old-Faced Printing Types* (Design and Industries Association), 31 March 1920—a four-page leaflet with specimen of Caslon types on the fourth page.

in either of the other faces. The thick strokes of 'old style' are on the whole thinner than in Caslon, with the result that there is less differentiation between heavy and light strokes. In modern face there is more. The serifs of the ascenders of practically all the older founts are wedge-shaped, the lower line being level and the upper inclining downward to meet it; the serif of the modern face is thin and perfectly horizontal. These few indications will aid greatly in the classification of ordinary type of the eighteenth and nineteenth centuries, but when we come to quite modern times there is far too much mixture of styles for them to be of any use, and one has to depend on 'specimens'.

It should be mentioned that the use of modern typesetting or casting machines in which the presence of kerned letters is impossible or at least most inconvenient has led to the narrowing of f and j so as to bring the curve entirely on the body of the type. The early attempts at a sickle-form f, in which the curve was bent back, have, I think, been abandoned, and well it is, for they were very ugly; but the narrow f that we now meet so commonly is likely to be permanent, and no doubt in the course of time we shall get used to it. After all it is but a matter of habit. One generally finds that in examining a new type, what one dislikes is just whatever is new, and with all respect to our modern typographical experts on such matters there is a great deal of truth in what Thomas James wrote from Rotterdam in July 1710 when he was on his famous type-hunt in Holland: 'The beauty of letter, like that of faces, is as people opine.'

The sizes of type-bodies.

The sizes of type-bodies used by the earliest English printers were somewhat various.¹ Gradually, however, they settled down to three for ordinary bookwork,

¹ The first type used in England (Caxton's No. 2) was about equivalent to two lines of long primer (10 lines = c. 65 mm.).

namely, english, pica, and long primer. Brevier was occasionally used for side-notes.¹ Small pica, such a usual size at present, was not introduced until towards the end of the seventeenth century,² and bourgeois, which is intermediate between long primer and brevier,

¹ Until comparatively recent times type-bodies, as cast by various founders, were far from uniform. Towards the end of the sixteenth century we find the measurement of ten lines of type (measuring from the base-line of one line to the base-line of the eleventh line above or below) to be approximately as follows: in english, 45-47 mm.; in pica, 41-42 mm.; in long primer, 31-33 mm.; in brevier, about 27 mm. It is well to remember that pica has always been *about* six lines to the inch. If it were accurately this, ten lines would measure 42.3 mm. Moxon gives the sizes of english as 66 lines to the foot, pica 75, long primer 92, and brevier 112, the equivalent of these measurements being respectively, 10 lines = 46.2; 40.6; 33.1; 27.2 mm.

Many incunabulists take *twenty* lines as the unit of measurement and there is an unfortunate want of uniformity in the way in which the measurement of these twenty lines is taken. Proctor's measurement was 'from the top of the short letters in line 1 to the bottom of the short letters in line 20, no account being taken of the tails of the longer letters', *Index of Early Printed Books in the British Museum*, 1898, p. 13. Others appear to measure from the top of an ascender in line 1 to the bottom of a descender in line 20. This of course gives a measurement nearer to that of 20 lines of actual type than Proctor's, but both are more or less short. The only way which can possibly give an accurate measurement of 20 lines of type, and one from which that of any other number of lines can be deduced, is to measure from any point in one line to the *corresponding* point in the 21st line above or below. Further, it is only by measuring in this way that we can calculate the measure of our unit number from actual measurement of a smaller number of lines, a thing which it may very often be necessary to do when the type with which we are concerned is not the text type of the book.

In any case I submit that 20 lines is a less natural and less convenient unit than 10, if only because it complicates calculations. There is also the practical consideration that it is much harder to count 20 lines quickly and accurately than 10 (or 11), and that an error in the count is far more likely to be overlooked.

² It is mentioned by Moxon as 'sometimes used' (*Mech. Ex.*, 1683, p. 13), but he disapproves of it as too near to pica and likely to get mixed with it.

did not appear until about 1748.¹ It may be noted that Elizabethan black-letter occupied, as a rule, a much smaller space on the body than the black-letter of most modern founts. Thus a modern small pica black-letter is almost identical in size of face with the early pica, and a modern pica with early english—a fact which gives rise to much trouble when one attempts a facsimile reprint in modern type of an old book containing both black-letter and roman.

It is hardly necessary that I should refer to the modern 'point' system of standard type-faces, as this can be found described in any recent book on printing. Briefly, in the American and English systems the standard is pica, which is made exactly $\frac{1}{6}$ of an inch and is regarded as measuring 12 'points'—the 'point' thus being $\frac{1}{12}$ of an inch. English is 14-point, small pica 11, long primer 10, bourgeois 9, brevier 8, and so on. The point system was originally introduced in France in 1737 by Fournier the younger, whose system was modified later as the 'Didot' point system, the unit of which is slightly larger than the American point.

The em.

In certain early founts of type the letter M was apparently cast on a square body² and thus formed a convenient measure of the amount of work done by a compositor, for though the area of type corresponding to a certain piece of copy will naturally vary according to the size of the type used, the amount measured in 'ems', i.e. squares of the type itself, will remain approximately constant. Compositors' wages came therefore to be reckoned on the basis of the number of 'ems' composed, and the system still continues

¹ Reed, *The Old English Letter Foundries*, p. 39.

² The 'em' is sometimes said to be derived from the lower-case m, but I doubt if in any normally proportioned type this has ever been cast on a square body. Actually in ordinary roman founts the M also is narrower than its height and, I believe, always has been.

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save that the actual measure in use in England is now the thousand 'ens', the 'en' being half an 'em'. The em is also used as a measure of the length of the line, though in this case, in order to avoid the inconvenience of having to keep a multiplicity of rules, ornaments, &c., of a fixed number of ems of all the different sizes of type, the pica em (now $\frac{1}{6}$ of an inch) is taken as the standard in all cases, a line of $3\frac{1}{2}$ inches of whatever size of type being known as a line of 21 ems.

As a measure for calculating the work done by compositors the em is said to have been in use from the fifteenth century, but I have found no certain evidence of this. That it was of very early date can, however, perhaps be inferred from its name, for it must have been instituted at a time when the body of the M was actually square. Nor have I been able to trace when the em came into use as a measure of length of line. If in a page of pica set solid (i. e. without leads between the lines) we find that dividers set to the length of the lines will also measure exactly any whole number of lines of type,² it is at least possible that the printer was working to an em-standard of length. I have, however, measured a number of English books of the sixteenth century without detecting any such general correspondence, though it must be confessed that a comparatively slight irregularity in the casting would serve to disguise the use of any standard of this kind. Indeed, although we often find books from the same printing-house and of near dates set to the same length of line, there seem no traces of any standard measures of length as between one printing-house and another.

¹ The unit in America is still, I believe, the 'em'. It must of course be understood that the actual rate of pay varies to some extent according to the type used, small type and very narrow type involving more work and being paid at a higher rate.

² Measuring from the base of the type in one line to the base of the type in another line, neglecting the descenders.

APPENDIX THREE

NOTES ON CERTAIN CHARACTERS AS USED IN ENGLISH PRINTING: f AND s; i, j, u, v, w; LIGATURES; PUNCTUATION MARKS AND OTHER SIGNS

The letters f and s. From the beginning of printing until towards the end of the eighteenth century f was used initially and medially¹ and s finally, following of course the practice of the MSS. The first book to discard f is said to have been Joseph Ames's *Typographical Antiquities* of 1749, but this was regarded as an eccentricity, and the normal f is used in Herbert's edition of 1785-90.² The effective introduction of the reform has been credited to John Bell who in his *British Theatre* of 1791 used s throughout,³ the same practice being followed in the Boydell *Shakespeare*, of which vol. i appeared in 1792.⁴

In London printing the reform was adopted very rapidly and, save in work of an intentionally antiquarian character, we do not find much use of f in the better kind of printing after 1800.⁵ The provincial presses

¹ There were certain exceptions to this; see pp. 291, 314-15.

² Herbert introduced his own eccentricity of spelling the pronoun of the first person with a lower-case i.

³ See Johnson, *Typographia*, ii. 24, and T. B. Reed, *Letter Foundries*, p. 52, note. The plays forming the *British Theatre* were published at various dates from 1791 onwards, being collected into volumes in 1797.

⁴ See facsimile No. 297 in Updike, *Printing Types*, vol. ii. It is perhaps worth noting that Capell in his *Prolusions*, 1760, had attempted a modification of the usual practice. He there uses s medially for a z-sound, retaining f for an s-sound, thus: easily, visible, rais'd, &c., but verfes, purfuit, fatiffy. I cannot find that he comments upon the innovation, which, considering the nature of the work, is strange. It was printed by Dryden Leach and published by J. and R. Tonson.

⁵ The f was used in the *Post Office London Directory* until 1824, but one would perhaps expect survivals in publications of this sort.

CERTAIN CHARACTERS

seem, however, to have retained it somewhat longer, and it is said to have been used at Oxford until 1824.¹

The letters i, j, u, v. As a general rule, until early in the seventeenth century there was only one capital letter, I (in roman) or **I** (in black letter), for the letters now represented by I and J; and only one capital letter, V (in roman) or **U** (in black letter), for the letters U and V.²

In lower-case most founts had i, j, u, and v, but j was only used in the combination ij (often a ligature) or in numerals, as xij, while v and u were differentiated according to position, not according to pronunciation; v being always used at the beginning of a word and u always medially. Thus the following are the normal spellings: iudge, injcere or iniicere (= *lat.* injicere), vse, euent, vua (= *lat.* uva). Certain printers varied the practice in a few books, but the rule followed by most was absolutely rigid. It is quite incorrect to say that the letters were used indifferently, or that the sixteenth-century usage was the converse of the modern.

I have discussed elsewhere at some length the history of these four letters in sixteenth-century printing,³ and a few notes on the matter will be sufficient here.

Apart from the use of j (to represent a guttural aspirate) in certain Spanish books dating from 1485 to 1487, the earliest instance known to me of the distinction between i and j, u and v, being made according to pronunciation is in the *Dyalogus between Salomon*

¹ Reed, *Letter Foundries*, p. 52, note.

² As was once pointed out by F. W. Bourdillon, this has in early French books the odd result that a *libraire juré* is liable to appear in capitals as 'IVRE'. When reprinting a black letter text in roman it seems logical to represent these by I and V in all cases, though some editors have preferred to use J and U, perhaps because the black letter forms approximate rather more closely to these letters in shape.

³ See *The Library*, 3rd Ser., i. 239-59. Rimes and puns show that the Elizabethans called V by the name we now give to U (hence W is called double-u). I have failed to discover the originator of the modern name 've'.

THE DISTINCTION OF U AND V

and *Marcolphus* printed at Antwerp by Gerard Leeu about 1492, where *medial* u and v are distinguished as in modern practice, and in the latter part of the book a somewhat ineffectual attempt is made to distinguish initial i and j (Leeu has 'is', 'justyce', 'japyng', but 'iudas' and 'iugeth'). Medial j (by pronunciation) does not seem to occur, so we do not know how the printer would have treated it.

A serious attempt to distinguish u and v according to the modern practice was made by Giangiorgio Trissino, Italian poet and spelling-reformer, in his books printed in 1524. Not much came of Trissino's attempt, however, and the reform was next taken up by Pierre de la Ramée or Ramus, whose *Grammatica* of 1559 distinguishes i and j, u and v according to the modern system throughout, both in capitals and lower-case. Ramus does not, however, claim the innovation as his own, but mentions it with approval as due to the printers, so it may perhaps be found somewhat earlier. Be this as it may, it was probably the great authority of Ramus that led to its adoption.

In England no example of the distinction seems to have been found earlier than J. Banister's *History of Man*, printed by John Day in 1578. The new method is followed in a few other books of Day, and in 1579-80 we find it followed by Henry Middleton in reprinting a Latin Bible from a Frankfurt edition in which the distinction had been made. From that time onwards to the end of the century we find a certain number of books following the new system either completely or with certain modifications, and thereafter the number gradually increased until between 1620 and 1630 it became the general rule.

It may be mentioned that the majuscule U at first employed was of the general design of the lower-case u with a small tail or serif at the foot.¹ The modern

¹ i. e. U. This has been revived in some modern founts.

U begins to come into use in English printing¹ about the middle of the seventeenth century. It occurs in the heading of page 1 of Gayton's *Festivous Notes upon Don Quixot*, 1654, but as late as the 1692 Ben Jonson Folio we find many examples of the tailed form.

As regards j we may note that in some of the early black letter founts the only separate form of the letter is one with two dots over it, used in roman numerals. In these founts it also occurs, with a single dot, in the ligature ij.

The letter w. In early founts this is often represented by vv. In later times the same is often found in founts of extra large size (presumably of foreign origin), and in ordinary founts when there happened to be a run on the w and the compositor had not enough.

It may be noted that in the capitals of certain large-sized founts used for titles, especially between about 1590 and 1640, the left-hand side of the second V of two used to form a W is filed or cut away so as to allow the two letters to come closer together and form a more regular W.² In a bibliography or facsimile reprint it is a question whether we should represent this by two V's or by a W.³

Ligatures. Two or more letters joined together, or differing in design from the separate letters, and cast on one type-body, such as ct or ffi, are called a ligature. There were two reasons for their being so cast, custom and convenience. In the early founts the great majority of the ligatures were due to custom alone and represented a following of scribal practice which commonly joined together certain pairs of letters. Thus in the fount used by Caxton in the *Dictes and Sayings of the Philosophers* we find such ligatures as ad, be, ce, ch, co,

¹ It seems to have been somewhat earlier used in Dutch printing, but I have failed to discover by whom or where it was first introduced.

² Less frequently the right-hand side of the first V is cut away, or the adjacent sides of both.

³ Cf. p. 153.

de, en, in, ll, pa, pe, po, pp, re, ro, te, &c., all of which owe their existence solely to imitation of MSS. of the time. Many of these customary ligatures persisted throughout the sixteenth century, and even later, in black letter founts, where we commonly find ee,¹ oo, ch, ph, pp, wh, and others, while a few have combinations with certain capitals such as Ch, Sh, Th, Wh.² Even in roman founts we find ct, oo, &c., of which ct has persisted until modern times. In italic founts we also find es, us, si, and others.³

When a letter part of which overhangs the body of the type, such as f or l, happens to be followed by such an upright letter as l or h, or by an i, the overhanging part or 'kern' of the first letter comes in contact with the top of the second, and either the two types do not fit together properly or the kern of the first letter gets broken off. To avoid this, most founts even at present have ligatures of f with l, i, and another f (the end of the curve of the first letter or the dot of the i being suppressed), and of ff with l and i. In early times these ligatures for convenience included also a set with f. The f and f ligatures are also presumably copied from the MSS., where they frequently occur, though not in all hands. In MSS., however, especially in those hands which do not dot the i, there is little or no difference between the letters written close together, and so written as to touch and practically form a single character. For the sake of avoiding an ugly gap the scribe would naturally place an i under the beak of the f or bring up an l to touch it.⁴ Thus it does not seem to have occurred to all the early printers to cut these f and f ligatures; and although some of the early

¹ There is also a ligature ée, the origin and purpose of which have not been explained.

² e. g. in the fount used in the 1587 edition of Holinshed's *Chronicles*.

³ The original Aldine italic had many more, see p. 293.

⁴ In some Italian MSS. of the second half of the fifteenth century the fi and ft have exactly the form of the ligatures in roman type.

founts contain them, others do not.¹ As in the MSS., however, so in some of the early printed books, it is difficult to be certain whether ligatures or the separate letters were used.

In the earliest type used by Caxton in England we find no f or f ligatures with the exception of ff, fh, and ff,² and indeed the shape of the type-faces did not render them necessary. Others of his types have fi and ft, but no one fount seems to have the whole series as used in later times, though most of them have a variety of other ligatures. The complete series included fi, fh, ff, ffi, ffi, fi, fi, fh, ft, ff, ffi, ffi,³ and we find these in most founts of roman, italic, and black letter throughout the sixteenth, seventeenth, and eighteenth centuries.⁴ There were, however, certain rarer combinations of f with upright letters, namely, b and k, for which in early times no ligatures seem to have been cut. In words in which these combinations occur it was customary in roman and italic type to use a short s, thus 'husband, Catesby, ask, skill', the same practice being followed when the s preceded an apostrophe or an f, thus: 'vs'd, aduis'd, satisfie,⁵ transform, misfortune, succesful', &c. In black letter founts the f does not seem to overhang the body quite so much, and we generally find 'husband, ask', &c., though it is indeed

¹ The combinations ff and ff seem to be more frequent than the others.

² Possibly there was an fi ligature, but the i is dotted.

³ So far as I can discover, no ft ligature was ever cast, though one would have supposed that it was at least as much needed as ft.

⁴ In a certain number of Elizabethan founts there seem to have been no ligatures of ff or ff with i or l, and even when these existed they were not always used. One may find 'possible' printed with ffi, ffi and ffi in adjacent lines.

⁵ Alternatively we sometimes find 'satisfie', &c., a hyphen being used to keep the letters apart (which hyphen should perhaps not be retained in a reprint which does not use long f). It may be remarked that in French printing the accents cause similar trouble. Momoro, in his *Traité Élémentaire*, p. 165, says that a thin space must be placed between f and i and in certain other sequences of letters.

sometimes evident that the types are not flush against one another.

This practice of using s instead of f before b, k, f, and ' continued until early in the eighteenth century. By the date of Strype's edition of Stowe's *London*, however, 1720, an fk had been cut, though the compositor apparently did not always remember its existence, for we find 'skilful' (Bk. I, p. 64^a, l. 14), but 'Baskets' (I, 110^a, 11 from foot); but I have failed to find an fb. This, however, occurs regularly, as well as fk, in the second edition of the *Letters of Lady Mary Worsley Montague* in 1763,¹ and from that date onwards until the long f was discontinued. Short s is, however, still used before f.

Finally it may be remarked that when f was followed in black letter printing by w the same difficulty arose, but in an exaggerated form, on account of the curl of the w, which was kerned to the left. It was therefore usual to put a thin space between the two letters, and when this space happens to be rather large such a word as 'answer' may appear to be broken in two. In reprinting a text it is usual to ignore this break.

Punctuation marks.

/ In quite early founts this sign is used for the comma, or perhaps we should rather say to indicate any short pause in reading. A form in which the line slopes in the opposite direction is occasionally found (see Ames, *Typographical Antiquities*, ed. Herbert, pp. 491-2). The modern comma seems to have been introduced into England about 1521 (in roman type) and 1535 (in black letter) (*ibid.*, pp. 268, 348). It occurs in Venetian printing before 1500.

¹ No doubt this was not the first book in which fb was used, but I leave it to historians of typography to say which was. The only usual word (apart from proper names) in which the combination occurs is 'husband', and it is surprising how rare this word is when one is looking for it.

CERTAIN CHARACTERS

? The query mark seems to have been used in England from about 1521 (*Typ. Antiq.*, p. 268).

: In black letter books printed in England about 1580-90, but not, so far as I am aware, much earlier or later, we sometimes find a curious query-mark resembling an acute accent followed by a colon. I have been unable to discover the origin of this mark.

; The semicolon seems to have been first used in England about 1569 (*Typ. Antiq.*, p. 858), but was not common until 1580 or thereabouts (*ibid.*, p. 782). Herbert remarks that Henry Denham was the first to use this mark with propriety (p. 942). A mark of similar form had, we may note, been used from much earlier times as part of 'q;', the contraction for 'que', but this was not a punctuation mark.

. The full stop was commonly used *before* as well as *after* roman, and sometimes also arabic, numerals until about 1580.¹ Thus '.xii.'. It was also used before and after *i* (*i.* = *id est*) and *f* (*f.* = *scilicet*), and I have found it once with *q* = *cue*: 'as though his .q. was then to speake'.²

' and ' were used indifferently in such abbreviations as *th'* or *th'* for 'the'. It may be noted that 't'is' or 't'is' (instead of 'tis') for 'it is' was so common in the Elizabethan period that it should perhaps be regarded as normal.

“ Inverted commas were, until late in the seventeenth century, frequently used at the beginnings of lines to call attention to sententious remarks.³ Modern

¹ It is probable that full stops before and after roman numerals could be found in occasional use much later. The practice was for a long period very irregular. In the late sixteenth century we sometimes find a full stop used after arabic numerals but not before; the stop after roman numerals persisted for a long time and is still used by some printers.

² U. Fulwell, *First part of the eight liberall science*, 1576, fol. 40.

³ Johnson, in his *Typographia*, ii. 58, first note, seems to admit the use of single inverted commas at the beginning of lines for the purpose

PUNCTUATION MARKS

editors have occasionally regarded such passages as *quotations* and completed the quotes, which is generally wrong. So far as I have observed they were not especially associated with quotations until the eighteenth century, although, owing to their use for calling especial attention to a passage, they often appear in passages which are actually quoted.

Even after they become clearly used to mark quotations they generally appear at the beginning of the passage and at the beginning of every line, but not always at the *end*. The practice of closing the quotation with two apostrophes seems to be comparatively modern.¹

Inverted commas, as well as many other signs, Greek letters (sometimes inverted), &c., were used in sixteenth- and seventeenth-century printing as reference marks directing to side- or foot-notes.

() were often used in the sixteenth century where we now use quotation marks, and were indeed the general way of indicating a *short* quotation, e. g.:

'in eo vico qui dicitur vulgariter (flete strete)'.²

'she was neuer heard to giue any the lie, nor so much as to (thou) any in anger.'³

'To win worship I would be right glad,
Therefore (willing to win worship) is my name.'

'I fayth to shew thee what luck we haue had,
By (Willing to win Worship) that lusty lad.'⁴

'take (had I wist) for an excuse'⁵

of emphasis even in the first quarter of the nineteenth century, but they were surely uncommon then.

¹ I have found it in the middle of the eighteenth century, but it does not seem to have been regularly observed until much later.

² Colophon of a 1519 book printed by W. de Worde (Herbert, *Typ. Antiq.*, p. 161).

³ Stubbes, *Christal Glasse*, 1591, A 2v.

⁴ *The Tide Tarrieth No Man* in *Sh. Jahrbuch*, vol. xliii, ll. 596-7, 1002-3. In the second quotation we should now rather use hyphens than quotation marks.

⁵ Greene, ed. Grosart, iii. 186.

CERTAIN CHARACTERS

'In one place of the booke the meanes of saluation was attributed to the worde preached: and what did he thinke you? he blotted out the word (preached) and would not haue that word printed.'¹

They also seem sometimes to be used merely for emphasis, e. g.:

'Qui alios, (seipsum) docet.'²

'What yesterday was (*Greene*) now's seare and dry.'³

[] Square brackets are common in some Elizabethan founts, being used as we now use round ones. They were also sometimes used instead of round ones for the purposes mentioned above; e. g.:

'πάλαι, which is as much as [of olde] or [in times past].'⁴

¹ Marprelate's *Epistle*, ed. Arber, p. 31.

² Wilkins, *Miseries of Enforced Marriage*, 1607, title.

³ Cooke, *Greene's Tu Quoque*, 1614, sig. A 2^v. I am indebted for the last two examples to Dr. Greg.

⁴ Plutarch, *Morals*, 1603, p. 672.

APPENDIX

ABBREVIATIONS AND CONTRACTIONS

PRINTED BOOKS

THE numerous abbreviations in the books of the fifteenth century, especially those in Latin and Greek, are a nuisance rather than a serious difficulty in the case of legal works (where the profusion, so that sometimes a word has to be abbreviated), a sufficient excuse in the case of a manual of practice, enable them to be read with confidence. Nevertheless, a general knowledge of the Latin and Greek contractions is often useful to save errors of interpretation.

Seeing that the use of abbreviations is of course derived from the method of approach is doubtful, though this is perhaps hardly true; however, the student will find sections dealing with abbreviations in *Hand A.D. 1066-1500*, by C. R. Jenkinson, 1915, pp. xxii-xviii, in printed books, which is it does not correspond exactly with the

¹ A good example of a much-contractioned text is *Questiones super Physica Aristotelis* printed in 1474, in which a page is reproduced by Duff, *ibid.*

² The Greek contractions are too common to be mentioned here. A convenient list of those most common is given in Johnson's *Typographia*, ii. 291, and should be studied as derived from the contraction which will be found in the standard palaeography.

³ For the principles governing the use of abbreviations in *Manuscript*, 1920, pp. 33-9 and *Mediaeval Manuscripts*, 1924, pp. 466-8.