

ENGLISH TRANSLATION

## Giambattista Bodoni

### *Manuale Tipografico*

Parma, 1818

The translation of Giambattista Bodoni's preface to the *Manuale Tipografico* of 1818 is by H.V. Marrot (Elkin Mathews. London, 1925); remaining preliminary pages were translated by Octavo.

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TYPOGRAPHIC  
MANUAL

I

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TYPOGRAPHIC  
MANUAL  
BY CAVALIERE  
GIAMBATTISTA BODONI

FIRST VOLUME

PARMA

EDITED BY HIS WIDOW

1818

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FOR HER MAJESTY  
THE IMPERIAL PRINCESS  
MARIA LUIGIA  
ARCHDUCHESS OF AUSTRIA  
DUCHESS  
OF PARMA, PIACENZA  
GUASTALLA  
ETC.

THE WIDOW BODONI

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## YOUR MAJESTY

In every age, in every nation, occurs that noble impulse to erect worthy monuments to those rulers

who merit the gratitude of mankind, so as to transmit their great and illustrious memory to posterity.

The statues, paintings and temples of the most celebrated artists have either perished amongst ruins or have fallen prey to flames; this however is not the fate of printing. This art, the most useful of all human inventions

since it rapidly propagates every other discovery has spread from its birthplace in Germany throughout the world. It has withstood fire, history, and time; it has revealed the virtues of monarchs, the mighty deeds of our ancestors, and the thoughts of sublime genius.

Emboldened, therefore, by the magnanimity of Your Majesty and by the protection that you grant to the sciences and fine arts, I presume to dedicate to you a book that will perhaps mark an epoch in the annals of the world, and that will certainly be more greatly esteemed in Europe through having been adorned with

your august name, which will preserve it from the ravages of time and bequeath it to future centuries.

When my beloved husband undertook this work he sought to ensure not only his own glory, but also that of a city which was to him a second home, and which had many claims on

his gratitude.

I am, therefore, still more obligated to dedicate this work to you since it was conceived in that very city – Parma – which today is so fortunate to lie under the gentle dominion of Your Majesty.

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spread9R

spread10L

spread10R

spread11L

DISCOURSE  
BY THE  
WIDOW  
AND  
PREFACE  
BY CAVALIERE  
BODONI

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THE WIDOW BODONI  
TO THE READER

spread12R

The Typographic Manual that I now present to the public gives ample testimony to the great pains my beloved husband took in the improvement and perfection of the art of typography. From the preface, written some time ago and intended to explain this “specimen of his industry” (as he

put it), “and his achievements,” one can discern not only the care he took in the art he so cherished but the vast knowledge he had acquired even in youth and which gave him a clear sense of his own mission in life. If the range and beauty of his letterforms, and the grandeur and splendour of his editions show him to be a great typographer, his vast erudition, readily apparent in his preface, indicates that he was no less an intellectual.

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page //

Having prepared his great Manual for publication, with the text ready for printing,

he had just set his hand to work, when a grave illness prevented him from carrying out his intentions. In the final moments of this bitter parting it grieved him to burden me in any way with the printing and publication of a work of such significance to his reputation and importance to the art itself. Indeed, he thought it too great an undertaking for me. From the start I was intimidated by the extreme difficulties presented by the mere collection and arrangement (following the guidelines established by his unique genius) of the last fragments of such a

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page ///

tremendous work, which he had continued to revise even as his illness came upon him; it did not leave his hands until the end, in his last weakened state.

If I had not lost this man so dear to my heart, or at least had heaven granted him more time, the responsibility for the printing would not have been mine nor the necessity to account for various things requiring explanation. He would have alluded to them in the preface; he would have overseen the printing and perhaps would have finished the manual. But the subtle refinements he wished to give his type

forced him to touch up thousands of punches in order to enhance their grace and beauty, and to remake even the matrices, an operation which consumed many years and which robbed him of the satisfaction of overseeing the book's final production.

Several years were also spent adding new alphabets not present in the first edition of the Manual printed in 1788, where only 100 are displayed: in this one there are 142. Any owner of the two editions may easily make the comparison and satisfy himself of the fact. And it

was not because he was dissatisfied with the quantity of his types, nor was it to show off their surpassing extent that he added alphabet after alphabet, but because he was convinced that a truly well-stocked foundry should include such a range of letters that the eye could just barely discern the difference between one font and the next. Similarly, in each point size or style, heavy or light are included to meet the different needs of printers, and be useful to them in every type of work. Light weights, for example,

might be more suitable for poetry, bearing in mind the length of verse, and heavy weights might be more suitable for prose.

Considering that he was armed with such an arsenal, it was strange to find the rumor spreading abroad for some years past that he lacked capitals and italics. It was probably the afore-mentioned Manual of 1788 that inspired the falsehood for in it Bodoni did not bother to include complete sets of fonts, not imagining that any intelligent man would not realize that the first word in each font was specifically set in the italics most complementary to the roman type. Perhaps they presumed he was offering

100 alphabets for sale without corresponding italic fonts, and without the necessary inventory of capitals. And this was said at a time when perhaps no other foundry was so well appointed. Proof enough is his series of Latin, Greek, and Cyrillic capi-

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page VIII

tals, both in roman and italic styles, printed in folio format that same year, and in which every alphabet, even the very largest, can be admired in its entirety. And if its limited edition prevented this type specimen from becoming well known, then at least his title pages, so highly praised,

spread16L  
page VIII (cont)

offered an ample display of his capitals, so that there was no room for doubt that Bodoni was not lacking in such types.

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But it is hopeless to attempt to suppress those voices that are so often raised against anyone who, in some particular field, surpasses all others. Even in the heart of Italy where there was scant excuse, a few malevolent spirits made mischievous attempts to persuade others that Bodoni was reaping an undeserved harvest; that it was not he, but others who had engraved the punches for his characters. There were even

attempts to dismiss him as incompetent and idle. But falsehood rarely triumphs over truth. In Rome, beginning in 1762, the oriental characters engraved by him were used by the Propaganda, and I offer proof of this here by showing three different title pages in large quarto format, printed in red and black with capital and lower-case Coptic characters and an Arabic epigraph in the middle, at the foot of which the Propaganda insisted that this statement be printed: EXCVDEBAT J.B. BODONVS SALVTIENSIS MDCCLXII.

spread17L  
page X

Italy could not be unaware of the fact that he had provided type ornaments and decorative capitals to a great many of her printers

from the earliest days of his career. Italy had also witnessed (before these idle rumors began to circulate) the polyglot he created at the beginning of 1774 for the solemn baptism of the royal prince Ludovico, the first born of their royal highnesses Ferdinand and Amalia, our sovereign rulers. It had also seen an even grander polyglot published in the following year for the wedding of the royal Prince of Piedmont. And so Italy scorned these frivolous and misleading rumours, recognizing that Bodoni must have required some assistance

spread17R  
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given the quantity of types that he already possessed. It also recognized that the enormous size of the steel punches for his great capital alphabets demanded the robust arms of workmen accustomed to the anvil; and that the most important tasks of a distinguished artist are to sketch out the design, to adjust the proportions and to

spread 18L  
page XII

correct defects. Thus, not only was the reputation of Bodoni in no way diminished, but he won praise from knowledgeable people who admired his unselfishness as shown in the great care he took in the instruction of those who assisted him, and in teaching them step-by-step with great

spread18L  
page XII (cont)

devotion, in what was to them an unfamiliar art, so as to make them more skillful type founders and worthy disciples.

spread18R  
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The tireless desire to perfect his series of characters would not have ceased had it not been for the unexpected estrangement of his apprentices after 1795. Several capital alphabets in new styles added to the considerable number already in his collection, together with many new lower-case alphabets – connoisseurs of his sumptuous edition of four French Classics were able to admire four of them – are proof enough of how capable and active Bodoni was even without such assistance. Still further proof can be seen in various

English italics. He masterfully cast five sets of these nearly oblique characters in such a way that the body of each piece of type, although severely inclined, supported the entire letter. Thus the extremities of each letter did not extend beyond the rectangular surface of the type body. In this manner no extension of a character would remain hanging, thereby becoming vulnerable to the force of the press and possibly being broken away during the process.

spread19L  
page XIV

It is not my intention, however, to list every alphabet which was added to his foundry after the above-mentioned time;

the present Manual will furnish an exact count if compared with the first. Rather it would be better to note that the format and ornamental border are patterned on the few pages of sample proofs printed before his death. In these he did not follow the precedent of the first edition of the Manual, where every page contains the description of a particular city, beginning with its name, but instead chose to repeat the opening lines the first Catiline oration [of Cicero]: *Quousque tandem abutère*, etc., in order to demonstrate to typographers the potential advantage obtained by being able to select

spread19R  
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one font rather than another of the same style, while at the same time determining which of the two allows for greater or fewer letters per line.

So as not to make a complete break with the first edition of the Manual, he

spread20L  
page XVI

printed at the foot of the page in this new edition the name of whichever city had been associated with a particular type in the old. He considered this necessary because a number of printers had acquired the habit of identifying his types in this way, as for instance, Garamone Pavia, Garamone Genova, Silvio Pesaro, Silvio Fermo, etc., even though he had already arranged that in each class the alphabets were numbered so that

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page XVI (cont)

with equal certainty a font could be requested by simply indicating its point size and number, for example: Testino (8 point) 1, 2, 3, etc.; Testo (18 point) 1, 2, 3, etc.

spread20R  
page XVII

The Chancellor and English types are numbered similarly. The corresponding Financier types are inserted alongside the Chancellor and assigned an identical number. The roman capitals – of which there are 108 sizes from the very smallest to the very largest – are also numbered so that those who so wish can indicate which font (depending on format), they consider most suitable for the design of a beautiful title page or elegant heading.

In the same order, one can look through 17 different sizes of Chancellor fonts. Thus concludes the first volume.

spread21L  
page XVIII

The second volume begins with the Greek characters, of which there are 34 different alphabets with an ample selection of roman and italic capitals, together with other exotic characters mentioned by Bodoni in his preface. These are followed by Fraktur and Cyrillic fonts. Only two series of Fraktur alphabets were cut, since he had long foreseen (as he himself explained in his Notice to the Reader in his edition of the *Oratio*

Dominica), “that they would fall into disuse, and that the German printers, in imitation of the English, would very soon adopt our letters, which would also greatly facilitate the study of their language. And we already have a fine example of this change in type style in the editions of Gesner’s *Idylls* and of the poems of Goethe, Wieland and Klopstock.” As for the Cyrillic alphabets, including both roman and italic fonts, there are 32 and the same number of capitals. All are numbered to facilitate and assure their

spread21R  
page XIX

ordering. There are also many ornamental fonts which can be pieced together to form beautiful and ornate shapes. Examples of these include: Algebraic, chemical and astronomical characters or notations; simple, double and triple rules; braces, etc.

spread22L  
page XX

with whatever else a comprehensive type foundry requires. Such are the contents of the second volume.

The decorative capitals, of which there exist – including both roman and italics – sixteen alphabets of varying sizes (and a seventeenth whose letters are formed using multiple pieces), have been omitted because they are no

longer in use. He did however include the musical characters that he had engraved in addition to his numerous series of alphabets of various forms and languages, for he had surmounted the great difficulties encountered in cutting and casting plain-song and figured music. Of the latter, he offered two types for sale, with one of which the staff lines are printed first and then the notes, which are set separately. Once the staff lines are removed from the bed of the press they are replaced by the composition of notes, positioned with great care, so that in the second passage through the press of

the now-ruled sheet all the notes fall precisely in the spaces or on the staff lines they should occupy. This is an operation that requires great accuracy in registration.

The other type does not require a second press run since the notes and lines are printed together. However, the engraving of these punches is very complicated and difficult because of the extreme precision demanded throughout the process. This difficulty consists, as he explained, in the great care necessary to ensure that all parts be executed precisely enough so that when they are joined together, the perpendicular, horizontal and

oblique lines meet exactly and produce a perfect whole. Following samples of such music, the *Manuale* comes to an end.

It is not my place to speak about the progress that typography may have made through his efforts. Any expert will be able to judge of this by comparing the most esteemed ancient and modern editions with those printed by him with his type-faces, considering either their beauty or the magnificence and grandeur which he attempted to bring to every format. I do not believe that such comparisons should be extended to certain other works, especially

those found abroad, that are prized for their exquisite copper plate engravings, and that he used to call chalcographic rather than typographic editions. For this reason, he never included such engravings in his editions unless they were strictly necessary.

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page XX (cont)

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page XXI

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page XXII

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page XXIII

spread24L  
page XXIV

He knew that only the typefaces, their elegant composition, proper proportion of the margins, accuracy of execution, and good paper determined the true value of a volume and the merit of the skillful typographer. It was for this reason that the brilliant Count Gastone della Torre di Rezzonico

spread24L  
page XXIV (cont)

declared in his poem found at the end of the *Epithalamia exoticis linguis reddita* (1775), at line 86:

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page XXV

Here, from Manutius, the elegant forms  
And from Giunta a purity never before exceeded  
Until Bodoni surpassed them with his flexible metal:  
A printer worthy of Amathus and Paphos.

I must remind the reader that the verdict on this work, as my dearly beloved husband so often explained, belongs in a special sense to the principal academies of Europe. In truth, it seemed to him that in view of the complexity and breadth of knowledge which every branch of art entails,

only these great and illustrious institutions had the right to determine (without appeal) which of the well-known printers of the day should receive the palm. He therefore intended, by submitting the most comprehensive and difficult work of his long and honoured career to such a tribunal, to enter the lists and inspire their lofty and impartial judgement.

spread25L  
page XXVI

And so in order to further his laudable desire, having gathered and arranged the different alphabets and all the other articles necessary to form this entire work, I had it typeset and then

printed. I knew very well the gravity of the burden I placed upon myself, but I husbanded all my resources, my love for him and his fame sustaining me. And I courageously set about the printing in order that Italy and Europe should not be defrauded of so distinguished a monument to the art of typography. In so doing, I have attempted to satisfy, insofar as lay within me, the high expectations of all.

spread25R  
page XXVII

# GIAMBATTISTA BODONI

## TO THE READER

This essay is the fruit of many years' assiduous labor – a real labor of love – in the service of the art of printing. Printing is the final outcome of man's most beautiful, ingenious and useful invention: that I mean, of writing; and its most valuable form where it is required to turn out many copies of the same text. This applies still more where it is important to ensure uniformity,

and most of all where the work in question is one which deserves transmission in clearer and more readable form for the enjoyment of posterity. When we consider the range of usefulness of printing, together with the long series of devices which have brought us from the first discovery of letters to our present power of printing on thousands of sheets of fine laid paper words no longer evanescent but fixed and preserved with sharper outlines than the articulation of lips can give them, the thought of such surpassing achievement compels admiration at the force of the human intellect. But it would be superfluous to enlarge on the merits of an invention which has already been the subject of many elaborate treatises and of much eloquent praise; to the glory of that happy century

which not only discovered it, but so pursued its development as to leave little room for the participation of its successors. Nor do I think it proper to dwell upon my own unremitting efforts to increase the perfection of so valuable an art. Whatever their nature and degree, if my performance does not attest them, no preface of mine can do so. I shall do better, therefore, to turn these remarks to the same purpose by applying them to such practical and theoretical considerations as undoubtedly make for the refinement of the art. The subject is one on which I cannot speak without enthusiasm. If, then, my words succeed in communicating to the reader some measure of this spirit, making him a keener critic and a sounder judge of typographical merit, lovers of really fine

editions will increase in number; and this will have a corresponding effect on the courage and competitive spirit of the printers, not all of whom are more avid of gold than of glory.

For the sake of logical arrangement, I may here observe that it is possible to develop typography by means of an increase both in quality and in output – two

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page I

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page II

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page III

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page IV

things which, though advantageously combined in practice, are, I think, better considered separately.

My first point, then, is this: that increase in quality is indispensable. Now, it is not my intention to deal with mechanical devices, nor to teach intending printers their business. My one aim will be to clarify the conception of that improvement which, making itself apparent in the finished work, bespeaks

the technical mastery of the craftsmen concerned in the production of beautiful and well-printed books.

The conception of the Beautiful must, it is true, not be confounded with those of the Good and the Useful; nonetheless, the three are, in reality, but different aspects from varying angles of one and the same thing. The measure of the virtue in a printed book is the number of people who read it and the frequency, eagerness, and speed with which it is read: indeed, the oftener a book is read – assuming it to be good – the greater the pleasure and profit resulting to the mind. Moreover, this same adaptation to the standards required by our eyes, which discriminate between fount and fount,

constitutes its beauty. This varies according as it succeeds in delighting them by sure proportionment of details, charm, and perfection, not only at a first glance but in the long run. It often happens that we have the same book before our eyes for a long time. If it turns out less and less agreeable to the eye, so that it becomes wearisome more quickly than any other, our opinion of its merits will sink. Visual powers vary largely in different people; we must not, therefore, expect every pair of eyes to be equally attracted, or repelled, by the same type: and this is one of the principal reasons why books should by no means all be printed after the same fashion.

Beauty in books may be classified under three different headings. These are: the splendid style, in large books suitable for the Long-sighted; the elegant, in small books suitable for the Short-sighted; and, in those of average size, whose appeal is more general, what we may term the beautiful without any further qualification.

Long-sighted people, whose eyes must be at a distance from the object viewed to see it distinctly, can take in and appreciate at a glance the masterly ensemble of a finely printed folio; while the Short-sighted, whose eyes must be quite near to see the print clearly, can only view it piecemeal. On the other hand, the former cannot bear to read a tiny

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page IV (cont)

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page VI

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page VII

script which the latter, far from growing tired, enjoy because of its elegance and just proportions. Short-sighted scholars possess herein no small compensation for their inferior ability to appreciate the particular excellences and beauties of buildings, landscapes, and moving objects. Mainly for them it was that Rovilles, the Jansons, the Elzevirs, and their competitors produced those elegant little volumes, as beautiful as they are small, which enshrine the noblest writers in every language. It is thus possible for them to form a select and handy travelling library, fairly complete in several branches, yet weighing only a few pounds. To this important

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page VIII

advantage, especially for those who have often to change their abodes, may be added that of smaller expense. Thus, in the case of these small and elegant editions, as I have called them, it is possible to have an eye to economy; but this is not to be thought of by the reader who wants big books, fine enough to stand comparison with a Terence, a Virgil, a Horace, or a Juvenal *du Louvre*.<sup>1</sup>

spread30R  
page IX

Still, if this sumptuous format cannot aspire to the useful properties of the small and elegant, it has its own advantages, which have nothing

<sup>1</sup> I refer to the folio editions *Typis Regiis*, Virgil 1641; Terence, Horace 1642; Juvenal 1644.

to fear from the comparison. These are, that it ensures a book the longest life possible, and earns respect both for itself and for its owner. Cheap, handy volumes are easily lost and worn out: big, handsome books, on the other hand, are more carefully kept and less handled; their paper, too, is stronger and more capable of resisting the assaults of time, so that they may easily last for centuries. The other advantage of splendid editions is no less manifest: for will not even the layman, when confronted with a book sumptuously and elaborately printed in the largest and costliest format, be forced to conclude that it is worth a price

spread31L  
page X

which it succeeded in fetching? Again, in going through the shelves of a library discriminatingly yet abundantly stocked with sumptuous editions, how is it possible to avoid the inference that their owner is not an ordinary rich man but a cultivated collector of books and of the knowledge therein contained? Pliny considered that the following incident of itself furnished an adequate instance of Alexander's great love of Homer. Amongst the spoils of Darius was found his perfume-box, made of gold and richly studded with pearls and other precious stones; this Alexander would use

spread31R  
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for no other purpose than to keep his Homer in it. He had had the text revised by Aristotle, and could fairly claim that it was his constant companion, his bedside book; indeed, he called it the source of all

spread31R  
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the military virtues. He read it with Callisthenes and Anaxarchus, and had even added an observation or two of his own. Now Pliny held that the reason which made Alexander use the finest casket possible to enshrine his Homer was clearly that he considered it the noblest work of the human intellect.<sup>1</sup>

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page XII

It is true that splendid editions are things more of luxury than of use; it is even true that luxury is the appanage of wealth: but no wealth can be so great that this insatiable spirit – be it of God or of the devil – cannot exhaust it without having

<sup>1</sup> See Pliny Hist, Nat. VII, 30; Plutarch, Life of Alexander, Strabo Book XIII.

recourse to books. It is ever and again demanding a thousand new fashions of clothes, fabrics, embroideries, ribbons, laces, jewels, silver, china, pictures, tapestries, rugs, mansions, villas, gardens, coaches, horses, grooms, banquets, festivities, and all the numberless things on which a man is practically bound to spend money if he wishes to parade his wealth. Indeed, if a library or a museum of archaeology or natural history can ever owe its existence to a rich man's vanity, it is only when its cost, great though it be, is but a fraction of what he has to spend. But when the principal manifestation of riches is to be found in the library, it is a sure sign of a real love

spread32R  
page XIII

of letters; and if, in proof of this enthusiasm, wealthy men can keep a lookout for imposing volumes handsomely printed, it will be the business of the printer's art to supply the demand. Beauty, then, will naturally be found in large books; convenience, as we have seen, in small.

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page XIV

Now, of what are we to say that beauty consists? These, perhaps, are its two main constituents: harmony and proportion. The first satisfies the mind, when it perceives on reflection that every detail works towards the common end; the second pleases the eye, or rather the imagination. This keeps before it certain set and preconceived forms; and the stricter the adherence to these, the greater the pleasure it receives.

Harmony lies, not in the haphazard choice of details, but in their rational selection and in their subservience to the purpose in view. Thus we may briefly say that in splendid editions everything must be on an imposing scale, while in the small and

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page XV

elegant everything must make for convenience and for an economy that shall yet avoid meanness. In the case of proportion, however, clearly as we have seen that it makes for conformity with certain models which we keep before us as standards, much as Polycleitus' famous statue once served as a standard for sculptors, we can see with equal clearness how difficult it is, amongst all the diversity of models in different minds contained, to decide upon the ideal in each manner. The only safe position which I can indicate

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page XV (cont)

is a moderate and discriminating adherence to those proportions which we find in commonest use. Thus, in estimating the beauty of a book with regard to its dimensions, we must first take into consideration its format – folio, quarto, octavo, duodecimo, or less – allowing for the greater license permissible in the smaller sizes. We have next to bear in mind, with regard to width of margin, that it would be a great mistake to take common editions as our standard, since these are for the most part cheap and ugly. Finally, we must remember that even to confine ourselves to the best models is not enough unless we distinguish between different species. The wide expanse of margin which in the splendid type of book is indispensable for a grandiose effect

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is unsuitable and unnecessary in the small and elegant. Old books, it is true, were left with wide margins for the purpose of annotation; but they are few whose hasty notes, written *currente calamo*, are not more likely to impair than to enhance the appearance of a fine book. Instead, therefore, of scribbling on the pages of text, the intending annotator will do better to have it interleaved with plain paper by the binder. It is at any rate certain that nobody who seeks to give to the public masterpieces of Typography would sanction the sacrifice in that superannuated employment of the beautiful contrast

spread34R  
page XVII

between the lines of text and the unspotted whiteness of the margins which enclose them.

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page XVIII

But here I am encountered by one of the nicest problems of the printer's art. The text may be framed like a picture in a handsome border, of which there are not one but an infinite number of varieties; and besides these there are a thousand other decorative forms which may be added here and there, in the way of ornaments, drawings, flowers, scrolls, figured initials, and copper-plates. Now one is tempted to conclude that all these, while conceivably omissible in the small and elegant type of

book where they are not necessary, are indispensable in the splendid; and yet we not only find the most admired editions of this sort quite devoid of decoration, but actually hear Baskerville praised for its

spread35L  
page XVIII (cont)

elimination. To resolve the difficulty we must distinguish between ornaments in relief like the actual type and applied at the same printing, and plates which, in the manner of their cutting or application, belong to another art. It is true that only poor quality, irrelevance, or inappropriateness can make them altogether unsuitable; at the same time, where a book, printed with all the magnificence and perfection possible, contains plates equally meritorious in design and execution, it is the latter which will attract more than their fair share of

spread35R  
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admiration. From this it follows that the art of Typography will win greater credit by showing what it can do without them. Moreover, their absence facilitates the realization of what we have seen to be the proper function of expensive books: that is to say, the endorsement of our love of letters and respect for the authors. It is true that this may be perfectly consistent with a feeling for the other arts and with the employment of fine plates; but it is an enthusiasm which will clearly emerge more conspicuously when unaccompanied. It may be added that in the long run Philosophy and the best literature impel a cultured taste more and more towards simplicity and restriction to essentials and towards a preference over all others for the beauty which has no borrowed plumes.

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page XX

Now this austerity of taste, acting as a reproof of the frivolous and superfluous, condemns as trivialities the very ornaments and borders which, as has been indicated, offer such varied opportunities for the display of technical virtuosity. It will, therefore, be injudicious to use them extensively, save, perhaps, in such books as have no strong appeal for the cultured or are printed chiefly for the satisfaction of a public less fastidious.

spread36R  
page XXI

In the case of a genuine classic, it is all the more appropriate that the beauty of the type should be unaccompanied; for this it is, when all is said and done, wherein the glory of the art is comprised. And this is only natural;

for the type is the one thing which is inevitably necessary, and to it all else is subservient. It will now be desirable to consider this question of type in greater detail, indicating the four chief principles from which all beauty would seem to proceed.

spread37L  
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The first of these is regularity. The analysis of any Alphabet, no matter what the language, will reveal not only a certain degree of resemblance between many different letters, but also the fact that they are the results of different combinations and dispositions of a very limited number of identical units. Thus, the standardisation of every thing which is not in itself distinctive, and the accentuation, so far as is possible, of the necessary marks of differentiation, will impart

to all the letters a certain schematic regularity. In this way we shall obtain uniformity without ambiguity, variety without disharmony, and evenness and symmetry without confusion. It is an intrinsic merit of the printer's art that each letter is always the same. This comes from the casting of them in thousands from matrices all punched by one and the same instrument. It depends, however, on the skill of the cutter whether or no such dimensions and component parts as may be common to several letters are precisely and exactly the same in them all. Moreover, this exact regularity is so grateful to the eye that it is almost in itself sufficient to make any script appear beautiful.

The second principle is no less important. It lies in the pleasure given by

smartness and neatness. These qualities are derived from perfection of matrices, and are visible in the cleanness of type which has been well cast. This should present a surface as smooth as a mirror, terminating boldly in corners which, so to say, have a knife-edge. When it comes to making the impression on paper, care and intelligence must, of course, be called into play. Remember, though, that the same type will give a cleaner impression when new than when worn out, though the same care be exercised in both cases: similarly the type of one foundry may give better results than that of another, though they be both equally new. In judging this quality, the reader's eye will form a competent tribunal.

The case of the third principle is different. This consists of good taste, which chooses the best forms and those most congenial to its

national and temporal situation. As in everything else, so also in writing, fashion reigns and gives its laws, now wisely, now foolishly. Where good sense does not tally with the fashion, which, however, is not so tyrannical as to allow no latitude, good taste maintains a neat simplicity, such as might be attained by forming all the letters with strokes of even thickness. It must, however, be perspicuous and agreeable, as

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page XXIII

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page XXIV

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page XXV

may be seen in that pleasant contrast, so to speak, between light and shade, which is the natural property of everything written by a well-cut and well-held pen. All this will become clear if we bear one thing in mind: it is no intrinsic, metaphysical superiority which makes simplicity preferable to elaborateness in printing;

spread38R  
page XXV (cont)

the reason is that printing was invented as a substitute for the manuscript. Degree of beauty depends, therefore, on closeness of resemblance to the best manuscripts, where the severe taste of the man of letters cares not at all for laborious and unnecessary trimmings, so that all appearance of stinting be avoided.

spread39L  
page XXVI

Charm is the fourth and last quality necessary to a beautiful fount. Everyone knows how hard a thing it is to say wherein lies that beauty, that attractiveness, that grace which we call charm. One thing, however, is certain: it must appear natural and inborn. So far is it from all affectation and visible effort that we shall not go far wrong if we look for it amongst those rare and perfect things which combine both the

direct gift of God and the happiness of nature. Often, however, it is the result of long habit and practice, which makes easy the most difficult tasks, to the point where no further thought is needed for their perfect performance. Perhaps, however, the beauty of writing lies chiefly in a certain free independence of line, frank, bold, and swift; equally, too, in exactness of shape, the thick strokes being so nicely graded *that envy's self finds nothing to emend*. Perhaps, however, we shall tread safer ground if we limit ourselves to saying that letters have charm when they give the impression of being written not unwillingly or hastily, but painstakingly, as a labour of love.

spread39R  
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A fount, then, will be the more beautiful the more it possesses of regularity,

cleanness, good taste, and charm. Now, if it is to show to advantage and sit well on the page, it must be very carefully marshalled in straight and perfectly even lines. These must not be too closely set, nor yet too widely spaced in proportion to their height. In every line equal distances must be left between words, as between squadrons, in which none of the various signs belonging to the letters must be left out. It is worth remembering that when footnotes are appended they should be equally distributed on the pages which face each other, so that wherever the book is opened the opposite pages should show a perfect symmetry throughout. Care must be taken,

spread40L  
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not only that no letter should be broken, or missing, or too full of ink, or smudged, but also that the impression should be even throughout, so that there should never be opposite each other two printed surfaces whose effects are dissimilar.

The most important point, however, is to have good paper. If expense is no deterrent, the beauty of fair thin parchment may be substituted for it. This is still more desirable in printed books than in manuscripts, because less frequently used, although examples are to be found ever since the beginning of printing. Less expensive is the modern invention of paper which imitates parchment. This is similar, not only

in brightness and smoothness of surface, but, I may say, in texture. It may be distinguished by holding it close to the light, when it will be seen to be marked all over by the lines of the metal grid on which the pulp was spread to drain. Although this artificial parchment cannot compare in strength with the genuine article, it offers this advantage to the eye, that both its sides are equally good.

Whatever may be the kind of paper used, opinion is divided on the practice of calendering it after printing. Some maintain that the brightness so obtained is bad for the eyes. If the application of this protest were restricted to excessive calendering, I should cordially agree. I would point out that

the object of putting the printed sheets under the calender is to give them the smooth appearance of parchment and not a mere flat shiny surface. Great care must be taken in the case of the calender, for it may not only give too shiny a surface, but even put the print out of shape and impart a dirty tinge to the sheets. It is this which has given rise to the opinion that it is better only to put them under a press. But my business here is to speak only of fine printing, not of the means by which it is obtained. I appeal, however, to the owners of copies on calendered paper of books from our press, particularly certain copies of *Aminta* on paper with a parchment texture, or, as the French term it, *papier vélin*. I would ask them to examine, to read, and to re-examine,

and then see if their eyes are unpleasantly dazzled.

I trust, too, that they will have no greater cause for complaint from the blackness of the ink. Certain people regard this as a defect, although it is impossible to deny that the blacker the text the more it stands out on the contrasting whiteness of the paper. These people claim consideration for those whose sight is more delicate, who

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page XXXI

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dislike looking at strong colours, and who linger with greater satisfaction on a text whose black and white are both rather gray and give a softer and less contrasted effect. But places where much reading is done rarely lack means of diminishing the light which falls on the book, whereby

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page XXXII (cont)

the colours of text and paper cannot be stronger than is desired. My own opinion, therefore, is that it is not necessary for the colours themselves to be washy: on the contrary, they rather need to be strong, so as not to be too weak even on the darkest days. Moreover, the more clearly bold black print stands out, the less need there is to hold it firmly beneath the gaze for sharpness' sake. The paper, alas! will get darker and the ink fainter with the years; and the glory of fine printing must not be restricted to a good impression made while it is new. This would be to repeat the mistake made by many painters in the days of our grandfathers. Their canvases are already so obscured that one can only guess painfully at such

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page XXXIII

details as are, I will not say depicted, but buried in shadow; while so many pictures, older by almost two centuries, seem new, or almost new, in the freshness of their colouring: so fatal to the later artists was their practice of considering the effect of a picture at the actual moment of completion, when it was finally left by the brush, never to be touched again.

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page XXXIV

We shall, therefore, be wiser to begin as would please the jesting Philosopher Lucian and his followers.<sup>1</sup> He gave the palm for painting to Homer even over Apelles and Euphranor,

<sup>1</sup> See his Dialogue entitled *Eikones*, at the end of the eighth page of the second volume, *Salmurii*, 1619.

instancing that purple streak of darkening blood on flesh grown ivory-pale which Homer's imagination depicts so vividly for us, and that when it is no stricken maid of whom he sings, but Menelaus no longer young. Let us, then, not interfere with the workings of time, which will tone our colouring down enough, and more than enough, for nobody to find it too vivid. No art has greater need than typography of keeping future generations in mind, so that its present activities may be no less useful to posterity than to our contemporaries. Perhaps there is not any class whose eagerness for posthumous fame is more useful to the Public than that of Typographers. This it is which impels them,

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sometimes even at a loss (to say nothing of diminished profits), to publish editions which are not only beautiful but correct, and of the best books – furnished, moreover, with every accessory which can increase their usefulness. But this final praise will not belong to the printer unless he frequently turns publisher as well; nor is this the place to speak of it. Of that, however, which is proper to the Art there is still much that I might say. I think, however, that I have said enough to put the reader in the way of thinking for himself. Beginning with the presses of Schweinheim and Jenson, and coming down to the Aldi, to the Stephani, to Vascosano, to the Gioliti, to Plantin, Blaeu, Vitré, to the Elzevirs, the Haacks, Tonson, Baskerville, Foulis,

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Ibarra, Didot,<sup>1</sup> and finally to our own presses, he will be able by comparison to estimate both the achievement and progress made already and that which yet remains to be made.

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And now, I think, is the time to speak of the progress of the Art as regards increase in quantity.

To maintain some sort of order in this part also of our considerations, it will be worth while to classify the infinite variety of material which may come under the press. To this end we will first of all distinguish between signs whose value is a matter of mere convention

<sup>1</sup> Lack not of respect but of space forbids me to mention above the Giunti, Torrentino, the Grifi, and so many others – too long a list to give in full.

and figures whose meaning, if any, is implicit in their intrinsic appearance. Amongst the former class we must further distinguish those which fix pronunciation, as the first and most important in our Art. We shall then have divided all this wealth of material into three classes. The first will embrace the letters, together with accents, and punctuation-marks; the second will include numbers and every kind of note or symbol belonging to Algebra, Astronomy, Chemistry, Music, or any other branch of thought or science; and the third, ornaments and flowers, together with anything else which cannot properly be termed a sign.

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Having thus made our classification, let us begin by glancing at the multiplicity of varieties which belong to the first class: that is to say, at the infinite

variety of scripts which can be printed, in one as well as in different languages.

The differences of founts in the same language can be reduced to three heads: shape, size, and proportion. As to shape, the inventors, as was natural, began by con-

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tenting themselves with one kind only, imitating the writing commonest in books of their time and district. Thus, the first letter which was used in the German presses was a certain kind, now fallen into disuse, which we may call Semigothic. But the first practitioners of the Art in Rome modelled their founts on the style of the best manuscripts then in the greatest vogue, and this style

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was soon called Roman in differentiation from the aforesaid Semigothic. It was round, as against the squareness which appeared in the capitals, these being the real old Roman, while the round lower-case was the product of later times. However, its use was almost entirely restricted to books. The elder Aldus, perceiving that, as a result, the more flowing writing of his day was already considerably diverging from it, decided to make his type conform more closely. Thus, there would be two founts used in the same book, and the lower-case would be genuinely modern, as the capitals were antique in origin. He accordingly had punches cut by Francesco da Bologna and began with the Virgil of 1501 to publish

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a series of Latin and Tuscan classics in this fount. First named Aldine after him, it is now called Italic by the French and Cursive by ourselves. This type does not stand upright like the Roman,<sup>1</sup> but slants somewhat to the reader's right; capitals with a similar slope were subsequently added.

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In the course of the ensuing two hundred years handwriting changed considerably in Italy; and someone in our own times added a new fount, which we call Chancellor, with a corresponding range of capitals. We have thus no less than six distinct varieties of type in use for our language alone.

<sup>1</sup> The word translated "Roman" above was actually *Romano*; here the word is *tondo*. This was rendered by the word "round" just above; but its exact and only English equivalent in this application is "Roman", and it is impossible to mark the difference of terms in translation. — H. V. M.

Now these six varieties are to be multiplied by the quantity of different sizes required in each style; and in each size there enters our third consideration, proportion. Here I am not considering all the differences which are possible, for, though they will produce innumerable varieties of more or less beautiful script, the resulting number of essentially distinct Typographical founts will not be so great. I speak here only of two proportions: those of the span of a letter to its counter and its width.

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Imagine two parallel lines, one above, one below, for the extreme points of those letters whose long strokes project into the spaces, some upwards,<sup>1</sup> as

1 Ascenders. – H. V. M.

b, d, others downwards,<sup>1</sup> as p, q. The distance between these parallels is the measure of what is termed the span of a letter. Now draw two other lines parallel and tangential to those letters which are entirely contained within the row of print, as a, c, e; the distance between those lines is the measure of the counter. Now divide the size of the span into seven equal parts. Three of these may be given to the counter, two being left above and two below for the spaces into which the long strokes of those letters which possess them extend. It is, however, possible to make the counter somewhat larger, so that, the number of lines in any given area remaining the same, the reader who demands large type is better suited. Similarly,

1 Descenders. – H. V. M.

the counter may, on the contrary, be made smaller in proportion, so that the lines may be separated by wider spaces, with a lighter effect; with the reservation, however, that this is neither the only nor the best means to that end.

But variation in width is more essential. This can be increased till the o becomes almost circular. The greater this roundness, the clearer the script, and greater the possibilities in the way of strong contrasts between thin and thick strokes, as of light and shade. But, on the other hand, in this way there are fewer letters to the line, so that the book is made bulkier. This, though even elsewhere not without its awkwardness,

might conceivably be tolerated if it never came to the printing of verse, where every line demands presentation unbroken and complete in itself. It follows that, if it is desired to avoid having to use type much smaller than would otherwise be suitable for the size of page, the best thing to be done is to compress the letters without shortening them; for, even though less round, they may still be graceful. The proportion of width to span has no other standard than the pleasure given to the eye; it will therefore be enough if care be taken not to offend it with letters too oblong in shape, such as are found in a number of books from the other side of the mountains, even from the most elegant presses, witness the Hymns of

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Santolio, *Amstelodami ex officina Westeniana* MDCCLX. 12mo.

But here it is sufficient if we satisfy the requirements of reason by means of this kind of variation. If, through all my preceding classification, any advantage has been shewn to result from multiplicity of types, with the more pleasure will be examined these hundred and forty-two Roman types, with their corresponding italics and capitals. There are also seventeen “Chancellor” founts, thirteen of which are accompanied by their respective “Financier” founts, and seven “English,” including two which are round-faced; and besides various Russian, German, Greek, Hebrew, and other Exotic types, with which I shall shortly deal, may be noticed a number of shapely Latin, Russian, and Greek

capitals for use in important title-pages and headings. I have myself had all those types cast from matrices cut with punches lovingly perfected by my own hand.

I should have no more to say on this question of multiplicity were it not that, in order to get an accurate conception of it, it would be well to take notice of the number of forms required in the casting of a single type with all its proper provision of double, tied, and accented letters, capitals, small capitals, open capitals, numbers, apostrophes, punctuation-marks, etc., etc. Few people, indeed, would realize without being told, that the total number of matrices required for a single Roman type is no less than 198, while another 184 are necessary for italics of the

same size and size of counter, which must be stocked for insertion among the Roman where desirable. Thus, a complete range of one single type involves the manufacture of 380 matrices. Some idea may thus be obtained of the scope of the Art, even when restricted to the requirements of our language alone, and of those which share with it an almost identical alphabet: French, Spanish, Portuguese, English, and Latin.

But it is time to raise our glance for the surveyal of a wider prospect. Typography was still, so to speak, in the cradle when it began to be recognized that it must also be able to set Greek script before the eyes of scholars.

Johann Fust and his assistant and apprentice Peter Scheffer are celebrated in the history of the invention of printing: celebrated, too, their edition of the Offices of Cicero, with the Paradoxes, whose colophon runs as follows: *Praesens Marci Tullii clarissimi opus Johannes Fust Moguntinus civis non atramento plumali canna neque aerea, sed arte quadem perpulcra Petri manu pueri mei feliciter effeci anno 1465*. Now, we

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find therein, at the head of each Paradox, the Greek proposition in Greek letters, though the type is rough and the composition highly inaccurate. Much greater skill went to the printing at Rome in 1468 of the Greek passages in the Lactantius of Sweinheim

and Pannartz. But since the Greek types of these first introducers of printing into Italy were quite uneven, we can hardly say that they had smoothed out and overcome the particular and characteristic difficulties of Greek typography. This is how the Cretan, Demetrius Ducas, under whose direction Master Dionisio Paravisino published at Milan in 1476 the first books printed in Greek, the Grammar of Constantine Lascaris and Dion Chrysostom, could say in his Latin preface to the aforesaid Greek Grammar: *Cum multum mente, plurimum vero experientia laboravimus, vix tandem inveni, quonam modo libri quoque Graeci imprimerentur; tum literarum compositione, quæ varia et multiplex penes*

*litteras græcas existit, tum maxime locis accentuum servatis, quod profecto arduum erat, nec parva indigebat consideratione.* Nonetheless less, neither he, nor with him the two brothers Nerli, assisted also by Demetrius Chalcondyles in their Homer of 1488 at Florence, nor their successors in the same city, the Giunti, nor at Venice the great Aldus, nor Calliergus at Rome, nor all the others who, in those early days, tried to give expression in print to the speed of modern Greek script with its frequent contractions, succeeded in imparting grace and lightness to their characters. Amongst all the claims to admiration, therefore, of the great Parisian typecutter, Claude Garamond, it is perhaps the greatest that he was the first man to produce a graceful and beautiful type, such as is so much admired

in the editions of the Stephani, the Turnebi, and the Morelli.

But in another form Italy had long since proved the refinement and culture of her taste even in the matter of Greek printing. She had given to the world whole volumes in that noble early letter, the only one known to so many centuries, and almost, one might say, immortal. This may, however, have been the idea of Johannes Lascaris, the editor of Callimachus and of the Anthology, both printed in capitals at Florence in 1494, where, in 1496, was printed in capitals the Argonautica of Apollonius. I borrowed this elegance, revived it, and surpassed it in my 4to and small 8vo Anacreons and in my folio Callimachus;

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nor, so far as I know, is there any other among the variety of later Greek characters which I have neglected. Nobody ever stocked so large a number of these – not only different sizes, but different faces. I have now thirty-four, some of which are unexampled in the whole of printing, and others so unmistakably different from each other that they might quite well be used in alternation together in a single Greek text, where it was desired to make quickly distinguishable all that in Latin or Italian is ordinarily differentiated by the alternation of Roman and italics.

After Greek, the most necessary of the exotic types for a well-stocked press is Hebrew. It is

a remarkable fact that the year 1476, the same in which, as we said, the earliest Greek books were printed, is also that which saw the printing of the first Hebrew books. We are indebted for this information to that very distinguished gentleman, our friend, Abate De Rossi. Anyone desiring further details on the subject may read what he has to say in Chapter I of *De Typographia Hebraeo-Ferrarensi*.<sup>1</sup> I will notice only two things. Firstly, Hebrew typography has its own special difficulties arising from the great

<sup>1</sup> We are particularly happy to learn from the same gentleman, Abate De Rossi, that he has since discovered another edition a year earlier, of which he has spoken at length in his new *Annals of Hebrew Typography in the XV Century*.

number of different small signs which come above, below, and between letters, and whose function is to make quite clear to the reader not only the pronunciation of each word, but the modulation of whole sentences, and every pause, however slight, which must follow one word rather than another in accordance with the requirements of the sense. For all that, it was the same Abraham Ben-Chayim, who took part in the earliest Hebrew printing, when unpointed texts of the First and Second of the Four Orders of rabbinical jurisprudence of Jacob Ben-Asher were printed in 1476 at Mantua and Ferrara respectively, who brought this branch of typography to perfection. This man printed at

Bologna, with points (as they are called) and accents, the Pentateuch of 1482, and subsequently, at Soncino, the famous Bible of 1488. In the second place, if a really successful piece of printing is one which even knowledgeable people might take for a fine piece of writing, then indeed we must recognize that Hebrew printing had already in 1478 reached that pitch of excellence at Pieve-di-Sacco. A copy of the

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aforsaid Four Orders of Rabbi Ben-Asher printed in that place and year was shewn by Johann Christopher Wolf to certain Hebrew men of letters, who insisted that it must have been written by hand. Furthermore, another copy on the finest parchment, which may be seen in the public Library of the Royal University of Turin, was classified by the most expert

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Librarians amongst the manuscripts, and was numbered MS.V.a.I.13 in the printed catalogue.<sup>1</sup>

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Moreover, since Hebrew literature has spread through so many countries and so many centuries, it may easily be imagined that it naturally has a great variety of scripts. However, two principal varieties figure from the start in printing: the Square, or textual, and Rabbinical, so called after *Rasbi*, a celebrated expositor of the Bible and of the Talmud, which is normally used for notes and comments around and beneath the text. Now, as regards the textual, leaving minor variations aside,

<sup>1</sup> See Wolf *Biblioth. Hebr.* Vol. III. p. 445, and De Rossi, *De Origine Hebr. Typogr.* p. 13.

we must notice one important difference – that between the manuscripts of the German Synagogues and those of the Spanish, Portuguese, etc. This is so marked, that we must distinguish two square Hebrew varieties, although the German sort, which may be seen in many sixteenth-century editions, is now no longer used even in German presses. These have, however, a rabbinical character of their own, which may be called Hebrew-German. It is generally used in the printing of works written by the Jews in that Jewish-German language which may be called their dialect. Now, even this I was not content to lack, and have cut, in various styles and sizes, seven square Hebrew types, three of Rashi's, and one Hebrew-German.

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Hebrew characters are used in the writing and printing of as much Chaldæan as the Jews have brought us. They will also do quite well for Samaritan; except, as in the case of Latin inscriptions, that although, as far as the books go, they might quite well be printed in modern Roman or italics, they are nonetheless to be preferred in their proper archaic style. The usual course, therefore, in doing Samaritan texts, is to imitate the actual script. As this varies considerably in different manuscripts, it exists in print in three different forms already. The first, which I will name after Scaliger, may be seen in his notable work *De Emendatione temporum Lugduni Batavorum ex officina Plantiniana*

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*Raphelongii*, 1598, pp. 616–619, or at the end of the Syrian School of Leusden, Ultrajecti, 1672. I will put second that of the Propaganda Press; the third and commonest is exhibited in Walton's Polyglot, the Samaritan Hours of Cellarius, and a hundred other books. Of this too I have cut two types.

But to return to Hebrew script. This will do equally well for work in Syriac, especially where, as is usual, it is not desired to add the pronunciation-marks. At the same time, whether for use or for ornament, three distinct Syriac characters have found their way into print. One is called Estrangelo, the second Nestorian or Chaldæan, the third plain or

Maronitic. In each of these variations may be found, both in the Italian presses, beginning with the Introduction of Ambrosio Teseo, *Papiae*, 1538, and in those abroad, beginning with the New Testament which Widmanstadt with the assistance of Mosé de Mardo published at Vienna in two volumes, the first in 1555, the second in 1562. My Syriac founts comprise three plain, two Nestorian, and three Estrangelo.

Arabic, which is somewhat less satisfactorily to be written in Hebrew characters, first appeared in print with its proper type in the Canonical Hours at Fano in 1514, and, two years later at Genoa, in the Polyglot Psalter of Giustiniani. Neither I nor (I suppose) anyone else

has ever seen the Alcorano printed at Brescia in Arabic type by one Paganino, to whose son, Alessandro, Ambrosio Teseo wrote in 1538 for certain specified characters required by Postel.<sup>1</sup> For all that, I think that the distinction of the earliest fine Arabic printing belongs to Giambattista Raimundi. This celebrated man of letters has hardly received due recognition for the range of his learning, which covered very many languages, or for the skill and assiduity which he devoted to the initiation of Europe into Arabic. Whilst in charge of the Medicean Press for foreign languages at Rome, he published the Arabic text of a number of books. To the four Gospels he added his line-for-line translation of 1591; and finally

<sup>1</sup> This remarkable man is noteworthy in this connection as the discoverer of the Bosnian Script. This was long thought to be a fraud, but has now been discovered in twelfth-century MSS. – H. V. M.

he edited and printed in 1610 the grammatical precepts of Tasrif.<sup>1</sup>

As regards characters, he produced a very handsome Copyist's Script, to translate in this way the Arabic name *Neskhi*. This is used for finely-written books in the

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careful and distinct Oriental manner, which I hardly know whether to call tracing or painting. But besides this the Arabs have many other kinds of script.

1 Martelotti in Gram. Arab. Romae, 1620, said of him after his death: *De literis arabicis elegantissime scripsit Jo. Bapt. Raymundus, qui ut prima jecit latentis hujus idiomatis fundamenta, sic nostri temporis lumen splendidissimum exstitit summa ipsius tum ceterarum linguarum, tum disciplinarum, omniumque fere scientiarum peritia.* Pier della Valle wrote of him to Morino in 1630, p. 161, *priori Antiq. Eccles. Orient.* that *Orientalis literas, et praesertim Arabicas in Europa semimortuas suscitavit, illasque facillime atque elegantissime imprimendi modum adinvenit.* He printed for publication a “Polyglot” in Latin, Greek, Hebrew, Chaldaean, Syriac, Arabic, Persian, Ethiopian, Coptic and Armenian. He published three Arabic Grammars: the *Kāfiyah*, the *Jūrumiyyah*, and the *Tasrif*; but the latter only with a translation. The Eritrean won him a place in the Pinacotheca II.V. This is not the place for further comment.

Leaving aside the old Cufic and Carnatic styles, the modern Malay and that of the Western Arabs, which I will call Moorish rather than African, or Punic, as it has sometimes most improperly been termed, there are several varieties in use in the same provinces as the *Neskhi*, and some find a place even in works of erudition. Thus the florid

*Thuluthi* letter is used in titles and headings; the upright Ta’lik is very popular in Persia, and the rounded Dīwānī is much used by the Turks. Accordingly, although Arabic script is common to the three languages, with the single addition, in the case of four letters, of three points, to explain to the Arab the foreign sounds intended, we have nonetheless in our presses types which we call Persian and Turkish. Of these I have cut six: two Neskhi, two Persian, and two Turkish.

Of these last, however, this would not have been the place to speak, were it not that they too are Arabic. It is my aim to treat in somewhat greater detail only those languages which form part of the Science of Christian Philology

as publicly taught in all the most notable schools of Europe, and which ought accordingly to be found in the stock of almost every printer. For this reason I must add to the list Ethiopian, also named Chaldean after the man who first gave us its rudiments at the Propaganda Press in 1630. Although less used, it is nonetheless one of the languages which must be classed together with Hebrew as so many dialects of a single language. Like them, it is, therefore, necessary to the complete Hebraist, at

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least if he belong to the school of the Dutchman Schultens, or, going further back, of the Tuscan Canini.<sup>1</sup> If

<sup>1</sup> Of Anghiari, near Borgo San Sepolcro. See *Institutiones Linguae Syriacae, Assyriacae atque Thalmudicae, una cum Aetiopicae atque Arabicae collocatione . . . Angelo Caninio Anglarensi auctore. Parisiis, MDLIII.*

Ethiopian is the most degenerate of these, its proper script is nonetheless more indispensable than in any other case. Hebrew makes an unsatisfactory substitute, because the very conception and formation of its letters are too different. Instead of simple letters, the script of the Ethiopians is composed of over two hundred symbols standing for combinations of consonants and vowels. This type too I have not omitted to cut.

I have spoken up to now only of those idioms of which there are public chairs throughout all Europe. For the rest, who could number them? Yet many of them

are cultivated by our scholars. There are, for example, Coptic and Armenian, both of them consecrated in the liturgy of a single Church. The first of these is precious also for the light which it throws on the remains of ancient Egyptian culture and art, just as through our native and foreign antiquities are investigated the remains of the Etruscans and Phœnicians, of Carthage and Palmyra. Nor must we omit mediæval and Gothic studies. As to modern languages, many are known in Italy through the zeal of its Missions to every race, however barbarous and remote; and many are useful in commerce, and in the dissemination of enlightenment or of news. I do not therefore consider wasted the attention which I devoted to the cutting

of two Coptic, two Armenian, two Phœnician, one Punic, two Palmyrene, one Cyrillic,<sup>1</sup> one Illyrian, one Ulphilas's Gothic, one Georgian, two Tibetan, one Brahman, one Malabar, two German, and various Russian founts, even though some of them are not, like ours, composed of simple constituents, and required an interminable series of matrices.

And yet all these different scripts form no more than a portion of our types; and they constitute, although the most important, only one of the three categories which we previously defined. But the conclusion of this preface of mine would be too long delayed, were it my intention to treat the other two classes in such detail. I must then go through the specific signs proper

<sup>1</sup> Probably he means a stylized Serbo-Croatian form of Cyrillic; but he may mean Glagolitic. — H.V.M.

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to science and art; must linger, either over the multiplicity of the symbols of modern Analysis, finite and infinite, or over the typographical difficulties of the two kinds of musical notation, the Gregorian and the figured; and finally discourse on ornaments, whether separated according to their kind and nature or combined in symmetrical or pictorial designs composed of many different parts skillfully arranged. Even then there would still remain the different colors of ink sometimes used on one page for the sake of differentiation; colored papers; and the silks on which our presses are occasionally called upon to print.

To cut a long story short, I will only say that the function of our Art

is to put before our eyes, in large numbers of copies, the printed representation of anything which the human mind can split up and divide into a definite number of different parts, not infinitesimally small, which frequently recur in exactly the same form to play a part in that representation. I might even take a wider view; for a really fine cutter cannot fail to be able to cut even such things as cannot be split up into elementary and identical constituents. But I do not wish to confound with ours any less delicate branch of printing, such as has been done in various manners from wood, iron, and copper, both before and since that most happy invention,

which constitutes the specific nature and pride of our printed work: that is, the composition and distribution of the same types, and their casting. And oh! that this art might be more generally practiced with the skill and enthusiasm which its ingenuity, utility, and beauty merit, and meet with the encouragement of good taste and good sense. But it would ill suit me that my words should do more than my works to win it praise. I will, therefore, now conclude, with the request, that the reader will examine these Specimens of mine with due attention and with corresponding goodwill; and that, among the many other things printed by me, he will seek an acquaintance with at least the best.

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