

The Woodcut Initials of the *Fabrica*

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URING THE fifteenth century, in the region of southern Germany, the format of the printed book of the western world was evolved, based to a large extent on that of the medieval manuscript. The rich ornamentation of manuscripts dates from remote antiquity, from Greece, where the tradition later passed to Rome, and thence, in medieval times to western Europe. The custom of embellishment was handed from one group of artists to another, most of these craftsmen working either as members of the Christian church, or under its protection, largely in monasteries, in the later medieval times.

Drawn and painted on vellum or parchment, usually of relatively large dimensions, the manuscript not only included many pages of carefully, tirelessly copied script, but many border embellishments, some purely ornamental, some definitely illustrative of the text; and at the beginnings, or in important locations, there were full-page illustrations brilliantly illuminated in precious colors and gold, as complicated in technical structure as larger easel pictures. Initial letters also were as elaborate as these full-page illustrations, usually containing subjects interlaced with the initial.

It is known that these miniatures, so-called, of the medieval manuscript, followed the fashion of the rich volumes transcribed by the copyists of Athens and Rome. The Byzantine tradition intervened, followed by Charlemagne, whose hospitality afforded men of letters encouragement and shelter, inviting the great Irish and Anglo-Saxon illuminators to Aachen, men who from the sixth century made a study of calligraphy, and were celebrated all over Europe. Much of this early style took the form of interlaced chequer-work or arabesque foliation resembling Gallo-Frankish jewelry. Manuscript styles flourished all over western Europe—England, Ireland, Germany, France, and Spain.

Since the manuscript was an expensive and necessarily limited record of great learning, it was but natural a more universal substitute should

eventually appear, the demand arising simultaneously with the revival of learning—the renaissance movement, and with the improvement in paper-making and the invention of movable type. Thus, the modern book appeared.

The aim of the first book-makers was to approximate the great craftsmen of illumination, and to produce, more modestly, the fine style of manuscripts, conforming to the limitations of printing and at the same time striving to be worthy of the tradition.

Printing in Europe, the discovery of which is associated with Coster and Gutenberg, goes back to about the year 1440. It was subsequently



FIG. 1. Large initial Q from the *Fabrica* (1543 and 1555)

perfected by Fust and Schoeffer, who tried beyond the pure letterpress conception of the 42 line Bible to follow the manuscript style throughout. Their Psalter of 1457, with over two hundred capitals in two colors, besides the great initial "B," form a perfect imitation of a highly decorated manuscript. Gunther Zainer, in Augsburg, was perhaps one of the first who gave up the complete imitation of the manuscript. Whoever was responsible, it came about certainly as a general practise in Augsburg, as a gradual change spreading through Germany and to the South.

The city of Basel, on the borders of Switzerland and Germany, was one of the chief centers of this early bookmaking, and printing was introduced there before 1468, though no book bears a printed date earlier than 1473. After the turn of the century, the city became even more prominent in this respect, especially when Erasmus allied him-

self with the great Basel printer, Johann Froben. So much so that for a period in the second quarter of the century, Basel fell heir, as Pollard remarks, "to the typographical supremacy which Venice was fast losing." Basel, therefore, as a vital center of bookmaking, attracted many artists by reason of its great publishing houses, which could always furnish a livelihood for designing in this manner, for new editions of the classics, treatises, and writings of the great reformers. Though in many instances the scholarly publications provided only occasional opportunities for illustrations, the desire for beautiful pages and make-up



FIG. 2. Large initial O from the *Fabrica* (1543 and 1555)

found an outlet in elaborate borders to titlepages, headpieces, tailpieces, and ornamental capitals.

From one of its most noted publishing houses, that of Oporinus, there issued in 1543 the "Anatomy" of Vesalius, entitled *De humani corporis fabrica*. . . . In turning over the beautiful folio leaves of that cherished book one is greatly impressed not only by the marvelous full page anatomic illustrations for which it is world renowned but also by the animated initial letters that enhance the beauty of the text. Upon closer examination these initials are seen not only to contribute to the typographic excellence of the book but also in their continuity to relate a story of the difficulties encountered in the sixteenth century in the study of medicine. An even closer scrutiny reveals the physicians practising the art of healing and experimenting with vivisection for the furtherance of anatomic and physiologic discoveries, and, indeed, in a

very subtle way, they supplement the anatomic plates illustrating textual materials.

The two series of ornamental initial letters, which appear in the Vesalius "Anatomy," depict children who, with inimitable seriousness are acting as medical consultants. There are four large ones, Q (Fig. 1), O (Fig. 2), I (Fig. 3), and T (Fig. 4), measuring 73 mm. square, to be found at the beginnings of the seven books of the text; and a group of seventeen smaller ones heading the chapters: A, C, D, E, F, H, I, L (Fig. 5), M, N, O, P, Q, R, S (Fig. 6), T and V, measuring



FIG. 3. Large initial I from the *Fabrica* (1543 and 1555)

39 x 41 mm. The designing of these initials, especially the larger ones, is supposed to have been done by the Flemish follower of Titian, Jan Stephan van Calcar, who also designed the plates.

Calcar was born in a town of that name in Flanders in the province of Cleves, about 1499. He is recorded as living in Venice, in 1536, according to the historian van Mander, "with a girl from Dordrecht whose parental home was a hostelry frequented by cutthroats and murderers," from whom she had fled. Calcar, studying under Titian, developed a technique of drawing and painting so much in the style of Titian that many of his works passed, and still do, especially portraits, for those of his master. Rubens, who once owned an "Adoration of the Shepherds," now in the Vienna Museum, had an enduring admiration for this picture from which he would not be parted, which in itself is a measure of real praise.

There was in Calcar's technical style little of Flemish origin; and as a draughtsman, especially in the matter of the human figure, or as a portraitist, he was thoroughly accomplished in the Italian sixteenth-century manner. His greatest work was the magnificent series of anatomical drawings done for Vesalius, which, to date, have rarely been surpassed in their attainment, if ever. These monumental scientific drawings of the muscular and bone structure of the human body were made by van Calcar, against a diminished but connecting landscape background, possibly representing the environs of Verona, and he did,



FIG. 4. Large initial T from the *Fabrica* (1543 and 1555)

as well, a frontispiece representing a lesson in anatomy, and a portrait of Vesalius.

The woodcuts (referred to by Vesalius himself as engravings), after these drawings, magnificent and faithful translations in themselves, were in turn made under Calcar's close supervision; it is even possible Calcar did some of the cutting himself, considering the skill and accurate mastery of detail. There was, currently, little record made of the individual work of the fine craftsmen who more often than not did the translating; and we are therefore without knowledge of many of these artists. Since, however, Dürer and many other great artists of the time knew the technical details well, and practised them furthermore, it is plausible to believe Calcar instrumental in creating in part these great woodblocks himself.

Vesalius taught anatomy at the University of Padua, nearby to

Venice. Vesalius was naturally drawn to Calcar, as Vasari puts it, "by the amazing art with which he drew from the dissected body before him" the anatomical plates of which the first—the *Tabulae Anatomicae*—were distributed as "fugitive" or loose sheets to Vesalius's students. It was the existence of these first drawings which created the idea of the treatise which Vesalius eventually caused to be published, and which came to be considered a monument in the field. Anatomical treatises had existed prior, such as J. de Ketham's *Fasciculus Medicinae*, 1493,



FIG. 5. Small initial L from the *Fabrica* (1543)



FIG. 6. Small initial S from the *Fabrica* (1543)

that of Laurentius Phryesen in 1518, and others; but their accuracy could hardly be considered in the same class.

Among the earliest designers and woodcutters to come to Basel was Urs Graf, a follower and admirer of the great Dürer, from Nuremberg. The latter master had currently everywhere an unquestioned influence upon the woodcut designers in south Germany. His only peer, Hans Holbein the Younger, was working in Basel in 1516, employed by the publishers to do initials and illustrations apart from his painting. Holbein commenced his woodcut designing in the style of Graf, animating the background, surrounding his ornamental initials with children masquerading in every occupation of life, some nude in the classical style of

the renaissance; others, again more seriously clothed in the Gothic tradition. Holbein added a greater scope to the other artists' work in the variety, the greater clarity through freer composition, design, and technique of rendering. His models at length became the standard of the Basel printers.

It should be noted at this point, however, that the invention of printing, which revolutionized in so many ways the life and times of fifteenth-century Europe, did not immediately put an end to the profession of the rubricator and illuminator. Some printed works of the end of the fifteenth and the beginning of the sixteenth centuries were embellished with miniatures of the very highest merit and illuminated letters of great beauty. There is, among the early books in the Army Medical Library, a case in point, in the edition of the Greek text of Galen, published in 1525 in Venice by the Aldine Press, where the initials have been left with no printed design or capital, to be supplied by the hand of an illuminator, which, in this case, was never carried out.

Eleven years later, however, in 1536, when Cratander published a Latin translation of Galen's works, in Basel, he used principally the initials by Holbein, and some from the Greek Lexicon of René Gelli. The same was true of the Basel Greek text of Galen, also published by Cratander, in 1538, both of these books also being in the Army Medical Library.

Oporinus was himself the son of a painter named Hans Herbster. Little remains of Herbster's work; we know nevertheless that he was a member of the Guild of Painters in Basel in 1492, and welcomed Holbein upon his arrival in that city. Oporinus was consequently familiar with the work of artists like Graf and Holbein, and would naturally have turned to these local craftsmen.

When it came to the point of considering a publisher, Venice was, though adjacent, no longer the great book center, and Vesalius turned to Basel and Oporinus. The latter appears to have approved the greater variety and scope which Vesalius wished to achieve in planning the book, and gave the author a free hand. Whether he wished it or not, from the record, it would seem as if Vesalius, being obviously a domineering personality, would have assumed it anyway. The extensive layout included the spacious text, the inclusion of the plates, frontispiece and portrait, and the decorative feature of the initials. Vesalius undoubtedly hoped for a reasonable advantage with the venture, but probably never realized that the collaboration with Calcar, and the beauty of the artist's plates, would result in the great success that occurred. A certain prestige could be counted, upon the reputation of a publishing house like Oporinus; and both author and publisher seem to have worked out the various preliminary steps in relative harmony. The interesting letter from Vesalius to Oporinus, of August 1542, printed

after the dedicatory letter to the Emperor Charles V, in the 1543 edition of the *Fabrica*, came when the cuts were finished.

You will receive in a short time together with this letter, through the merchants Danoni of Milan, the engravings to go with my books *On the Structure of the Human Body* and the *Epitome* of these. I only wish they may reach Basel undamaged and in a condition of security commensurate in some degree to the pains I have been at in preparing them, a task in which I have been ably seconded by the engraver and by Nicholas Stopius, the trusted business agent of the Bombergs in this town and a young man of no mean accomplishments along scholarly lines. I hope they will not be bruised in any way and that the journey may not cause them any sort or kind of damage. In among the series of engravings I have distributed the text by pages, together with proofs of each of the figures, adding directions to show where each belongs in the finished work, as a safeguard to prevent the order and distribution of these from causing any trouble to you or your workmen and the figures from being printed out of the proper order . . . [detailed instructions for matching descriptions with blocks, lettering descriptions, etc.]. . . . Particular pains must be used in printing the engravings, since these are not made in the common and ordinary manner and as it were in outline only; neglect nowhere the matter of the picture (even if you do occasionally omit the text on which the illustrations are based). And although in this respect you are a most capable judge, and I have the most complete confidence in your industry and pains, I should particularly desire this one thing, that in printing, you would follow as nearly as possible the printed copy sent by the engraver in place of his own draft and enclosed with the woodblocks. For this will insure that no character, however much in the background, will escape the keen-sighted and attentive reader, and that that feature which is most artistic about these pictures and to my eye exceedingly attractive, I mean the thickness of the lines, together with the nice shadings, will be clearly apparent. But there is no need for me to write you at length about these matters, since it depends upon the smoothness and firmness of the paper, and particularly upon the carefulness of your workmen, that after the pattern of this copy which we now send you and which we have several times printed here, each detail should be issued by your shop to the general public and become common property. I will do my best to make the trip to your city before very long and to remain at Basel, if not during the whole time that the work is in press, for some time at least. . . .

. . . Such are the chief reasons why I have prepared these woodblocks at my own expense; and now again and again I urge you to take care that they shall be exactly and clearly printed.

Returning to the initials, stylistically the four largest bear a superficial resemblance to those by Hans Holbein and his brother Ambrosius, in such publications as the philological treatises by Valentin Curio, the "Galen" of Bebelius and Cratander (1532), and other current works. But they seem more spacious and seem to have been contrived with more effort to present a full composition dealing with specific and con-

nected subject-matter, than to provide only incidental or humorous comment, like the Holbein's already mentioned. In the initials T (Fig. 4) and I (Fig. 3), the spaces behind the letters are entirely filled with a subject composition; in the case of the T, children stringing up a dog for purposes of experiment. The initial T, placed in front of a ruin, is used as a gallows over which is slung a rope, with two putti at the right pulling the creature up. Its nose is bound, and the other putti hold it from struggling while one to the extreme left grasps a club with which to kill the animal. Rosenkranz sees in the small V on the ploughshare at the lower right (Fig. 4), a signature of the woodcutter, working for Vesalius and Calcar, the only evidence of such authorship to be found on any of the pieces. It undoubtedly is a signature; but at best the author remains anonymous.

The letter I (Fig. 3) is a subject the meaning of which is rather difficult to determine. Whether the putti are robbing a grave or hastily burying a body is hard to make out. A figure at the left holds a candle over others lifting a body in or out of the grave at the lower left; behind, in front of arches of masonry, stand soldiers, one helmeted and holding a spear, while at the right one is running away from the scene with a pennant. The whole incident is an indication of the difficulty under which the student of medicine in the sixteenth century practised anatomical studies, overcoming religious scruples, superstition and mistrust.

The letters Q (Fig. 1) and O (Fig. 2), though measuring the same size and carried out with an identical use of horizontal shaded lines in the background, with short curved lines of shading in the bodies of the putti and with the subject-matter contained within the circle in the middle of the letters, differ in the outside and corners, which are taken up in the Q with two seraphs above and two putti beneath; and, in the O, with foliate and griffon patterns. Rosenkranz would see in this a transition from what he calls "pure" illustration to "decorative" illustration, to the complete foliate designs for the initials which appear in later editions. Since the subject designs are found both as early and as late as the foliate, this can be less an indication of change of style than an effort for more variety.

The center subject of the Q, which commences the preface of the *Fabrica*, represents an operation or vivisection on a young pig, the animal on its back chained to a table through the mouth, with the left foreleg fastened by rings to the table side. To the left is a figure holding an open book. One putto bends over the animal with a scalpel about to make an incision in the animal's neck, in order to perform one or another of Galen's experiments, either the division of the vagi nerves, to show their control of the voice—according to W. G. Spencer; or the performance of tracheotomy and the examination of the mechanism of breathing. Another suggestion by Singer for the Q is the opening of the

trachea, as Vesalius describes how the animal may be kept alive by the action of a pair of bellows inserted in the trachea even if the thorax is opened. The surrounding figures suggest a clinic, to whom the operation is explained by the reader by steps. There is no initial in the entire text that does not allude to some part of the treatise.

The O shows a room with a renaissance fireplace in which a cauldron hangs over a brisk fire blown by the putto to the left with a bellows. The figure in the center is in the act of placing a skull in the kettle, while a third holds a thighbone. The scene represents the maceration of parts of the skeleton through boiling.

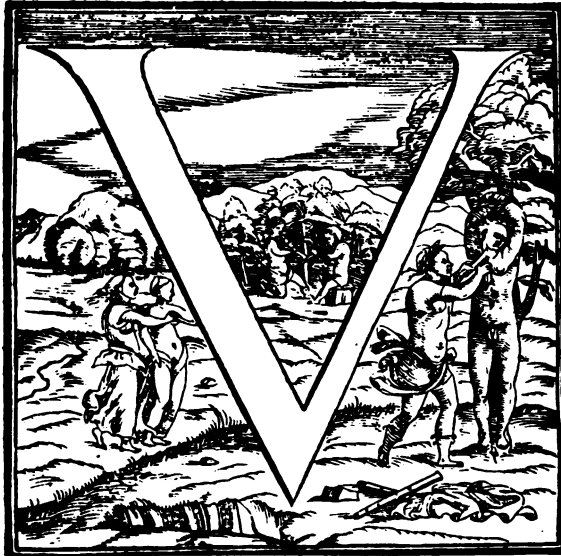


FIG. 7. Large initial V from the *Fabrica* (1555)

When, however, one comes to the second Basel edition of the book, published also by Oporinus, in 1555, besides the four large capitals of the 1543 edition, there is a large V (Fig. 7) which seems not only undoubtedly to have been cut but also to have been designed by another hand than the first group of four. It shows a distant landscape with mountains and sky, and nearer, three individual groups surrounding the letter V. In style it belongs with the smaller series of initials in the second edition, which correspond to those of the first but use landscape backgrounds throughout. The designs, especially in the case of the smaller alphabet, are more composed; the cutting more skillful, and the spirit indicates the Venetian School of the sixteenth century. In the V the subject is no longer strictly scientific; a classical theme is introduced, the distant group between the arms of the V representing the contest

between Apollo and Marsyas to see who was the more skillful musician. Apollo, the winner, could do what he wished with Marsyas, the vanquished, and accordingly flayed Marsyas for his impertinence, a scene which appears at the right. Wearing the laurel wreath, Apollo has Marsyas tied to a tree while two Muses, who were judges of the contest, view the scene from the left. In the right foreground are the dis-



FIG. 8. Small initial L from the *Fabrica* (1555)



FIG. 9. Small initial S from the *Fabrica* (1555)

carded flutes and clothing. This subject would appear to be a direct hit at Vesalius's critics.

Returning again to the earlier edition of 1543, we have in the smaller initials, although in more modest fashion, somewhat the same idea as Calcar's designs for the larger examples. Since tradition gives these small initials to Calcar, we accept the authorship. Nevertheless, they appear to be very closely allied to the Basel initial style of the Holbeins. It is possible that when designing the format, Oporinus suggested to Vesalius the use of the current type of Basel initial as a model. By and large they seem cramped and less carefully worked out than those of the second edition, though the narrative scenes are thoroughly

engaging. They represent, in the three here illustrated, the sawing open of a head, in the D at the beginning of this article; a removal from the gallows, the L (Fig. 5); and an experiment in bloodletting, the S (Fig. 6).

These chapter initials were divided in subject-matter into three groups; first, the obtaining of cadavers from burials or from the execution of persons or animals whether by sword or strangulation; secondly, autopsies and vivisection, especially D, Q, S and T; and thirdly, the treatment of fractures of legs, and various operations, childbirth, and so forth, as in the letters E, F, H, I, V and A.

In all, the subjects are treated at close range; if out of doors, in foreground settings, or if inside, close at hand so that the effect is one of intimate and confined areas. When comparing the L (Fig. 8) and the S (Fig. 9) of the second edition with the L (Fig. 5) and S (Fig. 6) of the first edition, we have the sensation, in the second edition, of a much greater feeling for composition, and that a different hand made the cuts. There is no doubt that the small initials of the second edition were especially designed and cut for that edition, since their slightly larger size was dictated by the larger type and more widely spaced lines of that edition. Calcar was now dead, and can have had no part in the designing of the new initials. The work was probably done by a Basel artist, working under the direction of Oporinus. It was undoubtedly the same artist who designed the large V for the second edition. There is no clue as to his identity.

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Note: Besides the initials used as illustrations in Mr. Francis's article the following are used to begin the other articles in this issue: Small I from the 1543 *Fabrica*, and small A, T, and I from the 1555 *Fabrica*.

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