

# TWO ANATOMIES

by

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If we examine the title-page of the *Fabrica* we see that it differs in a remarkable manner from those adorning earlier textbooks of anatomy. In these the Anatomist is set apart, reading aloud from a textbook he holds in his hand, while at a proper distance a Demonstrator is shown displaying, under the instruction of an Ostensor, those parts he refers to.<sup>1</sup> To the select and small impassive audience, the anonymous body and the well-known book are the important things in a ritual which is familiar to many of those there.

In Paris<sup>2</sup> the audience consisted of Members and students of the Faculty and barely numbered more than a dozen. In a large school, such as Bologna, this was limited as a rule to twenty, who must each have completed two years of study. Here, however, and elsewhere in Italy, these rules seem at the beginning of the Renaissance to have been relaxed. Two hundred or more attended the course of twenty-five lectures on the Anatomy of Mondino given by Curtius, and twenty-six demonstrations given by Vesalius.<sup>3</sup> If Curtius was wont at times with a bewildering and rather ostentatious display of quotations to demonstrate how Mondino had failed to follow Galen, and so erred, Vesalius would on occasion demonstrate how both had been mistaken.

In the earlier textbooks the dissection scene is depicted as taking place within a house, but in some of those published in France it is also shown as occurring in a walled garden, and indeed in Paris there are records of them being performed in one or the other. Both the lecture and demonstration took place simultaneously and the one supplemented the other. Both were concerned with man's place in the scheme of things, rather than with the intimate details of his structure. The public anatomy, on the other hand, had become an entertainment, in which at times the one seemed to contradict the other and lecturer and demonstrator quarrelled openly; an entertainment for which a special temporary amphitheatre was built with a portico of a church for background. It is almost inevitable that such an anatomy, written under such circumstances, should dwell perhaps unduly on detail, tending to stress the mistakes Galen had made, and significant that it should have been written, not by the lecturer, but by the demonstrator.

My chief concern, however, is not so much with Vesalius, or Mondino who preceded him, as with another anatomy published two years later in Paris at the height of the French Renaissance,<sup>4</sup> Estienne's *De Dissectione*. Here at Fontainebleau especially, a characteristic school of painting and design had been evolved. The native gothic tendency had imparted to the Italian Mannerist painters, Rosso and Primaticcio, working there a certain elegance and wayward grace; a particular set of proportions and way of posing their models, which even now we may feel is typically French.

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Elegance and style are, like good manners, lesser virtues, but not to be despised. In a textbook of anatomy they are conspicuous by their absence. Only now and then, as in the plates designed by Casserius or Albinus, do we find a trace of that elegance, that good taste we have a right to expect in the *De Dissectione*, the most costly book to leave the printing press of S. de Colines, Estienne's stepfather and one of the greatest printers of his time.

One's first reaction to the book is entirely favourable. The type is beautiful and the book handles well. It is only as we turn over the pages that we become aware of something amiss, and so gradually, I believe, learn of the accidents that befell the making of this book and, in so doing, about the anatomies of that time.

These skeletons are very gothic. In the background of some of the more remarkable are distant cities and rivers, recalling those of Italy as seen through the nostalgic eyes of Breughel and Del Abbate. Italy has not, however, tamed them. They have none of the playfulness of their Berengarian forerunners nor of the resignation of the Vesalian series. They are too gross, too akin to the figures in the Danse Macabre, to that of Death himself. With the exception of two plates, so clumsy they seem to belong to a different age, dated 1530, they are amongst the first in a book which was strangely long in the making. Possibly that is why they too, especially when coloured, as in the great vellum copy, seem to belong to a medieval rather than a renaissance text.

The muscle men are perhaps a little better. They at any rate are elegant and have a flavour all their own. Here it may be that particular quality we might expect. They seem petulant and a little resentful as they display the muscles of their abdominal wall, whereas their Berengarian forerunners are gay and unaffected. Such a change in attitude is, however, in keeping with the changing fashions and if we are disconcerted it is surely because of the way each dissection has been shown for no very obvious reason on a block apparently let into the original figures. At times this is clumsily done, and as in the Berengarian figures the dissection is confined to the abdominal muscles and stops before it is really begun, whereas in Vesalius it is carried out to the bitter end. In these famous figures we look in vain for that suggestion of wit we discern in Cowper or for the charm with which the Casserian figures indulge in so memorable a strip-tease.

These are, however, minor points, for, after all, the individual muscles are dealt with at the end of the book, which is, as the title-page suggests, particularly concerned with dissections. These are carried out first on men and then on women. Here then the book must stand or fall and here one is surely aware of something very amiss. The Vesalian figures have, in their diversity, a certain over-all unity, as have those of Eustachius, Casserius, Albinus and Cowper, but here, as in Berengario, they are subdivided into groups of varying size. One of the largest and most striking consists of studies of young men, obviously dead, who are shown hooked to trees or propped up against ruined shrines. They are more suited to a study for a picture of Saint Sebastian than an anatomy, yet where the parts to be shown are sufficiently large and the inset is neatly done, they serve their purpose admirably. Where, on the other hand, the parts to be

shown are small, as in the neck, the results are so deplorable as to suggest that this can never have been the purpose for which they were first intended. They are followed by a series of figures that seem to have been taken at random from a sketchbook and have been adapted with results that are often unfortunate. The majority of the young women form yet another little group. They seem unsuited for their purpose and, like their Berengarian forerunners, might well have been taken from a set of pictures. In these young women again the dissections are shown on an inset let into the original figure.

And so certain questions begin to take shape. Why did this work, begun in 1530, take so long in the making? And why is the part played by Estienne and Rivière so carefully stated on the title-page, when the acknowledgement from Estienne in the Foreword might so well have sufficed? Why were the great hand-coloured volumes, printed on vellum, never presented to the King and why do they contain no dedication leaf? How may we account on the one hand for so lavish a display of plates and on the other for the unsuitability of so many for the purpose for which they are employed? How can we explain their ugliness and occasional beauty and changing mood; their frequent correction by means of large insets?

Now such insertions are commonly used to correct a fault, or, on occasions, to adapt a block for another purpose, but are met with in no other anatomy. I argued, therefore, that Estienne had found a collection of blocks in his step-father's warehouse that he had in this way adapted for use in his book. Had this other book been published, there was one young woman it should have been easy to trace, for she was no longer a girl, had none of the clumsy grace we associate with Botticelli. She was a little mannered but not so sophisticated as were her contemporaries in Paris. She was Italian, rather than French, and Raphael, having seen Michelangelo's work, or one of his school, might have drawn her. I could determine her age to within a few years, but, even then, could not find her. No printed book contained her picture and we must assume that the book for which she was first designed had never reached completion.

But, if wood blocks were borrowed and copied, so too were the pictures on them. Berengario we have already seen is thought to have taken several of his female figures from pictures in his collection. It seemed then likely that she too had been taken from a picture which might still exist or which long ago had been destroyed. But sketches of her had survived, there are two in the Uffizi, and in the end I found her and her companions in a set of engravings of the Loves of the Gods, for which Rosso had done two drawings and Perino del Vaga the remaining eighteen.<sup>5</sup> Their discovery, however, raised a further problem, for many had already, in copying, been modified as if for an anatomy and varying degrees of violence had been done to their persons to suit them for the same purpose; this is why so many are so ugly. How can we account for this unless we assume that they were first modified for one anatomy and then re-adapted for a second by means of the insets; unless we suppose that Estienne and Rivière had fashioned theirs makeshift on the fragments of an anatomy planned by Rosso but never completed. Such a supposition might have seemed far-fetched, were it not known that Rosso had actually planned to publish an

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anatomy. Vasari, moreover, tells us that when Rosso was staying with Bishop Tornabuone after his escape from Rome, 'he disinterred dead bodies from the burial ground of the Episcopal Palace in which he had his abode and made very fine anatomical studies'. No one, of course, can practice anatomy in this way, nor indeed is it likely that the Bishop had countenanced such a procedure, unless it were to enable Rosso to complete a picture on a devout subject, such as a Deposition from the Cross, or a Saint Sebastian. For this there was indeed ample precedent; Michelangelo had enjoyed the same privilege when he was fashioning a crucifix for the Prior of the Church of San Spirito in Florence. The remarkable illustrations which are the core of this book could scarcely have been created in any other way.

Furthermore, Rosso came to the court of France on the recommendation of Aretino; he was in Venice at the same time as Charles Estienne, who was attached to the household of the French Ambassador, de Baif, who was responsible for the arrangements with Rosso.<sup>6</sup> They may even then have thought of adapting Rosso's drawings, including the St. Sebastian series, for an illustrated edition of the only anatomical text readily available, that of Mondino, and then, for certain preparations, obtained the aid of Estienne de la Rivière.

This young man was several years older than Paré, who had in 1532 obtained an appointment as House Surgeon at the Hôtel Dieu. They may well have met there for he soon became one of Paré's closest friends and at the Hôtel-Dieu there was, as Paré<sup>7</sup> himself pointed out at a later date, ample opportunity of familiarizing oneself with anatomy.

Provided one had access to the hospital, or was friendly with the Chief Executioner and his staff, there was in Paris no difficulty in obtaining a body for dissection. Paré secured one for his personal use, which he kept in his house,<sup>8</sup> and Rivière, I believe, one which he subjected to a process of selective maceration, the results of which are shown in the remarkable series of plates picturing not merely the skeleton but also the skeleton with its joints and muscle attachments, and finally the skeleton clad in a tangled web, fashioned from its own nervous system, which is the last to go in such a process, or so we are assured. In this, the running water which cleaned the body as it disintegrated and the small creatures it contained which fed on it, seem to have played an essential part. The whole process is completed within a short time. Immersion in stagnant water, on the other hand, is followed by very gradual change and, if Casper<sup>9</sup> be our guide, one that is horrible beyond belief. Even so, the artist who drew the central nervous system specimen seems to have been appalled at what he saw and the difficulties involved in its depiction and reproduction.

This was, however, the method Mondino had advocated and he had suggested that dried bodies be used when it was intended to demonstrate the musculature. This was presumably how Paré's own preparation was preserved and, many years later, Fragonard's cavalier.

At the Hôtel-Dieu approximately two thousand people were buried each year in the common grave.<sup>10</sup> Each was sewn up in half a blanket, there being no coffins. It should not have been difficult for Rivière to obtain one such body and suspend it in a perforated cask in the Seine that washed the very walls of

the hospital and far easier than it would have been to have attempted the more fashionable and formidable dissection as depicted in the *Fabrica*. So far as the skeleton was concerned, the end result was much the same as were the final steps.

The Vesalian preparations are a little more elegant than that which bears Rivière's initials but the method of mounting is essentially the same, and if either young man deserves the credit for its invention it is, as Paré implies,<sup>11</sup> Rivière, rather than Vesalius.

The nerve man, the joint and muscle insertion man, represent, I take it, two stages on the way towards the preparation of a skeleton by this method, which is described very briefly by Estienne but at greater length by Vesalius.<sup>12</sup> He tells us that when the body was taken out of its cask it was cleaned all over with knives but carefully so that none of the connections of the bones was destroyed, that the ligaments by which the bones are connected were preserved, and finally that everything except the joints of the bones glistened. The cleansed cadaver was then exposed to the sun so that the ligaments dried by the heat of the sun might hold the joints of the bones in that position it was desired that it be seen, posed sitting or standing. This stage is admirably depicted in the joint and muscle insertion man. The final stage in both methods involved disjuncting the preparation, placing the smaller bones in little bags so that they would not get lost, boiling them to get them clean and wiring them together while they were soft, the skeleton being held erect by means of a bar of iron threaded through the vertebral canal.

It is, however, far easier to take a body to pieces, muscle by muscle, rather than so to build it up again. Albinus was perhaps the first<sup>13</sup> who attempted so to do. Estienne was content to show the skeleton, the version showing the ligaments of the joints and muscle insertions and alongside them two diagrammatic figures, the outlines of which are mirror images of two figures we encounter towards the end of the section, but which in no way resemble the skeletons. Outlines such as these are easily obtained by means of tracings, but Dürer gives in detail certain other methods which enable one to obtain an accurate outline of an object. Albinus used a complicated system of nets and, by Cowper's time, the *camera obscura* was in general use.

Taking such an outline and putting in the muscles would seem to have been a favourite exercise with certain anatomists and with Cowper an obsession. In the Hunterian Collection in Glasgow there is sheet after sheet of these rather sinister powerful figures. In the Sloane Collection there is a book full of his earlier drawings of plants—they are quite a different thing—it is astonishing how skilled he became in this particular exercise. So that one wonders whether or not Vesalius himself might have had a hand in the muscle figures that play so prominent a role in the *Fabrica*. In these pictures of Estienne the muscles are shown in so diagrammatic a fashion that one feels that they have probably been copied from other figures that were then in common use and this would seem to be certainly true for the vascular figure. This is one of the most remarkable in the book. It has been frequently reproduced and only recently was used for an advertisement for a hypotensive drug. It is, therefore, I suppose, one of Estienne's most successful inventions—and yet it bears little or no relation to reality



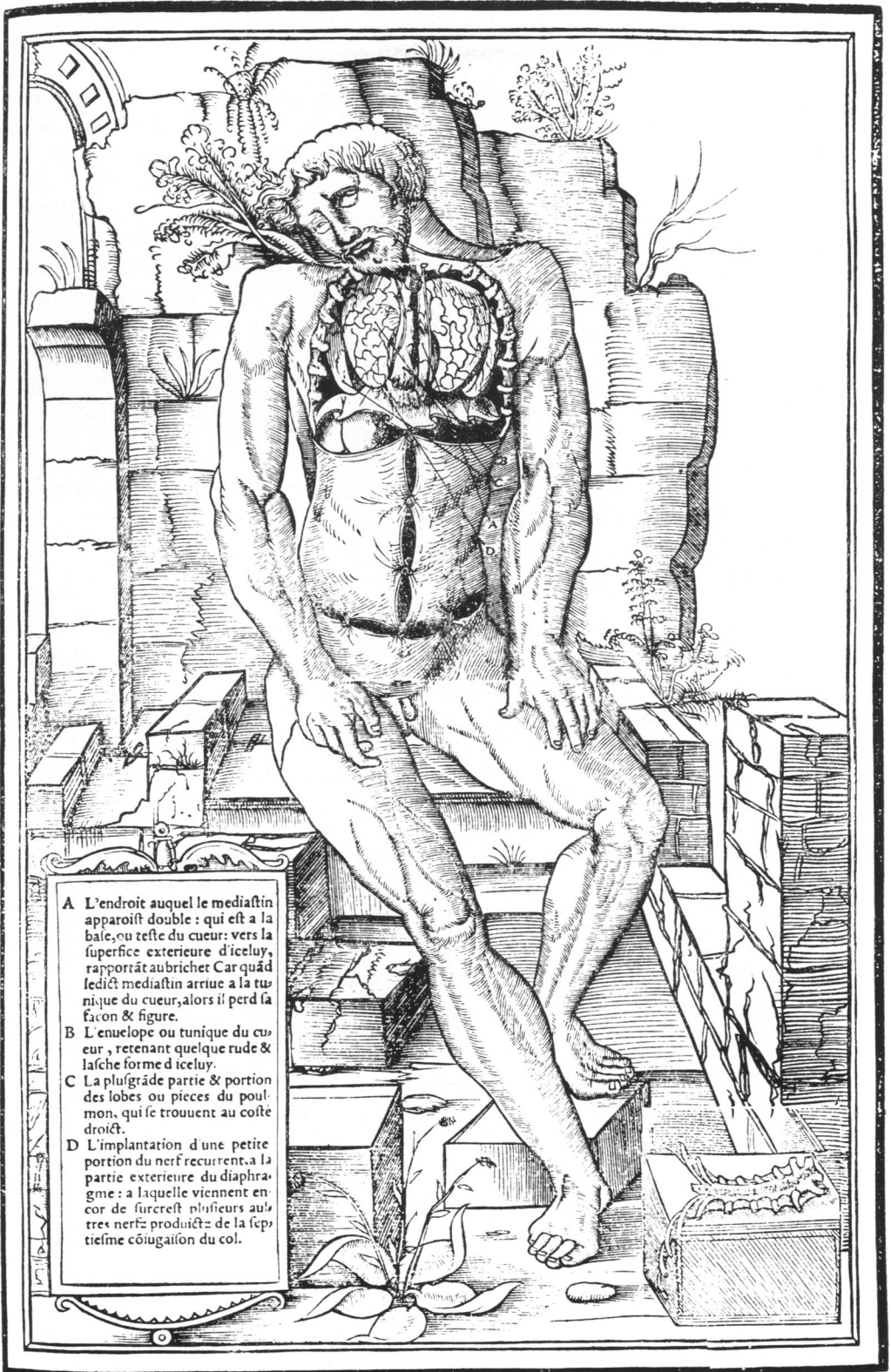


Figure 1. A sketch of a dissection made by Estienne Rivière. This has been copied on to the upper half of a block which has been inserted into one of the original figures, quite obscuring the original anatomy depicted and distorting the left arm. The sternum is rather neatly shown on a separate inset.



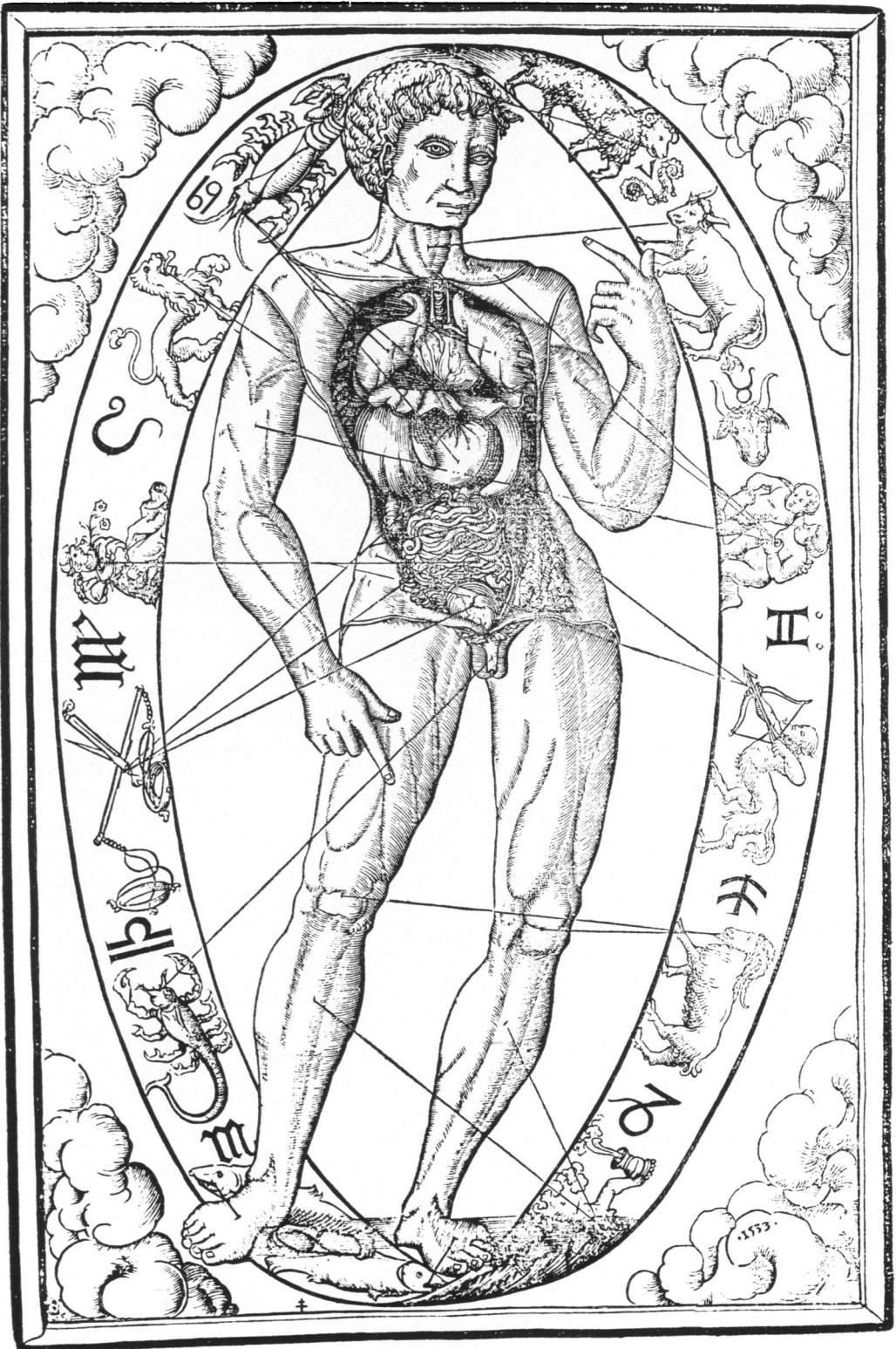


Figure 2. The Clibanus—Zodiac Man. An accurate and detailed interpretation of the anatomy of man, the microcosm as described by Mondino correlated with one aspect of his relation to the macrocosm.

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as seen in man but, as Singer<sup>14</sup> pointed out, is a composite figure resembling somewhat changes encountered in the ungulates and in cats. Nevertheless it fits rather neatly into yet another mirror image, which this time has been slightly altered. This diagram too must have been common property and presumably one of those Du Fail<sup>15</sup> states he saw Sylvius make use of in his lectures. They tell us more about the state of medical teaching in 1532 than do the majority of the illustrations, which I suggest were drawn by Rosso and based on Mondino. These have been altered beyond all recognition for the final version, and such a suggestion might have been little more than a wild surmise had it not been for the happy survival of three of the original plates. These, together with all the other wood blocks, were purchased many years later and published as they were, without Estienne's text, by Kerver. This book was obviously very popular and was published again in 1575. As the Introduction implies, it was designed for the ordinary person who had no knowledge of Latin or of anatomy, but was curious as to the way his body was fashioned. In this book the three illustrations which Estienne had discarded for obvious reasons were calculated to be of particular interest to the lay reader. One, dated 1533, illustrates the relation of the parts of the human body to the twelve signs of the zodiac, and the other two their relation to the seven planets. Now the zodiac figure appears in the early editions of the compendium, which included Mondino's anatomy but, so far as I can discern, was never part of that anatomy but belonged to quite a different and earlier section. Nevertheless Mondino himself makes a brief reference to man as a microcosm and his relation to the macrocosm, a relationship which, a few years later, was so brilliantly developed by Ficinus, the founder of the Florentine school of Neoplatonism. Here are relationships which went far beyond those of the zodiac man, so tinged with judicial astrology; here we have a glimpse of a far wider anatomy, which we encounter for a moment in Harvey's *De Motu Cordis* and again in the *Religio Medici* of Sir Thomas Browne.

In these three plates are symmetries of which the body knows little; devices of which it is ignorant but hinted at in Mondino. Here is made manifest the anatomy Mondino described:

Thus thou seest that the stomach hath heart above, being separated therefrom by the diaphragm, and mesentery and intestines below; to the right it hath liver, by the five lobes of which it is clasped as by a hand with five fingers, to the left it hath spleen, by the arteries of which it is warmed; in front it hath zirbus; behind it hath the muscles of the back and the vena magna and arteria magna which pass along the spine as thou wilt later see. Thus the place of the stomach is in the centre, being as a storehouse of food common to all. . . . Here too we see the heart. It is not too large nor too small, yet is greater in man than in any other animal of the same bigness since he hath more heat. Third the shape will be evident to thee, for it is of the form of a pine or pyramid. . . . We come now to the shape of the lung, which is that of a *clibanus*.

A *clibanus* is, Singer tells us, a Greek word in common Latin used to describe a flask-shaped vessel for baking bread. A similar term was used by the alchemists.<sup>16</sup>

These two lungs might well be mistaken for some sort of flask used by alchemists for distillation. Certainly they do not look like an ordinary lung or



those portrayed in the insets. One wonders why Mondino should ever have thought that a lung resembled a *clibanus* or for that matter a 'country oven' which is perhaps the original meaning of the word. We find that he has made a mistake, however, which serves to confirm our suggestion that this original picture was based on an edition of Mondino's works, for so far as I am aware this is a mistake no other anatomist has made, this term being normally applied to the chest or thorax as a whole.<sup>17</sup> If we compare this illustration with the contemporary illustration in Lotrian and Janot's edition, we are aware of an important change. Janot's illustration is no more than a very crude diagram of an idea far simpler than that elaborated in the text, but this illustration is designed to illumine the text, as indeed were most of the illustrations of that time, to go step by step with it, making clear what was written. This is the function of the majority of the diagrams we encounter in a modern textbook of physiology.

These three plates lead us to believe that this would have been a lovely anatomy: a final flowering of the medieval concept of man. You may well, therefore, ask why Estienne should have failed to publish it as it stood and in the end have destroyed it. He was, however, a young man who had his way to make. His father had provided for his two elder brothers, but he remained dependent on his stepfather, Colines, who now ran the family business. The very cost of the paper involved, which was more than half that of the total, was sufficient to prevent such a book being published in the ordinary way unless there was reason to believe that it would command a ready sale, as a result of being recommended for some particular course in the University. Not infrequently the author might come to some arrangement with a publisher in which they shared the risks and the profits, or else the whole venture was made possible as a result of patronage, but Estienne seems to have been both author and publisher and, so far as we know, had no patron to assist him. Furthermore, in this instance Lotrian and Janot's version was protected by the King's Privilege. If this secured the monopoly for three years at the very least, it meant that Estienne would not be able to publish his until 1535. Under normal circumstances this would not have mattered greatly. Mondino's text had been in existence for two hundred years; but circumstances were not normal in Paris at that time; the whole structure of the University was being overhauled. Tagault, who had become Dean of the Medical Faculty, was responsible for the medical training of the Surgeons and Barber Surgeons (and this included their training in Anatomy) as well as for the instruction of the Apothecaries. Colines' own press had within these few years published a series of translations by Andernach, one of Tagault's protégés, which had made Mondino appear hopelessly out of date. It was Vesalius' great fortune to come to Paris as a student at such a time and Estienne's misfortune.

In 1536 Colines published a textbook designed for the use of students, written by Andernach, who had recently taken his M.D. and been appointed lecturer. Vesalius had been one of his assistants and Estienne had probably seen it through his stepfather's press. During these years, moreover, he had begun to publish books on his own account. They were designed for the education of the young and were an immense success. He had also been responsible that year for

the illustrated edition of his friend de Baif's monographs on *The Ships of the Romans, their Dress and their Vessels*. These illustrations were designed to supplement these three monographs and were taken in the main from Trajan's column and added considerably to the value of the book. Estienne was even allowed to insert a special note to the reader, in which he warns him that, though they are a faithful copy of the originals, it does not follow that they in turn faithfully depict that which they represent, since the artists who carved them may have erred. He seems to have felt, therefore, that he had become an authority on illustration and was apparently capable of putting together a popular text on almost any subject. It seems as if both he and his friend, Rivière, who was still actively engaged in anatomical dissection, felt that there was still room for an up-to-date illustrated anatomy. Indeed the time would come when they would quarrel and both would claim that the idea and the book was theirs. This up-to-date approach to the subject was a result of a book Charles Estienne had himself seen through his stepfather's press; for on his return from Italy it seems that he resumed his work with Colines and was put in charge of his important series of medical and scientific publications. This book, Winter of Andernach's translation of Galen's *Anatomical Procedures*, broke entirely new ground. Mondino's procedure is that which we associate with autopsy. But in this book emphasis is laid on the parts Mondino neglects and the autopsy ignores, those concerned 'with the muscles, nerves, arteries, and veins—not just those around the heart or any of the internal organs but those evident in legs, arms and outer parts of the chest, by the spine, breast, ribs, shoulder-blades, abdomen, neck or head'. Just indeed the parts one cannot get at without disfiguring and cutting to pieces the subject, something one cannot do at an autopsy. 'One must, moreover, begin', wrote Galen, 'with the skeleton, for, as poles are to tents and walls to houses, so are bones to living creatures, for other features naturally take form from them.' This is the text that Vesalius revised ten years later for the edition of the works of Galen in 1541. The text that, as Singer puts it, 'started him on his triumphant career'.<sup>18</sup> Long before that, however, it had revolutionized the teaching of anatomy in Paris. Estienne had, therefore, to rearrange his material, the abdominal cavity is no longer the first to be considered; the Berengarian figures are moved, together with the whole of their section, to the second book; the whole of the first book, which occupies 150 pages, being almost exactly as long as the second, is now devoted to the poles and the tents, the bones and the tissues—muscles, nerves and vessels—covering them. Though the first book is written around the figures we have already mentioned, the connection between the two is not so evident as it is in the second book. It may be it owes as much to Estienne's reading as it does to Rivière's preparations. As we read through the second book, however, we become aware of a far closer relationship. Each chapter has begun to assume the character of a little essay written around the illustration of a particular dissection. These are often very crude. They seem to have been done on the spot and remind us of the little sketches and diagrams Vesalius is said to have drawn in the course of a dissection to illustrate a point. They remind us too that, in the course of his lectures and demonstrations, Sylvius is said to have

made use of figures and diagrams, and in this respect, as possibly in others, Vesalius does not appear to have been the innovator some would have us believe. Indeed, by the time we have reached the middle of this book, we begin to realize that we are witnessing a remarkable change. In the first anatomy the illustrations were, as we have seen, a gloss on the text, but in this the text has now become a gloss on the illustrations which have taken the first place. Indeed, if we take the insets alone and enlarge them to a convenient size, we are left with a set of illustrations some of which, such as those of the portal system, are far in advance of their time. It is, however, apparent that those of the neck and face have been virtually ruined as a result of reducing them and trying to fit them to the original blocks. Rivière may have been a poor draughtsman, but it is strange that he should have tolerated this. It seems likely, however, that he was being kept in the dark for, in 1539 when most of the book was in print and would soon have been published, a court order was issued which brought everything to a stop. This was at Rivière's request. He maintained that Estienne was attempting to steal a book on anatomy that he had given him with a view to its translation into Latin.<sup>19</sup> Estienne at that time was not even qualified, though it may be he had been attending certain courses. During the next two years the case was tried in the civil courts and finally the Court of Appeal appointed a commission to settle the matter. This was to consist of two physicians and two surgeons, who were to be appointed by their respective Faculties. Both were to study the book and were to report in writing to two counsellors of the court, who were in turn to be present when Estienne and Rivière were examined by them. Ultimately they were able to effect a compromise, which is reflected in the careful wording of the title and in the Introduction to the reader, in which Estienne explains how he had gone to great lengths to secure the skilled services of Rivière, who had been responsible for the various preparations and for the pictures of the dissections. In another section of the book he dwells on the value of illustrations, pointing out that if the written word satisfies the mind and the memory, it can just as well be maintained that pictures satisfy the eye with the representation of the absent thing. The written word takes the place of the spoken word, so too a picture of the thing seen, and that without the intervention of words. The one supplements and is additional to the other and that is why, he says, to avoid controversy he had so arranged things that the written word and the image depended the one on the other, memory and vision being satisfied alike.

A good deal more could be said about Estienne's quarrel with Rivière and about the subsequent fate of these two young people and their book. It is already clear that in this one book we can discern a revolution in the way of looking at man and learning his anatomy, and that it was taking place during Vesalius' stay in Paris. To this revolution the *Fabrica* owes much, perhaps more than Vesalius would have us believe. It may well be he was not even aware of his debt.

This paper is based on an occasional lecture on the *De Dissectione*, given to the University of Durham Dental Students on 8 May 1958, and entitled 'Two Anatomies'.



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I am glad to have this opportunity of thanking them for having invited me to do so.

As will be seen from the references, it owes much to the work of other people and to the encouragement of the late Dr. Charles Singer.

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This summarizes certain problems presented by the book we are discussing. The two titles are given in full, written as follows:

ESTIENNE, *De dissectione*. Latin. Paris, 1545.

*De dissectione partium corporis/humani libri tres, a Carolo Stephano, doctore Me/dico, editi. Vna cum figuris, & incisionum declarationibus, a Stephano Riuerio/Chirurgo copositis./[Simon de Colines' device]/Cum priuilegio./Parisiis./Apud Simonem Colinaecum./1545.*

ESTIENNE, *De dissectione*. French. Paris, 1546.

*La dissection des parties du corps/humain diuisee en trois liures, faictz par Charles Estienne/docteur en Medecine: avec les figures & declaratiō des incisions, composees part Estienne de la Riviere Chirurgien./[Printer's device]/Imprime a Paris, chez Simon de Colines./1546./avec priuilege du Roy.*

From these two carefully worded titles, it would seem as if legends for the figures themselves had been composed by Rivière. On the other hand in the Introduction Estienne seems to imply that he was responsible, the actual wording being: 'We have described the single parts of the body as they lay before (our) eyes. But it is not verbal description alone but rather visual representation of (even) the minutest things which promotes such knowledge as will be of use to you in the future. In bringing this about, we have been aided principally by Rivière the surgeon, whose labour was most assiduously and frequently contributed both in drawing what was necessary, such as bones, ligaments, nerves, arteries, veins, muscles, etc., and in picturing the methods of dissection, in which subject he has had much experience. You will see these dissections, described by us in the lettering engraved within the pictures, throughout the book.'

Kerver published reprints of these plates in 1557 and 1575, the title being: 'Les/figures et por-/traicts des parties dv/corps humaine./[Printer's device]/A Paris/Par Iaques Keruer, rue S. Iaques, au deux cochetz./1557,' and, perhaps wisely, makes no reference anywhere to Estienne or Rivière, or to the source of the plates.

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6. — A note on Rosso and the illustrations to Charles Estienne's *De dissectione*, *J. Hist. Med.*, 1957, 12, 325-36.

7. MALGAIGNE, J.-F., *Oeuvres Complètes D'Ambroise Paré*, 3 vols. Paris, 1840. Vol. I: Introduction CCXXXII and CCCXII, where he quotes at length Paré's account of how with the help of Rostan de Binosc he prepared the second enlarged edition of the *Anatomie Universelle* of 1561. Whenever as a result of their past experience they differed on any point, and this happened nearly every day, they sought afresh in a dead body what had caused this particular difference, *et passim*.
8. LE PAULMIER, *Ambroise Paré*, Paris, 1887, p. 29.
9. CASPER, J. L., *Handbook of Forensic Medicine*, trans. by G. W. Balfour, New Sydenham Society, London, 4 vols., 1861-5, vol. II, pp. 261-5.
10. COYECQUE, E., *L'Hôtel-Dieu de Paris au Moyen Age (1316-1552)*, 2 vols., Paris, 1891, vol. I, pp. 112-20. Gives the following figures for the decade or so earlier: 1522 2,471, 1523 3,766, 1524 5,729, 1525 2,097.
11. PARÉ ed. MALGAIGNE, *loc. cit.*, vol. I, p. 317.
12. SAUNDERS, J. B. DE C. M. and O'MALLEY, C. D., The preparation of the human skeleton by Andreas Vesalius of Brussels, *Bull. Hist. Med.*, 1946, 20, 433-60.
13. BRISBANE, JOHN, *The Anatomy of Painting*, London, 1769.  
'For it is to be lamented, that not only the common herd, but even some great anatomists, carried away by the irresistible torrent of custom, have often descended to too great minuteness; but what is tolerable, and sometimes useful and agreeable, in these first rate men, in a vulgar anatomist, who has minuteness alone to recommend him, is in the highest degree tiresome and disgusting; as he is not capable to adorn his subject with any thing either useful or elegant. As to anatomical figures, tho' at present too much neglected, they were not only used by the ancients, and early introduced by the great restorers of modern anatomy, but are pursued and improved to this day, with great judgment and skill, by the most learned and elegant anatomists;' p. iv.  
This work contains a translation of the general preface of Albinus, containing the history of the work, in which Brisbane says he not only endeavoured to express the sense but also the graces of Albinus, pp. 5-21.
14. SINGER, CHARLES, and RABIN, C., *A Prelude to Modern Science*, published for The Wellcome Historical Medical Museum, Cambridge University Press, 1946, pp. xxii *et passim*.
15. FAIL, NOËL DU, *Les contes et discours d'Eutrapel*, Rennes, 1597, p. 114.  
'I remember', he writes, 'listening to that fluent Latinist, Jacques Sylvius, reading Galen's *De Usu Partium* at the College of Tregierre in Paris before a marvellous audience of scholars of all nations. But when he came to the description of those parts we call shameful, there was no corner or place which he did not name in good French both by name and surname, adjusting the diagrams and figures accordingly for the more ample demonstration of his lesson, which had been altogether without taste nor flavour had he evaded the issue and done otherwise. I have seen him bring tucked up his sleeve, for all his life he lived without a servant, at one time the womb of a goat or lamb, and all the pelvis, at another time the thigh or arm of a gallow-bird, to dissect and anatomize, that had so foul a smell, so powerful a stink that several of his auditors had readily vomited had they dared but the old scoundrel, with his hot Picard blood (*le paillard avec sa teste de Picard*) flew into such a temper, threatening not to return for another eight days, that all resumed their former silence.'

*Two Anatomies*

16. SINGER, CHARLES, *The Fasciculo di Medicina*, Venice, 1493; Florence, R. Lier & Co., 1925, Pt. I, pp. 68, 85, 106.
17. The usual meaning of *clibanus* appears to have been that of a little country oven, either of iron, copper or earth, used for baking bread. Galen felt that bread so baked had certain valuable properties. So far as I am aware he did not apply the term *clibanus* to the thorax, though it is so used in one of the pseudo-Galenic works and apparently also with the meaning cuirasse (Migne). Berengario used it as a synonym for chest or thorax but few other anatomists seem to have used the term.  
See BERENGARIO DA CARPI, *A Short Introduction to Anatomy*, trans. by L. R. Lind, University of Chicago Press, 1959, p. 84.
18. SINGER, CHARLES, *Galen on Anatomical Procedures*, translation with introduction and notes, Wellcome Historical Medical Museum, Oxford University Press, 1956, pp. xiii and 2.
19. QUESNAY, F., *Histoire de l'origine et des progrès de la chirurgie en France*, Paris, 1749, pp. 228–9.