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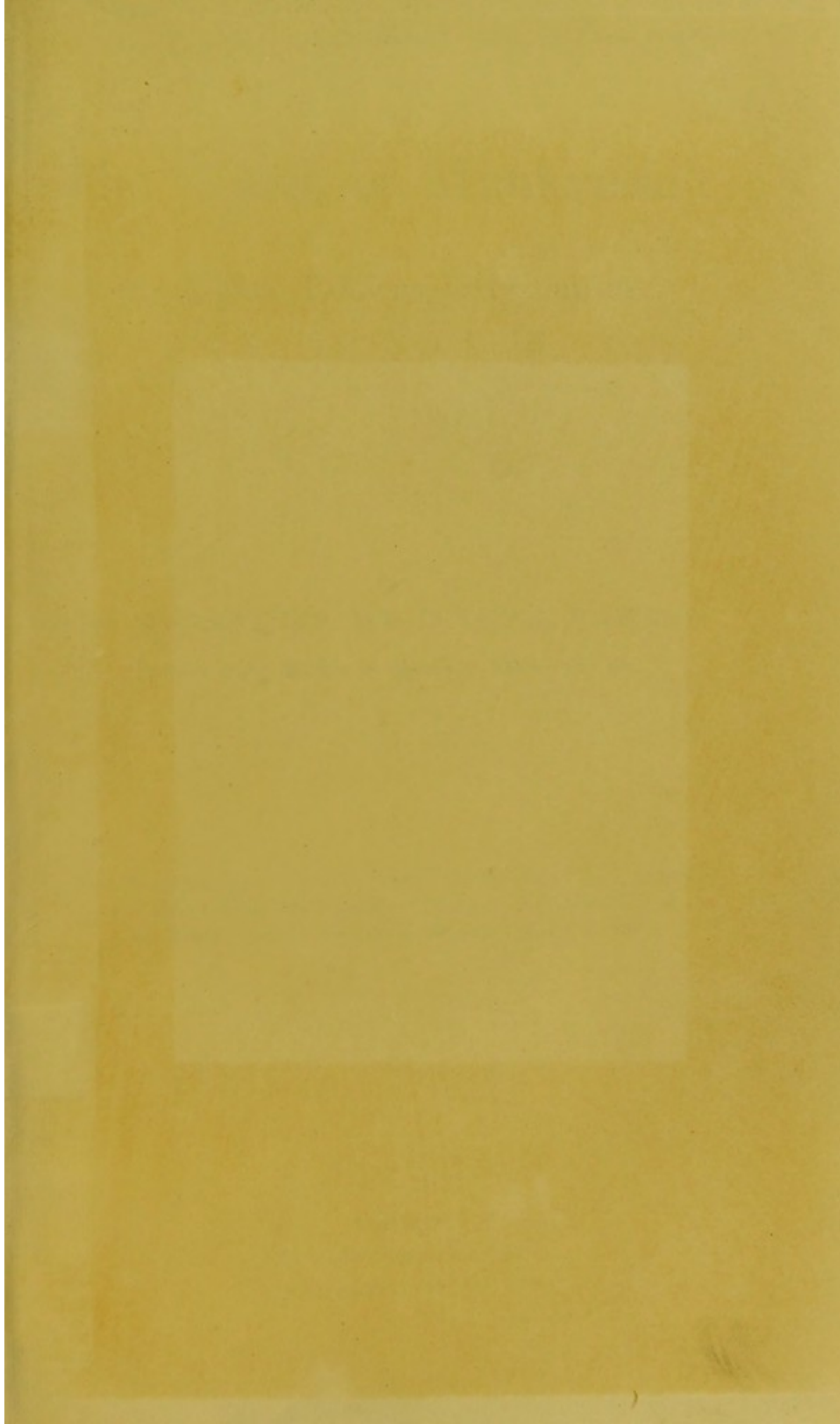
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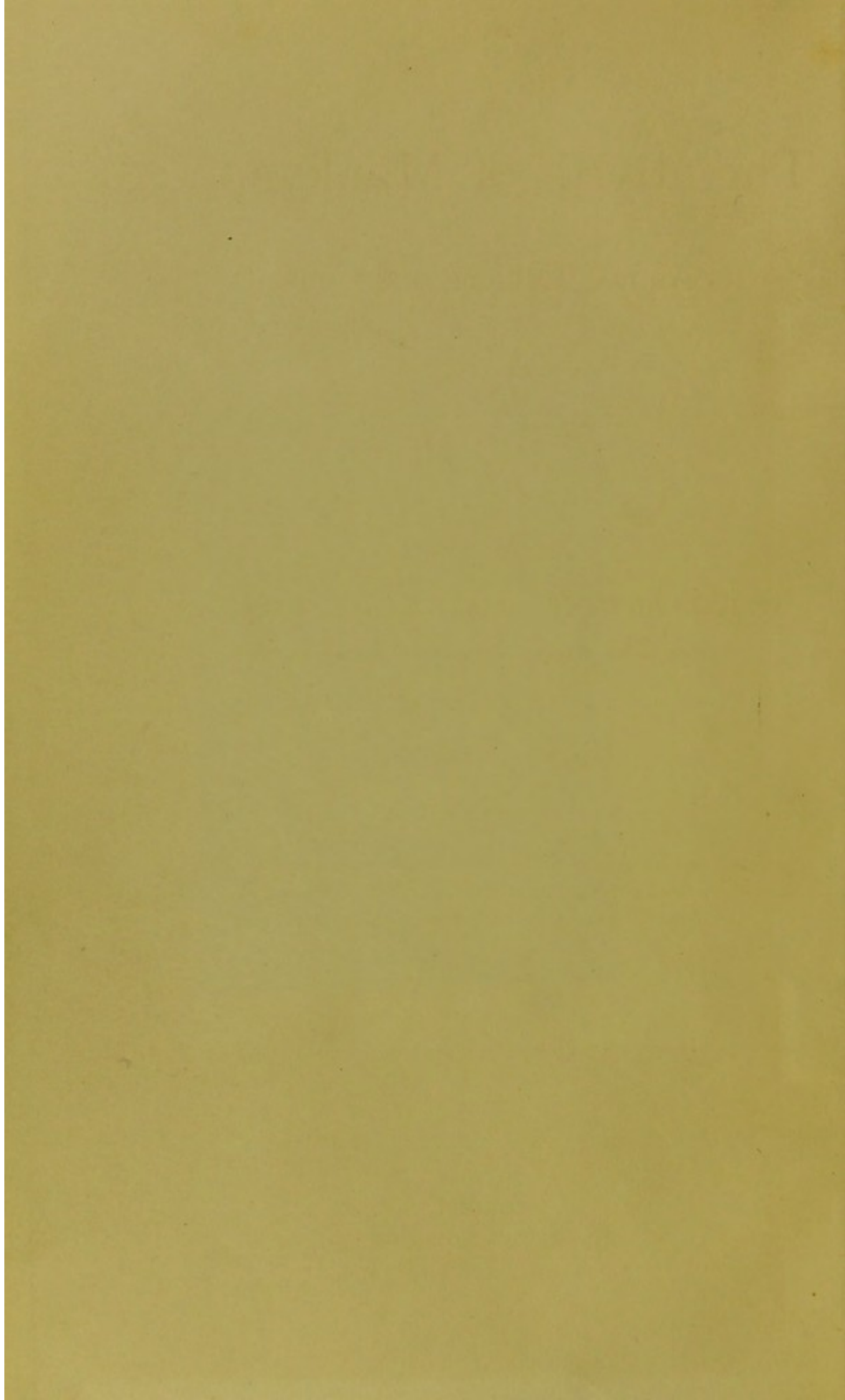
J. W. BALLANTYNE.

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With the Author's Compliments

The "Byrth of Mankynde":

Its Author, Editions, and Contents.

BY

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Two Communications made to the Edinburgh Obstetrical Society (1906-7),
and reprinted from the "Journal of Obstetrics and Gynæcology of
the British Empire," Oct., 1906, Sept., 1907, and Oct., 1907.



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The "Byrth of Mankynde."*

(ITS AUTHOR AND EDITIONS.)

By J. W. BALLANTYNE, M.D., F.R.C.P. (Edin.), F.R.S. (Edin.),
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Edinburgh Obstetrical Society.*

THE *Byrth of Mankynde* is perhaps the most interesting work on Midwifery in the English language. It must be admitted that an earlier manuscript work, written in English, and dealing with the same subject, has been discovered; it must also be allowed that it is in great part a translation of Rhodion's (or Rösslin's) *De Partu Hominis*; yet the *Byrth of Mankynde* retains its place of honour at the head and source of English obstetric literature, and has profoundly influenced the practice of the art of midwifery in these Islands for more than three centuries. The perusal of its pages, so beautifully printed in the old black letter, gives the reader a graphic word picture of the *vie intime* of the sixteenth century obtainable from no other work; the study of its history and of the identity of its translator or editor supplies problems of considerable difficulty, and consequently of considerable interest to the medical bibliographer; and the fact that its illustrations are believed to be among the first, if not the very first, examples of copper-plate engraving which were produced in England, gives the book an importance from the standpoint of the annals of typography which can hardly be exaggerated. Published first in the year 1540, and dedicated to "the most gracious and in all goodnesse most excellent vertuous Lady Quene Katheryne," the work lived on till 1676, new editions con-

* Communicated to the Edinburgh Obstetrical Society on June 13th, 1906.

stantly appearing with but few alterations, until finally it had to give place to more modern books with a much more transitory existence. Seeing the light in the days when Henry VIII. was King, it survived the stormy times of Edward VI. and Queen Mary, and was a strong and healthy work in the Elizabethan age of literary and national grandeur; the Tudors went and the Stuarts came, and the book reached the summit of its life's arch; it was more than a hundred years old when the Civil War broke out and a new edition appeared in the days of the Commonwealth five years after Charles I. was executed; it was now a very old book, but it lived to see the Restoration and had vitality enough to blossom out into a new and last edition in 1676. The study of so remarkable a work cannot be without interest, and I purpose in the following pages to touch upon some of the many problems and considerations which cluster round it.

THE FIRST ENGLISH BOOK ON MIDWIFERY.

The book's claim to be regarded as the first work in English on the subject of midwifery is the initial problem which calls for consideration.

Dr. J. H. Aveling, in his "Account of the Earliest English Work on Midwifery and the Diseases of Women" (*Obstet. Journ. Gr. Brit. and Ireland*, ii., 73, 1875), gives the following interesting information: "In the British Museum, among the Sloan Manuscripts, is one of the fifteenth century, vellum in quarto, beautifully written and illuminated, two hundred and thirty-four pages of which are devoted to "Midwifery and the Diseases of Women." From a note at the beginning we learn that it belonged to Richard Ferris, who was Master of the Barbers and Surgeons Company in 1563, and Sergeant Surgeon to Queen Elizabeth, and that at his death he bequeathed it to John Felde, who was to pay the executors for it "xxxxviii s. iiii d." Who the author of this interesting MS. was is not known. It is certain, however, that he was well acquainted with the medical writings of Rogerius of Parma, who lived some time after Albucasis, and whose book was first printed in 1490. The arrangement of the chapters is almost exactly similar, and in some instances the text is a verbatim translation from Rogerius."

Dr. Aveling gives extracts from this work relating to menstruation, and to the sixteen "unkind" ways in which the child may come forth. He reproduces also some of the drawings. The midwife's chief duty seems to have been to push the presenting part up again if it did not come down rightly, and to give various drugs. In cases

of retained placenta, "the mydwif should anynt her hondes and with hir nayles pullen owte the secondine if she mowe."

There can be no doubt that this work by an unknown author is considerably older than the *Byrth of Mankynde*, and Dr. Aveling deserves the thanks of the profession for having unearthed the manuscript and for having given so interesting a description of it. There is, however, no evidence that it was ever printed, and it could, therefore, never have served the same purpose as did the *Byrth of Mankynde* in the education and for the guidance of the midwives of the sixteenth century. Whilst, therefore, we cannot claim for the *Byrth* priority as the earliest work on Midwifery in English, we are certainly justified in regarding it as the first printed English book on that subject.

THE AUTHORSHIP.

The question of the authorship of the *Byrth of Mankynde* is not so easy of solution as might be thought from the perusal of the title page of the 1545 edition or of any of the numerous editions which followed it. The book is uniformly ascribed to Thomas Raynalde, Physician: the spelling may differ, and we find Raynold, Raynald, Reynald, and Reignalds, but obviously the same person is meant; and the designation of the alleged author may also differ, for we find Phisition, Physitian, and Dr. in phisick, but obviously a medical man is meant. When, however, we come to consult the first edition of the *Byrth*, that of 1540, we discover that the authorship or rather the translatorship is claimed by one Richard Jonas, and that the work was "imprynted at London by T.R." As will be seen immediately, "T.R." were almost certainly the initials of Thomas Raynalde, a well-known printer of the sixteenth century. Herein, then, lies the problem of the authorship. It is a triple problem, and may be best stated in the form of three questions: (1) Who was Thomas Raynalde the printer? (2) Who was Thomas Raynalde the physician, and what relationship, if any, did he bear to Thomas Raynalde the printer? and (3) Who was Richard Jonas, and what relationship did he bear to the Raynaldes?

When we wish to know what is to be known with certainty about anyone who has made his mark upon his times and upon the history of the British Isles, we turn, as a matter of course, to the great storehouse of all such information, the *Dictionary of National Biography*. In this case, however, we find even that trustworthy authority giving an uncertain sound; for the article on Thomas Raynalde, to be found in vol. xlvii., contains statements which are very considerably modified

in the volume of *Errata*. Nothing could more surely prove the existence of a mystery than the striking diversity between the accounts given in the original article and in the later volume of *Errata*. The following paragraphs will serve to make this plain.

According to the *Dictionary of National Biography* (vol. xlvii., p. 347, 1896), there were two Thomas Raynaldes living at the same time, the one a physician and the other a printer in London. To the former is ascribed the translation of Rösslin's *De Partu Hominis* which bears the name "*The Byrth of Mankynde*," and was first printed in 1540. In the volume of *Errata*, however, which was published in 1904, this statement is altered, and we are told that the original writer of the translation was one Richard Jonas, and that Thomas Raynalde's work consisted in editing the second edition of the *Byrth* which appeared in 1545. Having got thus far in my investigation, it seemed to me to be essential that I should go to the sources from which W. A. Shaw, the writer of the article in the *Dictionary of National Biography* had got his information. I, therefore, consulted Ames's *Typographical Antiquities*, both in the edition to which Shaw refers (that augmented by W. Herbert) and in that considerably enlarged by Thomas Frognall Dibdin, as well as in the original work as it left Ames's hands in 1749. It was fortunate that I did so, otherwise I should have been almost as much in the dark as before. The following statements are based upon what I found in Ames's work and its later issues, as well as upon what Dr. Aveling has to tell in his *English Midwives* (p. 11, 1872). Ames's information, it must be remembered, relates to Raynalde the printer, and it is only by accident, as it were, that it contains references to Raynalde the physician.

The following is what Ames had to say about Thomas Raynalde, the printer. I quote from the *Typographical Antiquities*, London, 1749, p. 219. "Thomas Raynalde dwelt in St. Andrew's Parish, in the Wardrop, and kept shop in St. Paul's Churchyard. It may be queried whether he was not the noted physician, who set forth the woman's book or birth of mankind, so often printed." Then follow the descriptions of the 1540 and 1545 editions, which I transcribe from Ames's book. "1540. The birthe of mankind, otherwise called the woman's boke. The first translation into English, with many small copper cuts, is dedicated to Queen Catherine, wife to King Henry VIII., and the first rowling press cuts I have seen in English books. To this edition the letters T.R. only. Quarto."

"1545. The byrth of mankynde, otherwyse named the woman's booke, newly set furth, corrected and augmented, whose contentes ye

maye rede in the table of the booke, and more playnly in the prologue. By Thomas Raynold, phisition. This edition has Thomas Ray, which, if not the name of another printer, is a contraction from Raynalds. Quarto."

These statements from Ames's work seem to have been the source of most of the comments upon the *Byrth of Mankynde* and upon its supposed author during a long series of years. In a later edition of Ames's *Typographical Antiquities*, that edited and augmented by William Herbert, the same facts are stated (vol. i., p. 581, 1785); and this is the edition to which the writer of the life of Raynalde in the *Dictionary of National Biography* tells us that he had access. We thus see how it was that the idea that Raynalde the printer and Raynalde the physician were the same person arose, and we also note how the edition of 1540 came to be ascribed to Raynalde ("to this edition the letters T. R. only").

In another volume of this same edition of Ames's *Typographical Antiquities*, however, a piece of information is found which throws doubt upon the identification of Thomas Raynalde the printer with Thomas Raynalde the physician. In the third volume, published in London in 1790, and on page 1570, is the description of another book ascribed to Thomas Raynalde. It was published in 1551, and is thus described by Ames's editor (Herbert). "Dr. Thomas Raynalde, his declaration of the vertues of a lately invented oyle, called for the worthiness thereof, the Oyle Imperiall, with the manner howe the same is to be used against innumerable diseases. Printed at Venice by J. O. Griphius. Octavo." A copy of this book is in the British Museum, and is thus catalogued: "A compendious Declaration of the Vertues of a Certain lateli invented Oile, called Oile Imperial with the maner how the same is to be used, etc. J. Gryphius: Venetiis, 1551. 8°." Now the existence of this second medical book by Dr. Raynalde, its publication in Venice by a Venetian printer, and its dedication by Raynalde 'to his singular friend, Francis Mery, merchant, of the city of London,' seem almost of necessity to lead to the conclusion that Thomas Raynalde of the *Byrth of Mankynde* was not Thomas Ray or Raynalde the printer. But, further, when we come to consult a still later edition of Ames's *Typographical Antiquities*, that edited and enlarged by Thomas Frognall Dibdin and published in 1810, we get more light upon the question of the authorship of the *Byrth of Mankynde* as well as some very interesting facts regarding the 1540 edition of that work.

In Dibdin's edition of Ames's *Antiquities* (vol. iii., p. 563, 1816), the following notes appear: "Thomas Raynald. Of this ingenious

printer we are unluckily without any authentic sources of information, except that he dwelt at first in St. Andrew's Parish, in the Waredrop, and in 1549 kept a shop at the Signe of the Star in St. Paul's churchyard. It may be queried (says Ames) whether he was not the noted physician, who set forth the woman's book, or birth of mankind, so often printed? But there seems to be very slight grounds for this quære, as it is nowhere apparent, but upon the face of a colophon, that Raynald the printer was a physician." Dibdin then goes on to describe very fully the 1540 edition of the *Byrth of Mankynde*, from the examination of a perfect copy in "the richly stored library of my friend Mr. Herbert"; and I here give his description, which, in view of the extreme rarity of this edition, is exceedingly valuable. "*The Byrth of Mankynde*. 1540. Quarto. 'The byrth of mankynde newly translated out of Laten into Englysshe. In the which is entreated of all suche thynges the which chaunce to women in theyr labor, and all suche infyrmittees whiche happen unto the Infantes after they be delyuered. And also at the latter ende or in the thyrde or last boke is entreated of the conception of mankynde, and howe manye wayes it may be letted or furtheryd, with diuers other fruytefull thynges, as doth appere in the table before the booke. *Cum priv. regal. ad impr. sol.*' On the back of the title-page is a sort of religious 'admonicion to the reader,' which is followed by a dedication of six pages 'Unto the most gracious and in all goodnesse most excellent vertuous Lady Quene Katheryne wyfe and most derely belouyd spouse unto the most myghty sapient Christen prynce Kynge henry the VIII. *Richard Ionas* wyssheth perpetuall ioye and felicyte.'" Dibdin concludes his description by stating that "at the end, we read this colophon: 'Imprynted at London by T. R. Anno Domini MCCCCXL.'"

Here, then, we have an indication of the authorship of the earliest known edition of the *Byrth of Mankynde*: the author, or rather the translator of Rösslin's *De Partu Hominis* (for a translation is what the 1540 edition really was), was a person called Richard Jonas; and the T.R. of the colophon referred to Tho. Ray the printer. But when we come now to ask who Richard Jonas was, we are almost brought to a stop. If we turn, however, to the Prologue which precedes the first book of the later editions of the *Byrth*, we find a reference which must surely apply to Jonas. I quote from the 1552 edition (but I believe the 1545 is identical). "Wherfore now to come to our purpose, ye shal understand that about a thre or foure yeres past, a certayne studious and diligent clarke, at the request and desyre of diuers honest and sad matrones, beynge of hys acquayntaunce, dyd

translate out of Latin into English a great part of thys boke, entiteling it according to the Latine inscription (de partu hominis, that is to saye: of the byrth of mankynd) which we nowe do name (The womans boke) (for so moch as the most parte or well neare all therein entreated of, doth concerne and touche onely women). In whych hys translation he varied, or declyned nothing at al from the steppes of his Latine auctor. Obseruyng more fydelitye in translatyng, then choyse or dyscretion at that tyme in admyttyng and alowyng many thynges in the same Boke, greatly neadyng admonityon and wary aduyse or counsell to the readers, whyche otherwyse myghte some tymes use that for a helpe, thee whyche shoulde turne to a hynderaunce, wherefore I reuoluyng and earnestly reuysinge from top to too ye sayd boke, and here withal considering the manifold utilite and profyte, whych thereby moughts ensue to all women (as touching that purpose) yf it were more narrowly loked ouer, and wyth a strayghter iudgement more exactly euery thing therein pondred and tryed, thoughte my labour and paynes shuld not be euyl employed, ne unthankfully accepted and receaued of al honest, discrete and sage wemen. If I after good and dylygent perusing thereof dyd correcte and amende soche fautes in it, as semed worthy of the same, and to aduyse the readers what thynges were good or intollerable to be used, which were daungerous, and which were utterly to be eschued. The which thinge I haue not only so done, but ouer this haue ther unto adioyned and annexed dyuers more experimented and more familier medicines."

In these lines of the prologue of the 1545 and subsequent editions we are told all that we know of Richard Jonas, for I do not think it can be doubted the "studious and diligent clarke" referred to was Richard Jonas. This, at any rate is the view of the matter taken by the authorities at the British Museum and by Dr. Aveling. In the *British Museum Catalogue* of printed books, under the name *Jonas* (Richard) is placed *The Byrth of Mankynde*, 1540; and in another volume of the same catalogue the same book appears under Roesslin, showing that the work was recognized as a translation of the latter author's *De Partu Hominis*, and that the translation was ascribed to Richard Jonas. Unfortunately the British Museum copy is imperfect, for it lacks the plates which are described in the text. To this edition I shall again refer, in the meantime I simply repeat that it seems to be undoubted that *it was the first edition of the Byrth of Mankynde, that it consisted of a translation of Rhodion's or Rösslin's "De Partu Hominis," that the translator was Richard Jonas, and that it differed in several respects from the later editions.*

Although nothing more is known with certainty about Richard Jonas, I may touch upon some circumstances which may serve to throw a little light upon his personality. By the end of 1540 Henry VIII. had led five wives to the altar. In 1531 Catharine of Aragon was put away, although the marriage was not annulled as void until May 1533, four months after the King had privately married Anne Boleyn. In 1536 Anne was executed, and on the day after the execution Henry married Jane Seymour; she died in childbirth. In 1540 Henry was for a few months the husband of Anne of Cleves. The Lutheran princess was soon divorced and Katherine Howard put in her place; but she was beheaded in 1542 (February), and another Katherine (Parr) became Henry's wife in 1543. The writer of the life of Thomas Raynalde in the *Dictionary of National Biography* states that it was to Queen Catherine Parr that the *Byrth of Mankynde* was dedicated; but, since the work was published in 1540, it must have been Queen Katherine Howard who was indicated in the dedication. It is impossible now to determine the circumstances of the publication of this edition; but some guesses may be hazarded. In the first place, it is significant, I think, that Queen Jane Seymour should have died in childbirth, for this death would draw attention very sharply to the perils of parturition, and would lead midwives and surgeons to inquire whether any more trustworthy guides to practice existed in the English or in foreign languages than were commonly known or used. Queen Anne (of Cleves) was a sister-in-law of the Elector Frederick of Saxony, and had other family ties with the Lutheran Princes of Germany. Justus Jonas, of Wittenberg, was a distinguished disciple of Luther, and it is just possible that to him was related the London Richard Jonas (who may even have come over in the train of Queen Anne) the translator of the *Byrth of Mankynde*. Rhodion's book was well known in Germany at this time. Further, it may have been intended that the work should be dedicated to Queen Anne; her early dismissal, and her succession by Queen Katherine Howard may account for its dedication to the latter.

I am now in a position to proceed to the discussion of who T.R. of the 1540 edition was, and of the relationship he bore to Tho. Ray and to Thomas Raynalde the printer, and Thomas Raynalde the physician. In the first place I think there can be no doubt that T.R. of the 1540 edition (Jonas's translation) was the printer whose name appears as Tho. Ray in the colophons of the 1545 and 1552 editions. In a later work printed by Thomas Raynalde his name is indicated by the initials T.R., I refer to the *Processionale* published in 1555; and it seems too artificial a suggestion to suppose that two printers with

names having the same initials should have printed the first and second editions of the *Byrth of Mankynde*. But it may be said that these reasons do not disprove the possibility that Tho. Ray and Thomas Raynalde the printer were different people. Neither they do; but there is no evidence whatever that any printer of the name of Tho. Ray existed; if there had been any such evidence either Ames himself or one of his two distinguished editors would almost with certainty have found it out. It may be concluded, therefore, that *T.R. of the 1540 edition and Tho. Ray of the 1545 and 1552 editions were one and the same person, and that he was Thomas Raynalde the printer in St. Paul's Churchyard, London.*

Ames's query whether Thomas Raynalde the printer was not the noted physician who set forth the *Woman's Book* or the *Byrth of Mankynde* now calls for consideration. Raynalde, the printer, sent out from his press in London several works between the years 1540 and 1555; among these were the two editions of the *Byrth of Mankynde* (1540 and 1545), a *Treatise against the Masse* (1548), a *Plaister for a Galled Horse* (1548), the *Boke of Barthra Priest* (1549), *Certaine Psalmes* (by Sir Thomas Wyatt, 1549), and the folio *Byble* (1549). No works seem to have come from his press after 1555, when the *Processionale* made its appearance. He flourished, therefore, between the years 1540 and 1555. As it happens these were also the years during which we have any information regarding Thomas Raynalde, the physician. His name appears upon the title page of the 1545 and 1552 editions of the *Byrth of Mankynde* as well as upon a second book, published at Venice in 1551 and already referred to (*vide antea*). From internal evidence in these two works we learn further that he was at Venice (in 1551), in Padua, and in Paris. His work on *Oyle Imperiall*, is described in Ames's *Typographical Antiquities* (Herbert's edition, iii., p. 1570, 1790) among those books "printed abroad by Englishmen, and other printers for them," and the epistle dedicatory is dated from Venice (March 1, 1551) to the author's 'singular friend, Francis Mery, merchant, of the city of London,' and in it there is an acknowledgement of the author's indebtedness to this merchant who had purchased from him a large quantity of the oil. A copy of this work is in the British Museum, catalogued under Thomas Raynalde's name; the printer's name is J. Gryphius. In the 1560 edition of the *Byrth of Mankynde* appears for the first time the ninth figure in the Anatomical plates, that showing the uterus cut open; to this is annexed (on folio li.) the following description: "And the nynth figure sheweth the Matrix cut forth of the body, being of that bygnesse as it was sene taken

foorth of a woman at the laste Anothomye, which I dyd se¹ at the uniuersitie of Padua in Italy." In the 1552 edition there is a reference to medical practice, which seems to throw some light upon the doings of the writer or editor; it is as follows:—"Yet agayne to confyrme myne opinion, that the Termes do onely issue oute of the vaute of the matrix: ye shall understande, that at sundry tymes I haue had two dyuers women in cure thone in London and thother in Paris: of which thone by a fal from her horse, the other by a violent thrust and squat on the buttockes upon the harde stones in the strete, beyng both neare the tyme of theyr purgation, chaunced also both of them into one maner of disease (that is to say) immediately here upon, theyr Termes dyd issue." The writer continues his description of these two cases, and draws some deductions from them regarding menstruation (*vide folio xliiii.* of this edition).

These facts are, I think, sufficient to show that it is very improbable that Thomas Raynalde the printer, and Thomas Raynalde the physician, were one and the same person; for, if they were, then we must imagine the printer travelling widely on the Continent (Venice, Padua, Paris), having a book printed for him at Venice by another printer called Gryphius, while all the time books were issuing from his own press in St. Paul's Churchyard in London. To my mind it is much more likely that they were individuals bearing the same name. It is possible that they were cousins or uncle and nephew. At any rate we can easily imagine the printer asking the physician to revise and add to Jonas's work, the first book which had come from his press and one which had evidently sold well since a second issue was needed at the end of five years; we can also easily understand that the physician would be led to incorporate his personal experience in the second edition and add new chapters to the work in order to make it more widely useful. To Thomas Raynalde's pen must, I think, be ascribed the greater part of the Prologue to the Women Readers and most of the first book of the 1545 and subsequent editions; the remaining parts are translations from Rösslin's *De Partu Hominis* made doubtless by the "studious and diligent clarke," whom we must regard as Richard Jonas. Of course it is just possible that Thomas Raynalde may have been the maker of the translation of 1540, and that he took the *nom de plume* of Richard Jonas to save himself from the possible obloquy which might attach itself to the physician who concerned himself (in those times) with

¹ This sentence is suspiciously similar to that in which Vesalius describes the same figure in his work, published in 1543.

the subject of midwifery. There are other possible solutions of the problem of authorship; but it seems to me to be *probable that the 1540 edition was the work of Richard Jonas and was a simple translation of Rösslin's "De Partu Hominis"* (most likely the 1538 edition published at Paris "apud Joannem Foucher"), *that the second edition (1545) was revised and considerably added to by Dr. Thomas Raynalde, and that he also added to and edited the third and probably the fourth editions (1552 and 1560).* I think, therefore, it is permissible to call the work Raynalde's *Byrth of Mankynde* rather than Jonas's *Byrth of Mankynde* or Jonas's English Translation of Rösslin's *De Partu Hominis*, on account of the Prologue and the new material in Book I., and for the reason that for more than three hundred years it has been so named. To the first edition, however, it is more correct to give the name Jonas's Translation of Rösslin's *De Partu Hominis*, and to catalogue it either under Jonas or Rösslin. Further consideration will be given to this subject when the peculiarities of the various editions have been described.

I may here conveniently summarize the conclusions at which I have arrived regarding the authorship of the *Byrth of Mankynde*. (1) The 1540 edition of the book was a translation of Rösslin's or Rhodion's *De Partu Hominis* made by Richard Jonas, the "studious and diligent clarke" referred to by the editor of the 1545 edition. (2) It was printed by T.R.; and these were the initials of Tho. Ray or Thomas Raynalde, the printer, who had a shop in St. Paul's Churchyard, and from whose press various works issued between the years 1540 and 1555. (3) The second edition, which appeared in 1545, was revised "from top to toe" by Thomas Raynalde, the physician, and was considerably added to by him, the additions consisting of the prologue and most of Book I., as well as of short paragraphs in the other books. (4) Thomas Raynalde, the physician, seems to have practised in London and Paris and to have visited Venice and Padua; he may have been a relative of his namesake the printer. (5) He may have edited the third edition (1552) and the fourth (1560); but subsequent editions were almost identical, and were printed by different printers (Richard Jugge, R. Watkins, T. Adams), and probably Thomas Raynalde, the physician had no hand in them.

THE EDITIONS OF THE "BYRTH OF MANKYNDE."

(a) *The 1540 Edition.*

I have already referred to (p. 301) and quoted from Dibdin's description of the 1540 edition, given in his edition of Ames's *Typographical Antiquities* (vol. iii., p. 563, 1816). His description

is of great value, for it was made from a perfect copy in Herbert's library. There is a copy at present in the British Museum; but it is imperfect, consisting of 84 numbered leaves instead of 86 (in Herbert's copy), and it lacks the plates. The title-page differs widely in its wording from that of later editions: the book is named "The byrth of mankynde, newly translated out of Laten into Englysshe," etc., and the alternative title "the womans booke," does not appear; there is no author's or translator's name on it; and there is no allusion to the prologue but only to "the table before the booke." The "sort of religious admonicion to the reader" which appears upon the back of the title page is evidently peculiar to this edition, and is probably replaced by what I have termed the Aristarchus preface of all later editions. The dedication (of six pages) to "the most gracious and in all goodnesse most excellent vertuous Lady Quene Katheryne" is also peculiar to this edition, and has been referred to already.

In addition to what has been stated already about the 1540 edition of the *Byrth of Mankynde* I may give the following particulars (Ames's *Typographical Antiquities*, vol. iii., p. 563, 1816). "The book contains 86 numbered leaves, and is printed on stout paper, in a fine large Gothic type. Between folio xxiv. and v., there are four copper-plate engravings containing seventeen illustrations of children in utero. These are very curious, as being among the rarest early specimens of this kind of engraving [the first ever seen by Ames] published in this country." These plates call for further consideration. I quote again from Ames's *Typographical Antiquities*, as edited by Dibdin (vol. i., pp. 24, 25, 26, 1810). "While the foreign presses were putting forth the most beautiful books, and the gravers of Albert Dürer and Aldegraver were exhibiting equally beautiful specimens in the sister art, we were, I fear, generally obliged to content ourselves with the importation of worn and battered blocks, or with foreign artists discarded from want of capacity. This may account for the tardy appearance of the first Copper-Plate impressions in this country, executed by means of a roller—which are supposed to be the frontispiece to Galenus De Temperamentis printed at Cambridge in 1521, and the cuts in Raynalde's *Birth of Mankind*, 1540. . . . Although Strutt says: 'it is by no means certain that these (latter) plates were engraved in England or the work of English artists,' yet, when the rudeness of the figures and the absence of any similar style of engraving preceding the date of publication of both works are considered, we may be disposed to conclude that they are the earliest known specimens of impressions from Copper Plates in this country." It is a misfortune that the copy of the 1540 edition

in the British Museum lacks these plates, as we are unable to judge of their characters. The reproduction of one of them given in Ames' work (vol. i., p. 25, 1810) unfortunately is "printed from a wooden block for the convenience of press work," and probably gives little idea of the original, although the editor states that "it will be found to exhibit a very faithful character of the original."

I have seen the so-called 1540 edition of Raynalde's *Byrth of Mankynde*, which is in the Library of the Obstetrical Society of London. Even a cursory examination of the work makes it very doubtful whether it is what is claimed for it in the Catalogue, and a more careful inspection makes it practically certain that it is really the 1634 edition. The title page is in manuscript, and so forms no indication of the real age of the work; but the type is only partly black letter, the marginalia are in ordinary type, the Aristarchus preface is in English not in Latin, the pagination is by pages not by folios, and the spelling is that of the seventeenth and not of the sixteenth century. There are several other features in which the copy resembles the later rather than the earlier editions, and I do not doubt but that it is really the 1634 edition. The absence of the title-page and of the last two or three pages at the end, and their replacement by transcriptions make it impossible to be quite sure (of course the *transcriptions* may have been made from other editions). It is certainly not the 1626 edition.

There is another copy of the *Byrth of Mankynde* which carries the date 1540 on the title page; this is in the Library of the University of Glasgow. The date, however, is written in, there being no printed intimation of it. This copy is, therefore, probably the undated edition of 1564 (q.v.). It came from the Collection of James Hotson, of Airdrie, and was presented to the University by Dr. Thomas Reid, the oculist.

This edition of 1540, it will be remembered, is not in any sense a Raynalde one except in so far that it was printed by Thomas Raynalde, the printer. It is a translation into English of Rösslin's *De Partu Hominis*, made by Richard Jonas; and it ought to be catalogued either as Jonas's *Byrth of Mankynde* or as Rösslin's *De Partu Hominis* in English.

I have carefully collated the contents of this first edition of the *Byrth* with those of later editions. The 1540 edition has its contents divided into three instead of four books; it lacks the Prologue to the Women Readers which appears in later editions; but it has the dedication to Quene Katheryne; it lacks also the Plates of Anatomical

Figures which later editions have, although it possesses the Birth Figures (indeed, all the editions have the latter). The collation of the chapters is as follows.¹

1540 Edition.	1552 Edition.
First Book.	First Book.
Chapter I.	Chapter XIV.
	Second Book.
Chapter II.	Chapter I.
Chapter III.	Chapter II.
Chapter IIII.	Chapter III.
Chapter V.	Chapter V. (error).
Chapter VI.	Chapter V.
Chapter VII.	Chapter VI.
Chapter VIII.	Chapter VII.
Chapter IX.	Chapter IX. (error).
	Chapter X.
	Third Book.
Chapter X.	Chapter I.
	Chapter II.
Second Book (not in chapters)	Chapter III.
Third Book	Fourth Book.
Chapter I.	Chapter I.
Chapter II.	Chapter II.
Chapter III.	Chapter III.
Chapter IIII.	Chapter IIII.
Chapter V.	Chapter V.

Briefly stated, the first and second books of the 1540 edition correspond to the second and third books of the later editions; and the third book of the former edition to the fourth book of the later editions. The first chapter of the first book of the 1540 edition, however, corresponds to the fourteenth of the first book of the later editions; and the tenth chapter of the second book of the later editions has no corresponding chapter in the 1540 edition. This collation of the chapters is of value, further, because it explains some of the irregularities in the numbering of the chapters in the 1552 and 1560 editions; the printer has evidently forgotten sometimes that the two series of chapters did not exactly coincide, and has attempted

¹ I have used the 1552 edition for purposes of collation, but it very closely resembles the 1545.

occasionally to make them do so. The greater part, then, of the first book of the 1545 and subsequent editions is not represented in the 1540 one, and is, along with the prologue, to be ascribed to Raynalde.

The collation of the 1540 edition with Rösslin's *De Partu Hominis* (the Paris edition of 1538) shows that the first and second books of the former correspond to the twelve chapters into which the latter is divided; the third book of the former is not represented in Rösslin's work. The Byrth Fygyres also correspond in the two works, but are not arranged in the same order.

(b) *The 1545 Edition.*

The Royal College of Physicians of London has a fine copy of the 1545 edition of the *Byrth of Mankynde*; through the courtesy of the College I have been able to examine this book. The title page has a woodcut border, but the degree of ornamentation and illumination is small as compared with what some of the later editions show. The date (Anno. M.D. XLV.) is rendered slightly uncertain, for the Library Stamp of the College covers it and makes it appear as if there were another figure between the D and the X; but I think it is correctly given in the Catalogue as 1545, and that the figure is only a full stop and a blur. The date is not repeated at the end of the work, so that it cannot thus be checked. The setting of the title is as follows:—

The byrth of
mankynde, otherwyse named
the womans booke, Newly
set furth, corrected and
augmented, whose co-
tentes ye maye rede
in the table of the
booke and most
playnly in the
prologue

By Thomas Raynold
Phisition

Anno M. D. XLV

At the end of the work is the word "Finis," followed by "Imprynted at London by Tho. Ray." "Imprynted" is preceded by the paragraph mark (¶), which is very commonly employed in this edition although it does not appear upon the title page. The book is printed entirely in black letter including the marginalia; and there are

woodcut capitals. There are 148 leaves or folia, but the numbering of them is irregular and seems to be erroneous¹; there are four preliminary leaves, and the prologue occupies 18 leaves; so that, in all, there are 170 leaves or folia (about 340 pages of a modern book). Inserted at folio 46 are two plates representing dissections of the anterior abdominal wall; at folio 63 are two leaves, printed on both sides, (*i.e.* four plates) of copper plates, consisting of the "Birthe Figures," viz. "the Woman's Stoule," and 17 figures showing the presentations of the child in utero. The anatomical plates are from Vesalius, the "Birthe Figures" from Rösslin. On folio 108, at the end of the second book, is the following interesting passage which I here quote. "And as touching the aboue Trociskes and emplasters described here in this place, ye shall fynde them alwayes readye made at the signe of the thre Dooues in Boucklars bery² in London: the name of the good man of ye house is wyllam Normewyll. In whose shoppe I haue caused the sayde thinges faithfully to be made, for because that I am certayne that he is one of the moostt fydel and faithfullest Apothecaries in London: And suche as wyll not spare for any cost to acquire and obtayne of the best and moost singular symples and droges in there kynde, that may be gotten for monye." This passage throws an interesting sidelight upon the life of the time, and on the relations of medical men and apothecaries, as well as upon the pharmacy of the middle of the Sixteenth century. It may also be compared with the corresponding passages in some of the other editions, to which reference will be made under these editions.

It is to be noted that the preface, commencing "Quamvis possit Aristarchus," is in Latin in this edition as it is also in that of 1552 (q.v.).

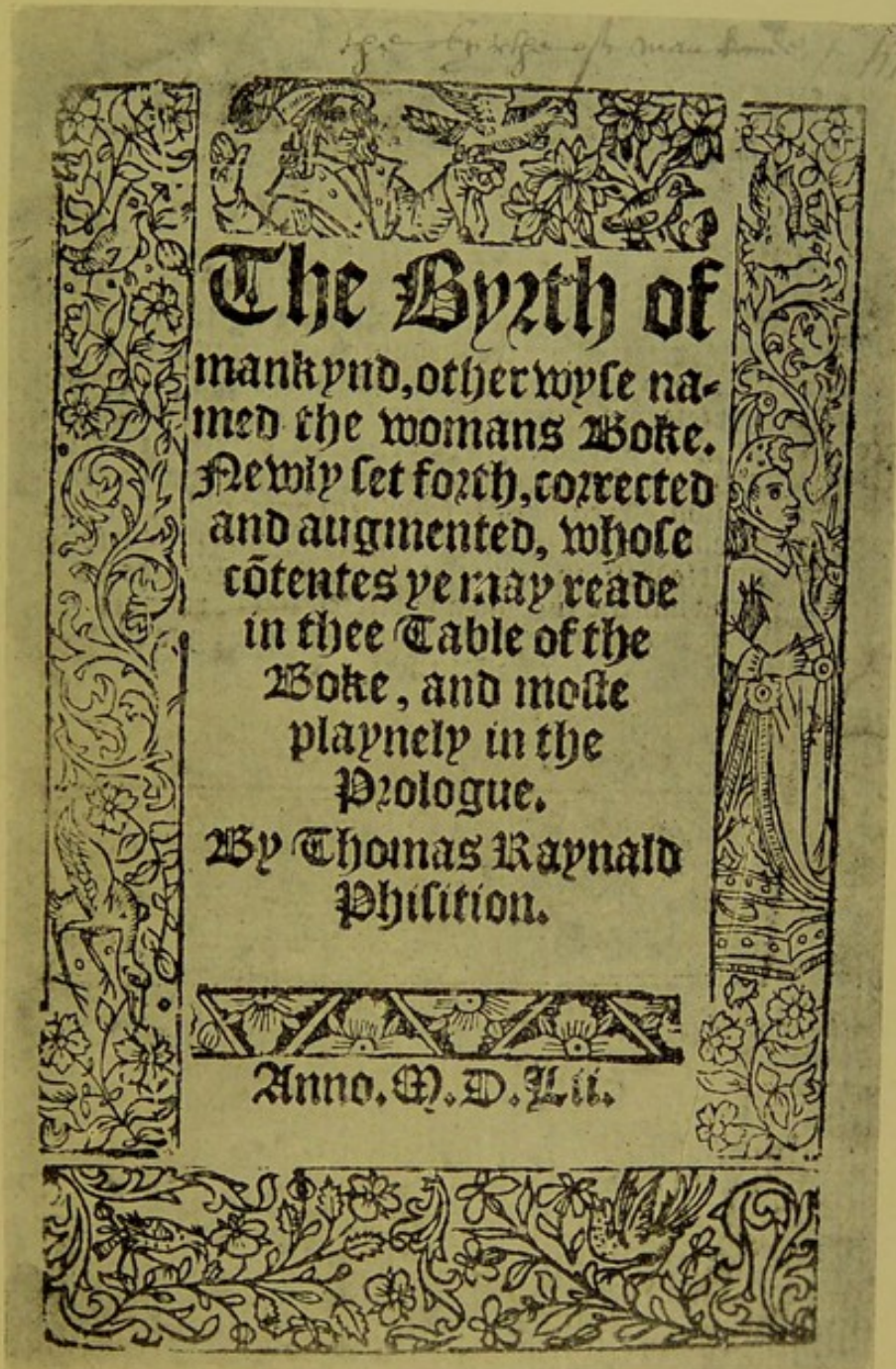
(c) *The 1552 Edition.*

The edition of 1552 is a small quarto of 149 folia or double pages, not including twenty folia devoted to the table of contents and prologue. The title page, reduced very slightly in size, is reproduced in Fig. 1. It is noteworthy that in the ornamental border on the right side is the figure of a midwife (or of a pregnant woman) with the forefinger of each hand extended as if for a vaginal examination. The date (MDLii) is clearly set forth, and the name of the author is

¹ After signature J, follows Hh8; and then Hhh6; it contains Y10 in eights; A, only 4.

² Bucklersbury was in Cheapside, and was noted for its druggists' and grocers' shops. There is an allusion to it in Shakespeare's *Merry Wives of Windsor* (Act. iii., sc. iii., 19): "Many of these lipping hawthornbuds, that come like women in men's apparel, and smell like Bucklersbury in simple time."

Fig. I.



Title Page of the 1552 Edition.



Fig. II.

Quamvis possit & tristatichus quispiam cu-
ram nonnullam, diligentiamq; in hoc o-
pere desiderare: nullus tamē tam iniquus
erit, qui inficias iuerit opere pectum hic
aliquod factum esse: quum & multo locu-
pletius, auctius, emendatiusq; quam vel
latine, vel Anglice, prius habebatur, iam prodeat. Et
nisi plurimis, hisq; necessariis curis familiaribus di-
strahi (Antequidum credebatur) fuisset, altus pla-
ne, factus foret hic liber. Haud ignari, non pauca hic
congeri parum admodum necessaria, que emitti potu-
issent absq; ulla lectoris dispendio. Rursum alia dese-
derant que absorta, non leuiter profuissent ad presens
negotium, decreuimus igitur breui opusculum hoc sub
incudem reuocare, & exactiore lima, omnia (pro viribus
postis) nitidius expolire: Antequā precantes be-
non minore successu ab obstetricibus, reliquis
q; matronis omnibus amplectatur, quam
est affectu scriptum.

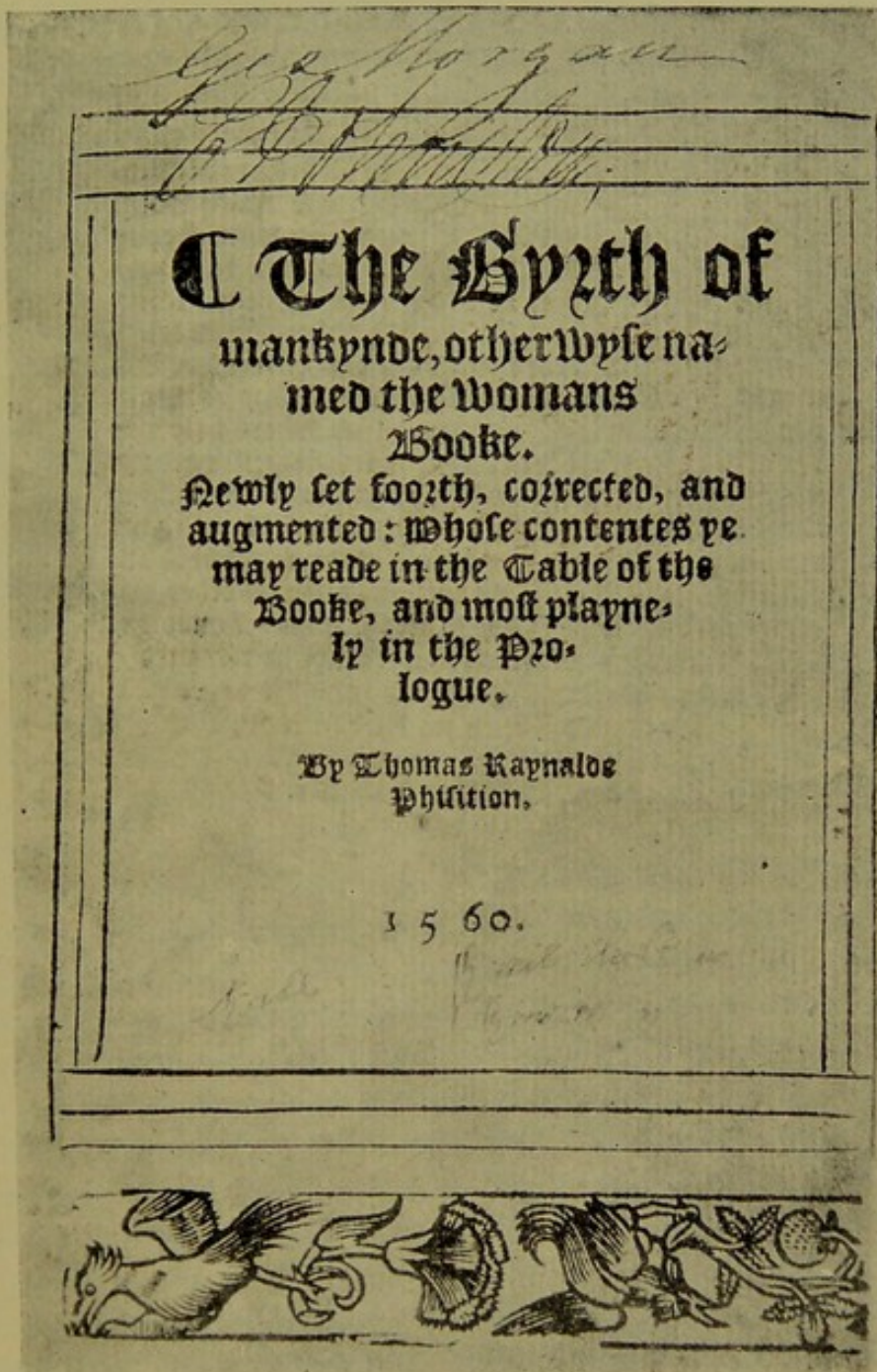


THE
COLL. REG.
MED. EDIN.

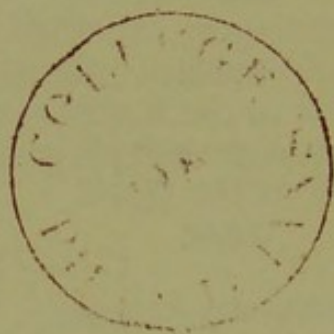
Latin Preface to the 1552 Edition.



Fig. III.



Title Page of the 1560 Edition.



given as Thomas Raynald, Phisition. On the reverse side of the title page is the preface in Latin. In the editions of 1560, 1564 (?), 1565, 1598, 1626, 1634, 1654, and I presume all the others, the preface appears in English. The Latin is reproduced in Fig. 2, and I give here the translation as it appears in the edition of 1560: "Albeit some Aristarchus¹ may perhappes finde some lacke of faithfulness and diligence in this work: yet there is none so froward to deny but that there is some fruit and profyte to bee founde therein, seying that it commeth nowe abroad much more enlarged and encreased, and more diligently corrected then it was before, eyther in the Latine or in the Englyshe. And where before in the other printes, there lacked matter necessary to the openyng and declaration of the figures pertaynyng to the inner partes: it is nowe so plainely set foorth, that the simplest Mydwyfe which can reade, maye both understand for her better instruction, and also other women that haue nede of her help, the more commoditie. Wherefore my desyre is, that it maye be receaued and practysed of Mydwyues and all other Matrones, with no lesse successe, then it is with good wyll and desyre wrytten to profite and to do good to other."

Then follow the table of contents and "A Prologe to the women Readers." Frequently throughout the table of contents and the prologue there occurs the old sign for paragraph (something like a reversed D, thus ¶); it is seen also throughout the whole book, but it does not appear on the title page as it does on that of the editions of 1560 (*vide* Fig. 3), and 1564 (?).

The first book extends from folio 1 to folio 56 (*i.e.* 112 pages); it consists of fifteen chapters and of "the declaration by letters of the fygures followyng." Eleven figures in all are described. From the description given, the first and second figures represented dissections of a man's body showing the peritoneum and the parts below it. At the end of the descriptive notes is the following remark: "Here ye shal be aduertysed that although these two fyrst fygures be made principally for ye man, yet may they serue as wel to expresse the woman; for the man and woman differ in nothyng but in the pryue partes." In the 1560 edition they have therefore disappeared (reducing the number of figures to nine); further, the declaration in that edition reads as follows: "The declaration by letters of the fygures folowing, wherein be set forth to the eye, euery parte in woman mentioned in thys boke before: Which in the former Printinges hath ben corrupted, but nowe truely set forth." The

¹ Aristarchus of Samothrace was a great critic; so the word came to be employed with the meaning of a severely critical person.

eighth, ninth, tenth and eleventh figures of the 1552 edition are the fifth, sixth, seventh, and eighth of the 1560 and subsequent editions. The ninth figure of the 1560 edition ("the matrix . . . taken fourth of a woman at the laste Anothomye, which I dyd se at the vniuersitie of Padua in Italy") does not appear in the present (1552) edition nor in the 1545; perhaps it took the place of the fifth and seventh figures of the 1552 edition. All these anatomical plates are to be found in Vesalius' (*De Humani Corporis Fabrica*, 1543).

The second book extends from folio 57 to folio 112; it consists of nine chapters, numbered I., II., III., V., V., VI., VII., IX., and X. In the second part of the third chapter is the description of most of the Birth Figures, viz., the first to the sixteenth (folio 71 to 74). The seventeenth and last of the Birth Figures is referred to on folio 60; it exhibits a two-headed monster. At the end of the second book is the interesting paragraph about the Trochiskes, which reads as follows: "And as touching the aboue Trochiskes and emplasters described here in this place, ye shal fynd them alwayes ready made at the signe of the thre Doues in Boucklers bery in London: the name of the good man of that house is Wylliam Normeuyl. In whose shoppe I haue caused the sayd thinges faithfully to be made, for because that I am certayne that he is one of the moost fydell and faythfullest Apothecaries in London. And soch as wyl not spare for any coste to acqyre and obtayne of the best, and moost singular simples and droges in theyr kynde, that maye be gotten for moneye."

The third book consists of three chapters and extends from folio 113 to folio 136. It deals largely with children's diseases. The fourth book has six chapters, extends from folio 137 to folio 149, and deals with sterility and certain cosmetics or "bellyfying receptes."

The only copy of the 1552 edition which I have had an opportunity of examining is that in the Library of the Royal College of Physicians of Edinburgh. It lacks the illustrations, but is otherwise perfect; and it was given to the College in 1846 by Dr. W. Beilby. Here and there throughout the volume are written comments or remarks, and some of these are interesting. They are all very old, as the caligraphy proves, *vide* the written title at the top of the title page. On the margin of folio 36 is written "The birth of man by Tho: Reignalds Dr in phisick," and on folio 18 is a somewhat similar inscription. Again on folio 86 is written "Joshua Jones his book 1688," and on the opposite page is "Richard Jones."¹ These were

¹ The occurrence of this name (Richard Jones) suggests the speculation whether the translator of the first edition may not have been a Richard Jones and not a Richard Jonas, and perhaps an ancestor of this Richard!

doubtless former owners of this copy of Raynalde. On folio 60 occurs the marginal MS. note "The birth of man easier yn ye birth of wom." There are some other notes mostly of the nature of comments on the text.

At the end of the work is the word FINIS in Gothic capitals followed by "Imprinted at London by Tho. Ray." The colophon, however, is not supplied with any date. I have already discussed the relationship of Tho. Ray to Thomas Raynalde.

(d) *The 1560 Edition.*

The edition of 1560 has a comparatively plain title page, that of my copy is reproduced in Fig. 3. It is noteworthy that even the title in this edition is prefixed by the old paragraph sign (¶). There is a good deal of carelessness visible in the headings of the leaves; thus: "the first booke" is put for "the seconde booke" on leaves 58, 59, 60, 61, 74, 75, 76, 77 and 92, whilst "the seconde booke" appears instead of "the thyrd booke" on leaves 102 and 108. The pagination, or, rather, foliation, does not include the "Prologue to the women readers" nor the table of contents; the Prologue covers nineteen as against thirty-three pages in the 1552 edition; the first book covers fifty-one leaves (102 pages) as against fifty-six leaves (112 pages) in the 1552 edition; in all, the four books occupy 131 leaves (262 pages) as against 149 (299 pages) in the 1552 edition. My copy has two former owners' names on the title page, viz., Geo. Morgan and E. Johnston; it lacks the plates of the anatomical relations of the genital organs, but has the "Birth Fygures" including the "Womans Stoole" and the seventeen figures of the presentations; the latter, consisting of four plates, are placed immediately after the table of contents, and not in the third chapter of the second book where they are described in the text; and it is incomplete at the end, some leaves of the third and the whole of the fourth book being absent. The seventeenth of the birth figures, that of the double monster "such as of late was sene in to the dominion of Werdenberg" is referred to in the second chapter of the second book (leaf 54). There are no written notes or comments in my copy except the statement on the margin of the first leaf of the second book: "Wrote by Thos. Raynalde M.D. A.Domini —1560" (*cf.* the account of the 1552 edition, the copy of the Royal College of Physicians of Edinburgh). The ninth figure of the anatomical plates makes its first appearance in this edition. It "sheweth the Matrix cut forth of the body . . . of a woman at the laste Anothomye, which I dyd se at the uniuersitie of Padua in Italy." It, also, is taken from Vesalius (*De Humani Corporis Fabrica*, 27th

Plate in 5th book, 1543). The description suggests that Raynalde himself saw the post mortem, but a comparison of his words with those of Vesalius throws a doubt upon this point.

There is a perfect copy of the 1560 edition in the University of Aberdeen. It formed part of the Bute gift to that University. No printer's name occurs on this edition, either on the title page or in the colophon; indeed, there is simply the word "Finis" on the last page. All the illustrations are present in the Aberdeen copy; the nine anatomical figures (from Vesalius) appear at leaves 44, 46, 49 and 51, and two of the plates are folded; the Birth Figures and the Woman's Stool are inserted opposite leaf 63. On the flyleaf opposite the title page is written "Rebekah Cox her Book," and below it is "Edward Challis, His Book, paid 1d at ye second hand 27th March 1669."

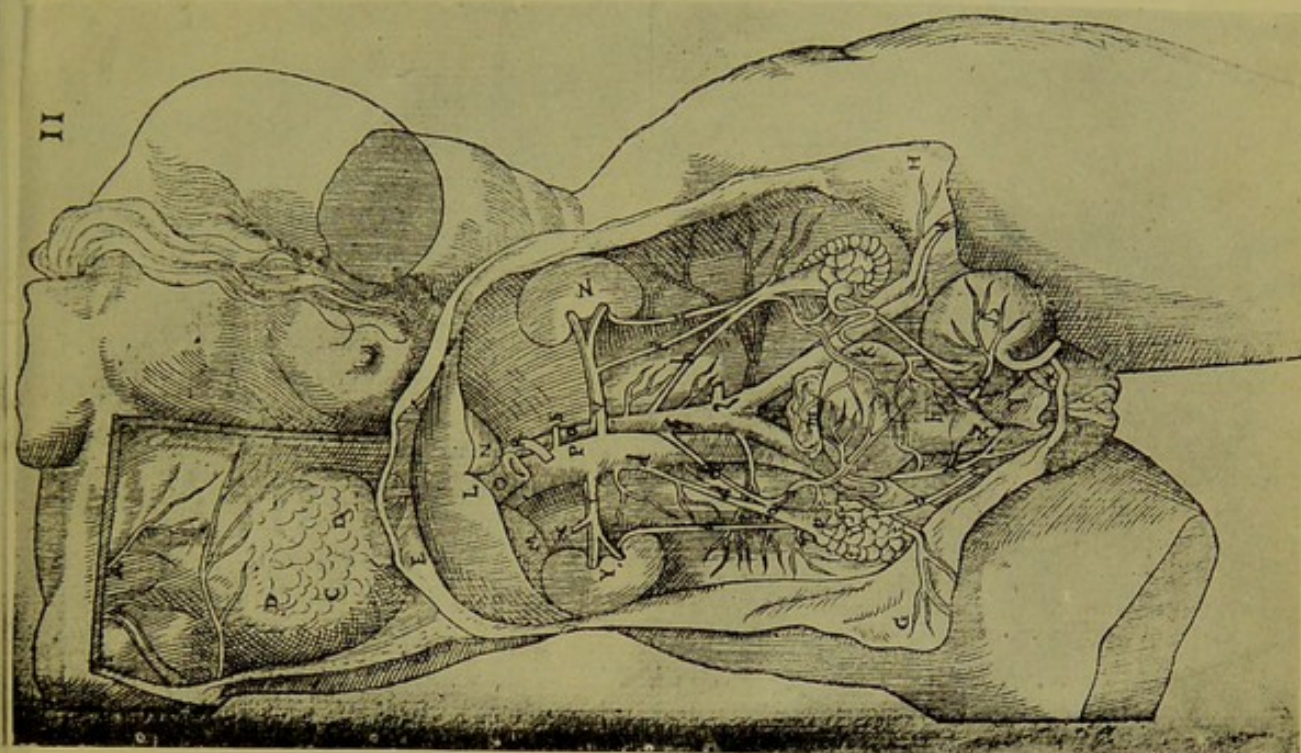
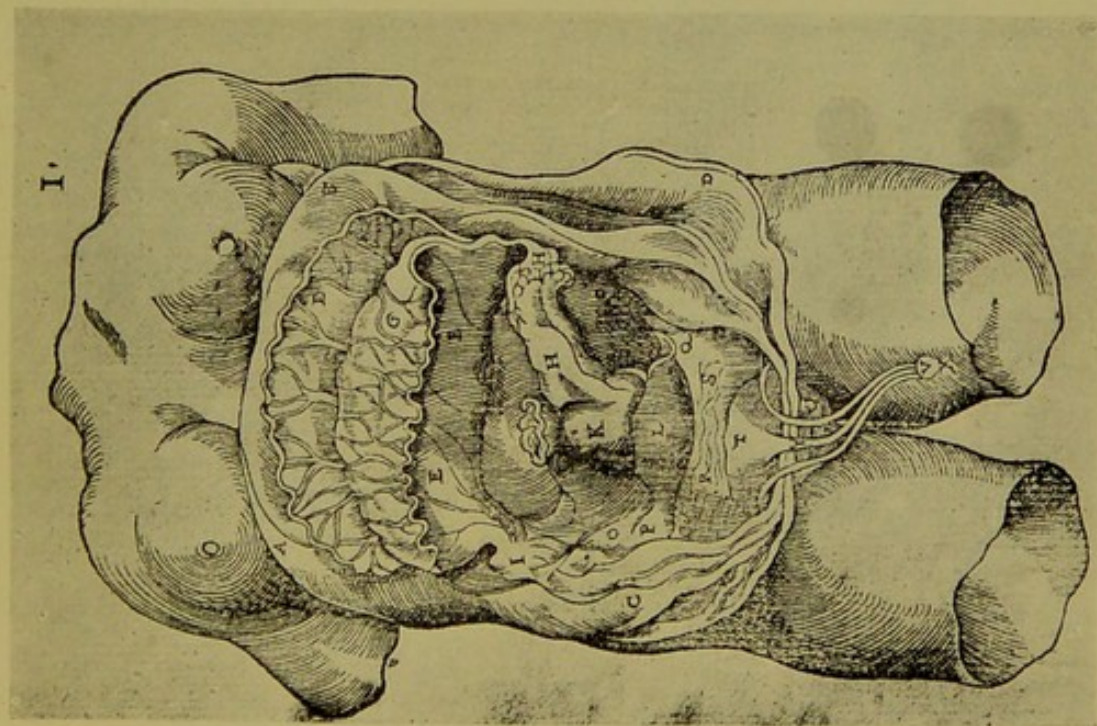
The illustrations of the 1560 edition (which are also those of all the later issues) are reproduced in Figs. 4 to 11.

(e) *The 1565 Edition.*

The edition of 1565 was a fine one, and a good copy of it is in the Library of the University of Edinburgh. It is a small quarto of 131 folia or double pages, not including 14 folia devoted to the title page, table of contents and prologue. The title page is ornate: the right border contains the figure of a woman and the left that of a man; there is a lion at each side of the base; at the top is a scroll with a monogram which seems to contain the letters R, E, G, and G. The arrangement and spelling of the words of the title are as follows:—

The birth of
mankynde, other-
wyse named the
womans booke.

Newely set foorth, corrected and
augmented. Whose con-
tentes ye may reade in
the Table of the
booke, and
most
playnely in the
prologue
By Thomas Raynalde
Phisition



Anatomical Figures in the "Byrth of Mankynde."



Fig. VI.

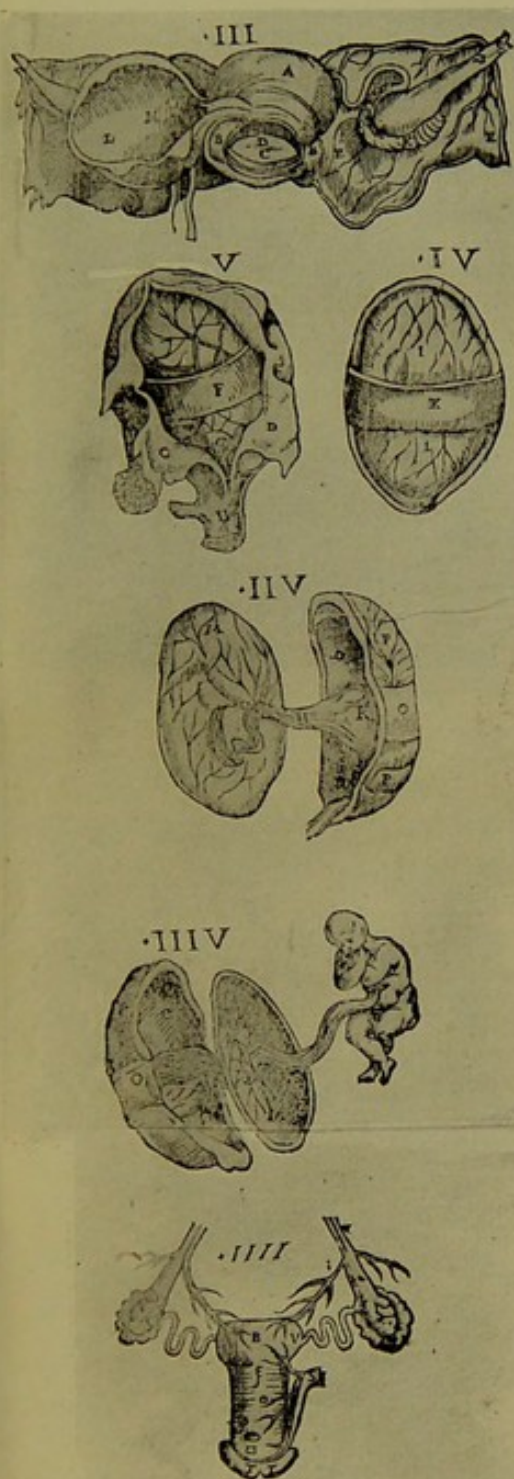
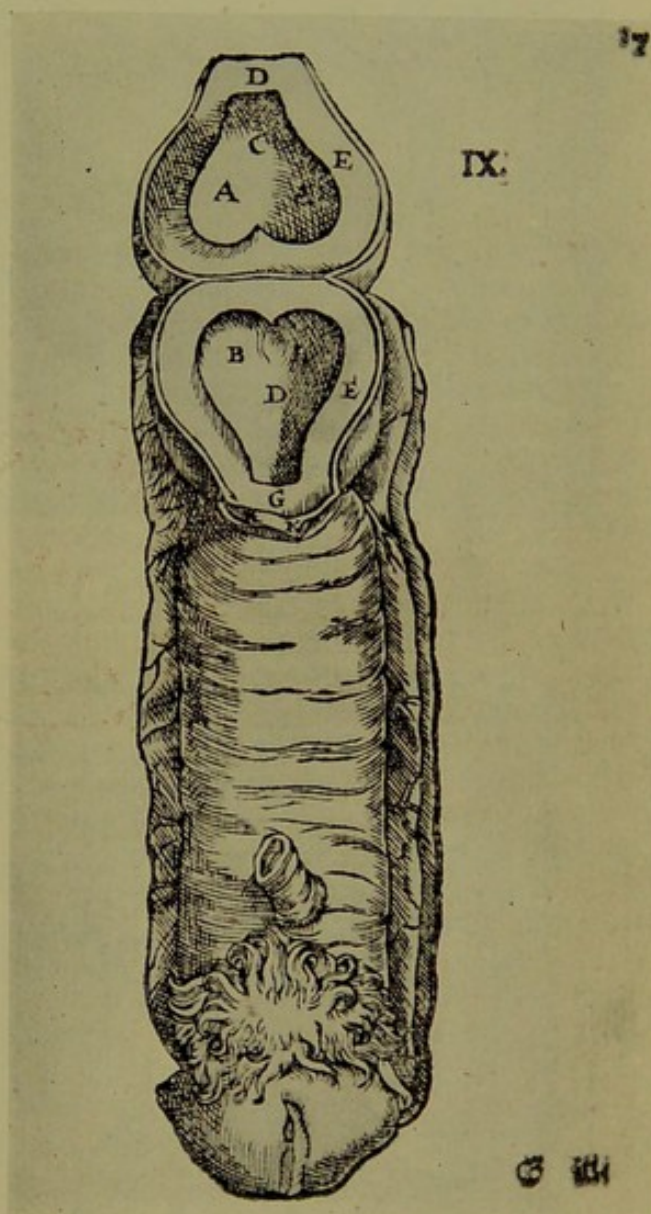


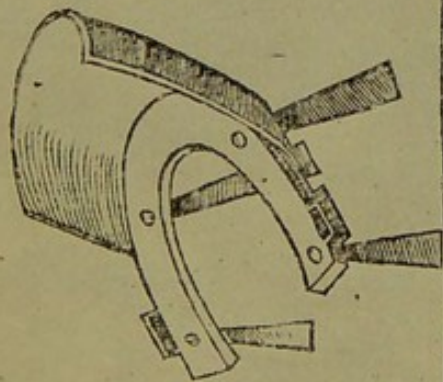
Fig. VII.



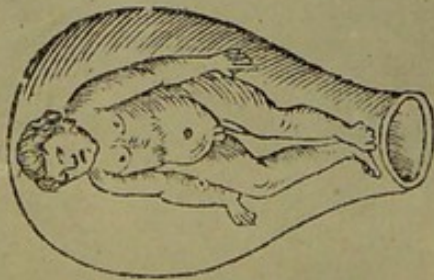
Anatomical Figures in the Byrth of Mankynde.



THE BIRTH FIGURES
THE WOMAN'S STOOL
THE



II



I



THE BYRTH
III



V



VI



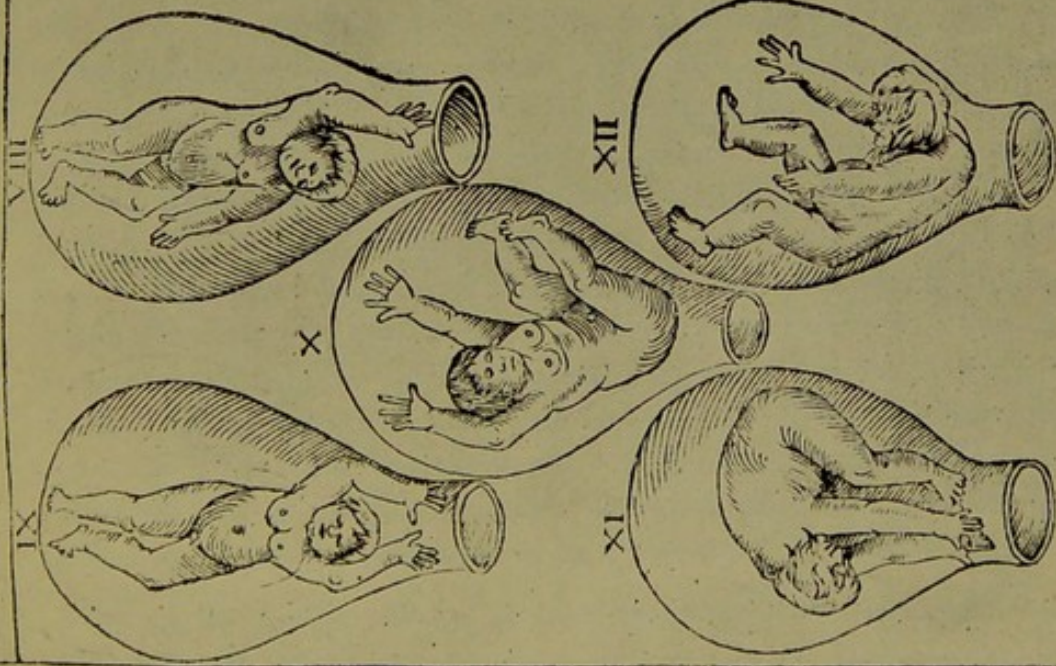
VII



Birth Figures in the "Byrth of Mankynde."

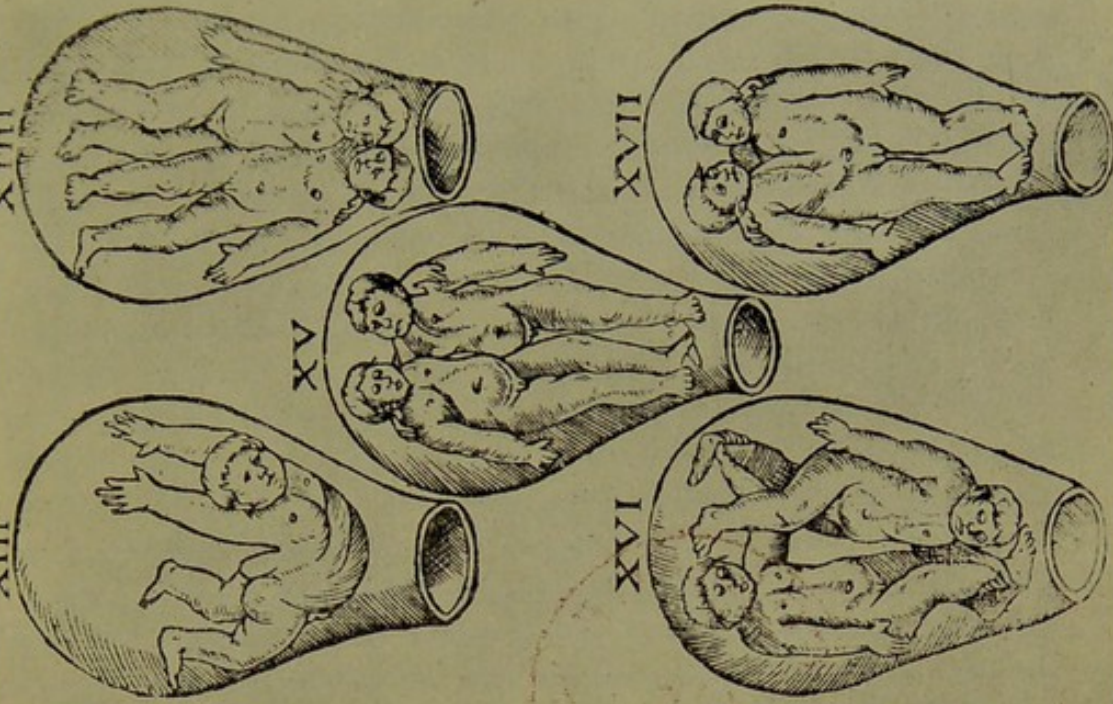


FIGURES.



THE BYRTH FIGVRES

XIII



Birth Figures in the "Byrth of Mankynde."



The table of contents has some fine initial letters (F, O and I), and the initial A of the Preface is also fine and resembles that of the 1598 edition. The type is black letter throughout, but of varying size. The Edinburgh University copy contains no plates, but the description of the figures is found as usual at the end of the first book and is the same as that in the 1560 edition, containing, as it does, "The declaration of the Karacters of the nynth figure of women." The ninth figure, it will be remembered, was "the matrix cut foorth of the bodye, beyng of that bygnesse as it was seene taken foorth of a woman at the laste Anothomye, which I did see at the vniuersitie of Padua in Italie." There is no indication of the place of publication of this edition; but in the British Museum Catalogue of Printed Books the suggestion is made that it was London. At the end of the work occurs the word "Finis" with "1565" below it. Below that, again, is a fine ornamental emblem with the following sentences incorporated in it: "Cogita mori;" "Pro lege, rege, et grege;"¹ "Love kepythe lawe, obeyeth the kynge, and is good to the common welthe." The paragraph at the end of the second book closely resembles that in the 1560 edition and widely differs from the corresponding passages in the 1552 and 1545 editions. It runs as follows: "And as touchyng the aboue Trochiskes and emplasters described in this place, ye shall fynde them alwayes redye made in Boucklers berie in London."

The motto referred to above as occurring on the title page is that of Richard Jugge, a printer, who flourished between the years 1531 and 1577. He was educated at Eton and Cambridge, but left the latter without a University degree. He went to London and began to print books about 1548 "at the sign of the Bible at the north door of St. Paul's Church." He printed, in all, about seventy books, including Tyndale's version of the New Testament and the Bishops' Bible. "He was unrivalled for the richness of his initial letters, and for the handsome disposition of the text." So writes H. R. Tedder in the *Dictionary of National Biography* (vol. xxx., p. 224); and my inspection of the two editions of Raynalde's *Byrth of Mankynde* which Jugge printed (this one and the next to which I refer) fully bears out the truth of the statement. A favourite device on his title pages was a rebus of his own name. It consisted of an angel holding an R, and of a bird (nightingale), in a nest with "Jugge" "Jugge"²

¹ This is the motto of the Earl of Beresborough and of Lords Brougham and De Mauley.

² "Jug," Jug," is an imitative representation of the notes of the nightingale's song.

printed above it. This enigmatical representation occurs in the undated edition to which I must now briefly refer.

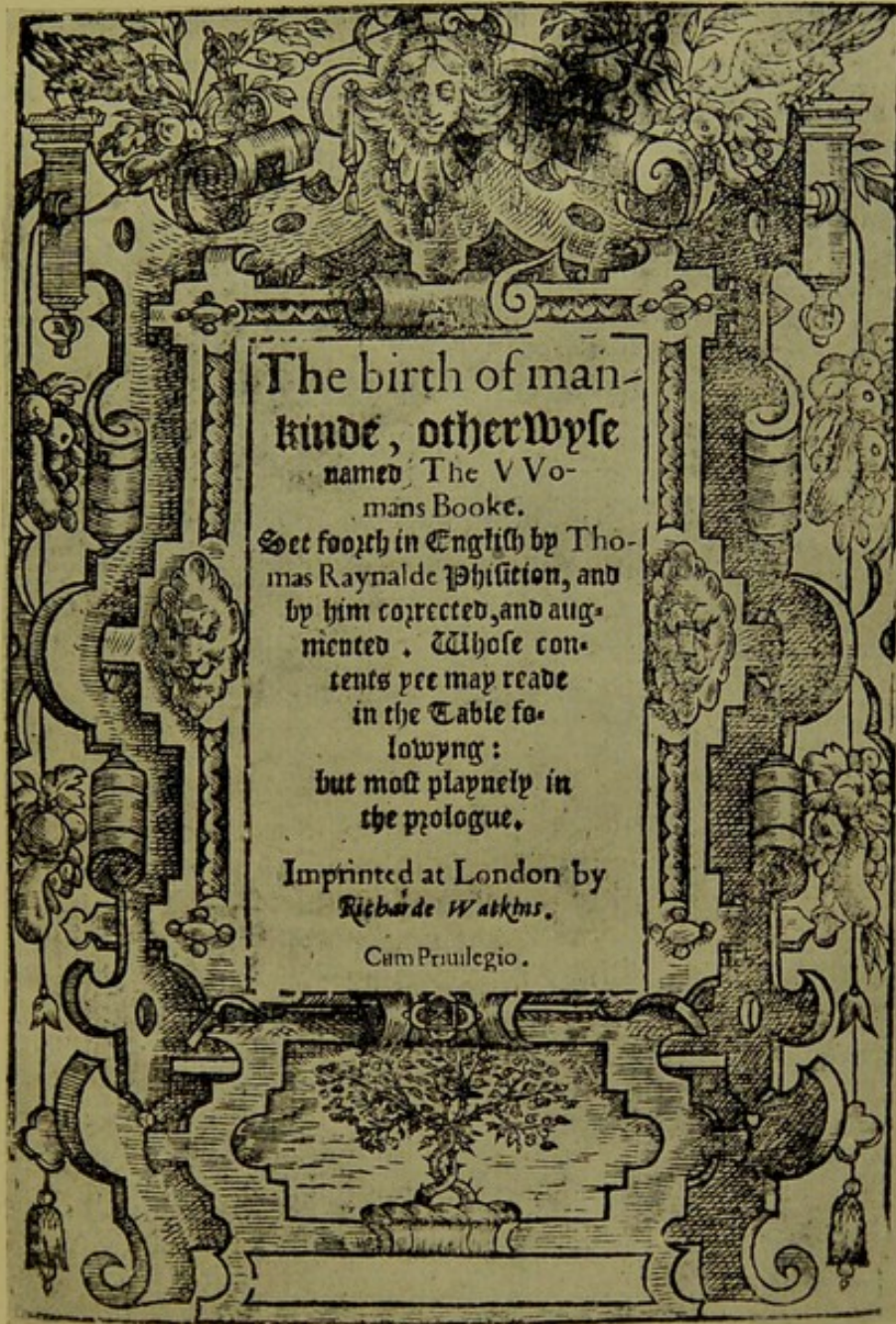
(f) *The Undated (1564?) Edition.*

There is an undated edition printed, like the 1565 edition, by R. Jugge; to this the provisional date of 1564 may perhaps be given. I have examined two copies of this edition; one of these is in the Library of the Royal College of Physicians of London, and the other belongs to Dr. J. F. Payne, the Harveian Librarian of the College. This edition has a finely executed title page, resembling in some details that of the 1565 issue. At the top is the motto of the Crown of England ("Honi soit qui mal y pense"), and at the bottom is the pelican feeding her young with her own blood. The printer's motto occurs in the ornamental border: at one side is an angel (or Cupid) holding the letter R, and at the other a bird (nightingale) in a nest with the word "Jugge" over it. The title is preceded by the paragraph sign (§), and the setting is as follows:—

¶ The Birth
of mankynde, other-
wyse named the wo-
mans booke
Newly set foorth, corrected, and
augmented. Those con-
tentes ye may reade in
the Table of the
booke, and
most
plainely in the
prologue.
By Thomas Raynalde
Phisition.

At the end of the work is a fine colophon with the same mottoes ("Pro lege," etc.) as in the 1565 edition. Some of the capital letters are markedly ornate, such as the A in the Preface and the F in the Table of Contents. The work contains 131 leaves and 13 preliminary leaves (288 pages). The College of Physicians' copy has one folding plate giving nine figures of the organs of generation, of which the ninth is on a larger scale than it appears in the other editions I have seen; but the Birth Figures are lacking. Dr. Payne's copy, on the

Fig. XII.



Title Page of the 1598 Edition.



Fig. XIII.



L be it some
Aristarchus may
perhappes finde
some lacke of
faythfulnes and
diligence in this
worke: yet there
is none so fro-
warde to deny,
but that there is
some fruite and
profite to bee
founde therein,
seeing that it

commeth now abroade much more enlarged and en-
creased, and more diligently corrected, then it was be-
fore cyther in the Latine or in the English. And where
before in the other printes, there lacked matter neces-
sarie to the opening and declaration of the Figures
parteyning to the inner partes: it is now so plainly
set forth, that the simplest Mydwife which can read,
may both vnderstand for her better instruction, and
also other women that haue neede of her helpe, the
more commoditie. VVherefore my desire is, that
it may be receiued and practised of Midwiues,
and all other Matrones, with no lesse suc-
cesse then it is with good wyll and
desire written, to profite,
and to do good to
other.

A ii.



other hand, has the Birth Figures but lacks the folding plate of the anatomical illustrations. No doubt a perfect copy had both sets of figures, for both are described in the text.

The paragraph at the end of the second book reads as follows: "And as touching the aboue Trochiskes and emplasters described here in this place, ye shall fynde them alwayes redy made in Bucklers berie in London." It will be noted that this very closely agrees with the corresponding paragraph in the 1565 edition (q.v.).

(g) *The 1598 Edition.*

The edition of 1598 contains 204 pages and three preliminary leaves. It has an ornate title page (reproduced in fig. 12) and the title is partly in black letter and partly in ordinary type. There are five wood-cut plates containing nine figures occupying pages 83 to 88; the "Woman's Stoole" and seventeen "birth fygures" (in four plates) are found on pages 107 to 110. On the title page is the information that the work was "imprinted at London by Richard Watkins. Cum Priuilegio."; and on the last page is the statement "Imprinted at London by Richard Watkins. 1598." Further, in the scroll work near the top of the title page are the initials R.B. and T.G., in the form of monograms. The preface with a fine large initial letter is reproduced in fig. 13. In the table of contents I notice that the word "folio" is used for the odd numbers and "page" for the even numbers.

The copy of the 1598 edition which I have seen belongs to Dr. C. E. Underhill, to whom I am much indebted for permission to examine it. It is a fine and perfect copy; from the book plate, it is seen that it was once the property of F. R. MacDonald, M.D. The margins are wide, and the marginalia are not in black letter, although a large part of the work is so printed. There are practically no MS. notes in it.

It is noteworthy that in this edition the reference to "Boucklers-berie" in the passage at the end of the second book has disappeared. It reads as follows: "And as touching the aboue Trochisks and emplasters described here in this place, yee shall finde them alwayes readie made in some Apotheries (*sic*) shoppes in London." This declaration concerning the Trochisks appears in practically the same form in the 1626, 1634, and 1654 editions; there was now no longer any need to specify any one shop where they were to be obtained, and doubtless "Wylliam Normeuyl" of the Three Doves had long since passed to his rest.

Richard Watkins, the printer of the 1598 edition, dwelt in St. Paul's Churchyard, and had a shop adjoining to the little Conduit, in Cheap. He had a patent, with James Roberts, for printing almanacks, and he was Warden of the Stationer's Company in 1583. He gave up his right of the sheet or broadside almanacks to the relief of the poor stationers. In 1598 he seems to have given the license for printing the "Byrth of Mankynde" by assignment to Thomas Adams, who dwelt at the White Lion, St. Paul's Churchyard. Adams appears as the printer of the 1604 edition.

It is noteworthy that comparatively few editions of Raynalde's "Byrth of Mankynde" appeared during the long reign of Queen Elizabeth. I have found no trace of any between 1565 and 1598. It is true that in the catalogue of the Radford Library in Manchester there is named an edition of Raynalde's work with the date 1593 in brackets appended; but it seems likely that this is the 1598 edition, for the date appears only in the colophon of that edition, and the 8 is rather like a 3.

(h and i) *The 1604 and 1613 Editions.*

I have not had an opportunity of examining either the 1604 or the 1613 editions. Of the former there is a copy in the British Museum and one in the Library at Washington, while of the latter the Royal College of Surgeons of London has two copies. Apparently these editions resemble the ones preceding and those immediately following them. The 1604 edition is a black letter quarto of 204 pages and was printed by T. Adams, London (*vide supra*).

(j) *The 1626 Edition.*

The edition of 1626 is a small quarto of 204 pages, including those of the Prologue but not those of the Table of Contents. The title page is very elaborately ornate, but in the copy which I have seen it is roughly printed and somewhat blurred. The arrangement and spelling of the words of the title are as follows:—

THE
BIRTH
OF
Man-kinde;
Otherwise named
The Woman's Booke,

Set forth in English by Thomas
Reynald Physitian, and by him
corrected and augmented

The Contents are in the Table following,
but chiefly in the Prologue.

LONDON

Printed for A.H. and are to be sold
by James Boler.
1626.

The initial letters are poor; and at the end of the work is simply the word FINIS. This edition is only partly in black letter. The illustrations are arranged in two groups: five plates containing nine figures are placed at the end of the first book and occupy pages 83 to 87; the four plates with the seventeen "Birth Fygures" appear at the end of Chapter IV. of the second book and occupy pages 107 to 110. The first group contains as usual, the illustrations of the female generative organs, and of the fœtus and the placenta and membranes; the latter contains the picture of the "Woman's Stoole," and the figures showing the various presentations of the fœtus, including the four twin cases. The copy of the 1626 edition, which is in the Library of the University of Edinburgh, was presented to that Library in 1881 by Dr. (now Sir) Dyce Duckworth; he bought it at a sale in the Midlands. Written on the back of the title page is "1681, Mary Buxton owns (?) this Book." Mary Buxton must, I suppose, have been a Seventeenth Century midwife, but I do not find her name mentioned in Dr. Aveling's work on "English Midwives."

(k) *The 1634 Edition.*

Another edition was that of 1634. There are several copies of this edition in England; there is one in the British Museum, one in the Library of the Obstetrical Society of London, and one in the Library of the Royal College of Physicians of London. To the Harveian Librarian of the College of Physicians I am much indebted for the opportunity of examining the last named copy.

There are 204 pages and 3 preliminary leaves in this edition. The title-page has a wood-cut border of an ornate kind, well supplied with devices heraldic in appearance; in it there are figures of Fides, Humilitas, etc. The setting of the title is as follows:—

The Birth
of Man-kinde;
Otherwise Named,
The Womans Booke.
Set forth in English by Thomas
Raynald Physitian, and by him
corrected and augmented.
The contents are in the Table fol-
lowing, but chiefly in the Prologue.
London. . . Printed for A.H. and are to be sold
by John Morret, at the two Tuns
in little Britaine.
1634.

The preface is in English. The printing is partly black letter and partly ordinary type, and the marginalia are in ordinary type. In the table of contents the even numbered pages are referred to as pages and the odd numbered ones as folios; there are also directions for the placing of the plates. The interesting passage at the end of the second book is thus rendered in this edition: "And as touching the aboue Troschiskes and emplaisters described here in this place, yee shall finde them alwayes ready made in some Apothecaries shoppes in London." The whole sentence is in black letter except the word "London."

It appears to me from a comparison of this edition with the so-called 1540 edition of the Obstetrical Society of London that the latter is really the same, that it is in fact the 1634 edition. But the MS. title page has been copied, so it seems to me, from one of the editions printed by Richard Jugge, that namely which is undated but which may have been published about the year 1564. The transcribed pages at the end may have been copied from the same.

In 1634 Paré's works were translated into English, and from this time Raynalde's book declined in influence and importance.

(1) *The 1654 Edition.*

The 1654 edition is the first that is entirely printed in Roman type; the black letter which was small in quantity in the 1634 edition has disappeared altogether in this. The title-page, also, marks a new departure (Fig. 14): it is destitute of all ornamentation; the wording is different; an enumeration of the contents is given; and there is a reference to the illustrations. A third name is now given to the work, for the title reads: "The Birth of Mankind, otherwise called

Fig. XIV.

46
N

THE
Birth of Mankind,
Otherwise called,
THE WOMANS BOOK.

OR,
A Guide for VVomen,
In their { Conception.
Bearing, and
Suckling their Children.

CONTAINING

1. *The Anatomie of the Vessel of Generation.*
2. *The Formation of the Child in the Womb.*
3. *What Hinders Conception; and its Remedies.*
4. *What furthers Conception.*
5. *A Guide for women in Conception.*
6. *Of Miscarriage in women.*
7. *A guide for women in Labour.*
8. *A guide for women in their lying in.*
9. *Of Nursing of Children.*

Illustrated with Figures.

Translated into English by *Thomas Reynald,*
Doctor of Physick.

The Fourth Edition Corrected and Augmented.

LONDON,
Printed for J. L. Henry Hood, Abel Roper, and Richard Tomlins,
and are to be sold at their Shops in Fleetstreet, and at the
Sun and Bible in Pic-Corner, 1654.

Title Page of the 1654 Edition.

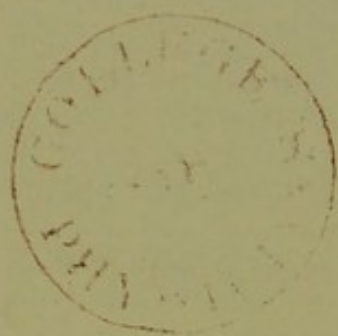


Fig. XV.



*Directions for the nursing of Children, and how to choose
a good nurse.*

I Am of opinion that it is fit for every Mother to nurse her own Child, because her milk which is nothing but the blood whitened, which nourished the child in the womb and of which the child was conceived, and formed, is fittest, and more naturall to the Child, then the milk of a Stranger, and by the womans nursing her Child, she shall be wholly accounted his Mother, but in case the Mother be sick or weak; or hath no milk, or that her Husband will not let her nurse her Child, then it is necessary to look out a nurse, but most men doe know how hard it is to get a good one.

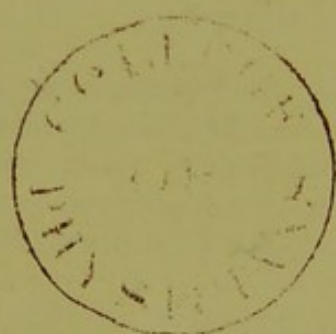
*Now in choosing a Nurse there is foure things
observable.*

First, concerning her Parentage, she must come of good kindred, and honest Parentage, that is not stained with any vice, for often times we see that although the Father and Mother be healthy, and strong, and ready witted, yet oftentimes the Children are weak and sickly, or else fools.

2. Touching her person, for her Age, she should be at her full growth, about 22 yeare of Age, and she will continue good untill she be forty years, for after forty

D d

years



the Woman's Book, or a Guide for Women, In their Conception, Bearing, and Suckling their Children." It is also entitled "The Fourth Edition Corrected and Augmented;" but, of course, it was rather the twelfth than the fourth, unless indeed we understand the inscription to mean that it was a corrected and augmented impression of the fourth edition. The augmentation would seem to consist mainly of two and a half pages added at the end of the fourth book, numbered 191, 192, and 193; they follow the original pages 191 and 192. These pages contain "directions for the nursing of Children and how to choose a good nurse," which are additions to the statements already given in Chapter II. of the third book. One of them is reproduced in Fig. 15.

The work consists of 195 pages and 3 preliminary leaves. There is no colophon. On the title-page is the statement that it was printed in London "for J. L. Henry Hood, Abel Roper, and Richard Tomlins, and are to be sold at their shops in Fleetstreet, and at the Sun and Bible in Pie-Corner, 1654." The table of contents is numbered according to pages and not at all according to folios (cf. the 1634 edition, etc.). The anatomical plates occupy pages 81 to 86, and the Birth Fygyres pages 105 to 108 (misprinted 118). The paragraph at the end of Book II. (referring to the Apothecaries of London) is practically identical with that in the 1634 edition, save that the spelling is modernized. Throughout the whole work there is a modernizing of the spelling and of the form of the words, so that this edition resembles closely other books published about the middle of the seventeenth century.

(m) *The 1676 Edition.*

A copy of the 1676 edition is in the British Museum; and it is stated in the Catalogue to be a black letter copy. So far as I have been able to discover this was the last edition to appear. Doubtless the growing popularity of Paré's works, and the appearance of "The Expert Midwife" (translation of Rueff's work), of Culpeper's "Directory for Midwives," of "The Compleat Midwife's Practice," and of P. Chamberlain's "Midwife's Practice," tended slowly to dislodge the "Byrth of Mankynde" from the position of supremacy which it had so long occupied during the sixteenth and seventeenth centuries.

The Various Editions.

I have now passed in review the various editions of the "Byrth of Mankynde," of which I have found any trace. It is possible that

there may have been others. For instance, McClintock in his annotations on "Smellie's Midwifery" (vol. i., p. 53, 1876) refers to a 1606 edition which he had seen, but he adds "the 0 here has somewhat the appearance of having been surreptitiously altered with a pen and may have been printed 2." I think it is probable that it was really the 1626 edition that he had to do with. There are, therefore, thirteen known editions, or fourteen if we admit the Radford Library 1593 edition. Of these I have been able to examine nine. I have also seen four other copies, but they were duplications of the 1560, 1564 (?), and 1654 editions. In all I have traced forty copies to their present resting places either in public libraries or in the private collections of medical men; and on the following page I give in tabular form the editions and where they are at present to be found.

I gladly take this opportunity of acknowledging my indebtedness to the following gentlemen for facilitating my researches: Drs. Cullingworth and J. F. Payne (London); Professor Stephenson (Aberdeen); Drs. W. L. Reid, Lawrence Oliphant, and John Ferguson (Glasgow); Dr. Underhill, Dr. Barbour Simpson, and Mr. J. R. N. Macphail (Edinburgh); and the Librarian of the Army Medical Museum and Library, Washington, U.S.A.

Summary of the Editions of the "Byrth of Mankynde."

- Edition of 1540. Jonas's Translation of Rösslin. British Museum.
- ✓ Edition of 1545. Raynalde's Translation. Royal College of Physicians, London; Hunterian Library, University, Glasgow.
- Edition of 1552. Raynalde's Translation. Royal College of Physicians, Edinburgh; and London Obstetrical Society.
- Edition of 1560. Raynalde's Translation. Royal College of Surgeons, London; Dr. J. W. Ballantyne, Edinburgh; University of Aberdeen.
- Edition of 1565. Raynalde's Translation. British Museum; University of Edinburgh; R. College of Surgeons of London; Washington Library; Hunterian Library, University, Glasgow.
- ✗ ✓ Edition of 1564 (?). Raynalde's Translation. British Museum; University of Glasgow; Royal College of Physicians, London; Dr. J. F. Payne, London.
- Edition of 1593 (?). Raynalde's Translation. Radford Library, Manchester.
- Edition of 1598. Raynalde's Translation. British Museum; Royal Medico-Chirurgical Society of London; Dr. C. E. Underhill; Washington Library; Hunterian Library, University, Glasgow.

Edition of 1604. Raynalde's Translation. British Museum; Washington Library.

Edition of 1613. Raynalde's Translation. Royal College of Surgeons of London (2 copies).

Edition of 1626. Raynalde's Translation. British Museum; University of Edinburgh; London Obstetrical Society; Faculty of Physicians and Surgeons of Glasgow.

✓ Edition of 1634. Raynalde's Translation. British Museum; Royal College of Physicians, London; London Obstetrical Society; ✓ Washington Library.

Edition of 1654. Raynalde's Translation. British Museum; Washington Library; Dr. W. L. Reid, Glasgow; University of Aberdeen.

Edition of 1676. Raynalde's Translation. British Museum.

[The Second Part of this article, dealing with the CONTENTS of Raynalde's *Byrth of Mankynde* will appear shortly.]

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The "Byrth of Mankynde."

(ITS CONTENTS.)

By J. W. BALLANTYNE, M.D., F.R.C.P. (Edin.), F.R.S. (Edin.),
*Lecturer on Midwifery and Diseases of Women, Surgeons' Hall
and Medical College for Women, Edinburgh; Physician to the
Royal Maternity Hospital, Edinburgh; and President of the
Edinburgh Obstetrical Society.*

I HAVE already* dealt with the author and the editions of the remarkable book known as the *Byrth of Mankynde*; and I now intend to complete the consideration of the subject by discussing the contents of the work and the light thus thrown upon sixteenth century midwifery. Before I do so, however, let me remind the reader that Raynalde's *Byrth of Mankynde* is really a composite work, for it contains an English translation (by Richard Jonas) of Rösslin's *De Partu Hominis*, along with new matter added by Thomas Raynalde. It has, therefore, three component parts: Rösslin's *De Partu Hominis* as translated by Jonas, his additions thereto, and those which came from the pen of Raynalde. In such a late edition as that of 1654, a fourth element is found in the supplementary matter added by a seventeenth century editor whose name we do not know; but it is small in amount, consisting chiefly of directions for the nursing of children, and no further reference will be made to it.

For purposes of description I might have taken any one of the first four Raynalde editions (those of 1545, 1552, 1560 and 1565), for it is probable that they all appeared during the lifetime of Raynalde;† but I have chosen that of 1560, for it represents what was practically the final recension of the work, and does not differ (save only in spelling and minor details) from so late an edition as that of 1654. The quotations which occur throughout this article

* *Journ. of Obstet. and Gynaecol. of the Brit. Empire*, vol. x., pp. 297—325, 1906.

† Raynalde is not likely to have been alive when the 1598 edition appeared.

are, therefore, to be regarded as taken from the 1560 edition except when it is otherwise stated. At the same time, I shall now and again refer to differences existing between the various editions, which may appear to have an interest other than the merely typographical and orthographical interest; and I shall draw attention to the very marked differences which are revealed by a collation of Jonas's edition of 1540 with the editions of Raynalde from 1545 onwards. Further, when I reach, in the description, the part of the book which is a translation of Rösslin's *De Partu Hominis*, I shall devote some sentences to the consideration of this German obstetrician's life and work.

The contents of Raynalde's *Byrth of Mankynde*, it need hardly be said, have a special interest for obstetricians. The book stands, so to say, between the old and the new in obstetrics: empiric midwifery was, in 1540, beginning to give way before the advance of scientific obstetrics, although many years had still to pass before the knowledge of the anatomy and physiology of labour and the principles of anæsthesia and asepsis were to sweep away the practices begotten of ignorance and superstition. The year 1550, in which Paré introduced podalic version into obstetric practice, has usually been regarded as marking the separation between the midwifery of the past and that of the present; if this be so, then Raynalde's *Byrth of Mankynde* appeared at the very time when the great transition from the empiric methods of the ancients to the scientific procedures of the moderns was being brought about. It cannot fail to be a matter of the most intense interest to know what were the practices and principles of midwifery in England in the middle of the sixteenth century, and we find them both revealed to us in Raynalde's book.

THE PRELIMINARY MATTER.

The preliminary matter in a typical Raynalde edition of the *Byrth of Mankynde* (such as that of 1560) consists of the title page, the Aristarchus preface, and the table of contents. In the single Jonas edition of 1540 are the title page, the religious admonition, the dedication to Queen Catherine, the table of contents, and a table of weights and measures.

The *Title Page* differs little, so far as wording is concerned, in the various editions prior to that of 1654. That of the 1560 edition reads as follows:—"The Byrth of || mankynde, otherwyse na || med the womans || Booke. || Newly set foorth, corrected and || augmented: whose contentes ye || may reade in the Table of the || Booke, and most playne || ly in the Pro || logue. || By Thomas Raynalde || Physi- tion || 1560." The titles of the 1545 and 1552 editions are similar, and no alterations of note appear until 1598, when the title reads: "The birth of man || kinde, otherwyse || named the Wo || mans Booke. || Set foorth in English by Tho || mas Raynalde Phisition,

and || by him corrected, and aug || mented. Whose con || tents yee may reade || in the Table fo || lowyng: || but most playnely in || the prologue." One or two slight differences are to be noted in the editions of 1604, 1613, 1626, and 1634, and then there occurs the radical change of the 1654 edition (see Plate XIV. in my previous article, *loc. cit.*, p. 322).

The wording of the title page of the Jonas edition is, as might be expected, somewhat different: "The Byrth of Mankynde, newly translated out of Laten into Englysshe. In the which is entreated of all suche thynges the which chaunce to women in theyre labor, and all suche infyrmities whiche happen unto the Infantes after they be delyuered. And also at the latter ende or in the thyrde or last boke is entreated of the Conception of mankynde, and howe manye wayes it may be letted or furtheryd, with diuers other fruytefull thynges, as doth appere in the table before the booke. Cum privilegio Regali, ad imprimendum solum."

The ornamental border of the title page differs greatly in the different editions which were published before that of 1654, in which it entirely disappears; but with this matter I have already dealt fully in my first article (*loc. cit.*).

The reverse side of the title page contains (in the 1560 edition) a short *Preface*, in English, commending the work in modest terms to midwives and matrons. The same preface appears in Latin in the 1545 and 1552 editions, and in English in all the others, but it is not always printed on the reverse side of the title page. I have reproduced it in Plates II. and XIII. of my former article, both in its Latin and in its English form. Since it begins "Albeit some Aristarchus," I have named it the *Aristarchus Preface*.

The Aristarchus Preface is absent from the Jonas edition of 1540; but, occupying the corresponding position there is a *religious admonition* which reads as follows (in ordinary English): "Unto the Reader. An admonition to the reader. For so much as we have enterprised the interpretation of this present book, offering and dedicating it unto our most gracious and virtuous Queen Katherine only, by it minding and tending the utility and wealth of all women, as touching the great peril and dangers which most commonly oppresseth them in their painful labours, I require all such men in the name of God, which at any time shall chance to have this book, that they use it godly and only to the profit of their neighbours, utterly eschewing all ribald and unseemly communications of any things contained in the same, as they will answer before God, which, as witnesseth Christ, will require a count of all their words, and much more then of all ribald and uncharitable words. Everything, as saith Solomon, hath his time, and truly that is far out of time, yea and far from all good honesty, that some use at the common tables and without any difference before all companies, rudely and

loudly to talk of such things, in the which they ought rather to know much and say little, but only where it may do good, magnifying the mighty God of nature in all his works, compassionating and pitying our even-Christians,* the women which sustain and endure for the time so great dolor and pain for the birth of mankind and deliverance of the same into the world. Praise God in all His works."

The rest of the preliminary matter of such an edition as that of 1560 consists of the Table of Contents, as we should now call it, or, as it is here termed, simply the Table. I have collated the Contents of the 1545, 1552, 1560 and 1654 editions, and I find them to be almost identical, except, of course, with regard to the spelling, type, and pagination. There are, however, one or two small divergences; thus, in the editions of 1545 and 1654 there is a heading in the third book ("Remedy for the Cramp, or distention of members") which does not appear in the other two editions referred to, but the presence of the heading does not indicate the addition of new matter in the text; again, in the 1545 and 1552 editions, eleven Anatomical Figures are named and nine only in the 1560 and 1654 editions. In the 1560 edition (in my copy at least) the "byrthe fygures" (seventeen in number or eighteen, if the 'stoole' be counted) follow after the Table of Contents; but in several of the other editions they are inserted at the end of the fourth chapter of the Second Book, their proper place according to the modern rules of binding.

Before we reach the Table of Contents of the Jonas edition of 1540, we find additional preliminary matter consisting of the Dedication. It is so interesting that I reproduce it here in full. Some parts of it, it may be added, reappear in the Prologue to the Women Readers which is peculiar to the Raynalde editions. In ordinary English it reads as follows:—

"Unto the Queen. Unto the most Gracious, and in all goodness most excellent virtuous Lady Queen Katherine, wife and most dearly beloved spouse unto the most mighty sapient Christian Prince King Henry the VIII. Richard Jonas wisheth perpetual joy and felicity. Whereas of late (most excellent and virtuous Queen) many goodly and proper treatises, as well concerning holy scriptures, wherein is contained the only comfort and consolation of all godly people: as other profane arts and sciences right necessary to be known and had in use, have been by the painful diligence of such clerks which have embusied them in the same very earnestly and circumspectly set forth in this our vulgar English tongue, to the great enriching of our mother language, and also the great utility and profit of all people using the same, and among all other things, out of the noble science of Physick, have been divers proper and

* *Even-Christen* or *even-Christian* meant *fellow Christian*.

profitable matters compiled and translated from the Latin tongue into English, by the reading of the which right many have confessed themselves to have received great light and knowledge of such things, in the which they have found no small comfort and profit. And in this behalf there is in the Latin speech a book entitled *De Partu Hominis*: that is to say, of the birth of mankind, compiled by a famous doctor in Physick, called Eucharius, the which he wrote in his own mother tongue, that is, being a German, in the German speech, afterward by another honest clerk at the request and desire of his friend transposed into Latin: the which book for the singular utility and profit which ensueth unto all such as read it, and most specially unto all women (for whose only cause it was written) hath been in the Dutch and French speech set forth and imprinted in great number, so that there be few matrons and women in those parts but (if they can read) will have this book always in readiness: considering then that the same commodity and profit which they in their regions do obtain by enjoying of this little book in their maternal language, might also ensue unto all women in this noble realm of England, I have done my simple endeavour for the love of all womanhood, and chiefly for the most bound service which I owe unto your most gracious highness to translate the same into our tongue. Most humbly desiring first your grace's highness, and then consequently all noble ladies and gentlewomen with other honest matrons to accept my pains and goodwill employed in the same: the which thing as I do not doubt for the wont and incomparable benignity goodness and gentleness inset and planted in your grace's nature, so shall it be no little encouraging unto me hereafter with farther deliberation and pains to revise and oversee the same again, and with much more diligence to set it forth. For considering the manifold daily and imminent dangers and perils, the which all manner of women or what estate or degree they be in their labour do sustain and abide: yea many times with peril of their life, of the which there be so many examples needless here to be rehearsed. I thought it should be a very charitable and laudable deed, yea and thankfully to be accepted of all honourable and honest matrons if this little treatise so fruitful and profitable for the same purpose were made English, so that by that means it might be read and understood of them all, for as touching midwives, as there be many of them right expert, diligent, wise, circumspect and tender about such business, so there be again many more full undiscrete, unreasonable and far to seek in such things the which should chiefly help and succour the good women in their most painful labour and throngs. Through whose rudeness and rashness only I doubt not, that a great number are cast away and destroyed (the more pity). For this cause and for the honour of Almighty God, and for the most bound service the which I owe unto your grace, most gracious

and virtuous queen, I have judged my labour and pains in this behalf right well bestowed, requiring all other women of what estate soever they be, which shall by reading of the same find light and comfort, to yield and render thanks unto your most gracious highness, wishing greatly that it might please all honest and motherly midwives diligently to read and oversee the same, of the which although there be many which do know much more peradventure than is here expressed, yet am I sure in the reading of it their understanding shall be much cleared and have somewhat farther perseverance in the same. It is no small charge which they take upon them, for if when any strange or perilous case doth chance, the midwife be ignorant or to seek in such things which are to be had in remembrance in that case, then is the party lost and utterly perished, for lack of due knowledge requisite to be had in the midwife. Wherefore I beseech Almighty God that this my simple industry and labour may be through your grace unto the utility, wealth, and profit of all English women, according to my utter and hearty desire and intent, to whom also I daily pray long to preserve and prosper your most gracious highness, both to the continual comfort and consolation of our most redoubted and without comparison most excellent Christian prince, and also the joy and gladness of his loving subjects. Amen."

Of course the Table of Contents of the 1540 or Jonas edition differs much from those of the Raynalde editions of 1545, 1552, 1560, etc. There is no reference in it to a Prologue, for no such thing exists in the 1540 issue, unless we regard the Religious Admonition and the Dedication as jointly constituting one. Then, we note the absence of the first thirteen chapters of the first Book of all the Raynalde editions; and the sixth chapter of the fourth Book of the Raynalde editions, containing the cosmetic suggestions or "bellifying receipts," is not represented in the Table of Contents of the 1540 edition. Roughly speaking, the Jonas or 1540 edition contains the second, third and fourth Books of the Raynalde editions, plus the last chapter of the first Book and minus the last chapter of the fourth Book of these later editions. But I have already, in my former article, set forth in detail the differences between the Contents of the two issues (*loc. cit.*, p. 310).

In the 1540 edition the preliminary matter closes with two interesting paragraphs dealing with weights and measures and with drugs and apothecaries; they are peculiar to this edition. The former is introduced in these words: "For because that in this book many times be found certain measures and weights of physic, not known peradventure to all such as that chance to read it, therefore here briefly I have set them forth, showing the value and estimation of them so far as they shall be requisite to the better understanding of such things the which ye shall read in the same treatise." Then follows the table of the weights and measures, the pound being stated

to contain 5,762 grains. The second paragraph refers to the obtaining of the drugs named in the text of the book, and reads thus: "Ye shall also note here that many times ye shall happen upon strange names of such things the which are occupied about infirmities spoken of in this book, for the which theyr is no English but are used in their own proper names of Greek or Latin: and they are such for the most part which are to be had only at the apothecaries, being of them right well known; wherefore when ye shall need any such thing if ye send the same names in your bill to the apothecaries they will soon speed your purpose: neither do this if ye may without the advice of some expert and learned physitian."

I have now enumerated all the parts of the preliminary matter, both as found in the Raynalde editions of the *Byrth of Mankynde* and in that first edition with which the name of Richard Jonas is associated. I now pass to the Prologue, which is to English readers perhaps the most attractive part of the work.

THE PROLOGUE.

To the English obstetrician, as well as to the student of the manners and customs of the sixteenth century, the *Prologue to the Women Readers* will be by far the most interesting part of the book. It is not a translation of anything in Rösslin;* it is not indeed a translation of anything at all. We may regard it as a piece of original writing fresh from the mind of Raynalde, giving the history of the work and throwing an important sidelight upon the way in which obstetric matters were looked upon in England in the middle of the sixteenth century. There are, it is true, a few passages in it which are reminiscent of some parts of the *Dedication to Queen Katherine* in the 1540 edition; but the greater part of it must be ascribed to Raynalde.

The intent of the author ("the entent of thauctour") is to recite the sum and chief contents of the book, for it is "a great pricke or allurement, entising and meuinge a man, to reade any boke, when he is somewhat first admonyshed of the matters comprehended and contayned therein." Then, without giving any names, Raynalde tells how the studious and diligent clerk [Jonas, to wit] made the English translation of the Latin work [by Rösslin] entitled *De Partu Hominis*, and called it "the byrth of mankynde"; it is now to be named "the womans boke." That translation is now to be corrected and augmented, revised "from top to to," as the writer quaintly says; and there are to be "set forth and evidently declared al the inward partes of women, and that not onely in wordes, but also in lyvely and expresse figures." Raynalde beseeches the midwives who

* There is a "Prologue" in Rösslin's *De partu hominis* (edition of 1538, Paris) but it has nothing in common with Raynalde's.

will read his book to pay special attention to these anatomical matters, for, he adds, "when a person is sycke or dyseased in any part, it is halfe a comfort, yea halfe his helth, to understand in what part the dysease is, and howe that parte lyeth in the bodye."

The second part of his book ("the seconde booke") is to concern itself with labour, "with the byrth of mankind and al the daungers, perels, and other cases happenyng to the labourynge woman at that season." This portion of the work is to be illustrated with the *Byrth Fygures* and the picture of the *Womans Stoole*; the first part had the anatomical figures from Vesalius to elucidate the text.

The third book considers the choice of a wet nurse. "Item medicines encreasyng, deminishinge, attenuatyng, engrossinge, and amendynge the mylke in the nources brestes. Also remedies for manye and sundry diseases, which oft tymes chaunce unto infantes after theyr byrth."

In the fourth book the author proposes to discuss the question of conception and the overcoming of sterility. "And farther in this last booke shall be uttered and set forth certayne embelleshinge receptes concerning onely honeste and helthsome decoration and clenlynnes." The writer evidently feels that he is on dangerous ground, for he adds that he is to teach "nothings in that place but that onely whiche may make to the honest, comely, and commendable conservinge and maintaininge of the inset and natural beautie in a woman, utterly abhorring and defying all farding, paynting, and counterfeit cast coulors, which of some dampnable and misproude people be dayly used, such as by all meanes possible, seke and search more the abhominable and divilish painting and garish setting forth of their mortal carcasses (the better therby to commend it unto the eyes of foolish and fond men) than by honest, sober, debonayre and gentil maners, so to demene their life, that they may therby rather obtayne the loue, amitie, and hartie perpetual favour first of god, and then of al honest, discrete, and godly wise men."

After giving this brief summary of the contents of the book, Raynalde asks his women readers ("for whose sake and only respect it is set forth") to give it their benevolent favour and good acceptance. He is quite sure, however, that to some the work will not be acceptable. Not even an invocation of the gods and goddesses ("great Apollo, wyttie Mercury, and sweet Suada") will suffice to convince them who give so "precipitat and heady judgements in all maner of matters," that the book is useful and good. Some will allege "that it is shame, and other somme, that it is not meete ne fytynge such matters to be entreated of so playnly in our mother and vulgare language, to the dyshonoure (as they say) of womanhed, and the derision of theyr wonte secretes, by the detection and discoveryng whereof, men it readyng or hearing, shalbe moved thereby the more to abhorre and loothe the company of women."

But it is of no use to attempt to convince such people. Nothing is so good but it may be abused. Fire and water, meat and drink, the Bible, even the blessed Sacrament may be abused; but "to them that be good theimselfe, everye thinge turneth to good, whatever it be is to them a sufficient matter and occasion therein to seke the glory of God, and the onely profyte of their even Christen." "Wherefore," the writer concludes, "consydering that there is nothinge in this world so necessary, ne so good, holye, or virtuous, but that it maye by wyckednesse be abused, it shalbe no great wonder though this lyttle booke also, made, written, and set foorth for a good purpose, yet by lyght and leude persons be used contrary to godlynesse, honesty, or thentent of the wryter thereof."

The only possible dangers, so far as the writer can see, are that some of the medicines referred to may be employed for a criminal purpose ("some divelishe and lewde use"), and that the book falling into any "lyght marchauntes handes" may be used for the derision of women. That men by reading such a book should "conceave a certayne lothsomnes and abhorrynge towardes a woman" is answered by the fact that if this were so then "Physitians and chyrurgians wyves should greatly be abhorred and mysbeloved of theyr husbandes;" and this is not so. "And I my self likewise, which wryteth thys booke, should mervaylouslye above many other abhorre or lothe women." Such "tender reasons" are petty and trifling: "but to be short, there is no such thyng, neither any cause thereto why." In fact, it is rather to be expected that if, by any chance, a husband read the book, he may, if of a gentle and loving nature, do his wife good.

Knowing as he does what the perils of childbirth are, the writer thought "it should be a verye charitable and laudable dede, and right thankfully to be accepted of al honourable and other honest matrones, yf by my paynes this lyttle treatyse were made to speake Englyshe, as it hath been longe syth taught to speake dutch, frenche, spanshe, and dyvers other languages." The *Byrth of Mankynde* may, if properly read and consulted, supply the "roume and place of a good mydwife;" as a matter of fact, the writer knows that it has been so used by "many honourable Ladies and other worshipfull Gentlewomen" and with much profit. But again it has to be confessed that there are some midwives who would have the book forbidden, "forsomuch as therein was descried and set foorth the secretes and privities of women, and that every boy and knave had of these bookes, reading them as openly as the tales of Robin Hood, etc." "But here nowe let not the good midwives be offended with that, that is spoken of the badde. For verely there is no science, but that it hath his Apes, Owles, Beres, and Asses." The good midwives, however, were glad to get the book. "And thus I conclude and make an ende of this rude Prologue, requyryng the gentle

readers therof, that yf they shall fynde any thing therin interpretable to dyuers senses, to accepte onely that which may make to the best, accordynge to my meaning."

THE FIRST BOOK.

Like the Prologue, the First Book of the *Byrth of Mankynde* contains matter which is not to be found in Rhodion's *De Partu Hominis*. Its contents are mainly anatomical descriptions. The writer is very sure of the "utilitie of the first boke;" it is "as a key, openyng and clearyng the matters to be intreated of in the seconde." It deals with the "fourme, maner, and situacion of the inwarde partes of a woman," with "the campe or felde of mankynde to be engendred therein."

An interesting paragraph deals with the relative importance of the sexes in the matter of procreation: "And although that man be as principall mouer and cause of the generation: yet (no displeasure to men) the woman doth conferre and contribute much more, what to the encrease of the child in her womb, and what to the noryshment thereof after the byrth, then doth the man. And doubtlesse yf a man woulde demaunde to whom the chylde oweth most his generation, ye may worthily make aunswere that, to the mother: whether ye regarde the paynes in bearynge, other els the conference of most matter in begettyng."

The organs are then described in detail. First, "the principal coates of the body" are referred to: they consist of the superficial skin or cuticula, of the "fleshye" skin or *membrana carnosae*, and of the third coat or *adeps*, which lies between the other two. "Immediately under the fleshye skin be conteyned the Muskles." Chapter III. of the First Book is specially concerned with the "Muskles," and particularly with those of the "bellye." These are the *musculi obliqui descendentes* or "the Byaswyse descendyng muskles;" the *musculi obliqui ascendentes* or the "Byaswyse ascending muskles;" the *musculi recti* or "the ryght muskles;" and the *musculi transversi* or the "overthwart muskles." "All these foure Muskles be to the entrayles and bowelles within the belly, as foure seuerall coates: by the vertue and helpe of whom, together with the ayde of the midwiffe, all expulsion both upward and downewarde in the guttes, in the stomacke, in the matrix of the woman in the tyme of labour, and also in the bladder in tyme of makynge of water, is wrought: and yet besides this utilitie, they clothe (as I have saide) defende, fortifie, and strength the inwardes of the belly."

Chapter IV. of the First Book speaks of the "kell, called Peritoneum," a certain "thin rime;" it "yeldeth unto eche entrayle a coate and webbe of the cloth of his owne body: by the whiche his livery, they be the more aretly and straightly affixed or fastened unto

hymselfe." Chapter V. gives the declaration of the names and nature of the Matrix. "The Matrix, the Mother, and the wombe, do signifie but one thing, that is to saye: The place wherein the seede of man is conceaved, fetified, conserved, nourished, and augmented, unto the tyme of deliuerance, in Latin named Uterus and Matrix." From the description which follows, it is evident that the writer intends by "Cervix Uteri" the vulva and vagina. Chapter VI. deals with "the wombe and his partes." "Nowe ye shall understande, that the founde or bottome of the matrix is not perfectly round bowlwyse, but rather lyke the forme of a mans heart, as it is paynted, sauinge that the particion or clifte in the matrix betwene both corners, the ryght and the lefte, is not so profoundlye dented inwarde as the clyfte in the hearte." From this description it would almost appear as if the uterus of one of the Mammalia were intended, or if the writer had come across a case of minor malformation of the organ (uterus septus) in the human subject. He is quite sure, however, that there is only one "holonesse" in the womb; he does not believe in the seven "selles" said to be therein. "In tymes passed, dyverse Clarkes haue written, and many other haue beleued, that there shoulde bee seuen selles, or seuen distinct places in the Matrix, in thre of the whiche, on the ryght syde shoulde onely men chyldren be conceyued, and in the other three on the lefte syde women chyldren, and yf it chaunced that the seede were conceaued in the seuenth sel, whiche was the myddelmoste, then that shoulde become a monster, halfe a man, and halfe a woman. The whiche all is but lyse, dreames, and fonde fantasyes: for the womans Matrix, as I haue saide, is euen as a stronge bladder, hauinge in it but one uniuersall holones, and the chylde when it lyeth in it, lyeth euer on the one syde more then on the other, the head beyng towardses one of the corners or angles, and not upryghte towarde the myddle brydge."

Chapter VI. (VII. correctly) speaks of the "Mother port." This is the Cervix as we nowadays call it. "It is of the forme of a haukes bell, or other lyttle mores belles" (*i.e.*, morris bells). At certain times, "the Matrix beyng apte and dysposed thereto, and other conditions requisite, thys wombe porte do naturally open it selfe, attractinge, drawing and suckinge into the wombe the sede by a vehement and naturall desyre." During pregnancy it remains closed, "untyll the tyme of delvuerance, at what tyme agayne it delateth and openeth it self, in such amplytude and largenesse, that it is wonderfull to speake of."

Chapter VIII. contains a description of the vessels of seede, called the woman's stones, *i.e.*, the ovaries as we now know them, "wherin is engendred the seede and sparne that commeth from the woman, not so strong, ferme, and myghtie in operation as the seede of man, but rather weake, fluy, colde, and moyste, and of no great firmitie."

But, the writer tells his readers, the woman's seed is just as proper for its purpose as the man's. "These stones be nothyng so bygge as the stones of man, but lesse, flatter, much fashyoned after the shape of a great and brode almonde."

Chapter IX. has to do with the "sede bringers," not, let it be borne in mind, the Fallopian tubes, but the "two vaynes and twoo artyres which come to these two stones." Here we find a description of the blood-vessels of the pelvis along with the views then held as to the origin of what was called the "woman's seed," which are set forth at length in Chapter X. These views have now only an historical interest, for the physiological knowledge on which they rested has long since been replaced by more correct information. To the curious, however, the description given of the four "mines," shops, or workhouses existing in the body cannot but be attractive. "Of this sort of mines, there be foure principall in the bodye of man. The first is the mine of bloud, which is the lyuer, in whom the iuyce of meate, before of colour whyte, is transmuted into red, made apt and fitte to nourishe all partes of the body, attract and drawen out of the stomacke and guttes, thorow verye small and infinite lyttle vaynes into the lyuer. The seconde mine is the heart, which of the bloud attracte and drawen from the great maister vaine, proceeding out of the foresayde lyuer, into his parlors, doth engendre vehement and liuely spirite, conmixed with depured and greatly elaborated bloud, within the selles of the heart, from thence sent forth throw the artires, into all partes of the bodye, being in colour yealowyshe, thinne, and hote bloud. The thyrde mine is the brayne, of whom all the sinewes take thyr originall. In whom the wyttie spirite, the spirites of mouyng, and the spirites of al sensibilitie be engendred, and thorow the sinewes sent to all partes of the bodye. For all suche partes as moue and feelee, haue that by reason of sinewes derived unto those places from the head. The fourth mine is the stones, in whom by commixtion of al the other thre foresaid metalles of the body, that is to say, vayne bloud, arteriall bloud, and liuely spirites engendred in the head, is engendred and produced sede, which bestowed in his due place becommeth like in perfection to the creature from whence it came; that is to say of mankynde, man." The writer then goes on to explain how "the seede is receaued into the stones," how the colour of the seed is transmuted, and how the seed in woman is not so firm as in man, etc.

Chapter XI. tells how the seed (of the woman) is sent from the stones to the angles or corners of the Matrix by means of a "wormye bodye," evidently the Fallopian tube. The seed in woman is supposed to be for the purpose of moistening the genital passage as "with a dewe." The writer then proceeds to moralize on what he terms the "prickes of nature." "For yf that the God of nature had not instinced, and insette in the body of man and woman, such a

vehement and ardent appetite and luste, the one lawfully to company with the other: neither man ne woman woulde neuer haue ben so attentfe to the workes of generation and encrease of posteritie, to the utter decaye in shorte tyme of all mankynde. For ye shal heare some women in tyme of theyr trauayle, meued through great payne and intollerable anguyshe, forswere and vowe them selfe, neuer to companye with a man agayne; yet after that the panges be passed, within short whyle, for entyre loue to theyr husbandes, and singular naturall delyte betwene man and woman, they forget both the sorow passed and that that is to come. Suche be the privie works of God, and suche be the prickles of nature, which neuer createth no special pleasure unaccompanied with some sorow: neither is there for the most part any sorow, but that it hath annexed some ioy or comforte, lesse or more, to alleuiate and lyghten the burthen and weyght of displeasure."

Chapter XII. deals with the bladder in women, with stone ("but women be not so prone ne apt to engender the stone in the bladder as men be"), and with the reason why the urine when it has reached the bladder does not revert again.

Chapter XIII. is a very interesting one, for in it are considered not only the "vaynes which resort to the Matrix," but also "the termes and theyr course with the causes thereof." "Nowe to come to the declaration of the nature of termes, ye shal understand that thei be called in Latine Menstrua, for because that ons in a moneth they happen alwayes to womankynd, after XIII. or XV. yeares of age passed (beynge in theyr perfect health): In Englyshe they bee named Termes, because they retourne eftsoones at certayne seasons, tymes and termes." Having described, as best he knew, how the blood was poured into the Matrix, the writer goes on to tell the cause of the terms, that they are really intended to serve as nourishment for the fœtus ("feature"); for "prudent Lady nature" has wisely so provided; "yea, although the woman do neuer conceaue . . . yet is there no faute in nature, who hath prepared place, and foode to be at altymes in readynes." It is noted, also, that women that have no terms cannot bear children; that the terms do not follow the waxing and waning of the moon exactly; and that the duration of the flow varies in different women.

In Chapter XIV. are considered at some length the three caul or wrappers "wherein the infant is lapped" in the uterus. The innermost caul is named the Amnios, "in Latine Agnina, for cause it is as dilicate as lambes bee." "The mydwifes commonly call it the coyfe or byggyn of the chylde, and some call it chylde shert, the which also many times proceadeth alone with the chylde, eyther uppon the chylde's head, or one of the armes or legges. And then the women reserve it as a thyng that shoulde betoken some great lucke to the chylde in tyme to come." "The seconde wrapper or caule

in Greek is called Allantoides, in Latine Farciminosa, in Englyshe these two termes do signifie haggiswyse for because that it is fashioned much after the shape of the outwarde skynne or bagge of an haggisse puddinge." This second caul of Raynalde is our modern chorion apparently, while the third which he names Chorion or Secundina (or hoop caul) would seem to correspond to the placenta; but the description is vague and shows no evidence of close observation of nature. The description of the vessels of the umbilical cord is more exact. "Thorow these Artires, liuely spirite and freshe ayre is deriued out of the mother into the chylde, wherwith the naturall heate of the chylde is viuified and refreshed. And these two Artires with the foresayde nauyll Vayne, when the childe is borne, begin to wyther and drye, euery day more and more, and become much like a harpstryng, without any holownesse or cautie." The urachus ("another vessell") is also described, and it is said that by it the urine passes from the bladder to the space between the first and second caul without the child's body. The placenta ("chorion") is compared to the spleen or melt "in a man or beast;" "so that to be short, Chorion is the immediat receptacle and receauer of al the vaynes and artires, to be deduced from the Matrix to the chylde, and the chylde receaueth onely at his hand the two Vaines and Artires, whiche by the way as they passe and perse thorow the other two caules, towards the chyldes Nauyll, they sende into eche of the caules innumerable small eye vaynes and artires, whereby the caules be sustayned and encreased also."

The terms, when there is a fœtus in the uterus to be nourished, are no longer superfluous but are used in supplying nourishment to the infant *in utero*, and that part which is not needed goes to the breasts to become milk. It is not right to regard the terms as a purgation, for the blood of which they are composed is as pure and wholesome "as all the reste of the bloud in anye part of the body els." "Yet much more are to be detested and abhorred, the shameful lyes and slaunder that *Plinie, Albertus magnus de secretes Mulierum*, and diuers other mo haue written, of the venomous and daungerous infective nature of the womans Flowres or Termes: the which all be but dreames and playne dotage. To rehearse theyr fond wordes here, were but losse of inke and paper, wherfore let them passe with theyr auctours." It is not a little amusing to read such denunciations of Pliny and Albertus Magnus following so closely after some of the anatomical descriptions that have gone before; but in his views upon the functions of the placenta as set forth in the following paragraph the writer is far in advance of his time. "Forbecause that she (Nature) woulde that the pure bloud commyng from the Matrix vaynes, should be made yet purer, she suffereth not the same to entre immediately into the infante, but first useth another meane, and sendeth it into Chorion or the hoope call (as I haue sayd before),

where truely it hath a certayne circulation, and another digestion, wherby it is desecate, and clenched very exquisitly, by the diligentis of nature attenuated and fined, and so at the laste sent foorth into the infant, leauyng all the grosser part in the spungye bodye of the hoope caule." (It is to be remembered that the hoop-caul is the placenta.)

The Fifteenth Chapter is concerned with some curious considerations regarding which of the three Matrix veins contain the Terms and how the milk comes to the woman's breasts. The importance of knowing which of the veins contain the menses is, the writer thinks, at once evident when we have to deal with too much or too little monthly flow; to put these anomalies right we have to apply medicines, and if the menses come only from the veins of the neck of the womb there will be no use in applying medicines to those of the fundus. The writer is of opinion (for reasons which it is unnecessary to discuss now) that the terms come from the veins at the fundus only. It is in this connexion that the writer relates the history of two cases in his practice, the one in London and the other in Paris, to which reference has already been made (*Journ. of Obstet. and Gynæcol.*, Vol. x., 1906, p. 306).

There is much else in this chapter about clots in the terms, about the "white flowers," about retention of the terms, and about the manner in which "the mylke which commeth to the brestes is engendred of the Termes (accordyng to moste mens opinions)." There is not wanting evidence, it is pointed out, of the "great familiaritie betwene the Matrix and the brestes, for so much as the ebbing of the one is the flowinge of the other."

Such are the matters dealt with in the First Book of the *Byrth of Mankynde* in the 1560 edition; it remains for me now to examine the differences which exist between this and other editions. The 1545 and 1552 editions call for no special comment, and those that were published later than 1560 also show none other than trifling alterations; but the Jonas or 1540 edition differs widely from the rest.

The First Book of the 1540 edition is really the Second Book of the Raynalde editions (with some exceptions to which reference will be made), and the First Book of the Raynalde editions finds no counterpart, or almost none, in the 1540 edition. Almost none, for the First Chapter of the latter contains an account of "how many caules the birth is compacted and wrapped in," and the fourteenth chapter of the Reynalde editions deals with "the three caules or wrappers wherein the infant is lapped." Chapters I. to XIII., Chapter XV., and part of Chapter XIV. of all the Raynalde editions find no counterpart in the 1540 edition of Jonas; practically the whole of the First Book of the Raynalde editions, therefore, is new material added to what was in the 1540 edition. To trace the source or sources of the new material found in all the Raynalde editions would be an interesting literary investigation, but it is one which

I am not now in a position to make.* I may, however, state that no part of the added chapters is in the two editions of Rösslin's *De Partu Hominis* which I have been able to examine (those of 1538 and 1556); and in the meantime it is only reasonable to ascribe it to Raynalde, and to regard it as part of the "augmentation" mentioned on the title page of the 1545 and subsequent issues of the *Byrth of Mankynde*.

THE ANATOMICAL FIGURES.

At the end of the First Book is "The declaration by letters of the fygures folowing, wherein be set forth to the eye euery parte in woman mentioned in thys boke before: Which in the former Printinges hath ben corrupted, but nowe truely set forth." These figures are nine in number, and they have all been reproduced in Plates IV., V., VI., and VII. of my former article.

No indication is given in the letterpress as to the source of the illustrations; indeed from the reading of the accompanying descriptions it would seem that they were original and that the objects depicted in them had been seen by the writer. A little investigation, however, soon shows that this was not the case. None of them is to be found in the 1538 edition of Rösslin's *De Partu Hominis*, although four of them make their appearance in the 1556 edition; but, then, as we shall see, they had already appeared in the 1545 edition of the *Byrth of Mankynde* and had been repeated in the 1552 edition. Evidently, therefore, their original source is not Rösslin's work. As a matter of fact, they have been taken, descriptions and all, from Vesalius's book *De Humani Corporis Fabrica*, in the "first" or 1543 edition of which they are all to be found.

I have carefully compared the plates in the 1560 edition of Raynalde's *Byrth of Mankynde* with those in the 1543 edition of Vesalius's work, with the following results: The first figure in Raynalde is the twenty-fourth of the Fifth Book of Vesalius, and is found on p. 377 of that work, with the descriptive letterpress on pp. 376, 377 and 378; the second figure is the twenty-fifth of Vesalius, and is found on p. 378, with its description on pp. 379 and 380; the third figure is the twenty-sixth of Vesalius on p. 380; the fourth figure (IIII.) is also to be found in Vesalius's work at the end of his Third Book, on p. 313, with its description; Figures V., VI., VII., and VIII of Raynalde's work are the first, second, third and fourth separate figures in the thirtieth plate of Vesalius's Fifth Book, and are to be seen on p. 382 with descriptive notes on p. 383; and the ninth figure of Raynalde's *Byrth* is the twenty-seventh of the Fifth Book of Vesalius's *De Humani Corporis Fabrica*, where it is to be found with its description on p. 381.

* One would require to have access to the various editions of Rhodion's work, both in Latin and in German. Some of the new material, however, is undoubtedly derived from Vesalius's work.

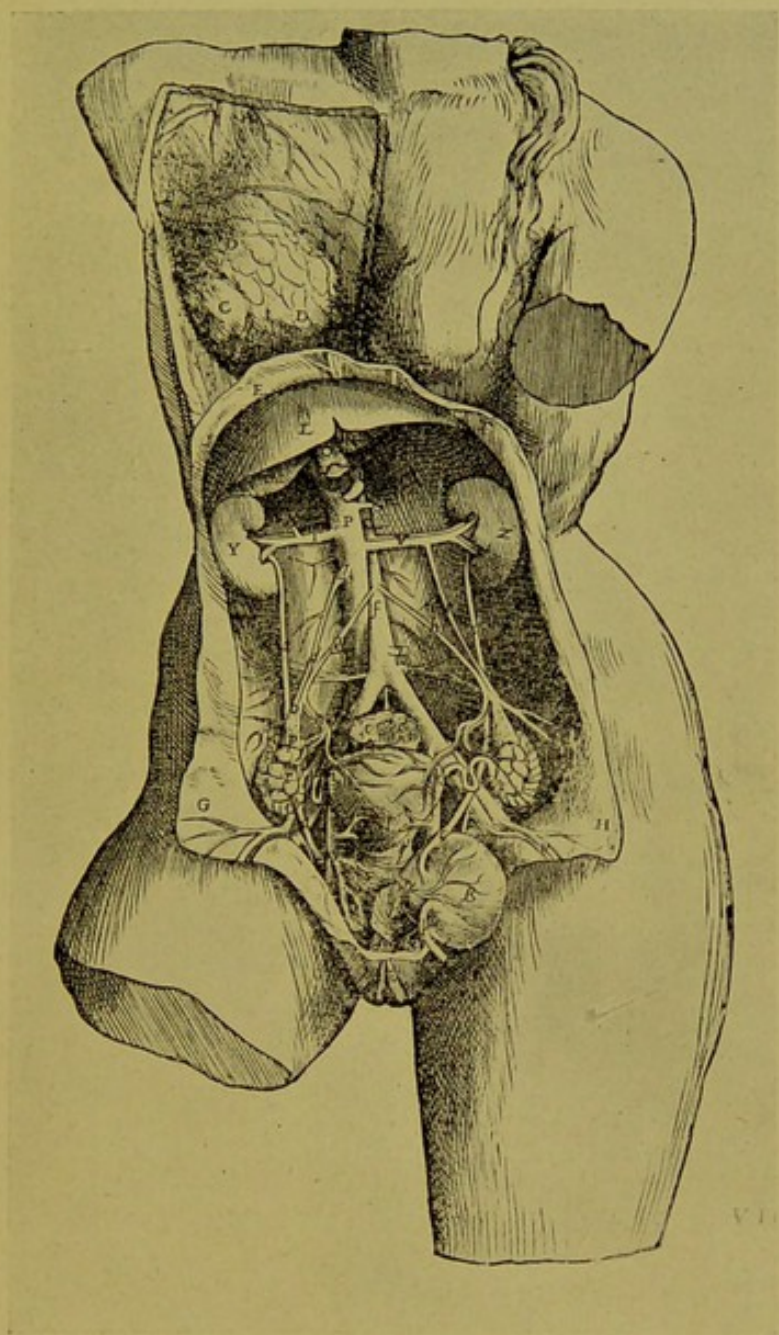


FIG. I.—Illustration taken from Vesalius's *De Humani Corporis Fabrica* (edition of 1543), where it is the twenty-fifth figure of the Fifth Book; it appears as the second figure in the *Byrth of Mankynde*.



All these figures, as they appear in the 1560 edition of Raynalde have been reproduced in my former article, where they are numbered Figs. IV., V., VI., and VII., but, in order to prevent confusion, their proper numbers (I., II., III., IIII., V., VI., VII., VIII., and IX.) are also attached to them (although some of them were reversed in the original printing, *e.g.*, IV., IIV., and IIIV. for VI., VII., and VIII.). In order that the reader may compare the plates as they appeared in Vesalius's work with their reproductions in Raynalde's 1560 edition of the *Byrth*, I give here Vesalius's twenty-fifth figure corresponding to Raynalde's Fig. II. (Fig. I.): it can be studied alongside of the Raynalde reproduction (Fig. V. of my former article). Further, in a later edition of Vesalius's work (that of 1642), all the nine figures used by Raynalde were grouped together in one plate (on p. 96), and I have thought it worth while to reproduce this also (Fig. II.). It represents in graphic form Raynalde's unacknowledged indebtedness to Vesalius.

The descriptions of the figures are literal translations of the Latin text which accompanied the illustrations in Vesalius's *De Humani Corporis Fabrica*. I give here in parallel columns the Latin description of Figure II. and the English translation of it:—

A praesentis figurae dextra mamilla cutem abstulimus, ut quàm fieri posset proximè mamillarum natura hic oculis subjiceretur. Deinde ventriculum, et cum intestinis mesenterium et lienum resecuimus, recto interim intestino non secus quàm in mox praecedente figura relicto. Ad haec, uterum suo extimo quod peritoneum ipsi porrigit involucri quodammodo spoliavimus, omnes membranas quàm licuit accuratissimè passim, ideo amputantes, ut seminis materiam testibus deferentia et rursus semen ab his utero deducenda vasa in conspectum venirent. Vesicam verò deorsum in sinistrum latus refleximus, unà meatum à dextro rene ipsi urinam deferentem abrumpentes, ut urinam vesicae deprentium meatuum insertio appareret, ipsaque vesica uteri inspectionem non occuparet. Postremò pubis ossium portionem ab hac figura exsecuimus, quo uteri cervix ac vesicae etiam collum appositè viderentur.

We have here taken away the skyn from the ryght teate of this present figure, that the nature of the teates mighte as nygh as may be, be set before the eyes, and afterwards we have cut away the ventricle with the bowels, and also *Mesenterium* and the splene, leaving the straye entrayle in thys place unmedled with, as well as we dyd in the fygure before. And moreover, we have as it were taken away from the uttermooste cote which *Peritonium* gave unto it, cutting away also al the pannicles, that the vessels caryinge forth the substaunce and matter of sede to the stones, and also the vessels carying away the sede from thence to the Matrix shoulde appeare and bee seene. Also we have tourned over the bladder downewarde on the left syde, lykewyse breaking the way or conduite which beareth foorth the urine to it from the ryght kydneye, that the insertion of the wayes of bearyng forth the urine to the bladder myght appeare, and that the bladder shuld not let the inspection or sight of the Matrix or Wombe. Last of all we have cutte away from this fygure a portion of the bones above the privie membres, thot the neckes of the matrix and of the bladder might the more commodiously be sene.

The comparison of the Latin description with the English translation leaves no doubt that Raynalde boldly appropriated both the plates and their accompanying text from the work of Vesalius; he was not even at the trouble of altering personal details which referred to Vesalius, such as the allusion to his work at the University of Padua which occurs in the explanation of the ninth figure. In this respect, however, he did not differ from the editor of some of the later editions of Rhodion's *De Partu Hominis* (e.g., that of 1556), who also borrowed some of Vesalius's plates without acknowledgement.

What has been said above refers to the 1560 edition of Raynalde's *Byrth of Mankynde*. When we turn now to the 1545 and 1552 editions we find two other anatomical figures (making eleven in all), named the fyrst and second fygyres, along with several differences in the accompanying descriptive letterpress. The wording of the Declaration differs slightly, the reference to corruptions in the printing not appearing. It reads: "The declaration by letters of the fygyres folowyng, wherein be set forth to the eye every part in woman mencioned in thys Boke before." The first and second figures, however, represent dissections of a *man's* body, and at the end of the descriptive letterpress the editor somewhat ingenuously says: "Here ye shal be advertysed that although these ii fyrst fygyres be made principally for ye man, yet may they serve as wel to expresse the woman: for the man and woman differ in nothyng but in the pryvie partes." These two illustrations also are borrowed from Vesalius's *De Humani Corporis Fabrica*, where they appear on pp. 355 and 356 of the 1543 edition, and are named the first and second figures of the Fifth Book. They are reproduced here as Figures III. and IV. I place, again in parallel columns, the Latin and the English, and it will be noted that the latter is not so strictly a translation of the former as in the descriptions of the 1560 edition:

Praesenti figura tanta humani corporis portio delineatur, quanta ad peritonaei sedes ostendendas sufficit: exprimitur itaque hac figura anterior peritonaei sedes, sectionis serie ab octo abdominis musculis libera, nulla ex parte dissecta.

A,A,B,C,D. His characteribus peritonaeum insignitur, quodammodoque hac figura terminatur.

E,E. Linea a mucronata pectoris ossis cartilagine ad pubis usque ossium commissuram procedens, cui oblique descendendum et ascendendum, et transversim procedendum abdominis musculorum nervosae tenuitates pertinacissime connascuntur.

In the fyrst fygyre is set forth so moch of a man's body as may be sufficient to show the forme of thee kell called Peritoneum: spoken of in the iiii Chapter, Whose compasse is here noted wyth A,B,C,D.

A,A. Noteth the grystell, nether ende or poynt of the brest plate, in the pyt or pitch of the brest agaynst the stomacke.

E,E. is a lyne descendyng upon Peritoneum from the sayde grystle, downe to the myddle joynt of the share bone.

F. is the navell.

G. sygnifieth the sede vessels of the lefte syde in men descendyng out of the amplytude of the bellye.

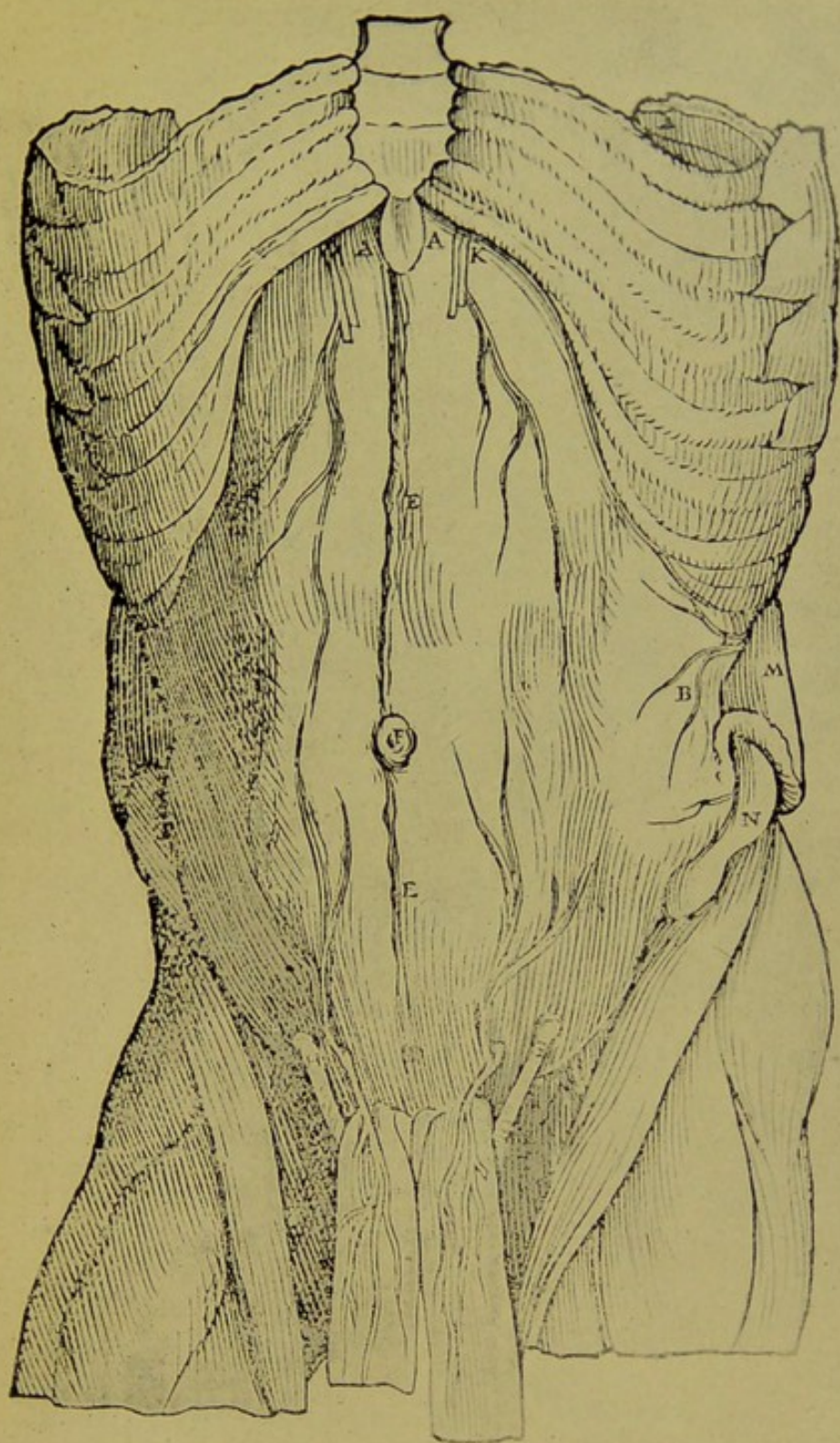


FIG. III.—Figure from Vesalius's *De Humani Corporis Fabrica* (edition of 1543) representing the dissection of a man's body. It appears as Fig 1 of the Anatomical Figures of the 1545 and 1552 editions of Raynalde's *Byrth of Mankynde*, but is omitted from that of 1560 and from all subsequent editions.



F. Umbilicus, quem inter dissecandum etiam adeptis abdominis musculis, gratia opportunae umbilici vasorum demonstrationis, reservare solemus.

G. Seminaria sinistri lateris vasa suis membranis, quas a peritoneo mutuantur, adhuc obvoluta.

H. Seminaria dextri lateris vasa.

I. Vena ac arteria quae potissimum inferiori sedi rectorum abdominis musculorum exporriguntur, quorum et hic quoque propendet portio.

K. Vena et arteria, quae sub osse pectoris exporrectae, in anteriorem abdominis sedem prolabuntur, praecipue rectis abdominis oblatae musculis, ac superiore abdominis sedem universam quoque implicates: quemadmodum illae quas insignivimus, humiliorè et pubis ossibus viciniorè implicat.

L. Venarum soboles in peritonei latera excurrentium, ac ab illis venis deductarum, quae aut à conjuge carente vena, aut geniculatim à cava pronascuntur, qua ipsius caudex lumborum vertebrae colligatur, etc.

H. is the ryght seede vessell: but thys G. and H. hath no place in the women.

I. sygnyfieth the ascendinge vayne and artyre mencyoned in the last chap.

K. the descending brest vaynes and artyres spoken of in the same Chapt. as for other letters that be in this figure I wyl make no further declaration of them, for because they serve nothing to this present purpose.

Other differences between the edition of 1560 and those of 1545 and 1552 remain to be noted. These consist chiefly of verbal differences in the descriptions of the figures. Figures 3, 4, 5, 6, 7, 8, 9, 10, and 11 of the earlier editions correspond to Figures 1, 2, 9, 3, 4, 5, 6, 7, and 8 of the 1560 edition. To show the extent of the verbal changes I place here in parallel columns the description of the fifth figure of the 1552 edition and the ninth figure of the 1560 edition; they represent the same specimen, but, as will be seen, differ considerably:—

1552 Edition.

This 5 fygure is pourtrayed after ye quycke, bothe in length and bredth, according to the length and bredth of the matrix of a woman which was cut open for the same purpose by phisitions. But ye must understand that here ye founde or body of ye wombe or matrix is devyded in ye myddes: the forepart of the which, is turned up, for because that ye maye the better perceave ye cavite of the matrix signed, the uppermost with A.A.C. The nethermoste halfe wyth B.B.D. Item. C. in

1560 Edition.

And the nynth figure sheweth the Matrix cut forth of the body, being of that bygnesse as it was sene taken forth of a woman at the laste Anothomye, which I dyd se at the universitie of Padua in Italy. And moreover we haue so devyded and cutte a sunder the bottome of the Matrix by the myddle, that the concavite and hollowe bought within the same myght be perceived, and the thicke substaunce also of both the coates of the Matrix in women, when they be not with chylde.

the uppermost halfe and D. in the nethermost halfe show the seame or lyne spoken of cap. vi. E.E. both in the upper and also in the nether betoken ye crassenes or thickenesse of ye inner coate, wall or skyn of the matrix in wemen not beinge with chýld, through the contraction thereof as ye shall farther rede in the sayd. vi chapt. F.F. the propendynge or heldynge parte of the seme in the matrix spoken of. cha. vi. G.G. is the porte, oryfyce, or gate of the wombe. H.H. is the second and utter coate of the matrix geven to it from Peritoneum. I.I. on both sydes of the necke of the matrix, do sygnifie, part of the kel called Peritoneum, sticking yet to the sydes of the Matrix and the necke thereof. K.K. is the place where the matrix is fastened to the upper part of the privy passage. ca. vii. L. signifieth the stub of ye bladders necke, wher it entreth into ye forepart of ye privy passage.

A.A.B.B. The concavities and holowe bought of the bottome of the Matrix.

C.D. A line somewhat after the maner of a seame called in Latin *Scortum*, which doeth belonge to the place wherein the testycle doo lye, whiche swelleth somewhat foorth into the bought of the bottome of the Matrix.

E.E. The thickness of the inner and proper coate of the bottome of the matrix.

F.F. A portion of the innermore bottome of the Matrix, swellng foorth downeward from the hygher seate of the Matrix, into the holownes and bought of the bottome.

G.G. The beginning of the necke or the opening place of the bottome of the Matrix.

H.H. The seconde or uttermore infolder of the bottome of the Matrix, descended from *Peritoneum*.

I.I. Here we have reserved a portion on bothe the sydes of the thynne coverynges, descended from *Peritonium*, and conteynyng the Matrix.

K. Here is also sene the substaunce of the necke of the Matrix, because the cuttyng wherwith we devyded the bottome of the Matrix, was begunne at this place.

L. A part of the necke of the bladder, implanted into the necke of the Matrix, castynge foorth into it the urine. The swellng partes of *Abdomen* and whatsoever is els to be considered therof, they may be sufficiently known without drection of Karacters.

On comparing these two descriptions with the original Latin inscription found in Vesalius's work I find that the first is a free and the second a literal translation thereof. In the first (that of 1552) all mention of Padua is omitted, while in the second (that of 1560) it is referred to with the addition of the words "University of" and "in Italy" which are not in Vesalius's text. On the whole, we must accept as substantially correct the statement made in the 1560 edition, that "the declaration of the figures . . . in the former Printinges hath ben corrupted, but is nowe truely set forth," if by that is meant a closer adherence to the text of Vesalius's work.

The Jonas edition of 1540 is supplied with no anatomical figures.

THE SECOND BOOK.

THE contents of the Second Book (of all editions subsequent to that of 1540) are of less interest to English obstetricians, for they are simply a translation, rather free perhaps, of Rhodion's book *De Partu Hominis*. I shall first enumerate the subjects dealt with in this Book, taking again the edition of 1560 as the standard Raynalde one, and I shall then compare the matter as it appears in the various editions, and consider the character of the translations with which Jonas and Raynalde have furnished us.

The first chapter of the Second Book of the 1560 edition (and of all the others, except that of 1540) corresponds to the second chapter of the work of Rhodion (which is not divided into "Books," but simply into twelve chapters).

Chapter I. begins with a short paragraph summarizing the contents of the First Book, and then proceeds to deal with "the tyme of byrth, and which is called naturall or unnaturall." The premonitory signs of labour are named: "first certaine dolours and paines begin to growe about the guttes, the Navyll, and in the raynes of the backe, and lykewyse about the thyghes, and the other places beyng neare to the privie partes, which lykewise then beginneth to swell and to burne, and to expell humours, so that it geveth a plaine and evident token that the labour is nere." Then comes a definition, which at least does not err by entering too much into detail: "Naturall byrth is when the chylde is borne both in due season and also in due fashion." The due season is "most commonly after the ninth moneth, or about fortie wekes after the conception;" and then follows that oft-repeated and widely-believed statement about the

poor chances of survival which an eighth month child has as compared with one born at the seventh month (when "the chylde proveth very well"). The writer is somewhat in error when he describes the "due fashion": "first the heade commeth forward, then foloweth the necke and shoulders, the armes with the handes lying close to the body towards the face and forepart of the chylde, beyng towards the face and forepart of the mother, as it appeareth in the first of the byrth figures." This definition makes, therefore, a face-to-pubes case the natural one, which is, of course, an error. The author (Rhodion) is on safer ground when he states that "yf the byrth be naturall, the delyveraunce is easy without longe taryng or lokynge for it." The "byrth not natural is, when the mother is delyvered before her tyme, or out of due season, or after anye other fashion then is here spoken of before: As when both the legges proceade fyrst, or one alone, with both the handes up, or both down, other els the one up and the other downe, and dyvers otherwyse, as shalbe hereafter more clerely declared." The "other els" as stated in the next chapter is "sidelonge (the which is most perellous) or arselonge, or backlonge, other elles (havinge two at a byrth) both proceade with their feet fyrste," etc.

Chapter II. deals with "easy and uneasy, difficult, or dolourous deliveraunce, and the causes of it: with the signes howe to knowe and foresee the same." "Verge manye," says the writer, "bee the perylles, daungers and thronges, which chaunce to women in theyr labour, which also ensue and come in dyvers wayes, and for dyvers causes, such as I shall here declare." Among the causes of delay in labour several are enumerated which are nowadays little accounted of or not considered at all, while others are omitted which are of importance. Few, for instance, will agree with the statement that the "byrth of the man is generally easier then the byrth of the female." Some of the causes are curiously set forth, such as if the mother be "too spare or leane, or that she never had chylde before, or that she be over timorous and fearefull, dyvers, waywarde, or such one that wyll not be ruled, removynge her selfe from one place to another." The old belief in the birth of the child by its own efforts appears in such statements as: "yf the childe be so faynt, weake and tender, that it cannot tourne it selfe or doth it very slowly;" "also if the child be dead in the mothers belly, it is a very perellous thing, for so much as it cannot be easely turned, neither can it welde or helpe it self to come forth, or if the chylde be sicke or weakned so that it cannot for feblenes helpe it self." Then, various signs are enumerated to help the midwife to tell in what cases the unborn infant is weak or sick, such as if the pregnant woman has been "sore lasked,"¹ if she have had "dayly and unwontly her flowres," if "strayght after one moneth upon the

1. Lasked, purged.

conceptyon her brestes yelde any milke." Causes of delay due to teratological states were not unknown to the writer for he says that there will be difficulty if that with which the woman laboureth "be a monster, as for example, yf it hath but one bodye and two heades, as appereth in the XVII. of the birth figures such as of late was sene in the dominion of Werdenbergh."¹ Faults in the "secondine or latter birth" (membranes), such as firmness or slenderness are also named, and the delay due to loss of the humidities from early rupture is referred to. "And farther if the woman have used to eate commonly suche meate or fruytes, which do exiccate or drye, and constrayne or bynde, as Medlars, Chestenuts, and al sowre fruites, as Crabbes, Chokeperes,² Quinces and suche other, with over much use of Vergeus,³ and such lyke sowre sauces, with Rise, Mill,⁴ and many other thynges, all thys shall greatly hynder the byrth." "Also," the writer continues, "the use of colde bathes after the fyrst moneth folowing the conception, or to bathe in such water where Alome is, Iron, or Salt, or anye suche thynges whiche do coarcte and constrayne, or yf he have bene often tymes heavye and mourninge, or ill at ease, or yf she have bene kepte over hungry and thursty, or have used over much watche and walkinge, eyther yf she used a lyttle before her labour things of great odour, smel, or savour, for suche thynges (in manye mens opinions) attract and drawe upward the Mother or Matrix; the which is great hinderaunce to the byrth."

The chapter closes with an enumeration of the tokens of an easy labour. "Nowe sygnes and tokens of an expedite and easie delyveraunce, be suche as be contrarye to all those that have ben rehearsed before. As for example, when the woman hath bene wonte in tymes passed, easely to be delyvered, and that in her labour she feele but little thronge or dolour, or though she have great paynes, yet they remayne not still in the upper partes, but descend alwaies downewardes to the nether partes or bottome of the belly. And to be short, in all paynefull and troublesome labours these signes betoken and signifie good spede and lucke in the labour: unquietnes, much styrynge of the chylde in the Mothers bellye, all the thronges and paynes tomblynge in the forepart of the bottome of the belly, the woman stronge and mightie of nature, such as can wel and strongly helpe her self to the deliveraunce of the byrth. And agayne, evyl signes be those, when she sweteth colde sweate, and that her pulces beate and labour over sore, and that she her self in the labouring faint and sowne, these bee unluckie and mortall signes."

1. Werdenbergh, a town in Switzerland on the Rhine, in the Canton of St. Gall. The monstrosity referred to appears as fig. x. near the end of this article.

2. Choke-pear, any "rough, harsh, and unpalatable variety of the pear, used for perry," a sort of crab-pear.

3. Vergeus, or verjuice, a liquor expressed from crab-apple, sour grapes, etc.

4. Mill, millet.

The third chapter of this Book is, in some respects, the most important and the most interesting of the whole work, for it deals with "howe a woman with childe shal use her selfe, and what remedies be for them that have harde labour." If there should be any disease, swelling, or apostumation (abscess) about the uterus, vulva, or bladder (such as stone or strangury), then "in these cases it behoveth such thynges to be loked unto and cured before the time of laboure commeth, by the advise of some expert Surgion." Her diet¹ before labour will be different from that during labour. If there be constipation, she must use "suche thinges, the whiche may lenifie, mollifie, dissolve, and lose the belly: as apples fried with suger taken fastynge in the mornynge, and after that a draught of pure wyne alone, or elles tempred with the juyce of swete and very rype apples. Also to eate figges in the mornynge fasting, and at nyght, looseth well the bellye. If these profite not, *Cassia fistula* taken iii. or iv. drams one halfe hour before diner, shal loose the belly without parel." The woman also must refrain from taking constipating things ("hard egges," etc.), and it may be necessary for her to get a clyster," but it must be very gentle and easye." An easy and temperate purgation (as by mercury) may be needed, "or elles a suppositar tempered with sope, larde, or the yolke of egges." If she be faint or sickly just before her labour "then must ye comfort her with good comfortable meate, drinke, holsome and noble electuaries." Various ointments and baths are to be used before labour: "Annointmentes wherewith ye may sope the privie place, be these. Hennes grese, Duckes grese, Goose grese, also oyle Olife, Linsede oyl, or oyl of Fenegreke, or the viscosite of holyoke." She is to bathe in water in which have been seethed "Malowes, Holyoke, Camomel, Mercury, Maidenhaire, Lyneseede, Fenegreke seede, and such other thynges which have vertue to mollifie and sope." If she be not able to take such baths, she must sponge herself with the water and apply ointments locally. Sweet fumes also are useful: "it shalbe also very profitable for her, to suffume the nether places with muske, Ambre, Gallia, Muscata, which put on embres, yelde a goody savoure, by the whiche the neather places open theymselve, and drawe downwarde." She must also "exercyse the bodye in doing some thinge, styryng, moving, goynge, or standinge, more then otherwise she was wont to doe."

Hints are given as to what must be done when labour pains come on. "To withstand, defend, and to put away so neare as mai be the instant and present dolours. And as touchinge this poynt, it shalbe verye profytable for her, for the space of an houre to syt styll, then (rysynge agayne) to goe up and downe a payre of stayres, crying or reaching so loude as she can, so to styre her selfe."

Here follows the oft-quoted passage about the "womans stoole"

1. Diet here means course of living and not simply the food or drink taken.

or "obstetric chair" which is represented in the Birth Figures. "Nowe when the woman perceaveth the Matrix or Mother to ware laxe or loose, and to be dissolved, and that the humours yssue foorth in great plentie, then shall it be mete for her to sit downe leaninge backward in maner upright. For the which purpose in some regions (as in Fraunce and Germany) the Midwyfes have stoles for the nonce, whiche beyng but lowe, and not hie from the grounde, be made so compasse wyse and cave or holowe in the middes, that that mai be receaved from underneth which is looked for, and the backe of the stole leaning backward, receaveth the back of the woman, the fashion of the which stole, is set in the beginning of the birth figures hereafter. And when the tyme of labour is come, in the same stoole ought to be put many clothes or cloutes in the back of it, the which the Midwife may remove from one syde to another accordinge as necessitie shall require. The Midwyfe her selfe shall syt before the labourynge woman, and shall diligently observe and wayte, howe much, and after what meanes the chylde styreth it selfe, also shall with her handes fyrste annoynted with the oyle of Almondes, or the oyle of whyte Lyllyes, rule and dyrecte every thyng as shall seme beste. Also the mydwife muste enstructe and comfort the partie, not only refreshing her with good meate and drink, but also with swete woordes, gevyng her good hope of a spedefull delyveraunce, encouraginge and enstomakinge her to pacyence and tolleraunce, byddyng her to holde in her breath so much as she may, also strekinge gentilly with her handes her bellye above the Navell, for that helpeth to depresse the birth downewarde."

If the patient, however, be fat, the writer recommends that she "lye grovelynge," and if necessity require it "let not the midwife bee afrayde ne ashamed to handle the places, and to relax and loose the straites (for so muche as shal lye in her), for that shal helpe wel to the more expedite and quicke labour." She is warned, however, against interfering too soon "before the byrth come forwarde," and she ought not to allow the patient to expend her strength before the proper time. When the bag of membranes appears, "then maye ye knowe that the labour is at hand." If the bag do not burst of its own accord, "it shalbe the Mydwyfes part and office, with the nayles easely and gentellye to breake and rent it, or yf that may not conveniently be done, then rayse up betwene your fyngers a peece of it, and cut it with a payre of shieres, or a sharpe knyfe, but so that ye hurt not the byrth with the cut." If the membranes have ruptured or been ruptured too early a dry labour results requiring the application of "oyle of whyte Lyllyes or some of the greses spoken of before" to the parts; "but chiefly in these difficulties should profite the whyte of an egge together with the yolke powred into that same place: which shoulde cause it to be most slyppery and slydyng, and supplye the roome of the naturall humidities spent before."

The birth of a child with a large head or of twins is to be assisted by the midwife, who is to "helpe all that she maye, with her hande fyrst annoynted with some oyle openyng and enlargyng the waye that the issue maye be the freer."

So far the writer has been dealing with the "natural byrth when that first proceadeth the head," as is represented in the first of the Birth Figures. He now describes in turn the various ways in which the infant or infants may present and in what manner the midwife is to treat them. In the second of the Birth Figures a child is represented coming feet first (the attitude of the fœtus is wrongly represented, as it is indeed in most of the figures), and in such circumstances the midwife is apparently directed to perform cephalic version! Here, at any rate, are the directions: "Sometime it chaunced the child to come the legges and both armes and handes downwarde, close to the sydes fyrst foorth, as appeareth in the seconde of the byrth figures. In this case the Mydwyfe must do all her payne with tender handlynge and annoyntyng to receave foorth the chylde, the legges beyng styll close together and the handes lykewyse remaynyng as appeareth in the seconde figure. Howbeit, it were farre better (yf it may be done by anye possible wayes or meanes) that the Mydwyfe shouldbe tourne these legges commyng fyrst foorth, upwardes agayne by the bellywarde, so that the head myght descende downwarde by the backe part of the wombe: for then naturally agayne and without peryl might it proceade and come forth as the fyrste."

In the third of the Birth Figures the fœtus is represented as coming by the feet with the arms displaced upward alongside of the head. "This is the perylloust maner of byrth;" and the direction is that the midwife must do what she may "to turne the byrth (yf it may be possible) to the first figure," but no directions are given as to the way in which this is to be done. If she cannot do this, she is directed to convert it into the second figure by bringing down the hands; and "if this also wyll not bee, then receave the feete as they come foorth, and bynde them with some fayre linnen cloth, and so tenderly and very softly lose out the byrth tyll al be come foorth, and this is very jeoperdous labour." When one foot only presents (*Birth Figure 4*) version by the postural method ("the labouring woman's head to be the lower part of her body") is to be followed; but if it do not succeed, the midwife is to bring down the other foot. The fifth *Birth Figure* represents, rather crudely, a transverse presentation; the sole direction for its management is: "then must the Mydwyfe do so, that it may be returned to his naturall fashion, and so to come foorth." The sixth and seventh cases call for no special comment. The eighth Birth Figure shows descent of one of the arms alongside of the head; under these circumstances the midwife is told to thrust the birth in again, and if this fail she is

to try postural treatment; the same procedure is to be adopted in the ninth mode of presentation when both hands come down. The directions for the management of a breech case (*Birth Figure X.*) are surprising: "Then must the Mydwife with her handes retorne it agayne, untill such tyme that the birth be turned, the legges and feete forwarde." A shoulder presentation is shown in *Birth Figure XII.* (described erroneously in the text as *XI.*), and the direction is "then must ye fayre and softly thrust it back agayne by the shulders, tyll suche tyme as the heade come forwarde." Twin cases are shown in the *Birth Figures XIV., XV., and XVI.*; in the first are two heads, in the second two breeches, and the third is a head and a breech presentation. In the description appended to the last-named mode of labour there is the suggestion that the possibility of head-locking was not unknown to the writer.

On the whole, it must be admitted that the management of labour as set forth in this chapter falls far behind modern practice, not to say theory. The notions regarding the attitude of the fœtus *in utero* were erroneous, the distinctions between the various presentations were incomplete (*e.g.*, face cases are not figured or named), and the management not infrequently consisted in interfering in the cases which we should now leave alone and in using ointments and posture under circumstances in which more radical methods would now be adopted. One cannot help wondering also how the midwives carried out the instructions given to them; certainly they were not burdened with details.

The fourth chapter (wrongly described as the fifth in this edition of 1560) deals with "the remedies and medicines by the which the labour may be made more tollerable, easy, and without great payne." The posture of the patient, the temperature of the lying-in room, the provocation of sneezing ("and that eyther with the powder of *Eleborus*¹ or els of pepper") and the use of ointments are all referred to. Of the oils, ointments, perfumes, washes, drinks, pills, and plasters mentioned in this chapter, we need mention two only. Here is a perfume: "Take yelowē brymstone, Myrre, Mader, Galbanum, Oppoponacum, of eche lyke much, and tempre all those together, makyngē of them pylls, and with those also ye maye make fume, to be receaved underneath." The chapter closes with the prescription of "a plaster to provoke the birth." Here it is: "Take wylde Gowarde,² and seeth it in water, in the same water temper Myrre, the juyce of Rue, and Barlye meale so much as shalbe sufficient, stampe these thynges together, and make it plasterwyse, then laye it to the womans bellye betwene the Navyll and the nether parte. This plaster shall helpe marveylously."

Chapter V. is concerned with "howe the secondine or seconde

1. *Eleborus*, Hellebore, White Hellebore (*Veratrum album*) was used as a sternutatory.

2. Gowarde, Wild Gourd, Colocynth.

byrth shalbe forced to issue foorth, if it come not freely of his owne kynde." Various causes of the non-expulsion of the placenta and membranes are enumerated, such as lack of strength from prolonged labour, "entanglement" of the secondines within the uterus, and swelling of the parts. The dangers of placental retention are also named, and include "suffocation and choking of the Matrix" and putrefaction of the after-birth. "The seconde birth retayned and kept within will soone putrifie and rot: whereof wyll ensue yll noysom and pestiferous vapoures ascendinge to the heart, the braynes and the midriffe, through the which meanes the woman shalbe short wynded, faynte harted, often soundinge and lyinge without any maner of movynge or styrringe in the pulces: yea, and many tymes is playnely suffocated, strangled and dead of it." The remedies proposed for non-expulsion of the placenta were founded to some extent upon the causal conditions so far as these were understood. If weakness from long labour were the cause, then must the "labourer" be "recomforted and strengthened with good comfortable meates and drinckes, which maye enhart her, as broath made of the yolcke of egges, or with good olde wine, and good fat and tidie fleshe, or Byrdes, Hennes fleshe, Capons, Partrige, Pigins and such like." If the cause were contraction of the passages then oils and ointments are recommended to "make the waye slypper, sople, and easy for it to proceade." Perfumes, also, and vapours are said to be efficacious. "But if the retencion of the secondine come by reason that it is entangled or fastened in some place of the Matrix, so that it wyll not resolve ne loose; then make a fume underneath of Brimstone, Ivie leaves, and Cresses, or elles of Cresses and fygges." There are some curious prescriptions, of which the following is an instance: "Also of all odoriferous and sweete smellinge thinges, as Ambre, Muske, Frankencense, *Gallia Muscata*, and confection, neare the which savoures and perfumes put on the embers muste be so closely receaved underneth, that no part of the smell do ascende to the nose of the woman. For to the nose shoulde the savoure of nothyng come, but onely of suche thinges, the which stinke or have abhominable smell, as *Asafetida*, Castorium, mans hayre or womens hayre burnt, Pecoockes fethers burnt." "Item let her be provoked to sneese with the powder of Eleborus or Pepper put in the nose, holdinge her mouth and nose so close as maye be."

The following directions for the removal of the after-birth are interesting: "And yf it bee so that any parte of the secondine do appeare, let the Mydwife receave it tenderly, losynge it out fayre and softly, least it breake, and if ye doubt that it wil breake, then let the Midwife tye that parte of the whiche she hath handfast to the womans legge or fote, not very strayght, least it breake, nether very lax, least it slip in agayne, and then cause her to sneese. Nowe yf the secondine tarye or stycke, so that it come not quickly

forewarde, then loose it a lyttle and a lyttle very tenderly, wrethinge it from one syde to another, tyll such time as it begotten out, but ever beware of violent and hasty movynge of it, leaste that with the seconde byrth ye remove the Matrix also." The danger of inversion of the uterus is doubtless alluded to in this last passage. The chapter closes with directions for a fumigation and a plaster, and with the following somewhat despairing instruction: "If for al this the secondine come not forewarde, then leave it, and use no more medicines ne remedyes to that purpose, but let it alone, for within fewe days it wyll putrifie and corrupt, and dissolve into a watery substaunce, thick like bryne, or other fex myxed with water, and so yssue foorth. Howbeit in the meane whyle it wyll put the woman to great paine in the head, in the heart, and in the stomacke, as we touched before."

The sixth chapter is a long one, dealing with such important matters as "howe many thinges chaunce to the women after theyr laboure, and how to avoyde, defende, or to remdye the same." Among the "many thinges" are "the fever or ague, or swelling, or inflation of the bodye, other tumblynge in the belly, or elles commotion or settelinge out of order of the Mother or Matrix," and the cause of these is sometimes "lacke of due and sufficient purgation and clensynge of the flowres after the byrth, or els contrarywyse over muche flowinge of the same, whiche sore doth weaken the woman, also the great labour and styrrynge of the Matrix in the byrth."

The "ague" we may shrewdly suspect was septic poisoning, "for that commeth of like cause by retention of the flowres." The patient is then to "drinke water in the whiche is decocte Barley beaten, or Cicer¹ and Barley together, or water in whiche be sodden *Tamarindi*, or whaye of mylke, and let her eate Cullis² made of a Cocke, and sweete Pomegarnates, for these thynges do provoke the flowres," etc. Various remedies, resembling those already referred to, are to be given in such conditions as swelling of the body, "frettinge and knawynge of the guttes," "paine in the privie partes," "outragious flux of flowres," "coming forth of the fundament gut," and the like. It is unnecessary to describe in detail the curious plans adopted and mixtures administered in these cases, one instance must serve for all: "To stynte and restrayne the outrageous fluxe of flowres, it shalbe verye good to binde the armes strayght and strongly, and not the feete or handes, as some unwyse men doe teache, and then to set a ventose boxe, or cupping glasse with fyre (which is called boryng) under the brestes without anye scarification." Here is one of the plasters: "Take of the bloud stone called *Emathites*, Bole armeniacke of eche halfe an ounce, *Sanguis draconis*, *Licium*, of eche twoo drammes, *Karabe*, otherwyse named Ambre, the

1. Cicer, a chick-pea.

2. Cullis, a strong broth, a beef-tea.

cuppes of Acornes, Cipres tree nuttes, flowres of Pomegranade, of eche one dram, of the scales of Iron one dram and a halfe, Turpentine and Pitch lyke quantitie, or so much as shalbe sufficient to make a softe and somewhat liquid plaster."

The next chapter (the seventh) deals with "aborcementes or untymelye byrthes, and the causes of it, and by what remedies it may be defended, holpen and eased." Many curious causes are enumerated, among which is "a disease called *Tenasmus*, the which is when hath ever greate desyre and luste to the stool, and yet can do nothyng." Other causes are coughing, bleeding at the nose, "to be let bloud," strong purgation, hunger, cold, heat, etc. "Therefore ought women with chylde to eschewe much bathyng or going to the hotte houses in theyr teming" (teeming). "Item, the intemperancie and mutation of the ayre and weather may be cause of aborcement," and after this statement there follows an interesting paragraph on meteorology in its relation to health, as it was then understood. "Dancing and leaping" are also named as possible causes, and so are "sodayne anger, feare, dread, sorowe, or some sodaine and unlooked for joy."

To the modern reader the signs of abortions enumerated by the writer of the *Byrth of Mankynde* will appear most astonishing and unconvincing; among them he will find "a great ache in the inner part of the eies toward the braynes," redness of the face, "ventositie or wynde runnyng from one syde of the bodye to the other." At the same time there is a reference, but a very brief one, to the really important sign of "greate paynes and dolours of the Matrix." The means of diagnosis given are hardly such as to justify the author's confident assertion "thus have I sufficiently declared evident sygnes, whereby may be provyded and foreseene the aborcement before it come." The methods of treatment are those which we now have come to look for from our author,—baths, fumigations, plasters, ointments, odours, and such like; but he gives the midwife one good piece of advice: "Howbeit, in all thys matter, let not to make some expert Phisition of youre counsaile, yf ye may have suche one: for because that manye such thinges come, and not all by one way or meane."

The eighth chapter (wrongly named the ninth in the edition of 1560) is concerned with "dead byrthes, and by what sygnes or tokens it maye be knowen, and by what meanes it may also be expelled." The signs are twelve in number; but they are not very convincing, as may be gathered when it is noted that the twelfth sign is if the mother's "handes put into very warme water, and then layde on the belly, and the childe steare not." There is evidence of sound knowledge, however, in the statement that "of all these sygnes now, the more that come togeather of theym at one tyme and in one person, the surer maye ye be that the byrth is dead."

The prognosis, grave or favourable, in cases of dead-birth labours is set forth: "Whether the Mother shalbe in parell or no, by these thinges shall ye knowe. If the woman beyng in the labour sowne or feare as though she were in a transe: yf her remembraunce fayle her, and she were feble and scante able to moue or styre herselfe, yf she (called with a loud voyce) canne aunswere nothinge at all, or elles verye lyttle, and that verye softely, as though her voyce began to fayle her: if she be invaded or taken among in the labouring with convulsion or shrinkelynge together: if she refuse or cannot brooke meat: yf her pulces beate verye faste, the which signes when ye se in the woman labouringe, it is an evident token that she shal not lyve longe after her delyveraunce, wherefore commit the cure of her to the handes of almyghtie God."

The treatment consists in getting ride of the "dead burthen" either by "medicines expulsyve" or else by certain instruments made "for the nonce." Here, again, we find described a long list of fumigations, containing such things as the hoof or dung of an ass, the skin of an adder, "hawkes' dung" or "oxe gall," of suppositories or pessaries, of drinks ("yf the woman drynke the mylke of another woman, it will styre and expell the byrthe"), and of plasters. "But yf all these medicines profyt not, then must be used more severe and harde remedies, with instrumentes: as hokes, tounses, and suche other thinges made for the nonce." From the wording of the directions it is evidently intended that the midwife herself shall fix the hooks into the eyes, or mouth, or shoulders, or ribs of the dead foetus and make traction, other women keeping the patient down. Arms and legs are to be cut off, if need be, and the head is to be opened with a sharp penknife if it be much swollen. Both the head and trunk may have to be broken up into pieces with "such instrumentes as the Chirurgions have readye and necessarye for suche purposes."

The last paragraph of this chapter must be quoted entire: "But contrary to all this, yf it chaunce that the woman in her labour dye, and the chylde having lyfe in it: then shal it be meete to kepe open the womans mouth, and also the nether places; so that the chylde may by that meanes both receave and also expell ayre and breath, which otherwyse myght be stopped, to the destruction of the chylde. And then to turne her on the lefte syde, and there to cut her open, and so to take out the chylde. They that be borne after this fashion are called Cesares, for because they be cutte out of theyr mothers belly: whereupon also the noble Romaine Cesar the fyrste toke his name." Assuredly the directions given here for a post mortem Cæsarean section are not too explicit!

Chapter IX. (by error called Chapter X. in the Raynalde editions) has no representative in the 1540 edition or in Rösslin's *De Partu Hominis*, and we must, therefore, ascribe it to Raynalde. It contains

a list of medicines, ointments, and plasters ("suche as hath ben wel experimented and practysed"), to be used to quicken delivery and to expel the afterbirth. The reader is, by this time, able to foretell pretty accurately what kind of drugs will be in these medicines, and I need only refer to certain "trochiskes" upon which the writer evidently places much reliance. "Item, of Saffron dried by the fyre tyl it be blackyshe, of *Cassia lignea*, fine Reubarbe, Savine dryed, Myrrhe, of eche of these seven scruples, of pure muske, xvi. graynes, every of these simples exquisitely by them selves powdred, and then perfectlye myxed in one, with vi. or vii. droppes of Malvesey, temper the hole mase into lyttle roundels or trochiskes, eche waying a dram. And in tyme of neede at the womans labour, geve her hardly the wayght of vi. d. of these trochiskes beaten into fine powder, with foure sponefulles of Isope water, and other foure of good wine secke." The chapter closes with a paragraph (to which I have referred in my previous article as the "Bucklersbery paragraph") telling where the "trochiskes" are to be obtained.

Such are the contents of the Second Book as they appear in the 1560 edition. There are slight verbal differences in some of the other editions, and these specially affect the "Bucklersbery paragraph." More distinct variations separate the 1540 or Jonas edition from that of 1560 and from the rest. The whole of the ninth chapter (erroneously called the *tenth*) is absent from the 1540 edition; there is a difference in the wording of the commendation of the "plaster to provoke the birth," Jonas being less certain about its efficacy than Raynalde, and throughout the whole Book Jonas is more in the habit of introducing such phrases as "Avicenna saith" or "Hippocrates writeth" than Raynalde (*e.g.*, in Chapter VIII.). The differences are simply due to the fact that Jonas translated Rösslin's book literally, whereas Raynalde gave a more free rendering and supplemented the work here and there. For this reason, also, it comes about that the Second Book of the Raynalde editions is part of the First Book of the Jonas edition, for it really represents Chapters II. to IX. of Rösslin's *De Partu Hominis*. Jonas's First Book corresponds to Chapters I. to XI. of Rösslin.

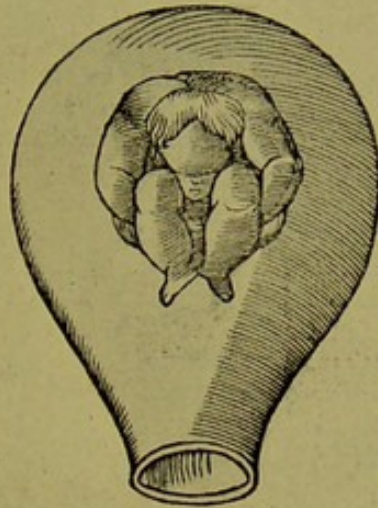
THE "BYRTHE FIGURES."

The "Byrthe Figures" including the "Womans Stoole" belong to the Second Book of the 1560 and of the other Raynalde editions. They are all taken from Rösslin's *De Partu Hominis*, but they are not placed in the same order. Further, there is one in Rösslin's book which does not appear in the 1560 edition (or, so far as I know, in any of the Raynalde editions); this has been reproduced in Fig. V. It will be noted that in some respects it more nearly represents the true attitude of the foetus *in utero* than any of the others. I have reproduced five of the Rösslin figures (including the "Stoole") which

FIG. V.

De partu ho

MINIS, & quæ circa ipsum accidunt,
Libellus D. Eucharii Rhodionis, Medici



PARISIIS
Apud Ioannem Foucher in via Iacoba
1538

FIG. V.—Title page of Rhodion's *De Partu Hominis* (edition of 1538) showing supposed attitude of the fœtus in utero; this figure is not reproduced in the *Byrth of Mankynde*.

FIG. VI.

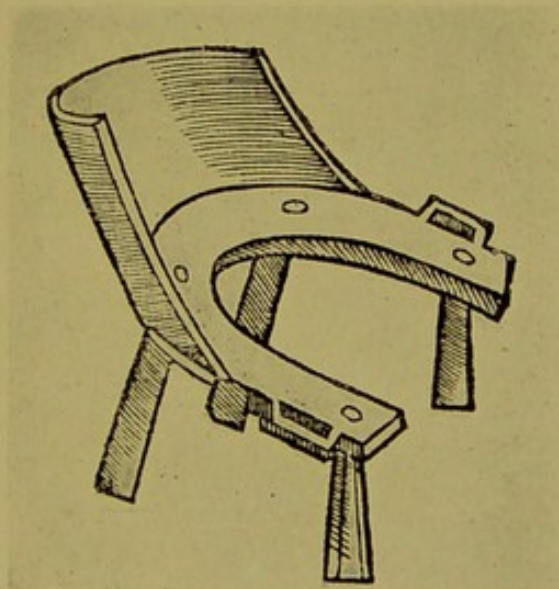


FIG. VI.—The "Woman's Stool," taken from Rhodion's *De Partu Hominis* (edition of 1538), where it appears on folio 18.





FIG. VII.

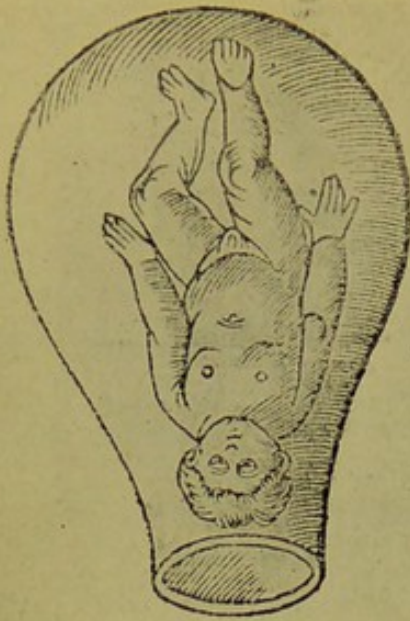


FIG. VIII.

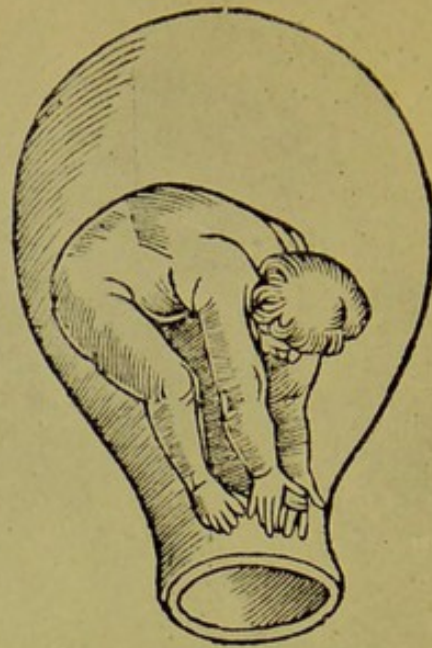


FIG. VII.—Figure showing Fœtus in Utero from Rhodion's *De Partu Hominis* (edition of 1538), where it appears on folio 20.

FIG. VIII.—Figure showing Fœtus in Utero from Rhodion's *De Partu Hominis* (edition of 1538), where it appears on folio 27.

FIG. IX.



FIG. X.

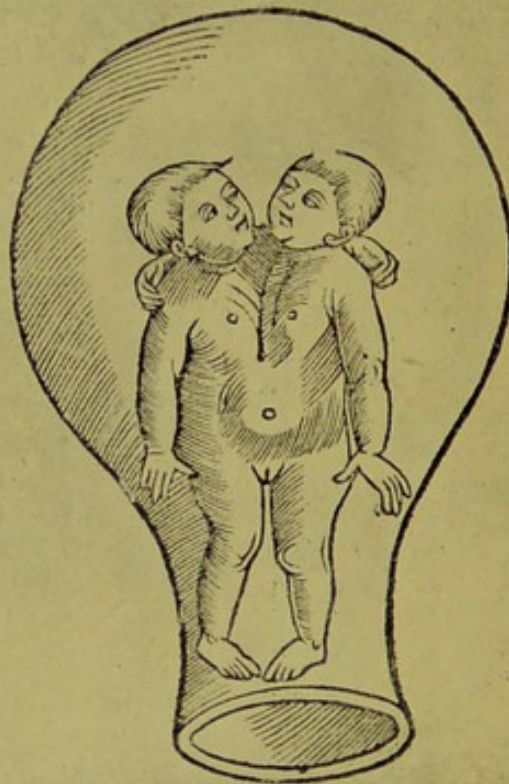


FIG. IX.—Figure of Twins in Utero from Rhodion's *De Partu Hominis* (edition of 1538), where it appears on folio 29.

FIG. X.—Figure of Double Monster in Utero from Rhodion's *De Partu Hominis* (edition of 1538), where it appears on folio 11.

have their representatives in the Raynalde editions (Figs. VI.—X.), so that the reader may compare them with the same pictures as they appear in the English translation (see my previous article, Plates VIII., IX., X., and XI.). I have already (*loc. cit.*) referred to the great interest which the "Byrth Figures" of the *Byrth of Mankynde* have excited as being the earliest, or almost the earliest, specimens of English copper plates.

THE THIRD BOOK.

The Third Book of the 1560 edition of the *Byrth of Mankynde* consists of three chapters, the third being a very long one. It is devoted to the care of the new-born infant, and to its "dyverse diseases and infyrmities": the first chapter speaks of the umbilical cord and its management, the second of the nurse and her milk, and the third of the maladies of infants and the remedies required for them. "Then after that the Infant is once come to lyght, by and by the Navyll muste be cut three fyngers breadth from the belly, and so knit up, and let bestrued on the head of that that remayneth, of the powder of Bole armeniacke, and *Sanguis draconis*, *Sarcocolla*, Myrrhe, and Cummin, of eche lyke muche beaten to poudre, then upon that bynd a peece of woll, dypped in oyle Olive, that the powder fall not of. Some use fyrst to knyt the Navyll, and after to cut it so much, as is before rehearsed." The writer mentions the belief that the length of the stump of the cord will determine the length of the "chylde's tonge," if it be a man child. He also refers to Avicenna's statement that the wrinkles on the cord betoken the number of future pregnancies the patient is to have and the intervals of time (long or short) between them; "but these sayinges be nether in the Gospell of the day, ne of the night."

The child's body is to be rubbed with oil of acorns. "After this annoyntyng, washe the Infante with warme water, and with your fynger (the nayle beyng pared) open the chylde's nosethrilles, and purge them of the fylthinesse." After the fall of the cord ("whiche commonlye chaunceth after the thyrde or fourth daye") the cicatrix is to be dusted with "ashes of a Calves hove burnte, or of Snayle shelles, or of the powder of lead, called red lead, tempered with wyne." The proper swaddling of the child is then described, so that its limbs may grow straight ("as it is in yonge and tender impes, plantes, and twygges"); the eyes should be frequently washed, and it should sleep in its cradle in such a place that neither the beames of the Sunne by day, neither of the Moone by nyght come on the Infant." It is to be washed two or three times a day; and, after that, to put a drop or two of water into its nostrils is "very good for the eye syght."

"It shalbe beste that the mother give her chylde sucke her selfe, for the mothers mylke is more convenient and agreable to the infant,

then any other womans, and more doth it nouryshe it, for because that in the mothers belly it was wont to the same, and fed with it, and therefore also it doth more desyrouslye covet the same, as that with the which it is best acquainted." Apparently the nursings are not to be frequent: "As *Avicenna* writeth it shalbe sufficient to give sucke twyse or thryse in a daye." If the mother be unable to suckle her child, then a "holosome Nourse" is to be sought out, five or six essential qualities are enumerated which she must possess, and a method of testing the milk upon the thumb nail is described. There is a long list of remedies which are said to increase the quantity of the milk. Two instances must serve: "Item, to eate shepes brestes, and the mylke of them is good;" "Item, take two drams of Crystall beaten into fyne powder, and devyde that in foure equal partes: one of these partes geve unto the Nourse, the space of foure dayes to drynke, with broth made eyther of Cicer,¹ or elles of peason."² The child is not to be put to the mother's breast for a day or two after birth "because that the creme (as they cal it) straight after the byrth, the first day in al women doeth thicken and congile." This, it need hardly be said, is not the rule of procedure at the present time. Weaning should take place at the end of a year, and it is not to be carried out suddenly but gradually; the infant is to be given "lyttle pylls of bread and sugar to eate" until it be able to "eate all maner of meate."

The third chapter of this Book is taken up, as has been said, with the diseases of infants and their treatment. It is of interest rather to the pediatric physician than to the obstetrician; but I may enumerate some of the subjects dealt with: "loosenesse of the bellye, cough and distillation,³ short winde, wheales on the tounge, apostumation and runninge of the eares, bolnyng⁴ of the eyes, often sneesinge, whelkes in the body, swelling of the coddles,⁵ unslepinesse, yexinge or the hyckate,⁶ terrible dreames, wormes in the belly, the fallynge syckenes, the palsey, and gogle eyes⁷ or loking squint." It is unnecessary to quote the means recommended for the treatment of these various maladies, but the following prescription for the falling sickness (epilepsy) may be given by way of sample: "Item, to hange *Viscum quersinum*,⁸ which is gathered in Marche the moone decreasyng, about the Chylde's necke, is very good."

The Third Book as it appears in the 1560 edition differs little from what it is in the other Raynalde issues, earlier or later. I have

1. Cicer, chick-pea.
2. Peason, pease.
3. Distillation, a catarrh or defluxion of rheum.
4. Bolnyng, swelling or a tumour.
5. Coddles, testicles.
6. Hyckate or yexing, the hiccup.
7. Gogle eyes, staring eyes or squint eyes.
8. *Viscum quercinum*, mistletoe of the oak.

found a few verbal differences between it and the 1552 edition (*e.g.*, in the paragraph on "Unsleepynesse"), and in the 1654 edition there is a new chapter (placed quite at the end of the work) amplifying what has been said about the nursing of children and "how to choose a good nurse." The 1540 edition differs more markedly: the chapter on "unsleepiness" is shorter, that on swelling of the coddess is not the same; there are two additional short paragraphs (the one "against the mother" and the other of short breath, hoarseness, or whistling in the throat), and there is an additional sentence on infantile constipation.

The Third Book of the Raynalde editions corresponds to Chapters X. and XI. of the First Book and to the whole of the Second Book of the 1540 or Jonas edition. It forms, also, the tenth, eleventh, and twelfth chapters of *De Partu Hominis*, from p. 61 to the end (in the edition of 1538).

THE FOURTH BOOK.

The Fourth Book of the 1560 as well as of the other Raynalde editions consists of six chapters; these are not found in Rösslin's *De Partu Hominis*, but five of them are present in the 1540 or Jonas edition of the *Byrth of Mankynde*, so that only one (the sixth) chapter is peculiar to the Raynalde editions. The Fourth Book of the 1545 and of all later editions corresponds to the Third Book of the 1540 or first impression.

An idea of the subjects dealt with in the Fourth Book can best be obtained from the short summary contained in the first chapter. I quote (in this instance) from the 1552 edition: "Here in this fourth Booke (by ye leave of God) shal brefely be declared soch thinges which may farther or hinder the conception of man, whych as it may be by dyvers meanes letted and hyndered, so also by many other wayes it may be farthered and amended. Also to knowe by certayne sygnes and tokens whether the woman be conceived or no, and whether the conception be male or female, and finally certayne remedies and medicines to farther and help conception: and there after we wyll (accordynge to our promyse in the prologue) set forth certayne bellyfying receptes, and so make an ende of this hole treatyse."

The second chapter gives the author's views as to the necessary conditions for the growing of corn between which and human generation he draws a parallel "Ther be in al maner of generation thre principal partes concurrent to the same: ye sower, the sede sown, and the receptacle or place receaving and contayninge the seede." The third chapter applies this principle to the consideration of the causes of sterility, and enumerates faults in the mother receiving the seed, faults in the sower, and faults in the seed itself. The mother's womb is fancifully compared to the ground; it may be

too hot, too cold, too moist or too dense. The following paragraph may be quoted to show how the author persuades himself that coldness of the matrix is a cause of sterility: "For yf corne be sowed in over cold places, soch as be in the partes of a countrey, called Sithia, and in certayne places of Almayne, or in soche places where is contynual snow or frost, or wher the sunne doth not shyne: in these places the sede or grayn sowed, wyl never come to profe, nor fructify, but through the vehement coldnesse of the place in the which it is conceived, the lyfe and quickenes of the grayne is utterlye destroyed and adnihilat." The man's seed also may be defective as to heat, cold, thickness, etc. Even more fanciful is the fourth chapter which pretends to give ways of finding out whether sterility is due to defect in the woman or the man. "Let eche of them take of wheate and barleye cornes, and of beanes of ech vii., the which they shal suffre to be staped in theyre severall uryne: the space of xxiiii. houres: then take ii. pottes, soch as they set gyly-flowres in: fyl them wyth good earth: and in the one let be set the wheat, barlye, and beanes, styped (steeped) in the mans water, and in the other the wheat, barly, and beanes styped in the womans water: and everye morninge the space of viii. or x. dayes, let eche of them with theyr proper urine water the sayd sedes sowed in the foresayd pottes and mark whose pot doth prove, and the sedes therein contayned doth grow, in ye partye is not the lack of conception, and se yf ther come no other water or rayne on the pottes." This marvellous test ends with the wise remark, "but trust not moch this farfet¹ experiment." Other tokens are given, taken from the works of Hippocrates (which are often quoted in this Book), but the writer warns the reader that "these tokens, although they have a certain reason and apparence, yet be they not alwayes unfallyble, but onely lycklye." The signs of pregnancy are described (menstrual suppression, changes in the breasts, "longings," and thickness of the urine), and directions are given to enable the midwife to tell whether the unborn childe is male or female.

The fifth chapter contains various prescriptions supposed to be efficacious in curing sterility, but they call for little comment and no commendation, being founded upon the etiological theory of lack of heat or cold or moisture in the woman or in her uterus.

The sixth and last chapter of the Fourth Book may be called the "cosmetic" one, for it deals with what the writer (Raynalde) calls "dyvers bellyfying" medicines and remedies. It is proposed to show how certain blemishes ("as it were weedes of the body") are to be removed, such as "dandraffe" of the head, "hayre in places where it is unsemelye," "frekens or other spottes in the face," warts, and "pymples." There are also instructions how to keep and preserve the teeth clean, and how to prevent "stynckynge breath" and "ranke

1. Farfet, far-fetched.

savour of the armeholes." I need only quote the last paragraph: "Item, auctors do wryte the ye rootes of artichauts (ye pithe pyked oute) soden in whyte wyne and so dronke, doth clense the stencche of the arme holes and other partes of the body by the uryne: for (as Gallen also doeth testyfy) he provoketh copy and plenty of stinkyng and unsavery uryne, from all partes of the body, the whych propertye it hath by specyall gyft and not only by his hote qualyte. And thus here I make an ende of thys fourth and last boke."

The sixth chapter is wanting in the Jonas edition of 1540, but is to be found in all the Raynalde editions from that of 1545 onwards.

No part of the Fourth Book is to be found in either of the editions of Rösslin's *De Partu Hominis* (to which I have had access), and we must conclude that Chapters I. to V. were written by Jonas, Raynalde adding the sixth. Both Raynalde and Jonas seem to have gone to Hippocrates for their facts (if facts they can be called) or to some work which quotes Hippocrates. The latter is the more probable explanation of the source of the Fourth Book.

RHODION'S "DE PARTU HOMINIS."

As we have seen, Jonas translated Rösslin's or Rhodion's *De Partu Hominis* into English, adding a few chapters thereto, and Raynalde revised the translation and added new material. But who was Rösslin and what was the history of his work?

Eucharius Rösslin, Röslin, or Rhodion was a medical man practising first in Worms and then in Frankfort-on-Main. The date of his birth is unknown, and for his death-year two dates have been given—1526 and 1553. The earlier of the two is most probably the correct one, the later date being that of the death of his son. He published his work entitled *Der Swangern Frawen und Hebammen Rosegarten* (by Imperial Privilege) in 1513, and so gave to the world the first separate work on midwifery. It was dedicated to Catharine Princess of Saxony and Duchess of Brunswick and Lüneburg; and it was a compilation from the works of Hippocrates, Galen, Avicenna, Albertus Magnus, Aëtius, Gordon, and Savonarola. The earliest edition (that of 1513) had the same Birth Figures¹ as were found in Jonas and Raynalde; they were printed from woodblocks. The work was divided into twelve chapters corresponding to the first and second Books of the Jonas edition of the *Byrth of Mankynde*, and (speaking generally) to the second and third Books of the Raynalde editions of the same work. Several German editions of the *Rosegarten* appeared (in 1522, 1529, 1571); then it was translated into Latin, and, as *De Partu Hominis*, editions were brought out in 1532, 1535, 1536, 1537, 1538, 1551, 1554, 1556 and 1563; Dutch translations, under the title of *Den Rosegaert van den bevruchten Vrouwen*, came out in 1540, 1555, 1670, 1685, 1701, and 1730; and there were French

1. See Figs. vi. to x.

versions in 1536, 1540, 1563 and 1577. The English translations we have already described.

In order that the reader may judge of the accuracy of the Jonas and Raynalde rendering of Rhodion's work I place here in parallel columns the Latin and the English of two passages, one referring to the "Womans Stoole" and the other to Cæsarean section:—

From Rhodion's *De Partu Hominis*.

"Ad quam quidem rem, in quibusdam regionibus ut in Gallia et Germania superiori, obstetrices peculiaria sedilia habent, quae et ab humo non non alte distant, et excavata ita sunt, ut facile, quae debent, transmittant, et reclinantem tergo accipiant: quarum forma fere est talis, qualem hic adpinximus."

"At vero si diverso modo pariens emoriatur inter enitendum, id quod signis, quae morientes de se praebent, facile deprehendi potest, et partus in utero superstes, spem vitae ostendat, principio convenit morientis os, et infra genitalia cum matrice aperta et reclusa servare, quo per ea et vitalem spiritum partus capere, et anhelitum reciprocare possit, id quod mulieres mediocriter peritae satis norunt. Deinde reclinatae latus sinistrum recto vulnere novacula incidi atque aperiri (nam dexterum latus non ita liberum, propter hepar quod in eo situm habet, ingressum incidenti praebet) et inde partus inserta manu per vulnus eximi atque educi debet. Quo pacto qui nascuntur, caesares dici solent, ut etiam Romae ille a quo primo caesarum familia nomen adepta fuit, primusque caesar, eo quod caesa est matre natus, appellatus est."

It will be seen that the translation is not strictly literal, neither is it exact; for instance, the reason why the abdomen (in Cæsarean section) is to be opened on the left side rather than on the right is given in the Latin version but does not appear in the English. Possibly some divergences may be explained on the supposition that Jonas and Raynalde used editions of *De Partu Hominis* which I have not been able to see.

From Raynalde's "Byrth of Mankynde."

"For the which purpose in some regions (as in Fraunce and Germany) the Midwyfes have stoles for the nonce, whiche beyng but lowe, and not hie from the grounde, be made so compasse wyse and cave or holowe in the middes, that that mai be receaved from underneth which is looked for, and the backe of the stole leaning backward, receaveth the back of the woman, the fashion of the which stole, is set in the beginning of the birth figures hereafter."

"But contrary to all this, yf it chance that the woman in her labour dye, and the chylde havynge lyfe in it: then shal it be meete to kepe open the womans mouth, and also the nether places; so that the chylde may by that means both receive and also expell ayre and breath, which otherwyse myght be stopped, to the destruction of the chylde. And then to turne her on the left syde, and there to cut her open, and so to take out the chylde. They that be borne after this fashion are called Cesares, for because they be cutte out of theyr mothers belly: whereupon also the noble Romaine Cesar the fyrste toke his name."

I have now concluded my survey of this remarkable book—*The Byrth of Mankynde*—both as regards its contents and in respect to its authors and editions. Although its precepts may bring a smile to the face of the obstetrician of the present day and merit his contempt, yet it was the most potent factor in establishing the popular customs which cluster round the practice of midwifery in these Islands, customs which can be traced and recognized even now.

ADDENDA ET CORRIGENDA.

Since I wrote my article on the Author and Editions of the *Byrth of Mankynde* I have been informed of several other copies of some of the editions, and have been led to alter some of the statements made. For instance, I am doubtful of the existence of an edition of 1676. Dr. C. Nepean Longridge, to whom I am greatly indebted for a series of researches made for me in the British Museum, finds that the so-called copy of 1676 named in the catalogue of the Museum, is really that of 1626. I have, therefore, removed this edition from the list.

I have now had an opportunity of examining a copy of the 1604 edition. It belongs to Prof. H. R. Spencer, to whose kindness I am indebted for the privilege of inspecting it. It is very similar in all respects to the edition of 1598. The ornamental title page is exactly the same, with the exception of a few differences in the typography of the title. At the foot of the inscription is "Imprinted at London for Thomas Adams," instead of "Imprinted at London by Richarde Watkins," which appears in the 1598 edition. The colophon reads, "Imprinted at London for Thomas Adams, 1604." There are 204 pages in this edition, and three preliminary leaves; the plates are the same, although two plates of the "*Byrthe Fygures*" happen to be missing in the copy which I am describing; and the type is black letter mostly. It would seem, therefore, as if Watkins, the printer of the 1598 edition, had assigned the blocks as well as the license for printing the *Byrth of Mankynde* to Thomas Adams.

I must correct the statement made by me on p. 315 of my former article (*loc. cit.*) about the ninth figure of the Anatomical Plates. It does *not* make its first appearance in the edition of 1560; it was present (as Figure 5) in the 1545 and 1552 editions. The altering of the order of description of the figures in the 1560 issue misled me.

Here follows the revised list of the editions. I may take this opportunity of thanking Dr. R. Wilson Gibson, of Orton, Tebay, Westmorland, for kindly giving me a perfect copy of the 1654 edition.

Summary of the Editions of the "Byrth of Mankynde."

- Edition of 1540. Jonas's Translation of Rösslin. British Museum.¹
- Edition of 1545. Raynalde's Translation. British Museum; Royal College of Physicians, London; Hunterian Library, University, Glasgow.
- Edition of 1552. Raynalde's Translation. Royal College of Physicians, Edinburgh; London Obstetrical Society;² Dr. W. Blair Bell, Liverpool.
- Edition of 1560. Raynalde's Translation. Royal College of Surgeons, London; Dr. J. W. Ballantyne, Edinburgh; University of Aberdeen.
- Edition of 1565. Raynalde's Translation. British Museum; University of Edinburgh; R. College of Surgeons of London; Washington Library; Hunterian Library, University, Glasgow.
- Edition of 1564 (?). Raynalde's Translation. British Museum. University of Glasgow; Royal College of Physicians, London; Dr. J. F. Payne, London.
- Edition of 1593 (?). Raynalde's Translation. Radford Library, Manchester.
- Edition of 1598. Raynalde's Translation. British Museum; Royal Society of Medicine of London; Dr. C. E. Underhill; Washington Library; Hunterian Library, University, Glasgow; Medical Institution, Liverpool.
- Edition of 1604. Raynalde's Translation. British Museum; Washington Library; Dr. H. R. Spencer, London.
- Edition of 1613. Raynalde's Translation. Royal College of Surgeons of London (2 copies).
- Edition of 1626. Raynalde's Translation. British Museum; University of Edinburgh; London Obstetrical Society;² Faculty of Physicians and Surgeons of Glasgow.
- Edition of 1634. Raynalde's Translation. British Museum; Royal College of Physicians, London; London Obstetrical Society;² Washington Library.
- Edition of 1654. Raynalde's Translation. British Museum; Washington Library; Dr. W. L. Reid, Glasgow; University of Aberdeen; Dr. J. W. Ballantyne, Edinburgh.

1. In a letter which I have received from Dr. J. F. Payne, he writes "A copy of this edition, presumably perfect, was sold at Sotheby's in 1905 for £40 or £45; what became of it I do not know."

2. Now amalgamated with the library of the Royal Society of Medicine of London.

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