

**A defence of the Cesarean operation, with observations on embryulcia, and the section of the symphysis pubis, addressed to Mr. W. Simmons ... author of Reflections on the propriety of performing the Cesarean operation / By John Hull.**

### **Contributors**

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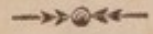
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*A DEFENCE*  
of the  
**CESAREAN OPERATION,**  
with  
**OBSERVATIONS ON EMBRYULCIA,**  
and the SECTION of the  
**SYMPHYSIS PUBIS,**  
addressed to  
**MR. W. SIMMONS, OF MANCHESTER,**  
AUTHOR OF REFLECTIONS  
on the  
PROPRIETY OF PERFORMING  
the  
**CÆSAREAN OPERATION.**



CONTAINING SOME NEW CASES, AND ILLUSTRATED  
BY SEVEN ENGRAVINGS.

BY JOHN HULL, M. D.

Member of the Corporation of Surgeons, and of the Physical Society of London; of the Natural History Society of Edinburgh; and Secretary of the Literary and Philosophical Society of Manchester.

“ DEHINC UT QUIESCANT, PORRO MONEO, ET DESINANT  
“ MALEDICERE, MALEFACTA NE NOSCANT SUA.”  
Terentii Prolog. in Andriam.



*Manchester,*

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A DEFENCE

OF THE  
CESSAREAN OPERATION,

WITH  
OBSERVATIONS ON EMBRYOLOGY

AND THE  
SYMPTOMS OF PUBERTY

BY  
MR. W. SIMMONS, OF MANCHESTER,

AUTHOR OF REFLECTIONS

ON THE  
PROBABILITY OF THE FORMING

OF THE  
CESSAREAN OPERATION,

CONTAINING SOME NEW CASES AND ILLUSTRATIONS  
OF THE  
SYMPTOMS OF PUBERTY

BY JOHN HULL, M. D.

LECTURER ON THE COURSE OF NATURE, AND OF THE PHYSICAL HISTORY OF  
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UNIVERSITY OF MANCHESTER.

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A LETTER

to

MR. WILLIAM SIMMONS.



*Manchester, Dec. 24, 1798.*

SIR,

A few days ago one of my friends sent me for perusal a copy of your Reflections on the propriety of performing the Cæsarean Operation. To these, although extremely averse to controversial writing, I feel myself bound to reply, not only in vindication of my own character, but also of those of the respectable and experienced Accoucheurs, who were concerned with me in the performance of the Cesarean Operation, alluded to by you as “ a late occurrence.”

It is not necessary to inform you, that I had been, for some time previously to this case, en-



gaged in preparing for the press a Treatise on Cesarean Births; the publication of it having been announced both in the London and Manchester Newspapers; but that you may not remain ignorant of the reason, why it is not already before the publick, I shall now tell you, that it is because I am in daily expectation of receiving, through the kindness of my friend Mr. Rupp, some important publications upon the subject from Germany, which I have not been able to obtain from the booksellers of London or Edinburgh.

Could I have been satisfied with bringing forward a few stale quotations from Rousset, Marchant, Paré, Mauriceau, and Dionis, with the addition of a few of a more recent date from the authors noticed by you, my treatise might have been printed in the year 1793, when Mr. Barlow's case was put into my hands for publication. For I had then collected a much greater quantity of opinions and facts, not irrelevant to the subject, than are contained in your work. But impressed with the importance of an operation, in the event of which the lives of two human beings are frequently involved, I have been induced to study the subject with extreme care and attention, and to take up the consideration of it upon every possible ground. For in my larger work, which

will be published with all convenient speed, I shall treat of the propriety of the Operation as employed,

1. Where the Mother is dead, for the preservation of her Offspring ;
2. Where the Child is dead, or supposed to be so, for the preservation of the Parent ;
3. Where the Mother and Child are living, for the preservation of both.

I shall treat of the *causes* which render the operation necessary ; of the *different methods of performing it* ; of the *after-treatment* ; of the *causes of death* in the unsuccessful cases, which have occurred in Great Britain ; and of the *manner* in which the operation itself proves fatal. The means, which have been proposed with the view of superseding the necessity of it, will also be examined, &c. &c. Under each of these heads I shall adduce correctly and dispassionately the evidence I have been able to collect on both sides of the question ; I shall afterwards give my own opinion upon the subject, as deduced from reasoning on the evidence stated, and from experience ; and, finally I shall leave to my readers the liberty of determining for themselves what line of conduct

they ought to pursue in each individual case. Having done this, I am willing to flatter myself, that even those, who decide in opposition to my sentiments, will still thank me for the pains I have taken in furnishing the necessary evidence; more especially as that evidence is scattered through a multiplicity of writings, and writings at this time not attainable without very considerable trouble and expence.

It is from the materials collected for that undertaking, Sir, that I am enabled to reply to you so expeditiously, and to prove so satisfactorily, that your book is a *compound of unjust and malicious insinuations* against a man, who never gave you the least offence; of *pernicious precepts*; of *false assertions*; and of *garbled extracts*. This Language may to the publick appear harsh. It is such as I have never before used, and it is such as I could wish never to have had occasion to make use of: But your aggression is of such a malignant nature as to justify my employing the severest expressions.

“ Tum si quis est, qui dictum in se *inclementius*

“ Existimabit esse, sic existimet :

“ *Responsum, non dictum esse, quia læsit prior.*

Terentii Prolog, in Eunuchuin

You begin with saying “ The Cæsarean section or operation has been a subject of discussion among medical men for the two last centuries,

first upon the Continent, and afterwards in this country. The result of their experience has been strikingly different, for while it is said to have been practised with success in other nations on the Continent of Europe, it has proved fatal in England in every instance. This singular difference in the event of an operation is unparallel'd in any other case, and unless climate be admitted to have great influence, no sufficient cause has been yet assigned. However inexplicable the subject may be, the intelligent practitioner will be governed by the fact, and will not hazard the life of his patient on theoretical grounds. Impressed with these sentiments I have been induced, by a late occurrence, to reexamine the subject, and to lay the result of my inquiry before the public, to prevent as far as my influence shall extend, the revival of an operation that has proved so fatal to my country women."

You here admit that the operation has been performed with success upon the continent, and yet at page 30 you make the following declaration: "Considering then the Cæsarean operation either analogically, or as having been uniformly fatal in this country, it must be abandoned, or as Doctor Osborn observes, the patient will be *doomed to inevitable destruction.*" Are you not, Sir, apprized that the force of the words in-

*evitable destruction* precludes every possibility of recovery? Let me now inform you that this difference in the event of an operation is not so *unparalleled* as you intimate; and permit me in proof to bring forward the following quotation from one of the latest and best publications on Surgery, that have appeared in this Island. “In the treatment of herniæ it has been remarked, that the French Surgeons prove usually more successful than German or British practitioners, and so far as I know, no reason can be assigned for the difference, but that the French *proceed more early to the operation* than the surgeons of almost any other nation.” Bell’s Surgery Vol. 5. Page 300. You will pardon me, I hope, if I take the liberty of assuring you that there is a material difference betwixt a patient’s dying *from an operation*, and *after an operation*, although, blinded by prejudice, you have entirely overlooked this very necessary distinction with regard to the operation in question.—If you were called upon to perform the Operation for the Hernia, after the intestine, or prolapsed viscus, has been so long incarcerated, that it is either absolutely in a gangrenous state, or so much injured that it must inevitably become so; or to perform the Operation of the Trephine, in a case where there was an extensive destruction of the texture of the brain, would you, Sir, if the event were fatal, acknowledge that the patients

died from the operation? Certainly not, the great mischief done to the abdominal viscus in the former, and to the encephalon in the latter case, are in themselves sufficient to account for the death, independently of the operation. Again, when your patients have been exhausted by uterine hemorrhages, and you have judged it necessary to deliver by turning the children, if they have died in Child-bed, have you been willing to allow, that their deaths were properly ascribable to the violence used by the operator? I anticipate your answer, it will be No. Have you not rather referred the death to the debility, occasioned by previous effusion of blood? Why then are you so perversely ingenious, as to impute every death, occurring after a Cesarean Birth, to the mode of delivery, that has been thought necessary to be adopted by the attendant practitioners, who were in full possession of every circumstance of the case, and of which you are, if not entirely, at least comparatively ignorant? In France and some other Nations upon the European continent, you need not be told, that the Cesarean operation has been, and continues to be performed, where the British practitioners do not think it indicated, that it is also had recourse to early, as in the case of hernia mentioned above, before the strength of the mother has been exhausted by the long con-

tinuance, and frequent repetition of tormenting, though unavailing, pains, and before her life is endangered by the accession of inflammation of the abdominal cavity. From this view of the matter, we may reasonably expect, that recoveries will be more frequent in France than in England and Scotland, where the reverse practice obtains. And it is from such cases as these, in which it is employed in France, that the value of the operation ought to be appreciated. Who would be sanguine in his expectation of a recovery under such circumstances, as it has generally been resorted to in this country, namely, where the female has laboured for years under Malacosteon, a disease hitherto in itself incurable; where she has been brought into imminent danger by previous inflammation of the intestines, or other contents of the abdominal cavity; or been exhausted by a labour of a week's continuance or even longer. And if the event should be fatal, what unprejudiced person would attribute it entirely to the operation? You see then, without having recourse to the *influence of climate*; without supposing any *material change in the laws of the female constitution*, as you would intimate at page 11, this difference of success is truly *explicable* on the ground of preexisting disease. I don't deny, that the operation has contributed very materially to the fatality of the event in some cases both here, and

upon the continent. I freely admit, that the death of the patient in some cases is wholly chargeable upon the operation: But is not that also the case with regard to Lithotomy, and other capital operations of surgery, though conducted with all possible address? To the observation, that "the intelligent practitioner will be governed by the fact, and will not hazard the life of his patient on theoretical grounds," I most cordially assent. I am extremely desirous that the propriety of my practice should in all cases be determined according to this scale, and I shall, towards the end of this letter, take the liberty of applying it to an untried project by Dr. Hunter, which you have adopted, with the intention of superseding the Cesarean operation, viz. the conjunction of Synchronotomia Pubis with Embryulcia.

When it is considered, in what high terms of condemnation you spoke of the operation, immediately after I had performed it; when it is considered, that you announced your *Reflections* (and truly they are not misnamed), in a Manchester Newspaper, within less than a fortnight afterwards; when it is considered, that you have not been able to elucidate the subject in any one point, nor to bring forward a single new or good argument against this mode of delivery; I think it will be extremely clear to every one, that you



were actuated by invidious and malicious motives ; that you wished to destroy the character of a man, whose short residence in the town had not afforded him a sufficient opportunity of making his professional attainments generally known, and to injure his coadjutors in the estimation of their townsmen. And nobody, I trust, will give you credit for acting from the motive, which you have been pleased to assign. I will conclude, what I have to say upon the quotation already given, by hinting, that when you publish a second edition of your *Reflections*, it would be as well to substitute the word *repetition* for *revival*, as the latter may lead a person unacquainted with the subject, to suppose the operation in question had been struck out of the catalogue of Surgical Resources.

I will next consider what you have advanced concerning the birth of one of our kings. You say “ The title (of Cesar) has been given to others, and among the rest to our Edward the sixth, but it appears to have been unmerited by him, his mother Queen Jane Seymour being safely delivered, although she lived only twelve days after her delivery.” And the authority you bring forward is Henry’s History of England, Vol. vi. page 231. Let us now examine the evidence in favour of his being brought into the world by the Cesarean Section. Let us first see what Mauriceau and

Dionis declare upon this point. “ Il y à néanmoins des occasions où on pourroit dire, que la vie corporelle de l’ enfant doit être préférable à celle de la mere, a laquelle on ne peut pas s’ exempter de faire l’ operation Cesarienne, pour conserver la vie de l’ enfant, comme il pourroit arriver qu’ on seroit obligé de faire, pour tirer du ventre de la mere, un enfant qui devoit être le successeur de quelque grand Royaume; parceque le salut du public est preferable à celui d’ un particulier. C’ est ainsi qu’ *Henry VIII.* qui regnoit en Angleterre du temps que *François I.* regnoit en France, permit qu’ on fit à *Jeanne Seymour* sa troisième femme, à laquelle on fit la section Cesarienne par le conseil des Medecins, pour tirer de son ventre *Edouard VI.* qui a depuis succédé à la Couronne d’ Angleterre ; préférant ainsi la vie de cet enfant à celle de sa mere, qui mourut quelques jours après cette cruelle operation.” Mauriceau, Traite des Maladies des Femmes Grosses, &c. Tome 1. P. 358. ed. 5. “ La reine étant dans les douleurs de l’ accouchement de son premier enfant, on vint demander au Roy lequel il vouloit qu’ on sauvât, ou la mere ou l’ enfant parce qu’ on ne voyoit point de moyen de les conserver tous deux : l’ enfant répondit-il, car pour des meres j’ en trouverai assez. Cette réponse ne laissa pas que d’ étonner, quoiqu’ on ne dût point en attendre d’

autre d'un Prince qui de sept femmes qu'il eût, en répudia les unes, et fit décapiter ou mourir misérablement les autres, & qui venoit de renoncer à sa Religion." Dionis, Cours d'Opérations, &c. Demonstr. 2. Of the latter passage I shall give a translation. "When the Queen was in labour of her first child, the King was asked whether he would have the life of the mother or the infant preserved, for it was judged impossible to save both. The child's, replied he, for I shall be able to find mothers enough. This answer did not fail to astonish, although no other ought to have been expected from a prince, who of his seven wives, divorced some, caused others to be beheaded, or to die miserably, and who renounced his religion."

You see that both the French Accoucheurs, whom I have quoted, agree in affirming, that Edward the sixth was brought into the world by the Cesarean section, and I could adduce a similar testimony from De la Motte: But, instead of that, I shall give two extracts from Hume's History of England, which will go a great way in support of the above. Speaking of Anne Bullen, he says, "Anne's enemies soon perceived the fatal change; and they were forward to widen the breach, when they found that they incurred no danger by interposing in

those delicate concerns. She had been delivered of a dead son; and Henry's extreme fondness for male issue being thus for the present disappointed, his temper, equally violent and superstitious, was disposed to make the innocent mother answerable for the misfortune." Chap. xxxi. "Soon after this prosperous success, an event happened which crowned Henry's joy, the birth of a son, who was baptized by the name of Edward. Yet was not his happiness without alloy: The queen died two days after. But a son had so long been ardently wished for by Henry, and was now become so necessary, in order to prevent disputes with regard to the succession, after the act declaring the two princesses illegitimate, that the king's affliction was drowned in his joy, and he expressed great satisfaction on the occasion." Chap. xxxi.

I will only bring forward one piece of evidence more upon this head, and will then endeavour to draw a conclusion from it, favourable to the operation. "He (Dr. G. Owen) was a witness to the will of King Henry VIII. who left him a legacy of a hundred pounds. It is reported that the succeeding prince, Edward VI, was brought into the world by Dr. Owen's means, who performed the Cæsarean operation on his mother." Aikin's Biogr. Memoirs.

You may perhaps fancy, that I have given myself a good deal of unnecessary trouble, in order to throw light upon an immaterial point of English history; but you must now learn, that my views extend rather further. For if you admit the authorities brought forward, as proving satisfactorily the operation to have been performed upon Queen Jane Seymour; it will follow by your own concession, that it has been performed, once at least, without endangering the life of the mother, even in England. And if you reject the authorities, as insufficient and unworthy of belief; remember that from Mauriceau and Dionis you draw your principal arguments, or rather invectives against the Cesarean operation.

We shall now see how admirably qualified you are for giving an opinion upon the manœuvres of Midwifery; and an analysis of the works of Hippocrates relative to that subject.

You say at page 5th “Hippocrates, who practised medicine in the fifth century before the Christian Æra is silent on this operation. His directions are few but judicious on the management of labours. Considering the head as the only natural presentation, when any other part presented, he directs it to be returned, and the head to be brought down “*ut prodeat secundum*

naturam." When the child was dead, and the head presenting could not be delivered by the pains, he orders it to be opened and the bones of the cranium to be picked away with forceps or the crotchet; and when further resistance is made from the swelling of the body, he directs to lessen it, by cautiously introducing a sharp curved instrument affixed to the larger finger, and guarded so as not to injure the mother, and then to extract it piecemeal with the embryulcus. If the hand or foot presented and could not be returned, he directs it to be amputated, and the head to be brought down; should this attempt fail, recourse to be had to the division of the parts, and then to the crotchet."

Do you maintain, Sir, that when any other part presents it ought to be returned, and that the head ought to be brought down?

Will you persist in declaring, that if the hand or foot present, and cannot be returned, it is a judicious direction, to amputate the presenting member, and to bring down the head?

If these directions be regarded by you as judicious, it will not be unfair to infer, that your practice is correspondent to them: and if this

should prove to be the case, I may with great justice exclaim *mutatis mutandis* in your own words, " I pity your patients without envying your credulity." See Page 34. For I deny that any worse precepts can be selected from all the trash, that has been written on the subject of midwifery.

That Hippocrates, or rather the unknown author or authors of the books *de Morbis Muliebribus*, *de Octimestri Partu*, and *de Superfætatione*, (for they are confessedly not genuine), was not ignorant, that delivery by the feet was practicable; and that he did occasionally at least terminate the labour, without returning them, and making the head present, will appear evident from the following passages. The first is from the book *de Octimestri Partu*. " Φύεται γὰρ πάντα, ἄνω τὴν κεφαλὴν ἔχοντα, τίκτεται δὲ πολλὰ, ἐπὶ κεφαλὴν, καὶ ἀσφαλέστερον ἀπαλλάσσει τῶν ἐπὶ πόδας τικτομένων, τὰ γὰρ συγκαμπτόμενα τῷ σώματι ἐπὶ κεφαλὴν ἔπω κωλύει ἴουλος τῷ παιδί, ἀλλὰ μᾶλλον ὅταν ἐπὶ πόδας ὀρμήσῃ, τα ἐμφράγματα γίνονται." *περι ὀκταμήνου*. " All children are formed with the head uppermost, yet many are born with the head first, and pass more safely than those, which are born with the feet foremost: for the bendings of the body do not obstruct the child,

which is coming into the world with the head first : But it is rather, when it presents the feet, that obstacles take place."

In the next passage, which is taken from the book *de Superfatatione*, he directs us, when the child is born all but the head, to introduce both hands, previously moistened with water, between the os uteri and the head, and in that way to extract it. "ὁκόλιαν δὲ τὸ μὲν ἄλλο σῶμα δύρηφι ἢ τῶν αἰδοίων, ἢ δὲ κεφαλὴ εἴσω ἐπὶ πόδας φερομένου τοῦ ἐμβρύου, ἐπὶν περιάγῃς τὸν δάκτυλον ἐν κύκλῳ ἀμφότερας τὰς χεῖρας παρεῖς μετὰ τῆς κοιλίας καὶ τῆς κεφαλῆς, βρέξας ὕδατι ἐξελεῖσθαι."

In the third, taken from the first book *de Morbis Muliebribus*, you will find, that he illustrates the difficulty of an oblique or transverse position of the child, by the comparison of an Olive-kernel in a narrow-mouthed Oil-flask ; that he speaks of a delivery, with the feet foremost, as generally fatal either to the mother, or infant, or both. And that he also speaks of the difficulty, attending the delivery of the child, when it is doubled. "καὶ ἦν πλάγιον ἴη, χαλεπὸν γίνεσθαι τὸ πάθημα. ὡς γὰρ εἴ τις ἐς λήκυθον μικρόστομον πυρῆνα ἐμβάλλοι ἢ κ' εὐφρὲς ἐξελεῖν πλάγιεμένον, ἔτω δὲ καὶ τῆς γυναικὸς χαλεπὸν πάθημα τὸ ἐμβρυον ἔπει-



δὲν λοξωθῆ, καὶ γὰρ καλεπὸν ἐξελθεῖν. χαλεπὸν δὲ καὶ ἦν ἐπὶ πόδας χωρήσει καὶ πολλάκις ἢ αἱ μητέρες ἀπώλλοντο, ἢ τὰ παιδιά, ἢ καὶ ἄμφω. ἔστι δὲ καὶ τόδε μέγα ἄξιον τῷ μὴ ῥηϊδίως ἀπιέναι, ἦν νεκρὸν, ἢ ἀπόπληκτρον. ἢ διπλοῦν ἦ."

We will next see, if you please, whether your powers are better adapted to making a report of the writings of Celsus.

"Celsus," you say, "who lived in the first century of the Christian Æra, copies Hippocrates, but is more full on the subject than his predecessor. In his chapter on the extraction of the dead fœtus, he deviates however in one very material point, namely, in bringing down the feet when near at hand, or when one presented, or when it was necessary to turn, instead of pushing them back to make it a head-presentation. This was unquestionably a very great improvement, (for I have not met with any mention of it in the writings of Hippocrates) as it is well known that such a presentation requires on that account, no material deviation from the treatment of a natural labour. They had but few resources in those times for saving the child or hastening the delivery; when any difficulty or delay presented, change of posture, succussion, and the endeavour to bring down the head, when not presenting, or

the feet, according to Celsus, for I am willing to extend his practice to the living fœtus,\* seem to be the whole of their scanty catalogue, and with some few medical directions, of very doubtful propriety, this short sketch comprehends their practice, as far as concerns the birth of the child."

\* *Note.* "Whether turning and extracting by the feet had been occasionally practised, during the life of the child, on the presentation of certain difficulties, does not now appear; but the doctrine of turning and delivering by the feet was first publicly taught by Paré."

If the direction noticed above were judicious, viz. when the hand or foot presents, and cannot be returned, to amputate it, and bring down the head; I wish to ask you, How it can be *a very great improvement* to deliver by the feet, as you here represent? The modes of practice are diametrically opposite: and therefore, if you contend for this being such an improvement, I must contend, that the precept of Hippocrates is extremely injudicious. And I think you, upon a little reflection, will hardly venture to deny it. That *you* have not met with any mention of delivery by the feet in the writings of Hippocrates, does not at all surprize me; although I have fully proved, that such a practice is repeatedly mentioned in the

writings attributed to Hippocrates, and quoted by you as his works. For it is a matter of doubt with me, whether you can read a single aphorism of that author in a latin translation; and I shall prove by and by, that you either have not the *ability* or the *honesty* to translate very easy and perspicuous latin. *Utrum horum mavis accipe.* Nay, I will even indulge you so far, as to step out of my way to bring one instance forward here, because you may perhaps have a wish, that the proof should immediately follow the assertion. In your *Reflections*, you will find at page 34, the following passage. "One of Rousset's operators made a circular incision to shew his superior dexterity." Upon my word, Sir, you have demonstrated your superior dexterity, as a translator, by construing the humane and amiable motive of the two surgeons employed, "*quo matri parcerent*" "*to shew his superior dexterity.*" As it is an authentick case, and the event was successful, and as I shall have occasion to allude to it hereafter, I will bring forward so much of the history of it, as comprizes the names of the parties, and the motive for making the incision in that manner "*Quæ.*" (speaking of Johanna Michel) "*cum diu ab obstetricibus frustra esset misere tractata, tandem Adamum Albericum & Guillelmum Colas, insignes Chirurgos ad se vocavit: hi postquam infanti brachium diu ex utero materno pro-*

pendens, jam emortuum et lividum abscidissent, nec tamen reliquum corpus extrahere possent, latus dextrum incidere, vulnere orbiculari & angusto satis (quo matri parcerent) facto." F. Rosseti De Part. Cæs. Pag. 21.

"When Johanna Michel had been a long time miserably treated by the midwives, to no purpose, she sent for Adam Aubry and William Colas, two celebrated surgeons. They cut off the arm of the infant, which had been long hanging down from the uterus, and was dead and livid; and being unable to extract the remaining part of the body, they made an incision in the right side, the wound was made of a circular form and rather narrow (*that they might spare the mother*)."

Let us now return to Celsus, and allow me to tell you, that you have misinterpreted him. Behold his words, "Verum intus emortuo corpori manus injecta protinus habitum ejus sentit; nam aut in caput, aut in pedes conversum est, aut in transversum jacet: fere tamen sic, ut vel manus ejus, vel pes in propinquo sit. Medici vero propositum est, ut infantem manu dirigat *vel in caput, vel etiam in pedes*, si forte aliter compositus est. Ac, si nihil aliud est, *manus vel pes adprehensus, corpus rectius reddit, nam manus in caput, pes in pedes eum convertet.*" Lib. vii. Cap. xxix. You have as-

serted in the extract given above that “when it was necessary to turn” Celsus brought down the feet. This is evidently an interpolation of your own. Pray be so good as to answer the question I am now going to propose; Is it not necessary to turn the child, when a *hand* presents? You surely will not have the audacity to reply in the negative. But you will find in the passage, quoted by me, that Celsus did not direct the child to be turned, and brought by the feet, *when a hand presented*. He says, that *the body of the child is placed in a better situation by laying hold of either a hand, or a foot; for, by pulling at the hand, we shall bring the head to present; and, by pulling at a foot, we shall bring the feet to present.*

In the note you assert, that “the doctrine of turning and delivering by the feet was first publicly taught by Paré.” Are you sure of this? Did you never hear of such a Surgeon as Pierre Franco? Nor of his *Traité des Hernies contenant une ample déclaration de toutes leurs especes, et autres excellentes parties de la chirurgie; à savoir, de la Pierre, des Cataractes des yeux, et autres maladies—avec leurs causes, signes, accidens; Anatomie des parties affectées, et leur entiere guérison. A Lyon 1561. 8vo?* If you have not, I would advise you to procure it, for it is an able work; and you will there learn that the doctrine

which you have been pleased to ascribe to Paré, is due to Franco; at least Haller and many others believe so, “*Fetum omnino pedibus jubet extrahere primus (Petrus Franco), ut puto.*” Halleri Bibliotheca Chirurgica, Tom. 1. Pag. 211.

Nothing new, or worth my notice, occurs in page 7, I will therefore pass on to your critique on Rousset's treatise on the Cesarean Operation. You say, page 8, “The cases he details are sufficiently numerous to warrant his recommendation, had they been collected on less exceptionable testimony; but, I think, he gives only one on his own authority; and others are drawn from a correspondence of little weight, as hearsay or the rumours of the ignorant. By his recommending it to be performed early, the preservation of the child seems to have been a main object. In several of his cases, however, as in the third and sixth, a putrid foetus was extracted. The mother was unnecessarily exposed to extreme hazard in others, for when a child could be born by a natural labour the Cæsarean section must be unjustifiable; and yet in the case he testifies the mother had a natural birth a year and a half after; and in the fifth and sixth histories, he mentions the like to have happened. Yet the work appears to have had considerable reputation, from Caspar

Bauhin taking the trouble to translate it into latin from the original French, and adding an appendix of his own. How high soever its repute might have been with some, the practice met with considerable opposition from others, for Rousset himself tells us, that the physicians and surgeons of his time declined performing this operation, and that in most of his cases a barber (tonsor) was the operator. There were however some exceptions. Although surgery was in a rude state at that period, even in France, I cannot persuade myself that this operation would have been generally consigned to such hands with so many instances of success. A fondness for the marvellous is prominent in many of his histories, and in none more than in the case communicated by his friend Villanova, who writes that he never knew a patient recover on whom the operation had been performed by an incision in the side (the usual way) but, in the case he relates, he accomplished the delivery by applying the actual cautery, so as to penetrate through the abdominal muscles and uterus. It must be observed that his patient afterwards bore children."

Before I undertake the defence of this excellent and amiable writer, against your shameful and ill-founded aspersions, I shall prove, that he was physician to the Prince of Savoy, &c. that

he took his degree at Montpellier, in the year 1581; and that his writings are held in high estimation. “Rousset (François) fut Médecin du Prince de Savoie, Duc de Genevois & de Nemours. Il fit ses études de Médecine à Montpellier, Rondelet fut son Président, & Saporta son hôte et son protecteur. C’est dans cette Université qu’il fit une étude réfléchie de la Chirurgie. Il a publié un ouvrage très intéressant, intitulé. *Traité nouveau de l’HISTEROTOMOTOKIE, ou enfantement césarien. Paris 1581, in 8vo. Traduit en latin par Gaspar Bauhin. Basileæ 1582, 1588, 1591, in 8vo. Parisiis 1590, in 8vo. Francof. 1601, 8vo.*” Portal *Histoire de l’Anatomie & de la Chirurgie, Tome 2. Page 75.*

“Il fut reçu Docteur en Médecine dans l’Université de Montpellier en 1581, & l’ouvrage de Marchant ne parut qu’en 1598.” *Ibid. P. 180.*

Let us now see what the illustrious Haller, whose judgment no man can call in question, says of this author, and his writings. “*Posterioribus libellos non vidi, sed princeps illa ὕπεροτομολογία egregius est labor, cordate & masculine scriptus, ejus eo seculo nihil prodiit simile. Primum ad incidendum vivæ matris uterum in difficultate pariendi insuperabili Chirurgorum*



spem erigit, per exempla vulnerum et ulcerum uteri feliciter sanatorum, ipsius etiam incisionis uteri superstite matre institutæ, &c. &c." Bib. Chir. Tom. 1. pag. 240.

You admit that the cases which he details, are sufficiently numerous to warrant his recommendation of the Cesarean operation, had they been collected on less exceptionable testimony, but, *you think*, he gives *only one* on his own authority. The cases given by him in his Treatise are seventeen, and he gives two more in the appendix; so that if I can adduce that number (nineteen), I shall stand justified for practising the operation by your own concession. Of the seventeen cases recorded by our author in his Treatise, he informs us that *eleven* are from the account of *credible* persons, "ex fide dignorum relatu;" and that *six* fell under his own immediate knowledge, "historiæ ab ipsomet auctore visæ & notatæ." The latter six, I suppose, you will therefore think sufficiently authentick: But if you should not, it is not very material, for the number brought forward hereafter, will permit me to indulge you in an extensive challenge.

The next of your observations, which I shall offer a comment upon, is this, "The mother was unnecessarily exposed to extreme hazard in

others" (other cases), "for when a child could be born by a natural labour the Cæsarean section must be unjustifiable." The quotation from Celsus, given at the beginning of your book, "Differre quoque pro natura locorum genera medicinæ, et aliud opus esse Romæ, aliud in Ægypto, aliud in Gallia," teaches us that different modes of practice ought to be adopted in different places; that one is necessary or proper at Rome; another in Egypt; and a third in France. To this precept, permit me to add, that different modes of practice have been found necessary and justifiable, in similar cases, at different Eras. It is upon this ground, that the *highly injudicious* precepts of Hippocrates, noticed above, were justifiable in his time; because the practitioners of that period were not acquainted with better. Upon the same principle the use of the crotchet (though destructive to the child) was justifiable, before the invention of the Forceps, in cases, which can be terminated, with safety to the infant, at the present day: For the art of midwifery did not then offer a more valuable resource, and it was undoubtedly better, that the child alone should be sacrificed, than that the mother and child should both perish. Let us therefore be charitable enough to Rousset, to allow that the practice, recommended by him, was at that epoch more than justifiable; that it was

truly meritorious ; for labours were in this way terminated without the loss of either of the lives, interested in the event of it, when the delivery was judged impossible by any other means, with which surgeons were then acquainted. You very coldly admit, that Rousset's work *appears* to have had considerable reputation from Caspar Bauhin taking the trouble to translate it into latin, and adding an appendix of his own. C. Bauhin saw clearly the merit of the work, and the judgement of the world has confirmed his opinion ; for besides the editions, mentioned above, it has been printed in two editions of a Collection of the writers on the diseases of Women, entitled *Gynæciorum, &c. Argentinæ 1597. Basileæ 1626.* And it requires no great degree of prophetic spirit to foretell, that Rousset's volume will be carefully preserved in the libraries of the learned, when your *Reflections* are sent

“ in vicum vendentem thus & odores,  
Et piper, & quicquid chartis amicitur ineptis.”

Hor. Epis. 1. Lib. ii

“ Where pepper, odours, frankincense are sold,  
And all small wares in wretched rhimes enrolled.”

Francis.

You next inform us, that in most of Rousset's cases, a barber was the operator, but that there were *some exceptions.* Of the seventeen cases, related in his treatise, nine were truly under the

management of barbers; but the remaining eight were under the treatment of eminent surgeons; whose names, as well as the names, and places of abode of the patients, are expressly mentioned. You proceed to accuse him of a *fondness for the marvellous*, which you say is in none of his histories more prominent than in the case communicated by his friend Villanova, “who writes that he never knew a patient recover on whom the operation had been performed by an incision in the side (the usual way), but, *in the case he relates, he has accomplished the delivery, by applying the actual cautery, so as to penetrate through the abdominal muscles and uterus.*” This is a most intolerable misrepresentation, and you can best explain whether it proceeds *from inattention, ignorance, or from a more dishonourable cause.* The women, whose histories are related by the venerable octogenarian Physician Villanova, &c. are, at the beginning of the chapter, expressly declared to have been not pregnant at the time, “*quamvis illæ mulieres non forent gravidæ, sed summo apostemate uteri (quod louge pejus erat) laborarint.*” Hence it is evident that Villanova only gave directions for the opening of a large abscess in the abdomen of two unimpregnated females, who recovered, and afterwards bore children. Long as the quotation is, it must be brought forward, to

stand as an irrefragable proof of the want of authenticity of your writings.

*“ Classis altera, continens historias quatuor de Abdomine, cauterio actuali aperto.”*

CAPUT III.

Verum ne forte causa alicui sit dubitandi, Uterusne adeo affectus ad extractionem foetus demortui (qui ulcerum horum causa erat conjuncta) felici cum successu & matris salute, secari potuisset, recitabo in hac secunda classe aliquot veras historias, quæ in æque periculosis casibus ex abdomine inciso, felicem habuerunt successum, quas ex duorum clarissimorum medicorum literis cognovi, *quamvis illæ mulieres non forent gravidæ, sed summo apostemate Uteri (quod longe pejus erat) laborarint.* Horum vero adhuc viventium Medicorum celebritas, testimonii & auctoritatis loco esse potest, quorum alter est D. Albosius Senonensis Medicus, cujus nomen cum adeo sit celebre, in causa est, ut de eo plura non sim dicturus: alter vero est *D. Villanovanus senior*, Valdreaci in Provincia habitans, primus, qui me, post quam studiis meis finem imposuissem, & *Doctoris titulo* ornatus fuissem, ad invisendos ægros deduxit. Quorum epistolas ex ipsorum libris curationum extractas (uti omnes Medicos facere decet) et ab

ipsis mihi communicatas, cum ex copiosiori, elegantiorique sermone latino, quo scriptæ erant, brevibus in Gallicum transtulerim, hic inseram.

HISTORIA I.

*Joan. Albosius, Rosseto S.*

Non minus admiratione dignus est, quam tua sit Cæsarea sectio, casus ille, qui juxta ædes meas accidit: Mulier Utero gerens, cum aut propter grandiozem ætatem, aut aliam ob causam parere aliter non potuisset, nisi frustratim partibus ipsius fœtus exclusis, utraque latera ipsius infimi ventris valde tumida habuit, propter vim ferreis instrumentis illatam, præsentibus etiam omnibus signis, apostema ostendentibus, quod etiam cum ductibus naturæ communionem habebat. Quare cum ipsius infimi ventris pars affecta, cauterio, et quidem amplo facto vulnere, aperta fuisset, magna puris quantitas effluxit, sed non minor puris quantitas, quæ ejusdem et substantiæ, & coloris fuit, per Uterum profluxit. Verum pati noluit, ut speculo matrici indito, quantus esset ipsius sinus, experirer: nihilominus tamen satis conspicuum erat, & apostema, et vulnus cauterio inflictum ad uterum usque vergere, quod ex symptomatibus, quæ successive

accidebant, & etiam excrementis similibus, colligi potuit: dein etiam ex eo, quod pari pacto, eodemque tempore utraque pars affecta fuerit percurata. Quare cum ita se res habeat, uti vidi, mirum non est, quod in tua gastrotomia tradis, cum longe difficilius sit tale ulcus, quam simplex ejusdem partis vulnus, curari. Vale.

## HISTORIA II.

*Altera historia priori similis, ejusdem Albosii.*

Cum cuidam Nicolæ, Simonis Pistoris Senonensis uxori infans mortuus, instrumentis ferreis violenter foret extractus, absque lochiorum fluxu, et secundinæ extractione: tum intra dies quinque ex utraque parte infimi Ventris, magnus tumor obortus cum Apostematis signis evidentissimis. Quare cauterio actuali, uni ex lateribus profundissime impresso, ex Apostemate aperto Chirurgus copiosum sanguinem grumosum, putridum et fœtidum manu extraxit: ita tamen ut alterius lateris tumor non consideret, nec etiam secundinam educere posset: quare et alterum latus ipsum aperire oportuit, unde secundinam extraxit. Hoc tamen non sine extremis doloribus, in tam ancipiti & desperato casu evenit: semianimis enim remansit, triennio se lecto continuit: biennio vero post, fulcris innixa, obambulat: postmodum scipioni solum innitebatur,

et sic tandem successive sanitatem pristinam adeptæ est, ita ut ab eo postmodum tempore plures habuerit infantes, inter quos unus Sebastianus nomine, qui adhuc et in vivis est, & in hac urbe habitat. Vale.

HISTORIA III.

*Duæ aliæ ejusdem argumenti historiæ a Villanovano communicatæ.*

Nicolaus Villanovanus, Rosseto salutem : Mirum in modum, &c. Sed ut ad rem veniam, fateor me tanto, ex quo vixi tempore, nunquam vidisse mulierem, quæ per latus enixa sit, & superstes remanserit, ut ad me scribis. Memoria quidem recolo, quod cum Dominæ de Piles moniali, infimus venter mirum in modum intumuisset, jussu meo Mauracium Valdreaci Chirurgum, Abdomen cauterio actuali ad Uteri fundum adacto, aperuisse : unde tam per vulnus, quam partes inferiores, ultra septem libras puris, quod semper simile fuit, emanavit : & ut de loco affecto certiores essemus, specillo partem inferiorem dilatavimus, ita ut facile magnitudinem ipsius ulceris Uterini conspexerimus, quod sex mensium spatio percuravimus : ab illo tempore filiam enixa, quæ adhuc superstes est. Anno 1532, hoc accidit.



## HISTORIA IV.

*Altera Historia ab eodem.*

Simile accidisse uxori Pharmacopæi Brisseti Montlimarii habitantis, et etiam curatam fuisse attestor: cui contra duorum Medicorum consilium, qui eam tractabant, consentiente tamen marito, simili cauterio usque ad interiorem Uteri partem adacto, Hypogastrium aperiri curavi: unde pus, usque ad spondæ pedes exiliit, et eodem tempore admiranda saniei copia inferne profluxit. Hæc trimestrispatio curata, statim post concepit: nam exinde tres filios, unamque filiam enixa est: accidit ann. 1558. Gratias ago Deo, quod cum jam peregrinationis meæ octuaginta quinque annos absolverim: tamen, sua benignitate, adeo corpore sim sano, ut præter exercitia quæ a me fieri vidisti, adhuc quotidie corpore bene disposito tam eques extra, quam pedes intra urbem incedam. Verum ut mihi omnia felicia precaris, sic vicissim ut tibi in pari & etiam majori ætate eadem largiatur Dominus, exopto. Vale.

You refer to Section iv. Part v. Hist. iii. but there is no part 5th in this Section; and the 3rd Hist. given above from Sect iv. Cap. iii. must be the case to which you allude. I shall therefore be at the trouble of translating it for you, and you cannot complain that I have given a muti-

lated quotation; because the whole of the chapter is laid before you. “ To come to the point, I must confess that I have never in the whole course of my life seen a woman, who has brought a child into the world through a wound in her side, and has survived it, as you inform me. I recollect however, when the abdomen of Madame de Piles, a *religieuse*, was wonderfully tumefied, that Maurice, a surgeon at Vualreas, opened it under my direction, by pushing an actual cautery to the Fundus Uteri, by which means more than seven pounds of pus were discharged, partly by the wound, and partly *per partes inferiores*. And, that we might be still more certain respecting the part affected, we dilated the lower part sufficiently to allow us the opportunity of seeing with ease the size of the ulcer of the womb; which we dressed during six months: After that time she was delivered of a daughter, who is still alive. This happened in the year 1532.”

You see, Sir, in all this history there is no mention made of *accomplishing the delivery by an actual cautery*.—Is it not, Sir, extremely wrong either *inadvertently, ignorantly, or wilfully* to misrepresent the words of a respectable author, and then to attempt to destroy his credibility by an *unfounded charge of a fondness for the marvelous?*

If you can in this shameful manner misreport *recorded* histories; How is it possible, that we can avoid suspecting the authenticity of those cases, and experiments, related by yourself, and of which no other person has had any cognizance? Impressed with the force of this observation, you will surely never henceforward undertake to make a single surgical report, without having previously obtained the signature of some credible person to it.

After giving an account of the case of Elizabeth Alespachin, wife of J. Nufer, related in Bauhin's Appendix to Rousset's Treatise, you add, "I am inclined to think from the expressions that this was a case of extra-uterine foetus. She lay in afterwards five times, first of twins, and then of four single births. Several of his cases besides strike me as being extra-uterine, which would make a very essential difference in the consequences to be apprehended from the operation; and I must candidly confess my doubts whether it was ever performed in others, they are given on such indifferent testimony, and are related with circumstances so improbable."

The only expression which can induce any one to suppose so, for a moment, is this, "*Verum primo ictu ita feliciter abdomen aperuit, ut subito*

infans absque ulla læsione extractus fuerit." " He at the *first stroke*, or incision, opened the abdomen so successfully, that the child was extracted uninjured." Yet it is hardly to be expected, that a man, unacquainted with the cautious steps of modern surgery, would act differently. It is certainly much more likely, that he would cut at once through the parietes of the Abdomen and Uterus down to the child. And the circumstance of the child's being born alive can scarcely leave the least doubt upon the mind of any unprejudiced person, that this was a true uterine case.

My ingenious friend, Dr. Haighton, in the Medical Records and Researches has been very properly employed, in searching into the authenticity of those recorded cases, where the mothers have recovered after Cesarean Births, and has endeavoured to shew, that many of the cases might have been extra-uterine, because the relaters have not been sufficiently particular in their descriptions, to remove all our doubts. As I shall have occasion in a future work, to examine his opinions with attention, I shall at present content myself with considering what he says upon the case in question. These are his words. " The authenticity of the case of the sow-gelder's wife at Siergenhausen, in Germany, though often quoted, seems to rest on no better evidence than the life

of the child ; for every thing else, that could probably fix our wandering conjectures, seems to have been overlooked." Page 253. And at page 250, speaking of a case, where the proof of its being a true Cesarean Operation depended on the single fact of the child's being born alive, he adds, " I believe the instances where the child has been saved in the extra-uterine cases are very few, because the true state of things is seldom ascertained during its life, and the inducement to operate is generally the consequence of some attempt, which nature has been making to relieve herself by forming an abscess in the Abdomen."

For my own part I freely confess, that I have never to my knowledge, read an account of one instance of a child's being extracted alive by an operation in a truly extra-uterine case ; and I should be extremely glad to have such a one pointed out to me. I acknowledge, however, the possibility of it ; and think this fully proved by the case, related by Mr. Turnbull, in the Memoirs of the medical Society, Vol. iii. page 176. But when we consider the infrequency of extra-uterine cases of any species, *ovarian, tubal, or ventral* ; when we consider how small a proportion of these are *ventral* ; and when we consider that it is only in a few of these, and scarcely any of the former kinds, that the fœtus arrives at the size,

which it acquires *in utero*; the life and healthy state of the child, extracted by the operation, will nearly amount to a demonstration of its having been in the uterus at the time, or of its having recently escaped into the cavity of the abdomen through a rupture of that viscus. And the arguments, founded on the supposition of its having been *ab origine* extra-uterine, will deserve little attention, as tending to prove that the recorded cases were not truly Cesarean Births. In one of Rousset's cases, mentioned at page 22 of this Letter, all doubt is removed by the circumstance of the child's arm appearing *in vagina*.

The number of uterine cases, related in the Appendix, appear to me to be six (two of which have been mentioned above), and two I believe to have been extra-uterine, viz. the 8th and 9th.

After saying, "Several of his cases besides strike me as being extra-uterine," you add, "which would make a very essential difference in the consequences, to be apprehended from the operation." I allow that this circumstance would make a very essential difference in the consequences to be apprehended. I really believe, that the consequences would more frequently be disastrous; because there would be great danger of fatal her-

morrhage, from making an attempt to detach the placenta from the parts, to which it adheres in those cases, on account of their not possessing the contractile power of the Uterus. And if the placenta should be left behind (which I consider as the more eligible practice), I am fully convinced, that it would be more likely to excite inflammation, &c. of the abdominal cavity, than a mere coagulum of blood, which is all that remains to be absorbed after a true Cesarean operation, when the divided parts heal by the first intention. See Mem. of the Med. Soc. P. 197.

Hence it appears, that, by considering the cases of Bauhin as extra-uterine, the poor women have survived a more dangerous operation than Hysterotomy.

You observe at page 11, “Lest serious argument should fail of its due effect, Marchant, surgeon to the King, attacked it” (the operation) “in several satirical poems, the third of which he entitled “*Tumulus Cæsarei Partus.*”

I will favour you with an Epigram by *Marchant*, who belonged to the Corps de St. Côme, in which it will not be difficult to prove him guilty of using extremely abusive language, and making a false charge against Rousset, viz. that

he was not a physician. You will be pleased to turn to the quotation given at page 27, which will be sufficient to invalidate his testimony.

“PRO REGIO PARISIENSIIUM CHIRURGORUM  
COLLEGIO.

Ordinis es cujus, rogo dic Rossete, vel artis

Si medicorum (inquis) te suus ordo rogat ;

*Nec tu donatus lauro, titulove medentum,*

*Et furtim exerces, quod titulo ipse nequis :*

Sed tu dum scindis miseras per frustra parentes,

Artis eris cujus, dic rogo, *carnificis.*”

An extract from the Works of Amb. Paré, next claims my attention, you give it from Johnson's Translation, b. 24. c. 31. p. 619.

“ I cannot sufficiently marvel at the insolencie of those that affirm that they have seen women whose bellies and womb have been more than once cut, and the infant taken out, when it could no otherwise bee gotten forth, and yet, notwithstanding, alive ; which thing there is no man can persuade mee can bee done, without the death of the mother, by reason of the necessarie greatness of the wound that must be made in the muscles of the bellie, and substance of the womb, for the womb of a woman that is great with child by reason that it swelleth and is distended with much bloud, must needs yield a great flux of bloud,



which of necessitie must be mortal. And to conclude, when that the wound or incision of the womb is cicatrized, it will not suffer the womb to be dilated or extended to receive or bear a new birth. For these and such other like causes, this kind of cure, as desperate and dangerous, is not (in mine opinion) to be used."

Had Amb. Paré been satisfied in his own mind, that the effusion of blood must of necessity be fatal, he might have spared himself the trouble of speculating falsely upon the bad effects of the cicatrix of the womb, in a succeeding pregnancy. It will be shewn in the course of this letter, that even the cicatrix, arising from a *ruptured uterus*, has not prevented the succeeding pregnancy from terminating successfully. And that his apprehension of an absolutely fatal hemorrhage, from the wound in the uterus, is still less founded in fact, it will be extremely easy to prove. In the two cases of Cesarean births, in which I have operated, and in a great many others, which I can adduce, the quantity of blood lost during the operation has been very trifling, not more than five or six ounces, and the quantity lost afterwards, not so great as occurs after a common natural labour; nor do I recollect one case, in which there was any dangerous bleeding, during the operation, either from the wound in the

parietes of the abdomen, or from that of the Uterus, after a true Cesarean operation. The quantity of blood, found coagulated within the abdomen, in the case related in the 4th Vol. of the Medical Observations and Inquiries, is the largest which I recollect, and that appears to have been at least partly lochial, and to be ascribable to the intractability of the patient after the operation. Lauerjat, a living French author, who has performed the Cesarean operation five times, and with success three times, is so far from considering the effusion of blood too large, that he recommends it to be promoted, as will be seen from the following quotation, which I have given from a German Translation by Eysold, the original not being procurable. "So bald man die Nachgeburt gewahr wird, muss man einen Theil absondern, und die Wunde mit einem gläsernen mässig erwärmten Trichter bedecken, und eine Menge Blut, so viel man nöthig glaubt, herausgehen lassen, um die Mutter-gefässe hinlänglich auszuleeren.

Diese Manier, sich die Sache zu denken, ist von der der Schriftsteller, die vom Kayserschnitt geschrieben haben, sehr verschieden. Alle rathen den Mutterkuchen zu vermeiden, in der furcht für der Blutung, welche aus dessen Verletzung entstehen könnte. Man muss zwar ohne allen

Widerspruch sich vor der Blutung hüten; allein ein Ausfluss des Blutes, der von der Gewalt des Wundarztes abhängt, wird vortheilhaft, und verhütet wahr scheinlich das Aufschwellen, Entzündung und Brand der Gebärmutter." Lauer-  
 jat's Neue Methode den Kayserschnitt, &c.  
 page 192.

"As soon as we perceive the *placenta*, we should detach a part of it; and having covered the wound with a glass funnel, moderately warmed, we should suffer such a quantity of blood to escape, as is judged necessary to unload the uterine vessels sufficiently. This opinion is very different from that of the authors, who have written on the Cesarean section. All of them directing us to avoid the placenta, for fear of the hemorrhage, which might arise from injuring it. We ought, beyond all doubt, to guard against hemorrhage; but a discharge of blood, which is obedient to the will of the surgeon, is of service, and is the most probable means of preventing tumefaction, inflammation, and gangrene of the uterus."

It is proved then, that Parés objection to the operation, as given in your quotation, are theoretical, and therefore not worth attention in a case of this importance.

Let us now attend to what his pupil, the celebrated Guillemeau, has to offer upon the subject. And I must here inform you, that he does not, as Paré has done, deny the possibility of a recovery after the Cesarean operation; on the contrary, he admits, that it had been performed successfully, even at the early period in which he wrote: But he contends that “we ought not to judge of the spring from the appearance of one swallow, nor construct a science upon a single experiment.” “D’ une seule arondelle on ne peut juger le printemps, ny d’ une seule expérience l’ on ne peut faire une science.” De la Grossesse, et Accouchment des Femmes, page 228. 8vo. 1643.

It is not at all surprising, that the cases, in which Guillemeau operated, should have a fatal event, when we consider how much he and Paré were prejudiced against this mode of delivery; for we may thence fairly infer, that they had first employed every other method; and that the subjects of the operation were in a very dangerous situation at the time it was resorted to. That this was really the case, however, I will not venture to assert, because neither the state of the patients, nor any other particulars are given, from which a proper judgement can be formed.

For what reason you have forced into your

book, at page 13, an extract from an Act of Parliament, passed in the year 1511, I cannot possibly conjecture, unless it be to insinuate that you are *cunning*, and all the Accoucheurs in Manchester *uncunning*.

We now come to Mauriceau, from whose *Traité des Maladies des Femmes Grosses, &c.* you have introduced quotations, which fill up seven pages of your work. And yet you have been guilty of the most shameful mutilation, I am acquainted with. Please to take up your *Reflections*, and look at page 17, line first, whilst I shew, that there ought to have been inserted between the words *follow* and *However*, a most material passage. After mentioning the opinion of Paré, that there is no possibility of the woman's surviving the Cesarean operation, Mauriceau proceeds thus, "à quoi j'ajouté, que ceux qui pratiquent cette horrible operation, ne l'entreprennent ordinairement qu'après qu'une femme a été durant plusieurs jours en travail, sans pouvoir accoucher, au quel temps la matrice a beaucoup souffert par quantité de douleurs inutiles, qui lui ont causé une inflammation de toute sa substance, la quelle venant pour lors à être incisée, s'enflamme encore davantage, et ne manque pas de contribuer toujours à la mort certaine de la femme." Page 353. Ed. V. a Pa-

*vis*, 1712. "To which I will add, that those, who practise this cruel operation, do not in general undertake it, till after the woman has been several days in labour, without a possibility of delivery; during which time the womb has suffered greatly from the number of fruitless pains, and has become inflamed throughout its whole substance; which being then incised, the inflammation is encreased, and does not fail to contribute to the certain death of the patient."

You see, Sir, the honest indiscretion of Mauriceau has led him in this passage, to point out the hard labour, and previous inflammation of the uterus, as contributing to the fatality of the event; and has afforded you a most admirable opportunity of displaying your superior finesse, by omitting the whole of it, without breaking the continuity of the quotation.

Throughout the whole of your performance, instead of conducting yourself with candour, like a medical philosopher, employed in the investigation of a truth, in which humanity is deeply interested; in which even the existence of many fellow-creatures is involved; you have acted the part of a subtle, and disingenuous advocate in a bad cause. You have kept entirely out of sight

the most material evidence against you. You have cast unfounded reflections upon the characters, and have thrown out the most injurious insinuations against the credibility, of those witnesses, which you have permitted to come forward on the opposite side of the question. And you have actually stopped the mouths of your own witnesses, whenever they have attempted to reveal any thing, that would injure the cause, in which you have been engaged. You have treated *Dionis* in the same manner, as the preceding author. You have brought forward, what he has been pleased to advance respecting the cruelty, and fatality of the operation; but you have suppressed his reasons for condemning it. These, therefore, I must take the trouble to bring forward, and I shall from them be enabled to demonstrate, that his opposition rested upon theoretical grounds, unsupported by any material facts. He says, “ S’ il est vrai qu’ une égratignure faite par un coup d’ ongle à la matrice, y cause des inflammations, & souvent la mort, & qu’ un ulcere pour petit qu’ il soit, y devient presque toujours incurable, quelle suite facheuse ne doit on pas attendre d’ une incision longue de six à sept pouces? Ceux qui l’ approuvent avancent deux choses qui ne s’ accordent point avec l’ expérience; l’ une que la femme ressent très-peu de douleur quand on lui coupe la

matrice, & l' autre que l' hemorrhagie qui en arrive n' est point si grande qu' on se l' imagine. La sensibilité de la matrice détruit le premier préjugé, puisque de l' aveu de toutes les femmes les douleurs qu' elles ressentent à cette partie sont insurmontables, & un léger ulcere y est infiniment plus douloureux qu' en aucun autre endroit du corps : le grand nombre de vaisseaux qui arrosent l' uterus, & leur grosseur dans le tems qu' il renferme un enfant, condamnent la seconde raison qu' ils allèguent ; car s' ils avoient ouvert une femme morte dans cet état, ils seroient surpris d' y voir tant de veines & d' arteres ; & ces vaisseaux qui lorsqu' une femme n' est point enceinte ne passent point la grosseur d' une petite corde de luth, ont sur la fin de la grossesse, acquis le diametre d' un gros tuyau de plume à écrire. Le moyen donc de couper tant de canaux remplis de sang, & d' empêcher en même tems qu' il n' en sorte une abondance terrible. Ce qu' ils répondent à cet article n' est nullement recevable ; ils disent que l' enfant n' est pas plutôt tiré de la matrice, qu' elle commence à reprendre son volume ordinaire, & qu' en se rétrécissant elle bouche les orifices des vaisseaux, que l' incision a ouverts ; mais cette organe ne se reserre que peu à peu, & il lui faut deux ou trois jours au moins pour revenir dans son état naturel ; & dans l' espace d' une demi-heure au plus, une femme



pourra perdre son sang jusqu' à mourir." P. 154. That the reason, drawn from the danger of hemorrhage, upon which he lays so much stress, although he has brought forwards no fact, except an experiment upon the dead female, is of little avail, I have already shewn at p. 44 and 45, when reviewing the opinions of Paré. And that his assertion, respecting the great sensibility of the uterus, when divided by a sharp instrument, is equally unfounded, I can prove from the respectable practitioners, who were present at the two operations, which I have performed, for the poor unfortunate patients scarcely uttered a complaint, and informed me afterwards, that the pain was not equal to the pains of labour. And yet the sensibility of these patients was not diminished at the time; since my latter patient, in particular, felt most exquisite pain, and complained most piteously, on a common examination *per vaginam*. Were it necessary to adduce other testimony, I have it in my power. See Med. Obs. & Inq. V. 4. P. 265.

It has often been the fate of Girolamo Mercurio, commonly named *Scipio Mercurius*, to be misrepresented, and I should have been extremely surprised, if, contrary to your usual practice, you had done justice to him. I will first state, what you bring forward concerning this author at p. 24,

and then introduce him, to speak for himself, and deny the charge. “What Scipio Mercurius mentions of his own time, would seem to be true of the present, both in France and Germany, namely, that the Cæsarean section was as common in France, as bleeding for the head-ach was in Italy. If there has been no design to deceive, their extraordinary accounts can only be explained on the supposition of an abuse of terms; and instead of alluding to the extraction of the fœtus by the Cæsarean section, the delivery of the child by instruments in all difficult labours must have been intended.”

“Io mi ritrovava in Francia l’ anno 1571, & 1572, e ragionai molte volte sopra questo soggetto della difficoltà del parto nascente della mole del corpo della creatura con parecchi medici, e cirurgici di quel paese, certamente dottissimi, i quali mi dissero, ch’ era cosa facilissima aiutare le creature in caso tale, e mi lodarono quel taglio, che si può fare nel ventre della grvida dal lato destro, ò sinistro senza nessun pericolo così della madre, come del figlio; detto parto Cesareo dal cedere, ò tagliare il ventre. Questo da me benissimo considerato nelle parti, che si fa, non mi pareva impossibile: ma come cosa nuova in Italia, & a me, che mai l’ haveva non solo veduto a fare, ma nè anco udito, arre-

cava gran maraviglia, e perciò desiderai sommamente di vederne qualche esperienza. Onde appresso Tolosa in una terra molto nobile detta Castel nuovo di Arri, per opra di un Cirugico dell' Eccellentissimo Sig. Scipione Duca di Gioiosa, allhora generale del campo della Lega in Linguàdocca vidi due donne, alle quali erano state cavate le creature vive dal ventre con questo taglio, & una di loro mi disse d' essersi dopò di nuovo ingravidata, e di havere partorito felicemente. Questo sò io chiaramente: perche ho veduto le cicatrici nei lati del ventre lunghe mezzo piede, e *questa attione è così nota per quei paesi, come in Italia il cavare sangue nelle doglie di testa.*" La Commare o Riccogliatrice. Pag. 207.

“ Being in France in the years 1571 and 1572, I conversed several times with different learned physicians and surgeons, upon the subject of difficult births, arising from the bulk of the child. They informed me, that it was a very easy matter to give assistance in such cases, and recommended the operation, which may be practised on either side of the abdomen of a pregnant woman, without any danger either to her, or the child, and which is named a Cesarean Birth from the incision in the abdomen. Upon mature consideration of the parts concerned, this did not appear impossible to me: But as it was a new thing in Italy, and greatly astonished me, who,

so far from having seen it performed, had not even heard of it, I desired to see some proof of it. And, by means of the Surgeon to his excellency Sig. Scipio Duke of Joyeuse, at that time general of the camp of the League in Languedoc, in a considerable town (or fine district?) named Castelnaudary, I saw two women, who had been delivered of living children by this operation, and one of them told me, that she afterwards conceived, and had a happy delivery. This I know clearly, because I saw the cicatrices, which were six inches long, in the sides of the abdomen: and *this operation is as well known in those countries, as bleeding in cases of head-ach is in Italy.*" There would, I apprehend, be no impropriety in saying, that Amputation is an operation *as well known* in England as Bleeding: but it surely does not follow from thence, that it is as frequently performed. Perhaps there are few, even in England, who have not heard of children being cut out of the sides of their parents, so that what has been said of amputation, might be extended also to the Cesarean operation. Had Heister known the meaning of the passage, given above, he might have spared himself the trouble of an attempt to account for the supposed circumstance, *from an abuse of terms*, "Atque hoc sensu si embryulcia, sive extractio foetus per vias naturales per abusionem & male pro hysterotomia sive ex

sectione foetus sumitur, aliquo modo forte verum est, quod Scipio MERCURIUS tradit *exsectionem foetus suo tempore adeo vulgarem atque usitatam fuisse in Gallia, quam sanguinis missionem contra capitis dolores in Italia.*" Heisteri Chir. P. ii. Sect. v. Cap. cxiii. § 15. And he might also have spared you the trouble of copying him. Before we attempt to assign a reason for any circumstance, it is proper to be well assured, that the fact exists, otherwise our ingenuity may frequently be very much misapplied.

Your *Reflections* upon one of the latest, and most respectable French writers, on the subject of midwifery, next claim my attention.

This Author is the celebrated M. Baudelocque, who has published an excellent Treatise, entitled *L' Art des Accouchemens, en deux tomes.* At page 24, you make the following observation. "But on the Continent they talk so familiarly of the Cæsarean section, it might be reasonably inferred, that the mother incurr'd little hazard in undergoing it; and their writings would lead to an opinion that it is even less dangerous to her than the crotchet." And you refer to Boudalocque, Vol 3. page 217. At page 25, you say, "There is a want of consistency in the most recent accounts of this ope-

ration, for whilst the French practitioners speak lightly of it, and assert that it is less dangerous to the mother than the crotchet, they also tell us, that it is generally fatal to the parent." And you refer to Vol. 3. page 219, of the same author. Again, at page 33, You have the following passage, " In a note, Boudalocque mentions several instances in which the operation had been successful, but it will be enough to satisfy the intelligent reader to extract his notice of the last case, as taken from the *Journal de Medicine* for 1770. " The surgeon having made the external incision too high, made another obliquely under it, &c.—he afterwards made three stitches in the *uterus*, and the operation had all possible success." System of Midwifery, vol. 3. page 361."

That a writer, when he can not read, or has not access to, an author in the original language, should be indulged in the use of a translation, is very allowable; and the proper return for this favour is, I presume, to make fair quotations from the translation used. Had you done this, some of the observations, which I am now going to make, would have been unnecessary. From your referring to the third volume of Baudelocque, it is evident that you have used a translated copy, for the original is in two volumes

8vo. And as, I believe, we have no other translation of the work into the English language except Heath's, I suppose that to be the work you quote, but I cannot be quite certain of this; because your references, if made to the translation above-mentioned, published in 1790, are sometimes erroneous.

Speaking of the danger, arising from the application of *crotchets* and *other instruments* employed for opening the skull, and evacuating the brain, Baudelocque says, § 1973, “ Ils ne sont indiqués exclusivement que dans le cas où l'enfant ne peut passer entier à travers le bassin ; & encore cessent-ils de l'être, lorsque cette cavité est resserrée au point de n'avoir qu'un pouce & demi, même deux pouces de petit diamètre : car la section de l'enfant dans le sein de sa mère pourroit alors devenir aussi dangereuse pour elle, & même plus, que l'opération césarienne à laquelle on voudroit la soustraire par ce procédé.” Nouvelle édition, 1789, à Paris. “ They are never exclusively indicated, but in those cases where the child cannot pass whole through the *pelvis* ; and even then they cease to be applicable, when that cavity has but an inch and an half, or even two inches in its little diameter : for the section of the child in the womb might then become as dangerous to the mother, and even more so than the *Cesarean operation*, to rescue her from.

which would be the view in performing it." Heath's Trans. V. iii. p. 218 and 219. This, I presume, is the passage first quoted by you, I will next take § 1975, which I suppose to be the second passage, referred to in your letter. Speaking of the danger to be apprehended, on the part of the mother, from the Cesarean operation, he says, " Si l' on n' avoit d' autre but que la conservation de l' enfant, il faudroit donc préférer cette méthode aux autres, toutes les fois qu' on a lieu de craindre quelques obstacles à l' accouchement par les voies ordinaires : mais la mère ayant le même droit à la vie, & cette opération lui étant funeste le plus souvent, quelque soin qu' on prenne pour en assurer le succès, on ne doit la pratiquer qu' autant qu' elle est évidemment nécessaire & que l' accouchement ne peut se faire autrement. Si la mort de l' enfant doit seule nous autoriser à le démembrer dans le sein de sa mère, lorsqu' il n' en peut sortir entier ; sa vie seule devoit aussi, dans le même cas, nous autoriser à faire l' opération césarienne. *Nous en excepterons cependant celui où le bassin est resserré au dernier point, c' est-à-dire, où son petit diamètre est au-dessous de deux pouces : car il ne reste alors d' autre ressource que l' opération césarienne pour délivrer la femme : il est malheureux, lorsque son enfant est mort, de n' avoir à lui présenter qu' un cadavre, pour prix de sa resignation, & du sacri-*



fice qu' elle fait en quelque sorte de sa propre vie. Si elle court le plus grand risque de la perdre à la suite de l' opération césarienne, elle seroit bien moins sûre de la conserver, si on ne la délivroit pas de cette manière ; comme on le verra à l' article où nous traitons de la rupture de la matrice, & des grossesses extra-utérines." " If we had no other view but the preservation of the child, we should therefore prefer this method" (the Cesarean operation) "to the others, whenever there is reason to fear any obstacles to delivery by the usual passage : but the mother having the same right to life, and this operation being generally" (*le plus souvent*, most frequently) " fatal to her, whatever care we take to assure its success, it ought not to be practised but when evidently necessary, and when delivery cannot be performed otherwise. If nothing but the death of the child can authorize us to dismember it in the womb of its mother, when it cannot be extracted entire ; so also its life alone can justify the Cesarean operation, in the same case. *I however except that*" (*those cases*) "*where the pelvis is contracted in the highest degree, that is to say, where its small diameter is under two inches : for then there is no other resource to deliver the woman, but the Cesarean operation.* It is unfortunate when her child is dead, to have nothing to present her but a corps, for the reward of her resignation, and the sacrifice which she in

some measure makes of her own life. Though she runs an exceeding great risk of losing it in consequence of the Cesarean operation, she would be much less sure of preserving it, if she were not delivered in that manner; as we shall see in the article which treats of the rupture of the *uterus* and of *extra-uterine* pregnancies." Heath's Translation. Vol. iii. p. 220 and 221.

I shall now transcribe the note referred to. "Un Chirurgien du village d' Attichi, près Compiègne, qui avoit déjà fait l' opération césarienne avec succès, la pratiqua une seconde fois en 1772, et tout aussi heureusement pour la mère, en faisant l' incision extérieure transversalement entre l' ombilic, & le dessous des fausses côtes du côté droit. J' ai eu occasion de connoître ce Chirurgien quelques mois après cette opération, il ne put me rendre compte des raisons qui l' avoient déterminé à opérer: la femme est accouchée très-naturellement depuis. M. *Tallibon*, Chirurgien très-connu à Dourdan, m' a envoyé la note d' une autre opération césarienne faite de la même manière, il y avoit environ quinze ans alors, par le nommé *Sanson* à la femme d' un Vigneron du village de Roinville-sous-Aunau, diocèse de Chartres. L' incision fut faite transversalement à un demi-pouce au dessous de l' ombilic. M. *Tallibon* vit la femme le surlendemain de l' opé-

ration : celle-ci eut tout le succès qu' on pouvoit en attendre. On en trouve un autre exemple encore plus surprenant dans le Journal de Médec. de 1770. Le chirurgien ayant fait l' incision extérieure trop haut, en fit une autre obliquement en dessous, &c. il pratiqua ensuite trois points de suture à la matrice, & cette opération eut tout le succès possible." Tome ii. p. 570 and 571.

“ A Surgeon of the village of *Attichi*, near *Compiègne*, who had already performed the Cesarean operation successfully, performed it a second time in 1772, and as fortunately for the mother, making the external incision transversely between the *umbilicus* and the under part of the false ribs on the right side. I had an opportunity of being acquainted with that surgeon a few months after the operation ; he could not give me any reason why he performed the operation : the woman has been delivered very naturally since. *M. Tallibon*, a surgeon very well known at *Dourdan*, sent me an account of another Cesarean operation performed in the same manner, about fifteen years before, by one *Sanson*, on the wife of a farmer, of the village of *Roinville-sous-Aunau*, in the diocese of *Chartres*. *M. Tallibon* saw the woman the second day after the operation : it had all the success that could be expected from it. We find another example still more

surprising in the *Journal de Médecine* for 1770. The Surgeon having made the external incision too high, made another obliquely under it, &c. he afterwards made three stitches in the *uterus*, and the operation had all possible success." Heath's Translation, Vol. iii. p. 361.

If you will read attentively the extracts, given above from Baudelocque, or his translator, you will find that you have again been guilty of making very egregious misrepresentations. M. Baudelocque says nothing in the places referred to that can subject him to the charge of inconsistency. He never speaks lightly of the Cesarean operation. He does not assert in *general and unqualified terms* that the operation is less dangerous than the crotchet. He says that "*they* (meaning crotchets and other instruments used for perforating the cranium, and evacuating the encephalon) *cease to be applicable when that cavity has but an inch and an half, or even two inches in its little diameter: for the section of the child in the womb might then (alons) become as dangerous to the mother, and even more so than the Cesarean operation.*" Finally, he does not say any thing in the note, which can lay him open to the charge of credulity. How can you make an attempt on such slight grounds, to set aside the testimony of this estimable writer?

The opinions of Dr. William Hunter, respecting the comparative value of the lives of the Parent and Infant, I shall notice in a future publication; and shall therefore pass on to page 28th of your work, where you make the following observation. “The Cæsarean section, Doctor Osborn informs us, has been performed eleven times in this kingdom (nine of which cases have been published), and it has proved fatal in every instance. I believe others might be added, which have occurred since the publication of this work, but they have been attended with the same fatal event.”

At pages 29 and 30, you say, “Notwithstanding this cheerless prospect, it is admitted to have been successful on the Continent in one or two instances; and as it is limited to those cases, where all other means fail, shall we not be governed by the axiom, that a doubtful remedy is better than none?”

To what cause soever the difference of result be owing, whether to a difference of climate, as above-mentioned, or to some more hidden cause, it does not seem material to investigate; for although it has lately been asserted to the contrary, the operation has certainly proved fatal in every instance in this country. And here I shall take

occasion to observe, that in a matter so important, newspaper intelligence ought not to be relied on; a case thus announced some time ago, and lately published as a successful case of the Cæsarean operation, I find on enquiry to be essentially different.

Considering then the Cæsarean operation either analogically, or as having been uniformly fatal in this country, it must be abandoned, or as Doctor Osborn observes, the patient will be *doomed to inevitable destruction.*"

To *you* it may not perhaps seem material to investigate the causes of the difference of result in the event of the Cæsarean operation: But to *me*, and to medical men in general, I should suppose, it appears a matter of the highest importance. I have, on that account, pointed out in a general way at page 10th, the causes, to which the greater proportion of deaths, occurring after it in this Island, are to be attributed; and I shall now endeavour to shew why most of the fatal cases could not be expected to have a different event.

A SYNOPSIS TABLE of the Cases of Cesarean Births, in which the Mothers died in Scotland.

Case	Year	Names of the Operators.	Names of the Patients.	Duration of Labour.	State of the Patient.	Event of the Operation, &c. &c.
1	1737	Mr. Rt. Smith, Edinburgh.	— Paterson.	7 days.	No previous disease is mentioned, but the protracted labour must induce us to believe her much exhausted, &c.	The Child born dead. The mother died eighteen hours after the operation. The Body was not inspected. See Smellie's Midw. V. iii. p. 423.
2		Prof. Young, Edinburgh.	No account.	No account.	Much exhausted by violent vomiting, which had continued 3 weeks.	The Child born alive, although its head was so firmly wedged in the pelvis, that it was necessary to employ force <i>per vaginam</i> to push it back. The mother died. Dr. Dobson's Copy of Young's Lectures.
3		Prof. Young.	No account.	No account.	A violent cough, which was very harassing after the operation, and is stated by the Dr. as having induced inflammation.	The Child born alive. The mother lived 3 days. Appearances on dissection not mentioned in either case. Ibid.
4		Mr. Alex. Wood, Edinburgh.	No account.	No account.	No account.	The Child died. It is not stated whether it was born dead.
5	1774	Mr. Wm. Chalmers, Edinburgh.	Eliz. Clerk.	12 days.	Had laboured under Ischuria for 2 days, bladder somewhat inflamed.	The Child born alive. The mother lived 26 hours. The Body not opened. See Hamilton's Outlines, p. 339. 1784.
6	1775	Mr. Wm. Whyte, Glasgow.	No account.	No account.	No account.	The Child died. It is not stated whether it was born dead.
7	1795	Dr. James Hamilton, Jun., Edinburgh.	Jean Douglass.	More than 2 days.	She had been afflicted with Malacosteon for some years, was much exhausted, abdomen tense, and painful, pulse small, quick, rigors frequent and severe.	The Child putrid. The mother died 31 hours after the operation. The abdomen distended, the intestines slightly inflamed. See Hamilton's Outlines. Last edition. 1796.
8	1798	Mr. Kay, Forfar.	No account.	More than 3 days.	Afflicted with Malacosteon, confined to her bed 6 or 7 months before her labour, unable to move any of her extremities without assistance.	The Child born alive. The mother lived till the 11th day. She did not complain of any uneasiness from the wound; the Lochial discharge passed <i>per vaginam</i> in the usual quantity.

A SYNOPTICAL TABLE of the Cases, in which the Mothers died after the Cesarean Operation in England.

Case	Year	Names of the Operators.	Names of the Patients.	Duration of Labour.	State of the Patient.	Event of the Operation, &c. &c.
1	before 1740	Dr. White, Manchester.	— of Rochdale.	No account.	No account.	The Child born dead. The mother died—Nothing more is known of this case.
2	1769	Mr. Thompson, London.	Martha Rhodes.	More than 24 hours.	No previous disease.	The Child born alive. The mother died five hours after the operation. No inflammation of the viscera. About 20 oz. of coagulated blood in the abdomen. See Lond. Med. Obs. and Inq. V. 4.
3	1774	Mr. Hunter London.	Mrs. Eliz. Forster.	More than 2 days.	She had been afflicted with Mollities Ossium more than ten years, and was become an unwieldy lump of living flesh.	The Child born alive. The mother lived almost 26 hours. The bones of the pelvis were extremely soft, and spongy. See Lond. Med. Obs. and Inq. V. 5.
4	1777?	Mr. Atkinson, Leicester.	Elizabeth Hutchinson.	Nearly 3 days.	She had been afflicted with Mollities Ossium, for a considerable time, and was extremely exhausted.	The Child was born alive. It presented the nates at the Os Uteri. The mother lived more than three days, notwithstanding a portion of the intestine had for some time been protruded thro' the wound. A small portion of the Int. lium was found inflamed, &c. See Vaughan's Cases of Hydrophobia.
5		Mr. Clarke, Wellenborough, Northamptonshire.			Considerably exhausted by pains, which had continued more than 8 days.	The Child born dead. The mother died about four hours after the operation. This was a <i>ventral</i> case. See Mem. of the Med. Soc. V. 3.
6	1794	Dr. Hull.	Isabel Keoman of Blackburn.	12 hours.	Had laboured under Mollities Ossium nearly 7 years, &c. &c.	The Child healthy. The mother lived nearly 22 hours after the operation. See the latter part of this Letter.
7	1798	Dr. Hull.	Ann Lee, of Manchester.	10 days.	She was much exhausted, &c. &c.	The child born dead. The mother only lived about 6 hours See the latter part of this Letter.



**A SYNOPTICAL TABLE of the Cases, in which the Cesarean Operation has preserved the Life of the Mother in Great Britain, and Ireland.**

Case	Year	Names of the Operators.	Names of the Patients.	Duration of Labour.	State of the Patient.	Event, &c.
1	Jan. 1738-9	Mary Donally.	Alice O'Neal, near Charlemont, Ireland.	12 days.	No particulars are given, respecting the state of this poor woman, at the time she underwent the operation.	The Child dead. The mother, in about 27 days, walked a mile on foot. She was examined by Mr. Duncan Stewart, Surgeon, who relates the case. See Edinb. Med. Ess. V. 5.
2	1793	Mr. Barlow, then of Chorley, Lancashire; now of Blackburn.	Jane Foster, of Blackrod.	5 days.	Dyspnoea, great anxiety, puls full. Her labour pains had left her, but she had pain in the epigastric region. The Deformity of the pelvis (which was in an extreme degree) was occasioned by a loaded cart passing over her pelvis.	The child dead. The wound healed in about 6 days; and in 20 days she was able to attend to her domestic employments. See Medical Records and Researches, p. 154. In this case that species of Cesarean Operation, which is named <i>Gastrotony</i> , was performed; the Uterus having been ruptured by the violence of its own contractions.

From a perusal of the fifteen cases, given above, in which the mother did not recover, it appears evident, that

Five of the women, besides other complaints, were afflicted with the disease named *Malacosteon*, or *Softness of the Bones*, a disease from which I do not know of any recovery, namely, Jean Douglass, Mr. Kay's Patient, Mrs. Elizabeth Forster, Elizabeth Hutchinson, and Isabel Redman;\* that

Five were much exhausted by the long continuance of labour, or by severe vomittings; or previously endangered by the inflammation of some abdominal viscus; namely,—Paterson, Dr. Young's former Patient, Elizabeth Clerk,

\* From the annexed description of the Pelvis of one of Prof. Young's patients, given by Prof. Hamilton, it is also extremely probable, for reasons which will be given hereafter, that the distortion was induced by *Malacosteon*: But I do not know to which of the patients it belonged. "The transverse diameter at the brim does not measure above  $1\frac{3}{4}$  inches at one side; the bones of the pubes are bent, and refuse admittance to a finger at the arch; the sacrum is convex anteriorly, the anchylosed coccyx is angulated; and the distance from it to the tuberosities of the ischia is somewhat less than  $1\frac{3}{4}$  inches. In a pelvis of this construction, where the bottom, and indeed whole capacity, are affected by the distortion, embryulcia could scarce be attempted." *Outlines, &c.* p. 327. 8vo. 1784.

Ann Lee, and Mr. Clarke's Patient. The last was also a case of *ventral conception*, and was more dangerous on that account, as shewn at page 42; that of

Four we cannot form any tolerable judgement, the particular circumstances, attending them, not being related, namely Dr. Young's latter Patient, Mr. Alexander Wood's Patient, and Dr. Thomas White's Patient; and that

One was in a state, apparently favourable to the operation, namely Martha Rhodes.

The number of children born alive, of these fifteen unfortunate females, is eight at the least, and if the operation had been submitted to in due time, it is very probable, that all of them might have been preserved, for in no kind of birth is the child so little exposed to injury, as in the Cesarean.

The Kingdoms of Great Britain and Ireland are therefore indebted to the Cesarean operation, for the lives of eight children, and two women, who would in all probability have sunk under the unavailing pains of labour, or the attempt to perform the operation of *embryulcia*; since the

attendant practitioners saw no possibility of saving any of them by that mode of practice.

I would here ask you, Whether you do not believe, that both the parent and child would have died (the children most certainly would have been destroyed) in every case, if they had been treated in the manner recommended by you? And, Whether an operation, which has in so many instances, even in Great Britain, preserved the lives of our fellow-creatures (and which, if seasonably performed, would have preserved a much greater number) under circumstances so desperate, is not a valuable resource, and entitled to a distinguished place amongst the Means of Surgery?

Whatever your answer may be, I trust, few practitioners will be found, who will join with you in saying, as it is expressed at page 68, "I hope that in future all trace of the Cæsarean operation will be banished from professional books; for it can never be justifiable during the parent's life, and stands recorded only to disgrace the Art."

After asserting that the operation has certainly proved fatal, in every instance, in this country, and that newspaper intelligence ought not to be relied

on, you add, " a case thus announced some time ago, and lately published as a successful case of the Cæsarean operation, I find on inquiry to be essentially different." I find also that one of the cases, which you bring forward from Dr. Osborn's Work, as an unsuccessful case, has a much less claim to the title of a Cæsarean operation, if you chuse to limit it to a division by the knife, both of the Parietes of the Abdomen and Uterus, or in other words, if you make it synonymous with *Hysterotomia*. For in the case, which occurred to Mr. Clarke of Wellenborough in Northamptonshire, the *conception* was, beyond all possibility of doubt, *ventral*, the placenta being attached to the kidneys, intestines, &c. of the mother. And yet you do not, on that account, chuse to leave it out of the catalogue of unsuccessful cases. Why then do you deny a place amongst the successful ones to Mr. Barlow's case?

The case, to which you allude, must, from the circumstances mentioned, be the case of Jane Foster, related in the Medical Records and Researches, page 154, &c. She was attended by Mr. Barlow, formerly one of my pupils. I suspected from the first, that Mr. Barlow was deceived in this case, from the account he gave of the remarkable thinness of the Uterus. And I had formed an opinion, that the child had escaped

through a laceration of the uterus, into the abdomen envelopped in the Secundines, and that he had merely divided the membranes, when he fancied he had divided the uterus. On corresponding, however, with Mr. Howarden, a very intelligent practitioner at Blackrod, who assisted at the operation, I learnt the following important circumstances, in reply to my queries, viz. that “after having divided the *cutis, membrana adiposa, and muscles,* Mr. Barlow made a small opening through the *peritonæum,* which he gradually enlarged with an obtuse-pointed knife;” that “upon the opening being made through the *peritonæum,* the foetus presented itself at the wound, so as in a manner to exclude the the external air, and prevent any protusion of the intestines;” that “the child was most certainly in the general cavity of the abdomen, and neither in the *uterus* or the *fallopian tubes;*” that “the *uterus* was supposed to give way about three o’clock on the Tuesday morning, preceding the day, on which the operation was performed; because at that period the pains were most exquisite, and she felt at that juncture, to use her own expression, *as if something had broken or given way within her,* and moreover her pain then removed to her stomach, where it continued, till the foetus was extracted;” that “the foetus was lodged in the

left side entirely, with the head up towards the lower part of the sternum, and the breech and thighs to the wound;" that "the *fœtus* and *placenta* were extracted without much difficulty;" that "the hemorrhage was little more than is usual after a common delivery;" that "he never saw the lacerated wound in the uterus, nor even the uterus itself;" and that "he is confident Mr. Barlow did not make any incision into the uterus." He further informed me, that he had not examined the poor woman *per vaginam*, and consequently that he was not acquainted with the dimensions of the pelvis, &c. &c.

This is an extremely important case, and, as there are but few similar ones recorded, I hope you will have the goodness to excuse my introducing here the account of three, given by Baudelocque, in § 2179 & 2180. "§ 2179 Dans le fait de M. *Thibaut* les choses étoient des mieux disposées pour l'accouchement, & sembloient annoncer une prompte délivrance, lorsque la femme ressentit une douleur aigüe & très courte vers la partie supérieure & latérale gauche de la matrice, après laquelle la tête, qui se présentoit favorablement, disparut. Ne trouvant alors ni l'enfant ni le placenta dans ce viscère, M. *Thibaut* ne craignit pas de proposer la gastrotomie, & de faire connoître tout le dangex qu' il y auroit à la dif-

férer. Il la fit, mais après quelques heures encore, ce qui la rendit inutile pour l' enfant. La femme n' en éprouva, pour ainsi dire, d' autres suites que celles d' un accouchement ordinaire."

§ 2180, " La gastrotomie, pratiquée deux fois sur la même femme, par M. Lambron, chirurgien d' Orléans" (le 3 avût 1775, sur la femme de Charles Dumont, Vignerons à S. Jean de la Ruelle près Orléans), " ne fut pas plus salutaire à l' enfant ; parcequ' on n' y eut recours la première fois que dix-huit heures après la rupture de la matrice. Mais la femme, au bout de trois semaines sembloit déjà toucher au terme de sa guérison, lorsqu' une tumeur de la grosseur du poing se manifesta à la région hypogastrique, & parut disposée à s' ouvrir, comme elle le fit en effet quatre jours après. Non obstant cet abcès gangréneux, par où il sortit dix-huit vers de la longueur de quatre à six pouces, & de l' espèce de ceux qui sortirent dans le même temps par l' anus & par le vagin, la femme put reprendre les travaux de la campagne après six semaines, à compter du moment de l' opération. Enceinte de nouveau l' année suivante, cette femme éprouva le même accident, l' enfant pénétra également tout entier dans le bas-ventre, & M. *Lambron*, témoin du fait, pratiqua une seconde fois la gastrotomie ; en n' y mettant alors d' autre délai que celui qu' exigea la



malade pour se faire administrer les sacremens. L' enfant donna des signes de vie pendant une demi-heure après l' opération & celle-ci eut les suites les plus simples. La femme *Dumont* rede- vint encore grosse, & accoucha naturellement d' un enfant bien portant”.

“ § 2179 In *M. Thibaut's* case, every thing was exceedingly well disposed, and seemed to announce a speedy deliverance, when the woman felt a sharp and very short pain towards the superior and left lateral part of the *uterus*, after which, the head which had presented favourably, disappeared. Not finding then either the child or the *placenta* in that *viscus*, *M. Thibaut* was not afraid to propose gastrotomy, and to demonstrate the danger of deferring it. He performed it, but not till after some hours; which rendered it useless to the child. The woman suffered, in a manner, nothing but the usual consequences of a common labour. § 2180. *Gastrotomy*, performed twice on the same woman, by *M. Lambron*, a surgeon of *Orleans*, was not more salutary to the child; the first time, because it was not performed till eighteen hours after the rupture of the *uterus*. But the woman at the end of three weeks seemed to be nearly recovered, when a tumour of the size of a fist appeared in the hypogastric region, and seemed disposed to open,

as in fact it did, four days afterwards. Notwithstanding this gangrenous abscess, out of which came eighteen worms from four to six inches long, and of the same species as were discharged at the same time from the *anus* and *vagina*, the woman resumed her labours in the fields in six weeks from the time of the operation. Being again pregnant the following year, she suffered the same accident, the child again passed entirely into the abdomen, and M. *Lambron*, who was present, again performed the operation of *gastro-tomy*; without any further delay than what the woman demanded to receive the sacraments. The child gave signs of life during half an hour after the operation, and the subsequent symptoms were very mild. This woman became pregnant again, and was delivered naturally of a healthy child." Heath's Translation, page 430, &c.

We have here four cases, in which the children were cut out of the bellies of their respective mothers, after they had escaped through a lacerated wound of the womb, into the cavity of the abdomen. And as lacerated wounds are confessedly more dangerous than wounds made with a sharp instrument, these cases shew clearly, that a female will sustain, without the loss of life, an injury, greater than the Cesarean operation. If you should be inclined to deny this position,

with regard to wounds of the uterus; you must then acknowledge, that it would be an improvement, in performing this operation, to puncture the Uterus, and afterwards tear it in such a manner, as to allow the child to be extracted; and that it would be better to wait till the violent and repeated throes of labour had ruptured the uterus, before we make the incision through the parietes of the abdomen. Both of which declarations will be considered, I believe, by intelligent surgeons as highly absurd.

To point out to you still more clearly, that the death of the parent, after unsuccessful Cæsarean Births, is often more properly imputable to previous injury, and disease, than to the operation itself; I shall here transcribe three very remarkable and well authenticated cases; which, I suppose, you have not read.

C. 1. " In the year 1769, a negro woman (belonging to Mrs. Bland, a midwife) at Mr. Campbell's grass plantation at the Ferry, between Kingston and Spanish Town in Jamaica, being in labour, she performed the *Cæsarean operation* on herself, and took her child out of the left side of her abdomen, by cutting boldly through into the uterus.

She performed this operation with a butcher's

broken knife, about two inches and a half long,—the part which joined to the handle. The position of the child was natural; she cut through near the *linea alba*, on her left side, and cut into the child's right thigh, which presented at the part, about three lines deep, and two inches and a half long. The child came out by the actions of his own struggling. A negro midwife was sent for to her, who cut the navel-cord, and freed the child, and returned the part of the navel-cord adhering to the placenta, and a considerable portion of the intestines also, into the abdomen, which had come out at the wound with the child.

The Surgeon who attended the plantation was sent for, a few hours after the accident happened; and judging, from the situation in which he found her, that some dirt had been put into the wound, by the old midwife, with the intestines, he cut open the stitches that had been made, and carefully washed the parts clean, extracted the placenta at the wound, and then stitched it up again.

On the third day after she had recovered from her sunk state from the loss of blood, which was considerable, a fever came on, which was removed by cooling medicines: she then took bark for ten days. The wound was fomented, and dressed

properly, and was soon cured; and the woman was well in six weeks time from the accident, and able to go to her work." Moseley on Tropical Diseases, &c. pages 98 and 99.

C. 2. "On the 25th June 1785, at eight o'clock in the morning, the relator of this case" (Don Antoine Zubeldia, a Spanish Physician) "was sent for with another surgeon, to the assistance of Mary Gratien, a robust woman, in the 9th month of her pregnancy, and who had been already the mother of many children. She was found weltering in her blood and in a state of fainting, from a wound she had received in the superior part of the hypogastric region from a bullock's horn. The horn had transversely divided the integuments of the abdomen and the peritonæum to the extent of eight inches, and allowed the uterus to pass out, which was wounded at its anterior part and in the same direction. The wound of this viscus, though deep, did not penetrate its cavity. Whilst the surgeons were disposing themselves to perform the operation, nature accomplished it, without any assistance, by exciting a violent hiccup, which produced a complete rupture of the matrix throughout the whole extent of the wound, and from which a dead child was expelled, the placenta, which was detached, was

extracted by the surgeon; the uterus immediately contracted, and regained its natural situation, &c."

"By the 21st day the patient found herself tolerably well, with only a little remaining fever, which disappeared a few days afterwards by a continuation of the same remedies. A collection of pus took place under the right transversalis muscle, which pointed towards the pyramidalis; this was discharged by a small opening. The ulcer became simple and cicatrized towards the end of the sixth week. This woman was cured in this manner of this dreadful accident, and was only subjected to the inconvenience of wearing a bandage, to prevent a ventral hernia. From this period she has enjoyed an excellent state of health, and has since lain in with two fine children, which she suckled." Gosling's Translation of the Parisian Chirurgical Journal, by M. Desault. Vol. ii. p. 277,—280.

Note. "The editor (M. Desault) observes, that he knew the woman, who forms the subject of this case. Three years after the wound he applied a proper bandage to retain a small ventral hernia, the only inconvenience that resulted from the accident." Ibid.

*Case 3.* "The subject of this very curious and extraordinary case was a poor woman, named Schulers, at Offdillen, in the principality of Dillenburgh, of a delicate habit of body, but in other respects healthy, who had already borne several children.

About two o'clock in the afternoon, of the 20th of October, 1779, being then in the sixth month of her pregnancy, she was gored by an ox in the lower belly. The horn of the animal penetrated the right hypogastric region, at the distance of about three inches from the linea alba, and wounded the body of the uterus.

Her husband, who saw her in this dreadful situation, holding by the other horn, flew to her assistance, and in disentangling her from the animal, unfortunately made a fresh wound, two inches in length, with the horn that was still sticking in the abdomen. This second wound, which was exactly in the direction of the linea alba, was attended with a laceration of the parts, and with a loss of substance, so as to form one common wound with the first.

A considerable hemorrhage ensued; and on examination, the right arm of the foetus was found protruding through the wound.

Dr. Fritse, whose assistance was called for, but who did not get to her till ten hours after the accident, found her strength, he tells us, less sunk than, considering the nature of the case, might have been expected; the hemorrhage, which at first was considerable, had almost entirely ceased, her pulse had still a certain degree of fulness, and her breathing was not materially affected.

After having duly considered all the circumstances of the case, being convinced of the necessity of having recourse to the Cæsarean operation, as the only probable means of preserving the life of the patient, he communicated this opinion to her in a proper manner, and she with great firmness determined to submit to it.

As it was now past midnight, and no symptoms were present that indicated a necessity of performing it immediately, he thought it better to defer the operation till morning, than to attempt to perform it by candle-light. He, therefore, employed himself during the remainder of the night, in directing the patient's chamber to be properly ventilated, in administering to her such remedies as her case seemed to require, and in securing the wound, as much as possible, from the external air.



At seven o'clock, the next morning, after having passed a very restless night, she voided her urine without any considerable pain; but as she had had no stool during the last four-and-twenty hours, it was thought right, previously to the operation, to administer a clyster, but it failed to produce the desired effect.

The patient being now placed in a posture convenient for the operation, and properly held by four assistants, the operator placed himself on her left side, that he might have the free use of his right hand.

He first introduced his left fore-finger into that part of the wound where the horn of the ox had penetrated into the cavity of the abdomen, and which, as hath been already observed, was three inches distant from the linea alba, and about as far from the abdominal ring.

After having sufficiently enlarged the wound, with the point of his scalpel, to admit another finger, he introduced into it his middle finger; and then, cutting through the right musculus rectus abdominis, and the peritonæum, enlarged the wound three inches, in a straight line upwards towards the navel: after which, taking hold of the knife with his left hand, he carefully

cut downwards, to the extent of an inch, towards the right abdominal ring.

The opening in the abdomen being now sufficiently large to allow of the extraction of the foetus, he began to examine the state of the uterus, and, by degrees, succeeded in introducing his right fore finger into its cavity, through the wound, which had so strongly contracted about the arm of the foetus, and by this means was enabled to ascertain the situation of the child, and likewise to satisfy himself that the placenta was attached to the right side of the uterus, and not to the fundus.

Being thus convinced that he had nothing to fear from cutting through the fundus uteri, he introduced his fore and middle fingers between the uterus and the body of the child, and then cut through the body of the uterus and its fundus to the extent of four inches.

The foetus was now brought out through the wound, though not without some difficulty, and much pain to the patient; as was also the placenta, which was found to be firmly attached. As soon as all this was accomplished, the operator again introduced his hand into the uterus to clear it of coagulated blood.

The head of the child was no sooner brought out through the external wound, than the colon began to protrude, but was kept up by one of the assistants till the operator had done with the uterus, and then he reduced it in the usual manner.

The integuments of the abdomen being now brought together, by means of the interrupted suture, as it is called, suitable dressings were applied to the wound, and secured by a bandage, three inches broad and eighteen ells in length.

The whole of the operation, we are told, including the application of the bandage, did not take up more than a quarter of an hour; and only twice, in the course of it, did the patient complain of pain, namely, when the head of the child was brought out through the wound of the uterus, and, afterwards, on the placenta's being separated. The loss of blood during the operation, is said not to have exceeded seven ounces.

The patient was now carefully placed, in an easy posture, in bed; a little wine was given to her to drink; and she was allowed to take freely of chicken broth.

About noon, a discharge of blood began to

penetrate a little through the dressings and bandage, but without any appearance of considerable hæmorrhage; and even at this early period the lochia were beginning to flow.

The only complaint the patient made was of pains like after-pains, which from her manner of living previously to the accident, it was thought might be occasioned in some measure, or at least increased, by impurities in the primæ viæ. Another clyster was, therefore, directed to be administered, but this, like the former one, came away without producing any evacuation of fæces. The bandage was moistened with vinegar and spirit of wine, diluted with water; and for the purpose of allaying thirst, she drank water acidulated with vinegar, and rendered palatable by the addition of syrup of raspberries. She also took, from time to time, small doses of nitre.

At two o'clock in the afternoon, the pains were not at all diminished, and she began to be troubled with nausea and eructations. Another clyster was therefore injected, but without the desired effect. At five o'clock, she complained of pain about her chest, and of an increase of the nausea, and about two hours afterwards, after vomiting bile, she found herself relieved, a gentle

perspiration took place, and she slept quietly during a considerable part of the night.

The day following, being the third after the accident, the bandage was suffered to remain undisturbed, for fear of occasioning a fresh hæmorrhage, and the same plan of treatment was pursued as on the preceding day.

In the forenoon of this day, she complained again of pain of the abdomen, and of a sensation as if this part was swelled; but, on examination, no enlargement or hardness of the belly could be perceived. She was frequently troubled with acid eructations, and her pulse was now much quickened.

As she had as yet had no stool since the operation, another clyster was administered, consisting of two parts water, one part vinegar, half an ounce of common salt, and a little linseed-oil. This very soon had the desired effect, to the great relief of the patient; a copious perspiration ensued; her breathing was free and natural; and she got some more sleep.

About five o'clock in the afternoon, the pains of the belly and eructations again returning, she

drank an infusion of chamomile flowers, which she thought afforded her relief; but the most certain remedy, it is observed, for these complaints was found to be the clyster of water and vinegar; for, in the course of the treatment, she had frequent returns of the pains of the abdomen, acid eructation, nausea, and even vomiting, but these symptoms never failed, speedily to give way to the use of the sort of clyster just now mentioned.

On the fourth day, she was reported to have slept well during the night, but at eight o'clock in the morning was found to have a considerable degree of fever.

The bandage was now removed for the first time. The lips of the incised wound were in contact with each other, and slightly inflamed; those of the lacerated wound were an inch asunder, and greatly inflamed.

A decoction of myrrh in barley water, with the addition of a little honey of roses, was now injected into the cavity of the abdomen (a mode of practice, which will probably not accord with the ideas of the English surgical reader), and the same kind of bandage was applied as before.

Suitable remedies were given to moderate the quickness of pulse, thirst, and other symptoms of fever. The patient's common drink was water properly acidulated, and she also took chamomile tea, and a decoction of bark, with Hoffmann's anodyne liquor.

On the fifth day, the patient having passed a good night, and slept well, found herself much better. The hardness and quickness of pulse were much diminished; the uneasy sensation she had complained of in the abdomen had subsided; she had had a natural stool, had made water, and was now in a gentle perspiration.

The bandage and dressings were again removed; the injection into the cavity of the abdomen was repeated; and the abdomen was gently embrocated with a mixture of vinegar and oil of chamomile.

On the sixth day, the patient had three stools. The state of the pulse indicated an increase of fever; and the night following she was restless, and troubled with a frequent cough, which, she said, occasioned, every time she coughed, a smarting pain in the wound.

On removing the dressings this day, it was ob-

served that the ligature of the incised wound had so cut through the skin, that the lips of the wound were separated from each other at the outer surface, but that at the bottom of the wound an union of parts had taken place. As the ligatures, therefore, now seemed to be no longer of any use, they were removed, and the lips of the wound were kept together by means of slips of sticking plaster.

On the eighth day, the patient had two stools; the cough was less troublesome, and the wound was beginning to discharge a good pus.

On the fifteenth day, as the patient still complained at times of the cough, a few drops of laudanum were occasionally added to her medicines.

At this period, the wounds appeared to be in good condition, and the patient was in every other respect in a comfortable state; she slept well, the symptoms of fever had entirely subsided, her evacuations, by stool and urine, were natural; and her appetite for food had returned.

On the seventeenth day, a slight excoriation of the skin around the wound, occasioned by the



discharge, made it necessary to recommend a suitable topical application, which soon produced the desired effect.

On the twenty-fourth day, a considerable discharge of matter was observed on the bandages, and traced to a small abscess between the integuments, and the musculus rectus abdominis, which was soon healed by means of gentle compresses.

On the thirty-fourth day, the wound being almost completely healed, a proper bandage was applied to prevent a hernia; after which the patient, for the first time after the operation, walked about her chamber.

On the 21st of December, she was sufficiently recovered to return to her usual occupations; and towards the latter end of February, about four months after the operation, she came on foot to Dillenburg, a fatiguing journey of two (German) miles." Lond. Med. Journal. Vol. 11th, p. 146, &c.

You ask at page 31, "but, shall a practice be persisted in, which has proved invariably fatal to the mother in so many instances?" and "Would it not be better that a woman should die undeli-

vered, rather than contrary to all precedent among us, and the rules of art, she should be consigned to such an end?"

I cannot admit, even if Cesarean births were certainly fatal to the mother, that it would be better to allow both parent and child to perish, than to preserve the latter by the Cesarean operation.

Neither can I admit that the operation is *invariably fatal to the mother*; and, in addition to the cases already mentioned, beg leave to refer you to the extensive collection of successful cases, given by *M. Simon*, in his *Recherches sur l'Opération Césarienne* inserted in *Memoires de l'Acad. Roy. de Chir. T. 1. P. 3.* to which you have never once referred, although I am informed, that the work has been very lately in your possession. And I will, as a further proof, insert the following extract from an excellent paper by *Dr. Garthshore*, in the 8th Vol. of the *London Medical Journal*.

“ *M. Tenon*, Member of the Royal Academies of Sciences and Surgery, and Surgeon to the *Salpetriere Hospital* at Paris, equally eminent for his learning and long experience, informed me, when lately in this country, that in all ex-

tra-uterine cases, and in the greater part of those where the child has burst, either wholly or partially, through the uterus, the French accoucheurs constantly extract it through the divided parietes of the abdomen, and that they consider this, as by much the safest practice. He is of opinion, that the Cæsarean operation is less successful in this country than it is in France, because we defer it too long; and he assured me, that since their first practising this operation, in the time of Bauhin, *seventy-eight women have been saved by it at the Hotel Dieu of Paris.*"

You next proceed to say, "Life is in the hands of God! and as there are cases of recovery by the powers of nature, working an outlet by Abscesses, and in other ways, the only hope for the patient's surviving is by a reliance on her aid." I would here ask you if *the only hope* for the patient's surviving be, as you state, by a reliance on the aid of nature, how it has happened, that totally disregarding these powers of nature, you recommend an operation, or rather a combination of two operations, afterwards, in cases of such extreme deformity of the pelvis, that it would prove considerably more dangerous to the parent, than the Cesarean Birth, and be certainly destructive of the life of her offspring?

I must now step out of my way a little to bring forward what you have advanced, at page 39. “ Tremendous as the operation is to the unhappy woman, it is simple to the operating surgeon. The unprofessional reader, who shall have witnessed the inspection of the abdomen of a dead body, will form a tolerable correct notion of the manner of operating, from what has been said above. It requires no more than a superficial knowledge of anatomy, and does not call for the exercise of manual dexterity. A surgeon, who is cool and collected, (without which he ought not to undertake any operation,) cannot but possess sufficient knowledge, and use of his hands, to perform it with propriety. The operation for the stone, for the strangulated hernia, and for the depression of the cataract, and many others, demand much superior skill and dexterity in the operator.”

If by the latter part of this quotation you mean to intimate, that I have not performed all the operations there mentioned; permit me to inform you, that your insinuation is unjust.

We will now return, if you please, to consider what you say, at page 32 of your *Reflections*, on the evidence of Mr. Hoffman, and the state of surgery in Germany. You observe that, “ Pro-

fessor Hamilton, says, Mr. Hoffman of Prussia informed him, that the Cæsarean operation had been very often successful in different parts of Germany, within the last ten years; and that the unsuccessful cases have been chiefly those in which the operation was delayed too long. Extraordinary as the account is, I should have given credit to it, had Mr. Hoffman spoken of the facts from his own knowledge, having seen him when in England; but the state of surgery in Germany is too well known to induce a belief of so unusual an occurrence, even if the alledged frequency of its success did not tend to destroy its credibility."

From reading the very curious passage, in which you attempt to overturn Mr. Hoffman's testimony, it would seem, he had told you, that he did not speak of the facts from his own knowledge; but on a little more attention, it only appears, that you saw him when in England. Admitting, however, that Mr. Hoffman had not spoken of the facts from his own knowledge, is his evidence, to be entirely rejected on that account? Is it not precisely on the same ground, that your evidence, and that of Dr. Osborn, whom you quote, with regard to the unsuccessful cases, rest? Have either of you ever been present at a Cesarean operation performed on a living female? How can you then reject evidence, which

appears more admissible than yours at least, since Mr. Hoffman has never, that I know of, been proved guilty of any misrepresentation?

Again, Do not the Surgeons of Germany perform the operation for the stone, and all the other nice operations of Surgery with success? And if so, Are they not properly qualified to perform the Cesarean operation, which, as you have affirmed, in the passage quoted above, “*requires no more than a superficial knowledge of anatomy, and does not call for the exercise of manual dexterity?*” To what cause, Sir, are these glaring inconsistencies to be attributed?

When I read the works of Richter, Plenck, Brambilla, Roederer, &c. &c. I am induced to form a very favourable opinion of the state of Surgery, and Midwifery in Germany; and I sincerely hope, that the Germans will form their judgement of the state of these two branches of the healing art, in Great Britain, from other sources than your Reflections, or I fear, they will be rated low indeed.

At page 33, you make this observation, “And in Holland it was performed by the celebrated professor Camper, but one fatal case was suffi-

ent to satisfy him." Where you have learnt this, I cannot discover; But whatever might have been the sentiments of this deservedly illustrious author, upon the subject of Cesarean Births; I can assure you, that the operation is not laid aside in Holland. One instance of the most completely successful performance of it in that nation, I will now lay before you. "Jacoba Roeël, Petri Boxmeer uxor, Leidæ degens, quæ 26 Januarii A. 1782, a doctiss. Brand Obstetricante, & expert. Baatè, Chirurgo publico, operato cum successu, per Hysterotomiam vivi infantis masculi læta mater evasit, die 24 Martii ejusdem anni, templum pié adiit.—Infans continuo sanitatis commodis fruitur, dum mater etiam absque ullo malo sana valeat." This event is celebrated in the following lines :

"Justa læssitus dum surgit in arma Batavus  
 Perfidæ vindex, dire Britannc, tuæ;  
 Tramite, quem ferrum, non quem Natura, reclusit,  
 Ingredior mundum, contueorque diem;  
 Quin ferrum cum luce simul? non hostis in hostem  
 Quo furat, ac Marti dextra cruenta litet;  
 Sed geminas uno vitæ quod vulnere præstet  
 Incolumes, geminas præcaveatque neces.  
 Salve operæ felix BRANDI! per cujus amicam  
 Sævitiâ matri parta mihiq;e salus.  
 Ut neget egressus Natura; negante vel ipsa,  
 Repperit Arsaliam prodigiosa viam," &c. &c.

J. P. Michel, de Synch. Pub. Com. P. 237.

The operation was also performed at Leyden, in May 1792, when I was there, by the celebrated Professor Sandiforth, in a case where he informed me, that the delivery might have been effected by the crotchet, without much difficulty. I saw him on the day after the operation, and he at that time had great expectations of the recovery of his patient. What was the event, I have yet to learn.

At page 34, you say, “ Warned by the fatal termination, it would appear superfluous to describe the manner of performing this operation; but as I have a remark or two to offer that may be useful in other cases, I shall briefly describe it. *I shall be readily excused from saying any thing of the employment of the actual or potential cautery, for this purpose, the stories of their application are so incredible.*” See page 31st of this letter. “ The operation then divides itself into two distinct parts, the division of the parietes of the abdomen, and of the substance of the uterus. The external incision has been made longitudinally, obliquely, or transversely. *One of Rousset’s operators made a circular incision to shew his superior dexterity.*” See page 22. “ The longitudinal and oblique incision has been made on either side of the navel; and the transverse, either above or below that point.



The chief object to be held in view, in the first instance, would seem to be the avoiding of hemorrhage. Accordingly the longitudinal incision has been made parallel to the outer edge of the recti muscles; and the oblique in the direction of the linea semilunaris, inclining to the spine of the ilium, to avoid wounding the epigastric arteries. But this method is liable to objection, on the proposed ground of its safety, the artery sometimes deviating from its usual course; and unless, from extreme deformity, the distended womb should incline very much to either side, it cannot in any respect deserve a preference.

The transverse incision has been preferred by some French practitioners; and it has been performed in this way, we are told, with success. The incision is directed to be made transversely above the navel, through the integument and abdominal muscles, and then through the fundus of the uterus. The epigastric arteries will be thus divided, and although they may be immediately compressed and secured by ligature, some effusion of blood will necessarily take place, and the cavity will also be longer exposed. The most serious objection, however, will be the utter impossibility of any extravasation that shall take place, during or after the operation, being afterwards discharged; so that should the patient escape, by

a miracle, the first consequences of the operation, a second miracle must be wrought, or the patient will perish. The smaller annoyance from the protrusion of the viscera, the alledged reason for preferring the transverse incision, cannot be put in competition with so weighty an objection, as the extravasated fluid will in all probability act as an extraneous body, and induce peritoneal inflammation; which is at all times an extremely dangerous disease, and very commonly fatal.

Obviously the most eligible method is to make the incision in the linea alba, commencing immediately below the navel, and carrying it in a direct line towards the pubes, so as to make an opening six or seven inches in length. In this direction, no blood-vessel of any consequence can be divided; and it is also convenient for making the opening into the uterus. To detail the history of this mode of operating would afford little satisfaction; but it is of a much earlier date than Baudeloque has stated it to be. He mentions Deleurie and Waroquier, as the only surgeons who have performed the operation in the *linea alba* with success. I cannot resist the inclination to insert the following remark, on which the reader will make his own comment. "It is easy to perceive, says M. Deleurie, all the advantages of having the wound in the uterus, as I may say,

before the eyes, during the progress of the cure, and having it answer directly to the external incision; by that means the humours discharged from the uterus have a free exit." Baudeloque's Midwifery, vol. 3. pag. 371. The incision of the womb is of necessity made opposite to the external wound, and of the same dimensions, and a ligature may be applied on such vessels as shall require it, as directed by different writers; but when that shall become necessary, I have no conception of the possibility of a recovery."

And at page 38, you give us the following passage. "The next point is the providing a passage for the transmission of any extravasation that shall take place, whether it be blood or any other fluid; and instead of introducing a tent or canula, as some have recommended, the light application of lint between the lips of the lower angle of the wound, so as in part to hinder the union of the sides, will accomplish it very completely. Should symptoms indicating a collection of fluid arise, it will be easy to break through any slight adhesion that shall have taken place between the parts of the surfaces lying in contact, and yet by adopting this method, every possible chance will be given for escaping the inflammation of the cavity."

After your invectives against the Cesarean operation, I am astonished to find, that you have condescended to give directions respecting the manner of performing it, and more particularly so, as it is an operation, which has not fallen within the sphere of your observation. Had you been silent concerning the mode of operating, I should have given you credit for knowing more concerning it, than I find to be the case. For it will not be difficult to demonstrate, that the method, proposed by you, will always be inconvenient, and in many cases absolutely impracticable, if the operation be limited to such cases of distorted pelvis, as it has hitherto been in Great Britain. Your ideas of the abdominal muscles named *Recti*, and the direction of the *Linea Semilunaris*, and also of the natural course of the *Epigastrick Arteries*, seem to be extremely incorrect.

When you say, “*Obviously the most eligible method is to make the incision in the linea alba, commencing immediately below the navel, and carrying it in a direct line towards the pubes, so as to make an opening six or seven inches in length,*” One could hardly suppose that you were planning an operation to be performed upon the diminutive creatures, who have been the objects of the Ce-

sarean Section in this nation. Have you not, Sir, a more correct knowledge of the space between the Umbilicus and Ossa Pubis of a poor distorted creature, who does not measure more than from three feet and a half, to about four feet and a half in height, than to suppose it practicable to make an incision of seven inches in length between the two points specified? Do you not know, that in many cases the uterus is placed nearly transversely in the cavity of the abdomen, or even with the fundus lower than the cervix, forming what the French writers call *le ventre en besace*? See Levret L' Art des Accouchemens. Planche ii. fig. 8, 9. Do you not know, that in these cases the umbilicus, and the hypogastric region can scarcely be made at all accessible to the knife? How then can this be a convenient part for making the opening into the uterus? Let us see what Dr. Hunter says upon the subject. "In a very short and crooked woman, with a very narrow pelvis, upon whom I saw the Cæsarean section performed, from a concurrence of the above mentioned causes, the fundus uteri was turned not only forwards, but even a little downwards. As she lay upon the table, the *navel and upogastrium* could not be seen; the navel being situated on what might have been called the posterior and inferior part of

the abdominal tumour," &c. &c. See Hunter's Anat. Descr. of the Human Gravid Uterus, p. 9.

Have you forgotten, that the outer margins of the *M. Recti Abdominis* are, throughout their whole length, in contact with the *Lineæ Semilunares*? Do you not know, that an incision made parallel to the outer edge of the above named muscles must necessarily be either in, or parallel to, the *Linea Semilunaris*? And do you not know that an oblique incision, instead of being, as you say, "in the direction of the *Linea Semilunaris*, inclining to the ilium," will, if produced, intersect this line?

Speaking of the transverse incision, as made above the navel, you say, "The Epigastrick arteries will be thus divided, and although they may be immediately compressed and secured by ligature some effusion of blood will necessarily take place, &c." I would here ask you, if you do not recollect, that the branches of the *A. epigastricæ* are become so small above the navel, as very rarely, if ever, to pour out much blood, or to require either compression or a ligature? Do you not know, that they here begin to anastomose with the extreme branches of the *A. mammariæ*? Or are you apprehensive, that

there may be a *lusus naturæ* in the course of the artery here also ?

You proceed to say, “ The most serious objection,” (to the transverse incision), “ however, will be the utter impossibility of any extravasation that shall take place, during or after the operation, being afterwards discharged ; so that should the patient escape, *by a miracle*, the first consequences of the operation, a *second miracle* must be wrought, or the patient will perish.”

Does it require, Sir, a second miracle to place the poor woman upon her wounded side ? For I maintain, that, in this position of her body, the wound is actually situated in the most depending part of the cavity of the abdomen, even if we consider this as extending to the bottom of the pelvis ; consequently it is in the situation most favourable to the discharge of extravasated fluid.

Besides, is it not possible, that a coagulum of blood, weighing three or four ounces, may be taken up by the Absorbents, opening upon that cavity, without a miracle being wrought ? And do not you perceive, that many advantages are derivable from making the incision in this direction, and situation ? Do not you see, for example, an advantage, from having the external in-

cision in the direction of the fibres of the *M. Transversus Abdominis*? Do not you perceive, that the Lochia will be much less likely to be effused into the cavity of the abdomen, when there is no wound in the inferior part of the uterus, &c. &c.?

Can you, for one moment, believe, that, if the operation were performed in the lower part of the *Linea alba*, as you propose, the wound of the uterus, after the necessary contraction of that viscus, will correspond with the external incision? May we not rather expect, that any effused fluid will be most likely to fall down into the cavity of the pelvis? And in case of such an event, how can you possibly place this external wound in the most depending part, with the view of favouring the evacuation of this extravasated fluid, but by obliging your patient to lie upon her face, which is a most irksome position? By saying, “as the extravasated fluid will in all probability act as an extraneous body, and induce peritoneal inflammation,” you admit, that it is only *in all probability*, that the above miracle can be necessary.

You, with good reason, apprehend great danger from the abdominal cavity being rendered imperfect, “which” you observe, “in itself is a suffi-



cient cause to induce the inflammation of any cavity, according to the opinion of the late Mr. Hunter." Page 39.

I must hereupon inform you, that the best way of avoiding this source of inflammation, is to heal the wound by the first intention, and that you could not have advised a method, worse adapted to this end, than the interposition of lint to prevent the union of its lips. Is not this precisely what is done with the view of exciting inflammation of the *Tunica vaginalis testis*?

As I am only desirous of pointing out, and refuting the most *material* assertions of your book, I shall pass over some of the *less exceptionable* doctrines, contained in the quotations given above; And the next passage, upon which I shall make an observation, is this, "But Doctor Osborn has *proved* by his experience, which has since been confirmed by that of others, that the child may be extracted by the crotchet, whatever the distortion shall be, if *in any part of the cavity* there shall be a space of one inch and a half in diameter, and, I believe, most of the *pelvises*, on which the *Cæsarean operation* has been performed, were *above those dimensions*." There must be a trifling error in this passage. You surely can not mean that the *Cæsarean operation* has been performed

upon the pelvises, but upon women, whose pelves were above the dimensions stated.

I will now adduce what Dr. Osborn has asserted upon this subject. "I therefore examined a great number of children's heads, who died immediately in, or near the time of birth, and found but the smallest possible variety in the volume of the bones making up the basis of the cranium, when it is turned sideways; for measuring these bones in that state, I found that they never exceeded one inch and a half in width; indeed they seldom measured quite so much, after the frontal and parietal bones were removed. Whenever there is a space from pubis to sacrum, or from the fore to the hind part of the upper aperture of the pelvis, equal to an inch and half, I am convinced it will be always practicable to extract a child by a crotchet, after the head has been some time opened, and the texture of the child's body is softened by putrefaction (as recommended above), and the whole of the parietal and frontal bones are picked away; and that,—with tolerable facility to the operator, and perfect safety to the parent." Osborn's Essays, p. 229, 230. And at p. 446, The Dr. has this passage, "I have endeavoured to demonstrate that it" (the head of the child) "may be safely extracted by the crotchet, wherever there is a space equal to one inch and a

*half from pubis to sacrum*, either immediately between the projecting angle of the sacrum and the symphysis pubis, or on either side the projection."

To these opinions of Dr. Osborn, I shall content myself, for the present, with opposing the following extracts from Dr. R. Wallace Johnson's System of Midwifery, and Hamilton's Letters to Osborn. "I declare that I think Dr. Osborn was mistaken in his dimensions of this woman's pelvis. Nay, although I have the happiness of hands as small, and fingers as strong as most men, and am not very unskilful in mechanics, yet, in a space so narrow as he describes, I verily believe, that neither myself or any person of the greatest judgement and expertness, could guide a crotchet, and apply it so well on the child, as to extract it with safety to the mother.

I lately asked a very ingenious practitioner, who did examine this woman before the Doctor began the operation, whether the dimensions of the pelvis were taken as I had described in my book? To which he replied, that they were not to his remembrance: I then requested to know, how he and the other gentlemen, who also examined her, could be certain that the pelvis was so small as Dr. Osborn had described? To which

he very candidly answered, that to him and them it felt very narrow, but to affirm that it was exactly as the Dr. had said, was more than he could do." System of Midw. page 309. Ed. 2. 1786.

*" If the basis of the head can only be reduced by the operation of embryulcia to the width of an inch and an half when turned sideways, I cannot conceive, that when joined to the body of a child, it can be drawn through an aperture of the same width, even in its whole extent, much less on either side of the projecting sacrum, for the neck must add somewhat to the volume of the head."* Ham. Lett. p. 134.

" The following experiment may be tried, and I shall rest the decision of this argument on its result. Let an artificial pelvis of strong tempered steel, be constructed in such a manner, that, at the brim, the diameter from one ilium to the other may measure somewhat more than four inches and an half, the transverse diameter from pubis to sacrum three quarters of an inch, the aperture on the left side of the sacrum no more than that, and the aperture on the right side about an inch and three quarters at one point only, being much narrower both towards the ilium and sacrum. Let a still-born mature fœtus, of an ordinary size, with the cranium opened, and its contents discharged, be macerated for thirty-six hours in wa-

ter of the temperature of 98° of Fahrenheit's Thermometer. Let the base of the cranium be broken down as much as it can be done in real practice, and then, by means of the crotchet fixed in the foramen magnum, let it be tried whether it be possible without the exertion of so much force as would separate the bones in a living subject, to extract the child through the brim of that artificial pelvis." Ibid, p. 135 to 137.

That these were the dimensions of Elizabeth Sherwood's pelvis, as stated by Dr. Osborn, you must know, for you have transcribed the account of it in pages 47 and 48 of your work. And yet, notwithstanding this fair appeal to experiment was made in the year 1792, Dr. Osborn has not published a reply, that I know of.

But admitting that Dr. Osborn had *proved his assertion*, given in the above quotations, I shall now demonstrate, that you have most grossly misrepresented *him* also. The Doctor every where particularly specifies, that he means the *space from the fore to the hind part of the pelvis*; but you boldly affirm that he "has proved that the child may be extracted by the crotchet, whatever the distortion shall be, if *in any part of the cavity there shall be a space of one inch and a half in diameter.*" No such thought could ever be

supposed to be entertained by Dr. Osborn. Has he not expressly mentioned in the case of Eliz. Sherwood, that the transverse diameter of her pelvis, at the brim, was more than four inches and a half from one Os Ilium to the other? And this, I presume, is one of the most contracted pelves, through which a child has ever been extracted by the crotchet. To what cause are all these gross misrepresentations to be imputed?

Your ideas of distance, and proportion, seem wondrously incorrect, otherwise the employment of a little power of reflection, would have taught you, after making the above declaration, that there never could be a necessity for the compound operation of *Embryulcia* and *Sectio Symphysis Pubis*, which you have proposed. For I will venture to assert, that no woman ever has had, nor ever can have, a pelvis so contracted, that there shall not be, *in some part of the cavity*, a space of more than one inch and a half; a space, which you have stated to be sufficient for the extraction of the child by means of the crotchet alone. At p. 55 and 56, you say, "I have myself had occasion to apply the crotchet in cases, where the pelvis has been very narrow, and have always found, that the patients speedily recovered

from the consequences of the operation." And, at the latter page, you give us the following Note.

" \* My connection with the Infirmary, gives me opportunities of seeing a greater variety of difficult cases in Midwifery, than would otherwise fall to my lot. In the year 1790" (the year in which all the present six surgeons of that Institution were elected) " I proposed to the trustees to annex midwifery to the other objects of their charity, there being then no establishment in the town for that purpose. Soon after my proposal was made, the present Lying-in Hospital was instituted, without my knowledge; but the trustees adopted so much of my plan as is contained in the following rule, which is now inscribed on every home-patient recommendation."

" Poor married women will be attended in labour by the *surgeons*, when the midwife *cannot deliver them*, on application being made at the Infirmary, in the day, and to the Bathman, at the gate of the Infirmary, in the night."

Whether the midwifery-patients, who have been under your care, in consequence of this regulation, have furnished you *one* crotchet case, you best know: but that it cannot have afforded you many, will appear from the following statement,

which, I have reason to believe, is nearly, if not perfectly, correct, and which was given me by one of my friends.

“ AN ACCOUNT OF THE NUMBER OF POOR WOMEN, who have been attended, in labour, by the Surgeons of the Infirmary, from June 24, 1791, to December 24, 1798.

From June 24 1791 to June 24 1792 .....	9
From June 24 1792 to June 24 1793 .....	12
From June 24 1793 to June 24 1794 .....	9
From June 24 1794 to June 24 1795 .....	5
From June 24 1795 to June 24 1796 .....	3
From June 24 1796 to June 24 1797 .....	0
From June 24 1797 to June 24 1798 .....	1
From June 24 1798 to Dec. 24 1798 .....	0
	—
Total in seven years and a half.	39”

Hence it appears, that if you have had seven patients of this class, in seven years and a half, you have had rather more than your proportional number.

Pray, Sir, amongst your crotchet-casses have you ever met with *one*, in which there was *not more than one inch, and a half in any part of the cavity of the pelvis?* And will you have the



goodness to state the lowest dimensions, through which you have been able to extract a child, by means of the crotchet?

Let us now attend to what you have advanced, at page 60, "Should then a case occur, in which even *the widest part of the pelvis is one inch and a half* in diameter, these cases prove" (viz. the cases of Eliz. Sherwood, Ann Cooper, and Mrs. West), "that the delivery may be accomplished by the crotchet, with perfect safety to the mother, and with no great difficulty to the operator."

I must here beg leave to observe, that the women, mentioned above, were not delivered with perfect safety, although the width of their pelves was more than twice as large, as you have stated.

Dr. Osborn tells us that, in the case of Elizabeth Sherwood, "*Even the first part of the operation, which in general is sufficiently easy, was attended with considerable difficulty, and some danger.*"

Page 245. This passage is given in your work, at page 49. And you assert at page 66, where you are recommending the compound operation of Embryulcia and Synchronotomia Pubis, that "as the base of the skull will *probably* be turned sideways, it" (the urethra) "will suffer less in

extraction than in other cases of the crotchet; *in which it must in general be injured from pressure against the pubis.*" I would here ask you, whether so important a part, as the urethra, can be injured, with perfect safety to the patient? And if, according to your own concession, the urethra be, in general, injured from pressure, will not the cervix of the Uterus be also much injured from pressure against the Ossa Pubis? And will the contusion of this part also be attended with no danger to the patient?

We will now examine how far the operation could be regarded as easy, or difficult, in this case. Dr. Osborn, who is a strong and large man, having, as he believed, fixed the crotchet in the great foramen, adds, "Of this I availed myself to the utmost extent, slowly, gradually, but steadily, increasing my force, till it arrived to that degree of violence, which nothing could justify but the extreme necessity of the case, and the absolute inability, in repeated trials, of succeeding by gentler means. But even this force was to no purpose; for I could not perceive that I had made any impression on that solid bone, or that it had been in the least advanced by all my exertions." P. 253 and 254.

Having afterwards, as he tells us, by changing the

position of the base of the cranium, succeeded in bringing it down and out of the os externum, he says, "After waiting a few minutes, a napkin was put round the neck of the child, and given to an assistant. I then introduced the crotchet, and (first opening the thorax) fixed it firmly in the sternum. *By our united force, strongly exerted for about a quarter of an hour, first one shoulder was brought down, and then the other; and lastly, after opening the abdomen, the whole body, (with the sternum and spine pressed close together) were extracted in the most putrid and almost dissolved state.*" P. 255, and 256. This is, according to your expression, *accomplishing the delivery with no great difficulty to the operator!*

I must moreover inform you, that I do not admit the *possibility*, much less the *safety*, of the extraction of a full grown fœtus through a pelvis, *the widest part of which is not more than one inch and a half in diameter.*

One remark I wish to make, in this place, upon a very singular faculty, which you seem to possess; It is, *the quality of believing, or disbelieving, whatever you please.* With the highest incredulity you have manifested the most extreme facility of belief. You have admitted, at page 29, that the Cesarean operation has been successful on the

continent, in one or two instances; but you will not believe, that it has succeeded more frequently. Now, if you will be so good as to point out the one or two cases, to which you allude, I will undertake to adduce a great many more, equally as well authenticated. But these, by virtue of your voluntary incredulity, you have rejected.

Yet you do believe, that the base of a foetal cranium, which measures more than four inches in length, about two in breadth, and one and a half, at least, when turned sideways (in which case also the neck of the child will form a considerable impediment), can by the crotchet be brought through a pelvis, the *widest part of which is only an inch and a half*. To any one, who is capable of reflection, I trust, the bare statement of this matter, is sufficient to prove the impossibility of a delivery in this way. Here then is an example of your unbounded credulity.

The next quotation, which I shall take the trouble of examining, is from p. 61 and 62. "In that deformity of the pelvis, in which it has been held indispensibly necessary to perform the Cæsarean operation, to accomplish the delivery, but which the above cases prove to be otherwise; it has been deemed requisite to obtain absolute certainty of the child being alive; and

also, in such a state of vigour, as to give every possible assurance of its surviving this so fatal operation to the mother.

Many signs are laid down by which we are instructed to determine on the child's being alive; but they are in general so equivocal, that it is only when taken collectively, that any stress can be laid upon them. The declaration of the mother, by which we are guided, for the most part, is not at all to be relied on in this instance.

Women, not pregnant, have asserted that they felt the motion of the child; and every practitioner must have met with instances of the mother confidently declaring the child to be alive; and yet, soon after, her mistake has been manifest, by the birth of a fœtus that had been dead some time. Agitation of mind, added to long bodily suffering, will render a woman unable to give a distinct account of her feelings; and, if in any way led to hope for relief, from answering in the affirmative, the imagination will often supply the want of real sensation. In a matter so important, the practitioner is called upon to exercise his skill and circumspection; and when doubt shall arise, prudence, propriety, and humanity, demand the forbearance of means, which will prove inevitably fatal to the mother. But if, on the

testimony of the mother, the Cæsarean section should be performed, and a putrid child should be extracted, (as the facts prove that she will certainly die of the operation,) it would be difficult to determine whether the operator deserved most reprehension, for his inexcusable ignorance, or cruel inattention."

I would first inquire of you, when, or where you have learnt that "it has been deemed requisite to *obtain absolute certainty of the child being alive, and also in such a state of vigour, as to give every possible assurance of its surviving this so fatal operation to the mother,*" in those cases where it is held necessary to perform the Cesarean operation? Or whether this is not purely a creature of your own imagination? At any rate, I must beg leave to refuse my assent, *in toto*, to this position.

With regard to the signs of the child's being alive, you say, "they are in general so equivocal, that it is only when taken collectively, that any stress can be laid upon them." If it be only *when taken collectively*, that any stress can be laid upon them, you must be understood to intimate, that *no stress* can be laid upon them, *when taken singly*. But I contend that, if *no stress* can be laid

upon them, *when taken singly, no stress can be laid upon them, when taken collectively.* You have therefore made use of an expression, from which we are at liberty to infer, that *no stress* can be laid upon the signs of the child's being alive, when taken collectively.

Again, I contend in *opposition to your assertion*, that there are several signs, by which we are enabled to determine positively concerning the child's life, e. g. the pulsation of the heart, the pulsation of the arteries of the Funis umbilicalis, or any other arteries that are within our reach, &c. &c. Again, the declaration of the mother, contrary to your assertion, is in my humble opinion *very much* to be relied on. Since I have been engaged in writing these comments upon your *Reflections*, I have been consulted by two females, one of whom has been delivered of four dead children in succession, and the other of six; and they inform me, that they can distinguish very accurately, not only that the child is dead, but, in general, at what time it dies, and consequently how long they carry these respective infants after their death. The former patient I attended in labour; she informed me, when I first entered the room, that her child had been dead more than a week, and, from the state in which it was born, I have no doubt of the truth of her observation.

Will you, because one or two women have been deceived, assert that, "*the declaration of the mother is not at all to be relied on in this instance?*" It would be just as reasonable for me to assert, because I have found *you* guilty of frequent egregious mirepresentations, that the declarations of other authors are not at all to be relied on.

I have next to make some remarks on one of the most shameful observations, that ever proceeded from the pen, or mouth, of any medical practitioner. You say, "if, on the testimony of the mother, the Cæsarean section should be performed, and a putrid child should be extracted, (as the facts prove that she will certainly die of the operation,) *it would be difficult to determine whether the operator deserved most reprehension, for his inexcusable ignorance, or cruel inattention.*"

There can not be the least doubt, that this accusation is particularly levelled at me, and the gentlemen, who were concerned with me in performing the Cesarean operation upon the unfortunate Ann Lee; whose case is particularly detailed, towards the end of this letter. I acknowledge, without the least hesitation, that, having observed no positive signs of the death of the infant in this case, I entertained hopes, founded on the repeated and positive testimony of the



mother, that the infant was alive; although I was not without fear, that she might be deceived, on account of the long duration of her labour, and the repeated convulsive paroxysms, with which she had been afflicted. But had the child's death been unequivocally ascertained, I should, notwithstanding, have recommended the operation, because I was fully convinced, that she could not be delivered by the crotchet, and because I thought it much more humane, (and consequently my duty), to give the unfortunate sufferer that chance of life, which the Cesarean operation afforded, even in her deplorable condition, than to abandon her to the painful death, which would have been her lot, had we left her undelivered.

The same charge applies to men of the first eminence in their professions, as may be seen in the synoptical tables given above, as well as myself; and I have no doubt, but they feel much more satisfaction, under their want of success, from performing the operation; than they would, under the same want of success, from neglecting the performance of it; because they must feel the gratification, arising from a sense of the discharge of their duty.

From your severity, and want of candour, in thus condemning the practice of your medical

brethren, it might be supposed that your steps have been infallibly right. Is this the case, Sir? Are you certain that your diagnostick powers are superior to those of the Accoucheurs, who were consulted in the case of Ann Lee? Can you, by touching a small portion of the tumified scalp of a *fœtus in utero*, be so certain of its death, as to contradict flatly the testimony of the mother, founded on her experience of its motions? I cannot believe, that you do possess the *tactus eruditus* in this exquisite degree. Is it candid, when you *imagine*, that your brethren have been acting wrong, to stand up as *Censor General*, and make such dreadful accusations, as are contained in your book? Consider, with attention, the arguments in defence of an operation, which the cruel fate of humanity has made it necessary for us occasionally to resort to. And, if you be open to conviction, you must allow, after reading the case, that our practice was the best, that could possibly have been adopted. Does not your own practice furnish *one case* of pregnancy, or parturition, in which this shocking accusation is much more applicable to yourself than to me, and the gentlemen, who favoured me with their advice and assistance? Do you believe, that there is one medical gentleman in this large town, who would have come forward, and have accused you either of inexcusable ignorance, or cruel inattention, if

you had been concerned in the performance of the Cesarean operation in this deplorable case? I can not conceive, that any, with whom I am acquainted, are capable of acting so dishonourably.

At p. 63, speaking of the section of the symphysis pubis, you add, "Although abandoned with a view to the preservation of the mother and child, it was suggested by Dr. Hunter, that it might be a considerable improvement in that distortion of the pelvis, in which the head cannot otherwise be brought within reach of the crotchet." At p. 65. you say, "When a case shall arise in which the child cannot be delivered by the crotchet, from the brim of the pelvis being no more than *one inch* in diameter; I propose to combine the two operations, and to divide the symphysis pubis to make way for the crotchet." At page 66. you say, "The objections urged against this mode of delivery, when the head is of the full size, will not apply to its reduced bulk; and it should be remembered, that the symphysis is formed of cartilage, and ligament; so that whatever pressure shall be made against the divided edges, will not be made against the sharp angles of bone. That much injury may be done anteriorly will not be denied; but, does the continued pressure of the child's head

never produce mischief in other cases? By the introduction of a female sound for a guide, a cautious and steady operator will avoid wounding the urethra; and as the base of the skull will probably be turned sideways, it will suffer less in extraction than in other cases of the crotchet, in which it must in general be injured from pressure against the pubis. If the separation, however, be carried beyond a certain length, laceration will probably ensue; and, should this accident occur, I see no reason to apprehend more danger from it than follows the extraction of a large stone from the bladder through a small opening, which will induce a lacerated wound, but which we know will not uncommonly heal. The sacro-iliac ligaments would certainly not be injured by choice, but the consequences, I believe, are not generally fatal."

And at page 68, you say, "Upon the whole then in that supposed case of distortion (which I hope will never happen) in which the mother must be doomed to death, from the impossibility of delivering the child by the crotchet, the compound operation I have recommended will furnish a resource, approved by reason and sanctioned by experience; inasmuch as the section of the symphysis pubis has been made, and the crotchet has been used, though separately, yet with safety. Such

a case will be attended, unquestionably, with additional hazard; but it offers the only chance to the mother, to the preservation of whose life our chief care should be directed: and, I hope that in future all trace of the Cæsarean operation will be banished from professional books; for it can never be justifiable during the parent's life, and stands recorded only to disgrace the art."

By adopting the project of Dr. Hunter, in such extreme cases of distortion, you have, I believe, manifested greater intrepidity than any other practitioner, in this kingdom at least, for I have never heard of one, who had the *hardiesse* ever to think of putting it in execution. Instead of this, however, I should, from your ingenuity, have expected the suggestion of some new operation. What do you think of an *Exsectio Symphysis Pubis*? Would not a complete, and dextrous, removal of the anterior portion of the pelvis be preferable in the extreme case of distortion, specified by you, to the mere division of the symphysis? Or, if you should have an objection to the removal of so large a portion of bone, might not it be better merely to saw through the *Ossa pubis* near the *Acetabula*, and also at their junction with the *Rami* of the *Ossa Ischii*, and after extracting the child, to replace them, and take the chance of their uniting again with the

parts, from which they had been severed? Perhaps, by either of these operations, a space might be obtained sufficient for transmitting a child through a pelvis, which is considered as rendering the Cesarean operation requisite; but scarcely for extracting a child through a pelvis, which has only *one inch and a half in any part of its cavity*, although you have stated this as a safely practicable crotchet-case. See above, at page 116.

I will now present to you a picture, which is not overcharged, of the consequences you may expect to succeed your Compound Operation, even when employed in cases, where the distortion is in a much less degree, than that in which you propose to employ it. It is drawn by the excellent Baudelocque, who has paid the greatest attention to the event of the recorded cases of Synchronotomia Pubis. He says, at § 2091. “ Si cette opération ne met que très rarement à couvert la vie de l’ enfant, même lorsque le bassin n’ est pas des plus difformes, elle n’ est pas alors toujours exempte d’ accidens graves pour la mère. La mort de l’ un & de l’ autre est certaine, quand cette mauvaise conformation est extrême. Les suites de l’ écartement spontané des os pubis, des os des îles & du sacrum, dans quelques accouchemens naturels ou laborieux, annonçoient

depuis long-temps celles qu' on devoit craindre de cette nouvelle opération; l' exemple de la femme *Vespres*, ceux de la cinquième opérée par *M. le Roy*, de la quatrième par *M. de Cambon*; de celle d' Arras, de Dusseldorp, de Spire, de Lon, de Gènes; celle de *M. Riollay*, de *M. Mathis*, &c. ont prouvé que ce n' étoit pas en vain qu' on redoutoit ces mêmes accidens. Le delabrement des parties extérieures & du col de la matrice; l' inflammation & la gangrène de ce viscère; des dépôts de matières purulentes, sanieuses et putrides dans le tissu cellulaire du bassin; la hernie de la vessie entre les os pubis; des échimoses le long des muscles *psos*; la lésion du canal de l' urètre; l' incontinence d' urine, & des gangrènes plus ou moins profondes, &c. forment le tableau des accidens dont cette nouvelle opération est susceptible. En accordant que ceux de l' opération, césarienne soient aussi formidables pour la mère, au moins offre-t-elle une ressource assurée & exempte de tout danger pour l' enfant. La-quelle des deux opérations sera donc préférable?"

*Note.* La section du pubis a eu des suites fâcheuses non-seulement dans ce cas; mais en d' autres où l' on avoit porté l' écartement des os pubis au-delà d' un pouce & demi, quoique le bassin ne fût que médiocrement resserré. Sur trente-

trois femmes dont nous avons parlé, douze sont mortes évidemment des suites de l'opération césarienne :\* nous n'y comprenons pas celle qui fait le sujet de l'observation de M. *Bonnard*, Chirurgien à Hesdin ; puisque la section du pubis n'a pas été faite complètement. Parmi les vingt autres, le plus grand nombre étoient accouchées naturellement auparavant, ou l'ont fait depuis très-heureusement ; & plusieurs sont restées infirmes. § 2092. Quand on pourroit, sans inconvéniens pour la femme, obtenir deux pouces & demi d'écartement entre les os pubis après la section de leur symphyse, l'opération césarienne sera toujours la seule & unique ressource que puisse offrir la chirurgie, dans le cas de mauvaise conformation extrême du bassin ; la section du pubis ne pourroit entrer en parallèle avec elle, qu'autant que le petit diamètre du détroit supérieur auroit au moins deux pouces & demi d'étendue. Si nous avons suspendu notre jugement, lors de notre première édition, sur la préférence qu'on devoit à ces méthodes, dans le dernier de ces cas, en attendant des connoissances plus positives sur l'innocuité ou le danger d'un écartement aussi considérable ; si nous exigeons que des hommes, qui n'avoient aucun intérêt à faire valoir cette nouvelle méthode au détriment

\* The introduction of the word césarienne appears to be a typographical error.



de la première ; que ses adversaires, en un mot, eussent vu un écartement de deux pouces & demi, sans rupture des symphyses sacro-iliaques, & sans inconvéniens, pour nous faire adopter cette nouvelle opération ; plus instruits aujourd'hui sur tous ces points, nous ne craignons pas de la rejeter, et d'assurer qu'on n'a jamais écarté les os pubis de deux pouces & demi sans qu'il en eût coûté la vie à la femme. Elle n'a eu de succès que lorsqu'on l'a faite sur des bassins au moins de trois pouces moins un quart de petit diamètre, & qu'autant qu'on a borné l'écartement des os de beaucoup au-dessous du terme où l'on s'est persuadé l'avoir porté ; dans ces cas, en un mot où elle étoit absolument inutile ; le bassin étant plus grand encore, puisque nous l'avons trouvé au-delà de trois pouces sur quelques-unes des femmes. La section du pubis ne peut soutenir aucun parallèle aujourd'hui avec l'opération césarienne ; on pourroit au plus, en quelques circonstances seulement, la substituer au forceps : ne pouvant, sans de grands inconvéniens, donner au bassin, dans la direction du pubis au sacrum supérieurement, que deux lignes d'accroissement ; comme cet instrument peut, sans danger, réduire de deux lignes le diamètre de la tête du fœtus. Mais quel sera le Praticien qui préférera, à une méthode couronnée par des milliers de succès, une opération nouvelle qui ne parôit encore

qu'entourée d'écueils ? Si l'on accordoit quelques avantages à celle-ci, ils ne seroient jamais plus évidens que dans l'enclavement de l'espèce dont parle *Roederer*, où l'on ne peut, dit-il, introduire aucun instrument entre la tête & le bassin, dans quelque endroit qu'on tente de le faire : elle mériteroit alors la préférence sur l'ouverture du crâne, sur l'usage des crochets, & la section césarienne proposée par le même Auteur : elle seroit préférable encore dans le cas où le détroit inférieur est resserré transversalement, s'il ne falloit que peu d'écartement pour donner à ce diamètre l'étendue qui lui manque."

“ § 2091. Though this operation very seldom secures the child's life, even when the *pelvis* is not excessively deformed, it is not then always exempt from the severest consequences to the mother. *The death of both is certain when that deformity is extreme.* The consequences of a spontaneous separation of the *ossa pubis*, and of the *ossa ilia* and *sacrum*, in some natural or laborious labours, long since announced those which might be expected from this new operation; the example of *Vespres*, those of the fifth woman on whom *M. le Roy* performed it, the fourth by *M. Cambon*; that at *Arras*, at *Dusseldorp*, at *Spire*, at *Lyon*, at *Génes*; that by *M. Riollay*, by *M.*

*Matthiis, &c.* have proved that it was not without cause that those accidents were dreaded. A devastation in the external parts and the neck of the uterus; an inflammation and gangrene of that viscus; collections of purulent, sanious and putrid matter in the cellular tissue of the pelvis; a hernia of the bladder between the ossa pubis; echimoës along the psoæ muscles; injury to the canal of the urethra; incontinence of urine, and gangrenes more or less profound, &c. form the group of accidents of which this new operation is susceptible. Granting that those of the Cesarean operation are as formidable for the mother, at least it presents a certain resource, exempt from every danger, for the child. Which of the two operations therefore ought to be preferred?

*Note.* The section of the pubes has had disagreeable consequences, not only in this case, but in others, where the separation of the ossa pubis has been carried beyond an inch and a half, though the pelvis was only moderately contracted. Of the thirty-three women I have mentioned, twelve evidently died of the consequences of the operation: I do not reckon her who is the subject of the operation of *M. Bonnard*, surgeon, at *Hesdin*; since the section of the pubes was not completely made. Among the other

twenty, the greater number had been delivered naturally before, or have been safely delivered since; and several have remained infirm.

2092. Even if we could, without inconveniences to the woman, obtain a separation of two inches and an half between the *ossa pubis* after the section of their *symphysis*, the *Cesarean operation* would still be the sole resource in cases of extreme deformity of the pelvis; the section of the *pubes* cannot enter into comparison with it, except when the small diameter of the superior strait shall have, at least, an extent of two inches and an half. Though I suspended my judgement, at the time I published my first edition, concerning the preference to be given to one of these two methods, in the latter case, till I could procure more positive information of the innocence or danger of so considerable a separation; though I required that men who had no interest in vaunting this new method, to the detriment of the former; in one word, that its adversaries should have seen a separation of two inches and an half, without a rupture of the *sacro-iliac symphyses*, and without inconveniences, to make me adopt this new operation; at present, better informed on all these points, I am not afraid to reject it, and to affirm, that no one has ever separated the *OSSA PUBIS* two inches and an half, without destroying the life of the woman.

*It has had no success but when it has been performed on PELTS at least two inches three quarters in the small diameter, and when the separation has been limited to much less than the point to which they fancied it was carried; in those cases, in fact, where it was absolutely useless: the pelvis being larger still, for I have found it to be more than three inches in some of the women. The section of the pubes cannot at present maintain any comparison with the Cesarean operation; at most, it might be substituted for the forceps, in some particular cases only: for it cannot, without great inconveniences, give the pelvis an increase of more than two lines from the pubes to the sacrum superiorly; and that instrument may, without danger, reduce the diameter of the child's head as much. But what practitioner would prefer a new operation, which seems to be surrounded by rocks on every side, to one that has been crowned with a thousand successes? If we allow the former any advantages, they would never be more evident than in that species of locked head mentioned by Roederer, where we cannot, says he, introduce any instrument between the head and the pelvis, at whatever part we attempt it; in that case it would merit a preference, over opening the cranium, the use of the crotchets, and the Cesarean section proposed by the same author: it would be preferable also, in cases where the inferior strait is*

contracted transversely, provided that a small separation were sufficient to give that diameter the necessary extent." Heath's Trans. Vol. III. P. 346.—350.

Where the deformity of the Pelvis has been occasioned by Rickets, Exostosis, or Fracture of some of the bones, and is in such a degree as to require, that the Ossa Pubis be separated from each other to the distance of two inches and a half, or even less, in order to allow of the transmission of the fœtus through its cavity; the recorded cases of the Sigaultian operation teach us, that the Ossa Innominata have always been forced from the Os Sacrum, and that the death of the parent has been the consequence.

That the same dreadful circumstance is to be feared also in those cases, where the distortion of the pelvis is occasioned by Malacosteon, is demonstrated by the experiment, which was made by Dr. Hunter, on the pelvis of Elizabeth Hutchinson; for in separating the Ossa Pubis to about the distance of two inches and a half, both the Sacro-Iliac Symphyses were torn asunder, and the largest circle that could then be described, in the interval of the bones of the Pelvis, was only  $2\frac{1}{4}$  inches in diameter. See Vaughan's Cases of

Hydroph. Pl. ii. Fig. 1. See also Plate 7th of this Letter, in which an Outline of the superior aperture of that pelvis is given.

From one case of Synchrondrotomia Pubis, namely, that performed in England, by Mr. Welchman, of Kington, in Warwickshire, it appears, however, that in a very deformed pelvis sufficient space has been gained for accomplishing the delivery, without separating the Ossa Innominata from the Os Sacrum (at least the separation is not noticed), owing to the bones being very soft and yielding. But as the patient's knees were carefully kept from being moved to a greater distance, after the section, it is to be presumed, that the Ossa Pubis were not nearly separated to the extent above-mentioned. Of this very interesting case, I shall subjoin an abstract, and for the detailed account must refer you to the London Med. Journal for the year 1790.

Mary Ordway, in her second pregnancy, about the year 1774, received a hurt in her loins from a fall, which occasioned great pain, and was relieved by losing some blood. She had a natural easy labour; but became lame immediately after her lying-in, and was troubled with rheumatic pains. Two years after, Mr. Welchman delivered her of another child, after three

days severe labour. On the 22d of September, 1782, he was called to her again. She was now in her thirty-ninth year, and her last child was six years old. From having been a stout woman of about five feet six inches high, she was reduced to less than four feet in height; her knees and chin almost meeting, and the muscles being so contracted, that her knees could be separated but very little without occasioning great pain. For the last two years she had been mostly confined to her elbow-chair, or her bed. Upon examining her *per vaginam*, he found the nates of the child presenting, and the pelvis very much distorted. She was feverish, vomited frequently, and got no sleep.

Sept. 3. A slight flooding came on, which was suppressed by the admission of cool air into her chamber, and the exhibition of Tinct. Ros. The pains became strong, but the child did not advance. Mr. Welchman, and his son, frequently visited her during this day and night, and were both of opinion, that she had not the least chance of living without an operation.

Sept. 4. The section of the pubes was proposed, and consented to, Mr. Welchman being more inclined to perform it, as the mother constantly affirmed she felt the child move. No



urine having been passed for a considerable time, an attempt was made to pass the catheter, but without success, owing to the belly's being very pendulous, and the bladder's being much turned over the pubes. He found great difficulty in making the upper part of the incision, without wounding the bladder, from the above-mentioned circumstance. Whilst he was dividing the Symphysis, by cutting carefully from within outwards, he desired the assistants, who held the patient's legs, to be careful not to pull her knees asunder. He was astonished to find the *nates* of the child brought down to the *os externum* the first pain after the division was made; and that the body and head were extracted with ease. The child was large and quite putrid. The wound being dressed, and a broad bandage applied round the hips, she was put to bed.

Sept. 5. The patient passed a comfortable night, by taking an opiate. And Mr. Welchman had some hopes of her recovery, though her pulse continued much too quick. She complained of a pain in her left side, which she had felt for some days before her labour commenced, and upon examination the uterus was found much too large, and painful when pressed on the left side. Proper remedies were administered; And the next day,

Sept. 6. He found her much better. She was imprudent enough to sit up to tea in the course of this day, and exposed herself to a current of air.

Sept. 7. She was evidently worse; had a troublesome cough, and the pain in her belly was much increased.

Sept. 8. This morning she had a violent rigor, succeeded by a hot fit, the pain in her belly was much increased, and her pulse was at 130, but extremely weak.

Sept. 9. The abdomen was much swelled, and she had cold sweats. And on

Sept. 10. She expired early in the morning.

Mr. Welchman is of opinion from an impartial review of the symptoms, that there is not the least reason to suppose her death was a consequence of the operation. He could not obtain permission to open the body till the 13th; at which time, although it was become very putrid, he could discover very evident signs of inflammation on the left side of the *Fundus Uteri*.

The pelvis was removed, and being cleared from the soft parts “measured from side to side

$4\frac{1}{2}$  inches, from the pubis to the sacrum  $2\frac{1}{4}$  inches, just at the symphysis, but jutting in on each side to about an inch; and the space betwixt the tuberosities of the ischia was but  $1\frac{1}{2}$  inch."

The bones of the Pelvis were so very soft, that into most parts of them a knife could be passed with the greatest ease.

Notwithstanding the great disproportion betwixt the capacity of this pelvis and the bulk of the child's head, "the woman neither complained of pain in the divided parts, nor in her back, from any distension of the posterior ligaments, but was even able to sit at the tea table the second day after the operation." Mr. Welchman assigns as the reason, why the operation was not proposed sooner, that both himself, and his son, perceiving a considerable motion in the bones of the pelvis during every strong pain, he was willing to hope, if the child had been small, it might have been extracted without the operation.

In this instance there can be little doubt, that the softened bones of the pelvis yielded to the impulse of the child's body, and thereby obviated the necessity of a distant separation of the Ossa Pubis.

When Dr. Hunter wrote his Reflections relative to the Operation of Cutting the symphysis of the Ossa Pubis, the experiments he had made, enabled him to speak decisively concerning the laceration of the ligaments, connecting the Os Sacrum with the Ossa Innominata; but the danger, arising from this dreadful accident, had not then been ascertained by experience, as will appear evident from the following extract. “ I have had occasion to perform this operation so often upon the dead body, that I do not apprehend I can be much mistaken upon this subject.”

1st. It is extremely difficult to execute it with a *thick knife*, however sharp in the edge, the ligamentous and gristly substance between the bones is so incompressible, that it will hardly make room for the thicker part of the knife to follow its edge; but a *thin* knife goes through it with great ease.

2. Whoever has had a little practice, will find that it may be executed without any danger of wounding the *Bladder* or *Urethra*; because in cutting cautiously with a thin knife, from above, downwards and inwards, the instant that the whole is cut through, there is both a particular sound, which informs us that the business is

done, and the two bones fly asunder to a sensible distance.

3. When the *Symphysis* is completely divided, the *Ossa Pubis* separate so little a way, that some force is necessary to produce an interval of half an inch; and upon encreasing the force, till the space of interval comes to two inches and a half, there is a continued crash, from the tearing of the ligamentous fibres at the posterior joints, viz. at the sides of the *Sacrum*. This, tho' requiring great force, is easily effected, by bringing the thighs to right angles with the trunk of the body, and pressing the knees gradually outwards and backwards. In that way, a small force has a great effect, because it has the advantage of a long lever, and is assisted by almost the whole weight of the lower extremities.

4. When such a violent separation of the *Ossa Pubis* has been produced, the *Sacrum* and *Ossa Innominata* remain in contact, only at their posterior parts; the ligaments that connect them at the fore part being all, more or less, torn asunder.

5. The mischief that may ensue upon cutting one joint of the *Pelvis*, and tearing the other two asunder, can be ascertained by experience only. It is proposed, that the incision at the

*Pubes* shall not penetrate into the cavity of the *Abdomen*. If, by accident, that should happen; the operation would of course be very dangerous. Lacerations of tendons, ligaments, and fleshy parts, when not complicated with an external wound, generally heal up in a kindly manner, as we see in cases of the ruptured *Tendo Achillis*, dislocations, and fractures.

But, on the other hand, at the time of parturition, the body is remarkably disposed to an inflammatory fever, which is always very dangerous when it rises to any height; and therefore, whatever exposes the body to considerable inflammation at that time, we may presume, must be attended with some danger. And it must likewise be remembered, that women who are exceedingly crooked, are commonly so weak, that they easily sink under any great disease." Vaughan's Cases, &c. p. 83.—86.

Dr. Hunter does not any where assert in positive terms, that the Sigaultian operation is preferable to, or that it will supersede the necessity of, the Cesarean section. He tells us, at page 96, "that the section of the *Symphysis* may possibly be found to be a much better resource than the Cæsarean section, in a very few rare cases."

And afterwards says, "But supposing a case, where no success can be expected from the crotchet, either on account of the extraordinary narrowness of the *pelvis*, or partly from that circumstance, and partly from a great projection of the *lumbar vertebra* over the cavity of the *pelvis*, hardly allowing any part of the child to come within the safe reach of the crotchet; in such a case, instead of the Cæsarean section which is so dreadful, because so generally fatal to the mother, this new operation, may be found to give the mother a good chance for life, and tolerable health, *if it will make room sufficient for bringing the child within the sphere of the crotchet.*"

Will you then, Sir, after a careful perusal of the above paragraphs, and of the numerous cases of Synchronotomia Pubis, given by Baudelocque, persist in proposing to combine the two operations, and to divide the symphysis pubis to make way for the crotchet, "*when a case shall arise in which the child cannot be delivered by the crotchet, from the brim of the pelvis being no more than one inch in diameter?*" Page 65.

Will you still feel yourself justified in asserting, that the compound operation, you have recommended, "will furnish a resource, approved by reason and sanctioned by experience; inas-

much as the section of the symphysis pubis has been made, and the crotchet has been used, though separately, yet with safety?"

It would be just as legitimate reasoning to say, that a child can raise a weight, equal to twenty-four pounds, because he has, *though separately*, raised two twelve-pound weights.

Does it follow, because the Sectio Symphysis Pubis has been made, and a child extracted, without materially endangering the patient, where the conjugate diameter was about three inches, that the same operation may be safely performed, and a child extracted, where the space from pubes to sacrum measures only one inch? By no means. In the former case, the bones of the pubes are but little separated, and the soft parts even are not always lacerated. But in the latter case, in order to enable us to extract the child, the bones of the pubes must be separated to a very great distance, the soft parts must be dreadfully lacerated, and even the bones, composing the posterior part of the pelvis, must be forcibly torn, or broken asunder at the sacro-iliac synchondroses, the dreadful consequences of which are enumerated above.

When treating of the difference in the event of



Cesarean births in this kingdom, and on the continent, you have, as has been already noticed, said at p. 3. “ However inexplicable the subject may be, the *intelligent practitioner* will be governed by the fact, and will not hazard the life of his patient on theoretical grounds.”

I have had occasion to mention *more than a hundred cases*, in the course of this letter, and can adduce many more, where the Cesarean operation has preserved the life of the parent. Therefore, I think I am governed by the fact, and do not hazard the life of my patient on theoretical grounds, when I perform it. And I call upon you to produce *one instance*, in which the operation of Sectio symphysis pubis has been employed, without destroying both the parent and child, in such cases of extreme deformity as you propose to employ it.

Lest you, or any of your readers, should be induced to make trial of this dreadful operation, I will relate, in this place, two cases from Baudelocque.

“ § 2079. Celle qui fait le sujet de l’ observation de M. Guérard étoit bien plus contrefaite, puisqu’ on ne trouva son bassin, à l’ ouverture du cadavre, que de deux pouces six lignes. Ne

pouvant s' accorder sur la nécessité de l' opération, et l' un des consultans se persuadant qu' on pouvoit extraire l' enfant sans ce secours extraordinaire, on fut chercher un des pieds, qui se présenteoit dans le voisinage du col de la matrice, & qu' on ne put amener que difficilement dans le vagin. On fit beaucoup d' efforts inutiles, soit pour faire descendre ce pied, soit pour aller prendre le second, & ce n' est qu' à la suite de ces efforts qu' on pratiqua la section du pubis. Quoiqu' elle eût donné un pouce & demi ou environ d' écartement, l' extraction de l' enfant n' en devint pas plus aisée ; on mit à contribution toutes les ressources de l' art, & toutes furent infructueuses. On arracha d' abord la jambe gauche, & on repoussa le tronçon de la cuisse dans la matrice, pour se frayer une route vers la seconde extrémité qu' on ne put dégager, quoique M. *Guérard* & deux consultans y travaillassent tour-à-tour. La tête paroissant vouloir se rapprocher, on attendit, espérant qu' elle s' engageroit, et trompé dans cette nouvelle attente, on ouvrit le crâne, on en évacua le cerveau, & on appliqua successivement le forceps & le crochet. On ne put en détacher que quelques pièces, au moyen d' une sorte de tenaille, & le reste parut inébranlable : la nature, après cinq heures de repos, l' expulsa cependant. Cette opération commencée à une heure après-midi, ne fut terminée que sur

les neuf heures du soir, & la femme y survécut onze jours.

§ 2080. La conduite de M. *Bonnard* paroîtra bien plus sage : n'ayant pu couper complètement la symphyse du pubis qui lui parut ossifiée, & imaginant bien que ce seroit en vain qu'il le feroit par rapport à l'état des symphyses sacro-iliaques, qui devroient être, dit-il, également endurcies, il aima mieux recourir à l'opération césarienne, qu'il assure avoir faite en deux minutes. Il conserva l'enfant qui étoit très-gros ; mais la femme mourut quelques jours après. Si l'on ne peut attribuer sa mort à la section du pubis, qui n'a été que commencée, il n'est pas moins certain que la conservation de l'enfant a été le fruit de l'opération césarienne : le bassin n'ayant été évaluée qu'à deux pouces de diamètre, & l'histoire de la section du pubis n'offrant encore aucun exemple de succès en pareils cas."

" 2079. The woman who was the subject of M. *Guerard's* observation was much more deformed, since on opening her body, the pelvis was found to be only two inches six lines. The accoucheurs not being able to agree concerning the necessity of the operation, and one of them thinking the child might be extracted without that extraordinary aid, they sought for one of the feet, which

presented in the neighbourhood of the neck of the *uterus*, and which could not without difficulty be brought into the vagina. Many fruitless efforts were made, both to bring along that foot, and to search for the other: and it was not till after those efforts that the section of the pubes was performed. Although it produced a separation of an inch and an half, or thereabouts, the extraction of the child was not at all facilitated; every thing that art could suggest was tried, but all in vain. They first pulled off the left leg, and pushed back the dismembered thigh into the uterus, in order to clear the way to the other extremity, which they could not bring down, though M. *Guerard* and two other accoucheurs laboured at it one after the other. The head seeming inclined to come, they waited in the hope that it would engage; but being deceived in that expectation, they opened the *cranium*, evacuated the brain from it, and successively applied both the forceps and crotchet. They could only get away some pieces of it with a sort of nippers, and the rest appeared immoveable: Nature, however, expelled it, after five hours rest. This operation, begun at one o'clock in the afternoon, was not finished till about nine in the evening, and the woman survived it eleven days.

2080. The conduct of M. *Bonnard*, will appear much more prudent: not having been able to cut through the *symphysis* of the *pubes* which appeared to him to be ossified, and thinking it would be in vain to do it, on account of the state of the *sacro-iliac symphyses*, which must, says he; have been equally hardened, he determined to have recourse to the Cesarean operation, which he affirms, he performed in two minutes. He preserved the child, which was very large, but the woman died in a few days. Though we cannot attribute her death to the section of the *pubes* which was but begun, it is not less certain that the preservation of the child was owing to the Cesarean operation: the diameter of the *pelvis* having been estimated at only two inches, and the section of the *pubes* hitherto presenting no example of success in such a case." Heath's Transl. Vol. III. P. 331—333.

In these cases we find two circumstances mentioned, of which you have not taken the least notice, namely, the presentation of another part of the child, instead of the head; and the ossification of the Symphysis Pubis, and the Sacro-iliac Synchronroses? Would not either of these occurrences present a very material obstacle to your compound operation? They are not

indeed very frequent occurrences, more particularly the latter, but they ought always to be had in view as possible accidents.

At p. 68, "the crotchet," you say, "has been successfully employed in dimensions that will probably be thus acquired" viz. by the section of the symphysis pubis. Let me here ask you, if you, upon reflection, can think it advisable, that a child should be absolutely sacrificed, for the mere *probability* of being able to deliver the mother?

For my own part, after much reflection upon the subject, I am induced to believe, that the destruction of a child by Embryulcia is a justifiable homicide only, when performed with a *certainty* of effecting the delivery, and a considerable expectation, or a *high degree of probability*, of preserving the life of the parent. I am decidedly of opinion, that it ought not to be practised as an experiment, *upon a bare probability* of being able to accomplish the delivery. I therefore declined the operation of Embryulcia in the two cases of Ann Lee, and Isabel Redman; because I was well assured, that I could not have delivered them, after having had recourse to this very painful and shocking expedient. And I performed the

Cesarean operation, by which means I preserved one life, and I am satisfied, from the inspection of the bodies after death, that no practitioner could have done more.

How unspeakable must be the distress of an accoucheur, if, after having destroyed the fœtus, he should find it impossible to deliver his patient, *per vaginam*! And if the painful alternative should be, after using extreme violence in vain, to leave the poor creature undelivered, or to have recourse to the Cesarean operation, under such distressing, and hopeless circumstances.

An attempt has been made to render the operation of embryulcia less shocking, by depreciating the value of the life of the fœtus, and by denying, that it possesses the power of sensation. "But as children before birth," says Dr. Osborn, "are incapable of mental apprehension, so it is as undoubtedly true, that they are not yet arrived at, or in the possession of bodily sensation, and cannot therefore suffer pain, or become objects of cruelty." Essays, &c. p. 204. And we are told by him, at p. 205, that "A strong presumption that such, however, is the state of the case, arises from this observation; that although children do often die in utero, yet the mother never can discover, by her feelings, when death

takes place there. The disease of which the child dies, and the act of dying, are equally unknown, and unnoticed by her. The cessation of the accustomed motion, is the first, and, for some time, the only difference observable by the mother, between the life and death of the child in utero."

As the nervous system of the foetus is totally independent of, and unconnected with, that of the mother, although the former were possessed of the most exquisite sensibility, I do not see how the mother should know any thing of the disease, or uneasy sensations, immediately preceding its death, unless these should excite convulsive motions; in which case, I have been frequently informed by mothers, that they have been conscious of them, and have dated the deaths of their infants from that period. This argument, therefore, has not the least tendency to prove the foetus devoid of bodily sensation, and the Doctor seems to be aware of its insufficiency, for he afterwards says, at p. 206, "This conjecture, therefore, may not be considered as sufficient evidence, however presumable, that the child is not yet arrived at bodily sensation, before birth takes place. But the following observation, I think, must be esteemed *incontestible evidence* of the truth of the assertion.



When we are compelled, by dreadful necessity, to open the child's head, while we know it is yet living in utero, that operation requires such extreme and painful violence, that were the child endowed with the slightest sensation, he must of necessity feel it; and his feeling must necessarily be accompanied with such struggles and exertions, as would be emphatically expressive of pain, and must be readily perceived by the mother, in a part so sensible, and irritable as the uterus.

Upon accurate and repeated inquiry in several such cases, I could never learn, that the mother was sensible of any such alteration in the motion of the child, even at the commencement of the operation, when the violence offered to it first takes place, and must be most painful. We are, therefore, I think, warranted in the conclusion, that no sensation whatever does exist at that time; and that no cruelty, or barbarity, can be said to be committed upon a being absolutely without feeling."

In reply to this observation, I shall observe, 1st. that it is contradicted by my own experience (and as I am informed, by that of others); for in more cases than one, where I have had occasion to use the perforator, the mother has ex-

pressed her consciousness of the violent struggles of the fœtus ; and I have, at the same time, been sensible of the motions of its head, although in the absence of the uterine contractions. That the life of a fœtus should sometimes be extinguished, without one convulsive motion being produced, is not at all wonderful, when we reflect upon the previous compression of the head of the child, and the extreme violence done to the brain, by pushing the perforator into it. Does not extreme injury, done to the brain of an adult, frequently extinguish life so instantaneously, that no struggle intervenes between the receipt of the injury and death? and

2dly. Admitting this observation, as universally true, it would, in my opinion, prove more than was intended, for it would tend to establish the want of irritability in the unborn infant, which, I presume, Dr. Osborn, will hardly contend for.

In confirmation of his opinion, the Doctor says, “ that bodily sensation would be of no service to a child in utero, and nature never performing works of supererrogation either in the moral or physical world, I must believe it has no feeling before birth.” Ibid. p. 449.

To me it appears that bodily sensation is necessary, and I am not certain, that it is not equally as necessary as bodily motion, to the fœtus in utero; and as the latter power is most certainly possessed, I do not see why the former should not. Besides, I have little doubt, that the motions of the fœtus very frequently take place in consequence of the uneasy sensations, arising from its limbs remaining too long in one position; and as the power of moving our limbs is frequently impaired by suffering them to remain too long in one position, sensation appears to me as necessary, in order to obviate the ill effects of the want of motion of the limbs in utero, as it is in the early periods immediately subsequent to birth; in which no doubt can surely be entertained, that the child can both feel and move.

Having thus answered the arguments, adduced with the view of proving the fœtus in utero devoid of sensibility, I will now state my reasons for considering the fœtus, as equally, if not more sensible, than at any other period of life.

1. The *Brain and Nerves* are larger, in proportion to the rest of the system, in the fetal state than afterwards.

2. A child born in the seventh or eighth

month, or even earlier, gives the most unequivocal proofs of its powers of sensation, immediately on its being ushered into the world.

3. There does not appear to be any power, acting upon the fœtus in utero, which can destroy, or even impair the communication between the nerves and the encephalon; or in any way render the latter incapable of receiving impressions.

If then the *genus nervosum* be in excess, and proved to be susceptible of sensation, before the ninth month, and no power can be shewn to act upon it, which can destroy, or blunt this faculty whilst it remains in utero, I think we may consider it, as proved beyond all doubt, that the fœtus is possessed of acute sensation before birth.

The comparative value of the life of the child, and parent, I do not mean to discuss in this place. But I will just put one question to you, Do you think, that a healthy child's life ought to be sacrificed, for the chance of preserving, for a few months, a mother labouring under an incurable disease, burthensome to herself, her friends, and society?

I had almost forgotten to notice the following

assertion, which occurs at page 65 of your Reflections, "Many experiments have been instituted to ascertain the space that would probably be gained by the separation of the bones at the symphysis pubis, without injuring the sacro-iliac ligaments, and, in some that I witnessed, it appeared to me to be sufficient for the purpose." Do you mean to say, that you have seen as much space gained by the sectio symphysis pubis, as would enable you to extract a child through a pelvis so extremely distorted as you have stated, without tearing asunder the sacro-iliac synchondroses? Have you ever seen this operation instituted on a dead female, who had a materially distorted pelvis? For my own part, in the two winters that I attended the Dissecting Room at St. Thomas's Hospital, I never saw a body with a distorted pelvis introduced; and if the Windmill-street Room afforded more than one, you were fortunate in seeing the experiments instituted in these cases. Perhaps you will be so good as to state the dimensions of the pelves, before and after the Sectio Symphysis Pubis, in the experiments you witnessed, and also who were present at them.

You conclude this most extraordinary performance with saying, "I hope that in future all traces of the Cæsarean operation will be banished

from professional books ; for it can never be justifiable during the parent's life, and stands recorded only to disgrace the art."

Your modesty is eminently conspicuous in this quotation. You have here opposed *your own opinion* to the *judgement of the most eminent practitioners in this Island, as well as on the Continent*. In London we find, that the following Gentlemen approved of, and assisted at, the two Cesarean operations, performed in that city, namely, Drs. Cooper, Ford, Cogan, Bromfield, Garthshore, Hunter, James Ford, Mackenzie, Orm, Underwood, Lowder, Heineker, Maclaurin, and Wathen, Messrs. Hunter, Thompson, Hewson, Patch, and Graves. In Edinburgh, the Professors, and the most eminent Surgeons, whose names it is unnecessary to recount, have given their sanction to the propriety of performing the Cesarean operation.

Having now repelled your foul attack upon my professional character, by proving satisfactorily, *that your book is an assemblage of unjust and malicious insinuations, of pernicious precepts, of gross misrepresentations, false assertions, and mutilated extracts*, I might venture to lay down my pen ; But conscious of having done my duty in

the *case*, alluded to by you, as “a late occurrence,” and for the management of which, I have fallen under your severe, and ill-founded censure, I do not shrink from a publick investigation of my conduct. I shall, therefore, proceed to give a detailed account of this, and also of a former case of Cesarean operation, which occurred to me, some years ago, and shall willingly leave it to be determined by my professional brethren, whether, in both cases, I have not acted in the best possible manner under such unfortunate circumstances.

*The Case of Ann Lee.*

On Sunday, the 23d of September 1798, about ten in the evening, I was desired to visit this poor woman, then living in Cumberland-Street, Manchester.

From Mr. Brigham, whom I met in consultation, I learnt, that he had attended her since Sunday the 16th, and that Dr. Le Sassier and he had visited her conjointly, since Tuesday the 18th; that, on Monday night, she was attacked with a convulsion; that on Tuesday she experienced a similar attack, and that on Wednesday she had five convulsive paroxysms, which were very severe, and succeeded by stupor and delirium; that he had ascertained the pelvis to be

very much deformed at its superior aperture on Tuesday, and had intimated his doubts as to the possibility of a delivery *per vaginam* to the attendants; that, on Thursday, the Orificium Uteri was dilated to about the size of a crown-piece, that the membranes burst on that day, and the os uteri, on Friday, was become again so much contracted, as scarcely to admit one finger, and the presentation of the child still indistinct; that, on this day (Sunday the 23d), finding no change, he judged it impossible to deliver her with the crotchet. He moreover informed me, that the patient considered the child as alive, and that the attendants believed they had very lately felt the motion of it externally; that he could not be quite certain what part of the child presented; and that Dr. Le Sassier, in consequence of some engagement, could not attend.

In addition to this information, I learnt from her mother, that our patient was twenty-seven years of age; that she was of very low stature; that she was ricketty, when an infant, and unable to walk at all, till she was two years old; that she had enjoyed a good state of health, during her pregnancy; that she had never been subject to convulsions, except during the period of dentition, and that she had been in labour of her



first child since the morning of Friday, the 14th of this month.

Her pains were now very frequent and excruciating; her belly painful, on very slight pressure, her pulse beating from 140 to 160 strokes in a minute, her hands clammy and cold; and her spirits and strength much exhausted. On an examination, *per vaginam*, I ascertained, that the head of the child presented, and I could distinctly feel a *Suture*; but every part of the head was above the superior aperture, and at some distance from the *Orificium Uteri*, which was thick, rigid, and so much contracted, that it would not, without difficulty, admit the introduction of more than one finger. A portion of the *Cervix Uteri* was within the cavity of the Pelvis, and both this part and the vagina were extremely sensible to pain; for she could not bear the gentlest examination, without uttering the most piteous complaints.

It was not an easy method to ascertain, with precision, the dimensions of the conjugate diameter at the brim of the Pelvis, owing to the *Cervix Uteri* being interposed between the *Symphysis Pubis*, and *Os Sacrum*, as stated above: But after taking a great deal of pains, I satisfied myself, that there was not, in any one point, from

the anterior to the posterior part of the superior aperture, the space of one inch and a half, and that the parietes uteri occupied more than one third of this space. The inferior aperture of the Pelvis did not appear to me to be very different from the common size and form.

Having practised Midwifery more than twenty years, and having been, during the greatest part of the time, in very extensive practice, in a very populous neighbourhood, I have had occasion to use the perforator and crotchet very frequently, and also to be present, when they have been employed by others; and knowing from experience, that the use of those instruments is neither easy to the operator, nor perfectly safe to the mother, where there is only a space of two inches, or even somewhat more, in the direction above specified; and knowing also that the base of the Cranium of a moderate-sized fœtus measures, at least, two inches, from one side to the other; I was induced to regard the operation of *Embryulcia*, as totally inadmissible in the present case. And I declared, immediately after I had examined this unfortunate female, to Mr. Brigham, that I was decidedly of opinion, that she could not be delivered without employing the Cesarean section; that the life of the child, if it were then alive, as the mother repeatedly and positively

declared it to be, might be preserved by the operation; that much expectation of the recovery of the mother could not be entertained, on account of her present deplorable situation; but that I was satisfied this operation would afford her a better chance of life than any other means, which could possibly be adopted.

Mr. Brigham then made another careful examination, and informed me that his sentiments corresponded with mine.

After waiting a little time, in order to observe in what manner the pains recurred; how she supported them; and whether it was probable that any part of the child's head would descend into the Pelvis, I examined her a second time, and finding every circumstance, as before stated, I did not think myself justified in waiting any longer. We therefore mentioned, first to the mother of our patient, and some of the attendants; and afterwards to the patient, that unless the Cæsarean operation was submitted to, we really believed that she could not be delivered. And we wished them, if they were desirous to have the opinion of any other medical gentleman upon the case, to call him in without delay.

We were very soon informed, that the poor

woman was willing to submit to any practice, that we might think it necessary to adopt; and that they did not wish for any further advice.

Dr. Le Sassier had been sent for, but was engaged, and could not attend. I then called upon my friend Mr. Tomlinson, and desired to have his assistance. He very obligingly accompanied me to the house of the patient, and having made a careful examination of the Pelvis, agreed with me very nearly as to its dimensions. We deliberated for some time upon the case, and then begged the favour of Mr. Hall's attendance.

Mr. Hall joined us, as soon as he possibly could, and having examined the poor woman with great care and attention, assured us, that the distortion was greater than he had ever before witnessed in practice, and that he was decidedly of opinion, that the delivery could not be accomplished by the crotchet.

We examined the poor creature once more, and after a consultation of great length, in which every circumstance of the case was fully considered, we were unanimously of opinion, that there was very little chance for the recovery of the mother, and that the Cesarean operation, as giving the only chance of preserving the child's

life, was the most eligible practice that could be adopted, and much preferable to suffering the poor woman to die undelivered.

Every thing being previously prepared for the operation, I performed it in the following manner, about five o'clock on Monday morning. I made a transverse incision, nearly six inches in length, and higher than the Umbilicus, in the right side of the abdomen, to which part the fundus uteri was inclined, through the integuments, muscles, and peritonæum. I then made an incision of the same length, and in the same direction, through the parietes of the Uterus, and with great ease, and expedition, extracted a child, rather larger than the middle size, and which, from the separation of the cuticle, appeared to have been dead some days. The placenta was extracted, at the wound, without any difficulty. The intestines now began to protrude at the wound, and it was not without a great deal of attention, and trouble, that they were reduced, and retained in the cavity of the abdomen, whilst I stitched the external incision, by means of the uninterrupted suture, carefully avoiding the peritonæum.

The quantity of blood lost, during the operation, was believed not to exceed three or four ounces; and no artery was divided, that required

a ligature, or any application, to be made to it for the purpose of restraining hemorrhage.

The poor woman bore the operation with great fortitude, and almost without uttering a complaint. Before she was removed from the table, she became faintish, and had a propensity to vomit. She was carried to bed, as soon as possible, after the operation, and took about thirty drops of Tinctura Opii in a draught. Her pulse was at this time more feeble, and equally as frequent, as before the operation.

On visiting her at ten o'clock the same morning, the symptoms were become so extremely unfavourable as not only to preclude all hopes of her recovery, but all expectation of her remaining alive many hours. Her pulse was excessively frequent, small, weak, and irregular; she was extremely faint, and restless; her face was pale, and contracted; her respiration was very much hurried; but she was not delirious.—No discharge had taken place, *per vaginam*.

From this time she sunk gradually, and expired about eleven o'clock, six hours after the operation.

Having obtained permission to inspect the bo-

dy of our ill-fated patient, Dr. Le Sassier, Mr. Brigham, Mr. Tomlinson, Mr. Hall, and myself, assembled in the evening of the same day.

On opening the abdomen, which was not much tumefied, we observed a thin coagulum of blood, overspreading part of the uterus, and extending, on each side, over a portion of the small intestines. It was supposed to weigh about two or three ounces. This being removed, the uterus was found moderately contracted, and contained a small quantity of coagulated blood within its cavity. The lips of the wound were near together, but were not, in any point, united. There was no appearance of inflammation in the immediate vicinity of the wound; but that part of the peritonæum, investing the hypogastric region, and the inferior portion of the body and cervix uteri, exhibited very strong marks of inflammation.

The Pelvis being cleared of all the soft parts, diminishing its capacity, the dimensions of the superior aperture were accurately taken, and found to be as expressed in Plate III, engraved from a drawing, which I made; viz.

The *Diameter*, in the widest part, four inches and a quarter.

The *Conjugate Diameter*, taken from the *Symphysis Pubis*, to the nearest point of the Projection of the *Os Sacrum*, one inch and five-eighths.

The *Conjugate Diameter*, taken from the *Acetabula* to the projection of the *Os Sacrum*, one inch and nine-sixteenths, on each side.

And the dimensions from the anterior to the posterior part of the pelvis, beyond the points specified, were still narrower on both sides.

The distance from the anterior, and superior, spinous process of one *Os Ilium* to the other was eight inches and a half.

The dimensions of the inferior aperture, and cavity of the Pelvis were not taken, as they did not appear materially contracted. The child was larger than the middle size. The *Base of its Cranium*, taken from the point of one *Processus Mastoideus* to the other, and strongly compressed between the Callipers, measured one inch and seven-eighths.

The body of this poor woman, being measured, was found to be only four feet two inches in height.



*Certificate.*

We, whose names are hereunto subscribed, do certify, that the above statement, so far as we were respectively concerned, is accurate; and, that we are decidedly of opinion, from a careful comparison of the dimensions of the pelvis with the volume of the child, that Ann Lee could not have been delivered by the Perforator and Crotchet.

RICHARD HALL,  
WM. BRIGHAM,  
P. LE SASSIER,  
G. TOMLINSON.

*The Case of Isabel Redman.*

This poor woman, the wife of Thomas Redman of Blackburn, was in the thirty-third year of her age, and in the last month of her fourth pregnancy, when on Wednesday, the 17th September 1794, she sent for Mr. Abraham Chew, at that time one of my pupils. She informed him that she should be at her full time of utero-gestation about the end of that month; that she had severe pain in the abdomen, although different from the pains of labour; that she was costive, had incessant vomiting, great difficulty of breathing, and a troublesome cough.

He thought proper to examine her *per vaginam*, in order to ascertain, whether the pains had produced any effect upon the state of the *orificium uteri*; and was extremely astonished by the narrowness of the inferior aperture of the pelvis, on discovering that he could not pass more than one finger between the Rami of the Ossa Ischia, in one part, and scarcely the points of two fingers, any where, between this narrow point and the *Symphysis Pubis*. He also discovered, that the pelvis was extremely contracted in its dimensions at the superior aperture.

He immediately made me acquainted with these circumstances, and I accompanied him to her place of abode; which was a wretched cellar near Byrom-Street.

On enquiring into the previous history of her case, I learnt the following particulars: She was married about the age of twenty-four, and was delivered of her first child about a year afterwards; her labour being smart, but unattended with any remarkable circumstance. After her recovery from this lying-in, she experienced considerable pain about her loins, with some degree of lameness; and after some time conceived, and bare a second child. This labour was easy, and expeditious.

The pain about her loins, and the lameness continued to encrease. And she again became pregnant, and bore her third child about twenty-two months ago.

At that time she was very lame, extremely weak and emaciated, and was attended by the late Mr. Aspden, a Surgeon then in practice at Blackburn. From whom I learnt, that the child presented an arm, and was of a small size; that he turned it without any difficulty; and that there was, at that time, no material deformity of the pelvis; but that she was then so much debilitated, that he thought she would have sunk under the delivery; and that she, very contrary to his expectation, recovered from her confinement.

It was nearly a month after this labour, before she was able to stand; and she was never afterwards able to walk without crutches. Her stature gradually diminished, and she was of opinion, that she was at this time a foot lower than she had formerly been. She was not sensible of any other deformity except the change, which had taken place about her hips. Her health had been wretchedly bad through the whole of her pregnancy, and extreme poverty had added much to the distress occasioned by her disease.

On examining the abdomen, I observed, that the space between the Pubes and Sternum was uncommonly short, and the uterus, for want of room, was placed nearly transversely, the fundus projecting very much forwards and over-hanging the pubes, with a slight inclination towards the right side. On an examination *per vaginam*, I found the dimensions at the inferior aperture of the pelvis, as they had been stated to be by Mr. Chew; and I also satisfied myself, that the superior aperture was excessively deformed. I found in one part, on the left side of the pubes, the narrowness so extreme, that it would barely allow the introduction of one finger; and, although there appeared to be a little more room on the right side, I was convinced, that there was not sufficient space to allow of her being delivered by the Perforator and Crotchet.

The deformity of the Pelvis was evidently the effect of that state of the bones, which is named Malacosteon, and had been very rapidly induced.

The troublesome symptoms, under which she now laboured, namely, dyspnœa, constipation, incessant sickness, vomiting, and pain in the abdomen, appeared to be occasioned principally by the undue pressure of the uterus upon the intestinal canal, and the Diaphragm; but from

their continuance, the frequency of her pulse, thirst, and the increased heat of the body, I was apprehensive, that inflammation had supervened, or would shortly take place, unless her complaints could be relieved by medical treatment.

The exhausted state of her body appearing to render any evacuation of blood inadmissible, and V. S. not being very powerful in removing inflammation, arising from a mechanical cause, whilst that cause continues to operate with its full force, I directed a laxative glyster to be injected, and frequently repeated, and a Solution of Kali to be given, in the act of effervescence with lemon juice, and the addition of ten drops of T. Opii every four hours. Oleum Ricini was also administered, &c. &c.

She was visited two or three times every day, and her symptoms not yielding to the treatment employed, I began to be apprehensive that she would die, before the commencement of her labour.

I gave the husband (whom I acquainted with the deplorable state of his wife) very strict orders to inform me of it, the instant she perceived any circumstance, that indicated the accession of Labour. And on Sunday the 21st, at ten p. m.

I was called to her, the membranes having just given way. The tension and pain of the abdomen being somewhat relieved by the discharge of the Liquor Amnii, which was in large quantity, and labour pains not coming on immediately, she appeared to be in much better spirits, and was in hopes of getting some sleep, I therefore left her, and desired to be called as soon as the pains became material.

I was called to her again, about six o'clock, on Monday morning, and took Mr. Aspden with me to the house. We found, that she had not slept as she expected, and that her pains were pretty frequent, but not powerful. On examining her at this time, we could not ascertain the position of the child; but Mr. Aspden satisfied himself, that the deformity was so great, as to preclude all possibility of a delivery by embryulcia.

About nine the same morning, Mr. Fisher, and Mr. Danson, both attended at my request. We were now able to distinguish the head presenting, but every part of the cranium remained above the superior aperture of the pelvis.

It being our unanimous opinion, that the Cæsarean operation was the only resource for the

preservation of the life of either the mother or child, the poor woman was made acquainted with our sentiments; and, without the least hesitation, submitted to the operation.

At ten o'clock a. m. I performed the operation, in the presence of all the gentlemen, mentioned above, in the following manner.

As the uterus occupied the middle part of the abdomen, with only a slight inclination to the right side, I made an incision through the Integuments, Tendons of the abdominal muscles, and Peritonæum in the course of the Linea alba, from about four inches above the Umbilicus, to nearly two inches below that part, and only so much to the side of the *umbilicus* as was necessary to avoid wounding it. The Uterus was placed in immediate contact with the parietes of the abdomen, at the upper part of the incision; but, towards the lower angle of the wound, the intestines intervened, and began to protrude, as soon as the external incision was completed.

I then cautiously divided the uterus, and finding the placenta attached to the part I had divided, I cut through a portion of it, and enlarged the wound by a probe-pointed bistouri, directed by my finger introduced at the wound, to the size of

the external incision. The upper angle of the wound in the uterus extended nearly to the fundus.

The left nates of the child presenting at the wound, by laying hold of the thigh, I extracted it very expeditiously, and with great ease. The child was a fine healthy boy, and cried violently the moment it was brought into the world. The Placenta was removed without any difficulty. The intestines now beginning to protrude through the whole of the wound, the position of the patient's head was lowered, and Mr. Fisher, having returned the large prolapsed portion of the intestines, with a good deal of difficulty retained them within the cavity of the abdomen, by introducing his hand at the wound, and spreading his fingers over them, till I began to stitch up the wound by the interrupted suture.

The parietes of the abdomen being extremely thin, the ligatures were placed very near each other, and I carefully avoided passing the needle through the peritonæum. The ligatures were supported by straps of adhesive plaster, and a little lint, and a pledget of tow being laid over the plaster, a many-tailed flannel bandage was applied lightly round the abdomen, and secured



above by a Scapulary, and below by a slip of a roller passed under each thigh.

Not more than six or seven ounces of blood were lost during the operation. The patient was scarcely heard to complain. She grew faint and sick, and retched a little, before she was removed from the table. This faintness continued for some time after she was laid in bed, and her pulse being very frequent, small and weak, a little Volatile Alkali was given to her in a Julep, every half hour, and a small quantity of wine and water was allowed her. She had taken an opiate just before the operation was begun.

At one o'clock p. m. I saw her, and found her faintness and other symptoms abated, but her pulse was small, and feeble, and beat more than 140 strokes in a minute.

At four p. m. I visited her again. She was now much recruited, had been free from sickness since my former visit, had a moderate discharge *per vaginam*, and did not complain of much pain. Her pulse was not so feeble as before, but very frequent, viz. about 144 in a minute.

At eight p. m. Her strength and spirits were

much raised, her countenance natural, and she spoke with confidence of her recovery, but her pulse was still as frequent as before. An opiate was given her at bed-time.

Tuesday, at four a. m. Having been called up to visit her, I was informed that she continued tolerably easy till midnight; that she then began to vomit, and to talk incoherently; and that her strength manifestly declined. She was still able to give a rational answer to any question, which I put to her, but rambled when not spoken to; her pulse was about 160 in a minute, weak and irregular, her respiration much hurried. From this time she continued sinking gradually, and died, about half past seven, the same morning, without having any convulsions.

*Appearances on Dissection.* At three o'clock in the afternoon of the same day, in the presence of the gentlemen mentioned above, having obtained permission of her friends, I opened the abdomen, which was not materially tumefied. The lips of the external wound had remained in perfect contact, but no union had taken place in any one point; and there had been a slight oozing of a bloody water from the wound.

On exposing the cavity of the abdomen, a co-

agulum of blood, about four or five ounces in weight, was observed, adhering to the anterior, and superior part of the uterus. The Uterus was nearly as large as the head of a new-born infant. The incision, which extended from near the fundus downwards, was nearly four inches in length, the lips of the wound were not at all united, they were not indeed in close contact. The Uterus was now about an inch thick, and felt rather like paste. No part of it was inflamed.

Neither was any inflammation observed of any part of the small intestines, although much exposed during the operation, nor upon any of the abdominal viscera, except a portion of the Colon near its origin from the Cæcum, which was indeed much inflamed, and was supposed to have been so previously to the operation.

The Pelvis being removed, its dimensions were carefully and accurately taken. It afterwards was macerated, and when sufficiently cleaned, two Drawings were made from it by an ingenious Artist, and the annexed plates were also engraved by him. In justice to him, I ought to say, that 500 of the best Impressions of each Plate are reserved for another publication.

The Pelvis is rendered lighter by the absorp-

tion of a part of the Phosphate of Lime, and is somewhat softer than in the natural state.

From the *Crista* of one *Os Ilium* to the other, at the most distant points H H Plate I. it measures ten inches and a half.

Dimensions of the Superior Aperture. See Pl. I.

The Conjugate, or Antero-posterior Diameter from the *Symphysis Pubis* to the 4th Lumbar Vertebra A A, is two inches and three tenths. This diameter is not taken from the *Os Sacrum*, or its junction with the last *Lumbar Vertebra*, because the point of their junction is so much sunk within the cavity of the pelvis, that the place, it should have occupied, is represented by the 4th Lumbar Vertebra.

The Diameter G G measures five inches and two eighths; it is taken from very near one *Sacro-Iliac Symphysis* to the other.

The Oblique Diameter, from the right *Sacro-Iliac Symphysis* to the *Linea Innominata*, opposite the nearest point of the left *Acetabulum*, is 4 inches.

The Oblique Diameter, taken from the left

*Sacro-Iliac Symphysis* to the *Linea Innominata*, at the right *Acetabulum*, is four inches and one tenth.

The distance from the right *Sacro-Iliac Symphysis* to the *Symphysis Pubis* G A is five inches.

The distance of these two points, on the left side, is four inches and eight tenths.

The distance from that part of this aperture, which corresponds with the posterior part of the right *Acetabulum*, to the *Os Sacrum* F F, is one inch and one sixteenth.

The distance of the point of this aperture, which is opposite to the anterior part of the right *Acetabulum*, from the articulation of the two last *Lumbar Vertebrae* E E, is seven eighths of an inch.

The distance of the point of this aperture, opposite to the posterior part of the left *Acetabulum*, from the *Os Sacrum*, in the direction D D, is one inch and one sixteenth.

The distance of the point, corresponding with the middle part of the left *Acetabulum*, from the articulation of the two last *Lumbar Vertebrae*, in the direction C C, is not quite five eighths of an inch.

The distance of one *Oss Pubis* from the other, in the points marked B B, is seven eighths of an inch.

The largest Circle, that can be formed, in any part of the superior aperture, does not exceed in diameter one inch and three eighths.

- a. The fourth Lumbar Vertebra.
- b. The extremity of the *Oss Coccygis*.
- cc. The Spinous Processes of the *Ossa Ischii*.
- dd. The *Foramina Ovalia*.
- ee. The *Ossa Ilii* appear as if partly broken in these parts. And at B B the same broken appearance of the *Ossa Pubis* is observed.

The upper margin of the *Symphysis Pubis* is six tenths of an inch higher than the uppermost point of the *Acetabula*.

Dimensions of the Inferior Aperture. See Plate II.

The Transverse Diameter taken from one *Oss Ilium* to the other, in the direction B B, measures five inches and two eighths.

The Transverse Diameter, taken from the Spi-

nous Process of one *Os Ichium* to the other, in the direction C C, is two inches and six eighths.

The distance from the Spinous Process of the left *Os Ichium* to the *Os Coccygis* is rather more than one inch and six tenths.

The distance from the Spinous Process of the right *Os Ichium* to the *Os Coccygis* is one inch and one sixteenth.

The Conjugate, or Antero-posterior, Diameter, taken from the *Symphysis Pubis* to the point of the *Os Coccygis* A A, is three inches and three quarters.

The distance from one *Ramus Ossis Ischii* to the other, at E E, is seven-tenths of an inch.

The distance at the points F F, where the *Rami* of the *Ossa Ischii* and *Pubis* are joined, is one inch and a half, but more inwards these parts are only one inch asunder.

a a The two last *Lumbar Vertebrae*, with the *Os Sacrum* beneath, completely sunk into the cavity of the Pelvis.

b b The Tuberosities of the *Ossa Ischii*, which

are distant from each other, at the most remote points, three inches and three quarters.

cc The Acetabula.

The depth of the Pelvis at the posterior part, if taken from the top of the *Os Sacrum*, is nearly three inches; if taken from the top of the fourth *Lumbar Vertebra* is five inches.

The distance of the junction of the *Os Sacrum* with the last *Lumbar Vertebra*, from the junction of the *Os Sacrum* with the *Os Coccygis*, is one inch and eight tenths, and the distance, from the base of the *Os Sacrum* to the point of the *Os Coccygis*, only one inch and two tenths.

The depth laterally, from the brim to the lowest part of the *Tubera* of the *Ossa Ischii*, is three inches and a half, and the Tuberosities are thrown unusually forwards.

The depth anteriorly, from the upper margin of the *Symphysis Pubis* to the lowest point of the *Tubera Ossa Ischii*, is four inches and a half.

The Form is too irregular to allow of the axis of the pelvis being easily given.



It has been already shewn, that its position with regard to the spine, is in a very great degree changed; the *Ossa Pubis* being placed considerably higher than the uppermost point of the *Os Sacrum*, which will, in some degree, account for the poor woman's great loss of stature.—As the *Os Sacrum*, descended within the cavity of the pelvis, the inferior portion of it was bent upwards so much, that the point of the *Os Coccygis* is situated nearly as high as the base of the *Os Sacrum*.

Mr. Kay, of Forfar, having been so obliging as to favour me with a detailed account of the case, in which he lately practised the Cesarean section, and the permission to publish it in this letter, I shall in this place give the

*Case of Jannet Williamson.*

“ I was called to Jannet Williamson, a married woman, aged thirty-eight, in the Parish of Kirriemuir, Shire of Forfar, early in the morning of September 14th, 1798; and was informed, that she had been in labour, during the three preceding days; that the membranes gave way very soon after the commencement of the labour; and that her pains had been very frequent, and severe. I was told, that Mr. Douglass, Surgeon in Kirriemuir, was called on the 13th, but did not re-

main long with her. On making an enquiry into the previous state of her health, I learnt, that she had been afflicted with severe pains, supposed to be *rheumatic*, for some years ; by which she was so much emaciated and debilitated, as to be confined to her bed for the last six or seven months; that for a considerable time she had not been able to move any of her extremities without assistance ; and that the least motion, in this way, occasioned very excruciating pain in the part moved.

On examining her *per vaginam*, I could with one finger feel a small part of the child's head, above the superior aperture, towards the right side of the Pelvis. On attempting to ascertain the dimensions at the brim, I was astonished to find it so much contracted, by the approximation of the last Lumbar Vertebra and the Os Sacrum to the Ossa Pubis, as only to allow the *points* of two fingers to be pushed upwards, on the right side, at the part where the child's head was felt. And the left side was considerably narrower, for I could not in this part introduce one finger.

The lower aperture was much smaller than natural, but I did not examine it very particularly, as the great obstacle to delivery was in the superior aperture.

Considering her deplorable situation, and knowing that in a former labour, about three years before, she had been delivered, with great difficulty, of a small dead child; suspecting also that the deformity had been encreasing ever since, I told her husband, and the attendants, that there was no possibility of delivering her, but by performing the Cesarean operation, which I described to them; and having occasion to visit a gentleman, in the neighbourhood, I desired them to acquaint the poor woman, and to come to a determination, respecting it, before my return, which would be in a few hours.

Having to pass the town of Kerriemuir, I called, on my return, in the afternoon upon Mr. Douglass, to have his opinion upon this lamentable case. Mr. Douglass being of opinion that she would die undelivered, I told him it was my design, if the patient and her friends should give their consent, to perform the Cesarean operation, and begged his assistance.

When we arrived at the house of our patient, Mr. Douglass examined her, and found her in the same situation, as on the preceding day. And the poor woman being made acquainted with our concurrence in opinion, consented without he-

sitation, and seemed anxious to have the operation performed as soon as possible.

The intestines had been emptied by an injection in the morning ; and she had made water a short time before, we therefore immediately began to prepare for the operation.

Having placed her as well as we could, in bed, upon her back, but more upon the right side than I could have wished, her thighs and legs being so much contracted that she could not be placed otherways, I began the incision on the left side, a little below the umbilicus, with a convex scalpel ; and having cut carefully through the integuments, muscles, and peritonæum, which were very thin, to the extent of an inch, I introduced my finger, and using it as a director, enlarged the incision in an oblique direction upwards, and outwards to nearly six inches. The uterus now appearing I made an incision through its parietes, at the the lower part of the external wound, and carried it upwards and outwards nearly to the fundus, in the same direction, and to the same length as the wound in the parietes abdominis. The placenta being attached to this part of the uterus, I could not avoid dividing a portion of it, about two inches in extent. Whilst I was cutting the parietes of the abdomen and

uterus, there was very little hemorrhage, but it became more considerable during the division of the placenta.

Mr. Douglass supported the abdomen with a hand on each side of the incision, whilst I extracted the child, which was alive, but weakly. The uterus contracting quickly, I with very little trouble brought away the placenta.

Having wiped away the blood, I brought the sides of the external incision together, and secured them with three ligatures, and having covered them with lint, and a compress, I applied a roller.

The operation did not take up much more time than four minutes, and the discharge of blood did not exceed what happens in an ordinary labour. The poor woman bore the operation remarkably well. Her pulse was rendered feeble by it, but, in a few minutes, it returned to its former state, and she expressed her happiness on being freed from the severe labour-pains.

Her pulse continued small, and very frequent, and the lochial discharge took place *per vaginam*, and in the usual quantity, for the first three days. She did not complain of any uneasiness from the

wound, and on the sixth day insisted on being taken out of bed. Her strength gradually declined from this time, and, on the eleventh day, she expired.—The external incision was not healed.—As the body was not opened, I cannot give any account of the state of the cavity of the abdomen.

I should not hesitate to perform this operation again, should a case occur, which requires it; for I consider the death of this poor woman, as owing to the extremely debilitated state of her system.

The child was sent to a nurse, when two days old, and I am happy in being able to say, that it continues healthy."

The Pelves, of which I have given figures, are excellent examples of the diversity of the deformity, induced in the infantile period of life by *Rachitis*; and in the adult state by *Malacosteon*.

In the distortion, occasioned by the former disease, the *Symphysis* of the *Ossa Pubis*, and the *Os Sacrum* are approximated, but the *Acetabula* remain as distant, from each other, as in the natural state, or even become more distant, in con-

sequence of the bones of the pubes becoming straighter.

In the latter disease, the *Acetabula* are the parts of the pelvis, which principally yield; and, by their approach to each other, and to the *Os Sacrum*, give to the superior aperture the form of a triangle, with its three sides convex inwardly; the bodies of the *Ossa Pubis* being rendered more or less nearly parallel to each other. See Plates I. and VII.

These are very curious facts, and are not, I think, altogether explicable from the circumstances of children, affected with *Ricketts*, being less frequently upon their legs than adults, affected with *Softness of the bones*.\* Although there can be no doubt, but this cause does contribute very materially to the change induced in the form of the pelvis.

To give a complete, and satisfactory, solution of these *phænomena*, we must advert to the state of the bones, composing the pelvis, in the first

\* As both these diseases depend upon a deficiency of the Phosphate of Lime in the bones, affected by them, and, to a certain degree, resemble each other in their symptoms; they might, with great propriety, be referred to the same genus in a *Nosologia Methodica*, under the titles of *Rachitis infantilis*, and *adultæ*.

years of life, when the mischievous effects of Rachitis are produced, although we frequently do not become sensible of some of them, as occurring in females, till the period of their first parturition.

In infancy the *Ossa Innominata* consist each of three distinct bones, named Os Ilium, Ischium and Pubis, all of which contribute to the formation of the *Acetabula*. And as, in general, the points where ossification begins, more particularly in those bones, which are not of a cylindrical form, are near the centre of each, the extremities are, consequently, the last parts, that are completely converted into bone. Hence it appears, that the extremities of each of the three bones, mentioned above as constituting the *Acetabula*, are during infancy in a cartilaginous state. And the cartilages, destined to supply the place of bone *pro tempore*, either not being at all affected, or, at least, not proportionally with the true bones, by the disease, named Rachitis; the cartilages, of which the *Acetabula* are formed, remain sufficiently strong to sustain the pressure, made upon them, by the heads of the *Ossa Femorum*; or if they yield at all, their elasticity appears sufficient to restore them to their proper state, on the removal of that pressure. So far, indeed, are they from being forced nearer each



other, that they are sometimes, as was before noticed, actually rendered more distant than in the natural state of the pelvis, owing to the *Ossa Pubis* being approximated to the base of the *Os Sacrum*, in a greater degree, at their *Symphysis* than at their *acetabular extremities*; in which case the bodies of these bones, instead of a more curved, describe nearly a straight line. See Med. Obs. and Inq. Vol. IV. Pl. 2 and 3. Whilst, on the other hand, the base of the *Os Sacrum* and the last *Lumbar Vertebra*, from being sooner converted into bone, from being naturally of a spongy texture, and from being greatly affected by Ricketts, lose their firmness, and yield, in a very considerable degree, to the superincumbent weight of the body.

In this manner, then, from the cartilaginous state of the extremities of the bones, forming the *Acetabula*, taken conjointly with the smaller, and less frequent, pressure against them, by the heads of the *Ossa Femorum*, we see the reasons why the Superior Aperture of the Pelvis so rarely assumes the triangular form from *Rachitis*; and so generally from *Malacosteon*. See an excellent Dissertation, published at Leyden, in 1793, *De Mutationibus Figuræ Pelvis, præsertim iis, quæ ex ossium emollitione oriuntur*, Auct. N. C. de Fremery.

To enter further into the consideration of the various degrees, and kinds, of distortion, to which the Pelvis of females is, unfortunately, subjected from various causes, is not necessary in this place, I shall, therefore, now proceed to state the dimensions of a *Fetal Cranium*, which is, I believe, smaller, in all its dimensions, than the *Cranium* of Ann Lee's child, and I shall afterwards prove, that the base of it could not be extracted through her pelvis, by the means, which the present improved practice of Midwifery affords, except by cutting or breaking the pelvis in pieces.

You will find, in Plate 4th, a very accurate view of the base of the Fetal Cranium, which I am going to describe, drawn, and engraved, by an ingenious artist, resident in Manchester.

*Explanation of the Plate.*

- a. The Chin.
- b b. The Zygomatic Arches.
- c c. The Mastoid Processes.
- d. The Posterior Fontanelle.
- e e. The Parietal Bones.
- f f. The Temporal Bones.

The long diameter of the base, extending from

the highest point of the *Os Occipitis* at the *Posterior Fontanelle d*, to the extreme point of the *Maxilla Inferior a*, is four inches and a half.

The short diameter, crossing the former at right angles, from one *Mastoid Process* to the other at *c c*, measures one inch and seven eighths. And the greatest distance of the *Mastoid Processes*, from each other, is two inches and three eighths.

The greatest breadth of the *Os Occipitis* is two inches and a quarter.

The perpendicular height of the *Os Occipitis* is one inch and seven eighths.

The perpendicular height of the *Ossa Temporum*, in the highest point, from the base of the cranium is one inch and a half.

The height from the lowest point of the Chin to the highest point of the nose is one inch and nearly nine sixteenths.—From the Chin to the top of the Orbit one inch and five eighths. See Plate VII.

The *Oblique, or Greatest* diameter of this

cranium, taken from the extremity of the chin to the most distant points of the *Sagittal Suture* measures four inches and five eighths.

The *Longitudinal* or *Antero-posterior* diameter, taken from the middle of the forehead to the top of the *Occipital bone* is four inches.

The *Perpendicular* diameter, extending from the base of the cranium to the vertex, is nearly three inches and a half.

The *Transverse* diameter, extending from one *Bossa Parietalis* to the other, is three inches and a quarter.

To convince you, that I have not chosen a cranium of more than ordinary size, I will transcribe Baudelocque's account of the diameters of the fetal cranium.

“ § 453. Le plus grand des diamètres de la tête, dont la longueur est de cinq pouces & un quart pour l'ordinaire, passe obliquement de la symphyse du menton à l'extrémité postérieure de la suture sagittale; le moyen, qui est d'environ un pouce plus court, s'étend du milieu du front au haut de l'os occipital: le troisième traverse la tête du sommet à la base du crâne; &

le quatrième d'une protubérance pariétale à l'autre. La longueur de ces derniers est assez constamment de trois pouces & quatre à six lignes."

" § 453. The largest diameter of the head, the length of which is usually five inches and a quarter, passes obliquely from the *symphysis* of the chin to the posterior extremity of the *sagittal* suture; the middle diameter, which is about an inch shorter, extends from the middle of the forehead to the top of the *occiput*; the third passes from the summit of the head to the base of the *cranium*; and the fourth from one *parietal* protuberance to the other. The length of these latter is pretty constantly three inches and from four to six lines."\* Heath's Transl. V. I. P. 267.

We will now apply the base of this fetal cranium to the Pelvis of Ann Lee, See Plate Vth. and, notwithstanding the Pelvis is cleared of all the soft parts, which, during life, diminish its capacity, notwithstanding the base of the cranium is represented smaller than it actually is, and is deprived of the integuments, &c. which add to its volume, we shall find the pelvis greatly too contracted to admit of its extraction,

\* The French inch is about  $\frac{1}{2}$  larger than the English.

since the dimensions of the cranium exceed those of the pelvis in every direction.

Dr. Osborn allows, that the base of the cranium is incompressible, and will not admit of any further diminution; and, as you appear to have adopted his sentiments upon this subject, as far as you have been able to comprehend them, I should suppose you will not contend, that the base of this cranium can be extracted through the pelvis, here exhibited, in the way *in which it is now applied to it.*

It is fully demonstrated then, that, after having evacuated the child's brain, after having broken in pieces, and removed, the frontal and parietal bones, neither myself, nor any other person, could, by the exertion of our utmost strength, have extracted the base of the child's cranium, whilst it remained in this position, through the pelvis of Ann Lee.

Being completely foiled in this attempt, what steps ought to be taken to accomplish the delivery? We are, with great ingenuity, informed, that the base of the fetal cranium ought to be turned sideways, and that the dimensions of its short diameter will then not exceed one

inch and a half. See Osborn's Essays, P. 229, and P. 109 of this Letter.

Let us take the pelvis cleared of the uterus, and all the soft parts, which diminish its capacity, let us apply to its superior aperture, the denuded bones, which compose the base of this cranium, in the favourable position, required above, let us consider the crotchet so applied, as not to add to the difficulty by its bulk, (See Plate VI.); and we shall still find it impracticable to complete the delivery by this instrument, owing to the bones of the face extending beyond the limits of the superior aperture on one side, and the Os Occipitis on the other side.

On applying this cranium, in the same manner, to the pelvis of Isabel Redman (Plate I.), although its transverse and conjugate diameters are considerably greater than those of the pelvis of Ann Lee, we shall find it equally impracticable to accomplish the delivery by *cephalotomia*.

Let us now compare the base of this cranium, turned sideways, with the superior aperture of the pelvis of Elizabeth Hutchinson (See Plate VII.), and the insurmountable difficulty of the case immediately strikes us.

Finally, let us form the superior aperture of a pelvis, similar to that of Eliz. Sherwood, as described by Dr. Osborn, at P. 241, and 242, and mentioned at page 111 of this letter, and upon applying this fetal cranium *sideways* to it, we shall be perfectly convinced, that it is impossible to extract a moderate-sized foetus through such a pelvis by means of the crotchet.—We shall not entertain the least doubt, but Dr. Osborn, since he states the child to be “*moderately-sized,*” was greatly mistaken in the dimensions of this pelvis. For since the dimensions from the Symphysis pubis to the basis of the Os Sacrum did not, he says, exceed three quarters of an inch, and the space on the left side quite to the ilium, though two inches and a half in length, was not wider than three quarters of an inch; and since the base of the fetal skull, both at its facial and occipital extremities, is, when turned sideways, one inch and a half in width, it is demonstrable that neither extremity could enter the left side of the pelvis, and consequently that the left side of the pelvis was of no service in the extraction of the base of the cranium. Therefore, if a child of a moderate size were extracted through a pelvis, having the dimensions, stated by Dr. Osborn; it must follow that the base of the fetal cranium was extracted through a space rather more than two inches in length, one inch and three quarters



in width, and becoming gradually narrower at each extremity; that is, a solid incompressible body, about four inches and a half long, two inches and a quarter wide, and one inch and a half deep, was extracted *sideways* through an *unyielding* aperture (for this patient was not affected by *Malacosteon*), rather more than two inches in length, one inch and three quarters in the widest part, and becoming “gradually narrower both towards the ilium, and towards the projection;” *the greater through the less*, which is absurd.

I am decidedly of opinion, after paying great attention to the subject, that a fœtus of a moderate size, never has been extracted, by the operation of Embryulcia, through a pelvis, which measured only one inch and a half in the widest part of its conjugate diameter; and, further, I am of opinion, that no pelvis can be produced with the above dimensions, through which it is possible to bring such a child by the above-mentioned operation, except by breaking or forcing asunder the bones of the pelvis, or by obliging them, in consequence of unusual softness, to yield to the impulse of the child’s head. I therefore regard Dr. Osborn’s assertion, related at page 109 of this letter, as calculated to do great mischief, inasmuch as his authority may induce the less experienced accoucheurs to destroy the life of a

child, which might have been preserved by the Cesarean operation, in cases, where they will afterwards be unable to complete the delivery by the crotchet.

Having, I hope, sufficiently determined the impossibility of delivering a woman by the crotchet, whose pelvis is no more than one inch and a half in the widest part of the conjugate diameter, I shall beg leave to call your attention, once more, to the dimensions of Isabel Redman's pelvis. The transverse diameter of the superior aperture measures 5 inches and two eighths; the conjugate diameter, taken from the fourth Lumbar Vertebra to the Symphysis Pubis, is two inches and three tenths, and, if taken from the base of the Os Sacrum, measures more than  $3\frac{1}{2}$  inches.

This pelvis is, of course, more than twice as wide, from the pubes to the Os Sacrum, as the pelvis, which is stated by Dr. Osborn as constituting a *safe crotchet-case*; and it is more than three times as spacious as *you* require for the completion of the delivery by the crotchet. And yet I contend that neither you, nor any other accoucheur, can extract a moderate-sized foetus through it, by means of this instrument, without either previously cutting, or breaking the pelvis in pieces. If you should think other-

wise, you will be enabled, by means of the engravings, and the very minute description given above, to construct one of a similar form, and to make the experiment.

And if, after being foiled in the attempt to extract a child through the whole space, afforded by the brim of this pelvis, you should still contend for the truth of your position, namely, "*that the child may be extracted by the crotchet, whatever the distortion shall be, if in any part of the cavity there shall be a space of one inch and a half in diameter,*" I would then advise you to undertake to extract a child, through the portion of the superior aperture, comprehended between the line C C, and the point G, on the left side of the Lumbar Vertebrae (Plate I), which is rather more than an inch and a half in diameter.

I will, in the next place, endeavour to determine, whether we are likely to gain any advantage from dividing the Symphysis Pubis in excessively deformed pelvis; and I shall take the pelvis of Elizabeth Hutchinson as an example; because we have an excellent engraving of it, both in its entire, and its divided state, given in the App. to Vaughan's Cases of Hydroph. Pl. I, and II. And, that publication being out of print, I have been induced to exhibit, in Plate

VII., the outline of the superior aperture in both these states, with the fetal cranium turned sideways, and applied to it.

On measuring this aperture I find, that in its entire state, when freed from all the soft parts, by which its capacity had been diminished, the *Transverse Diameter* measured four inches and a quarter; and the *Conjugate Diameter* measured rather more than two inches and a half. And yet the *Largest Circle*, that could be described between the Os Sacrum, and Ossa Pubis, amounted only to one inch and five sixteenths in diameter, owing to the Ossa Pubis being placed in a parallel direction, for nearly an inch of their length, and not more than three sixteenths of an inch distant from each other.

It is manifest, from an inspection of this Plate, that, at least, one inch of the space, extending from the symphysis pubis to the os sacrum, would not afford any advantage, except by defending the urethra, in an attempt to extract a child through this pelvis.

It is equally evident, that, in attempting to ascertain the lowest dimensions of a pelvis, thro' which a child of a moderate size can be extracted by the perfortator and crotchet, it ought to be a

primary consideration to determine the particular form of the pelvis ; otherwise, we may mislead our readers in a point of the highest importance. Had Dr. Osborn, instead of taking one inch and a half from pubes to sacrum, as a sufficient space for allowing the extraction of the fœtus by embryulcia, fixed absolutely upon three inches and a half in this direction, it is demonstrable, from the pelvis of Isabel Redman, that even this space may be found insufficient, in some peculiar forms of the pelvis. We must therefore give up every expectation of having a statement, taken from the dimensions of the transverse diameter, and of the conjugate diameter from Symphysis Pubis to Os Sacrum, which will be capable of directing us, in every instance, when the delivery ought to be attempted by the crotchet, and when the Cesarean section ought to be employed.

Whenever any case of extreme distortion occurs in practice, we should endeavour to ascertain, as accurately as we can, not only the dimensions of the pelvis, from one side to the other, and from the pubes to sacrum, at the superior aperture, but the dimensions of its other diameters, both in this and the inferior aperture, and also its depth ; or, in other words, we ought to make ourselves acquainted with the form of the pelvis, and all its dimensions ; we ought then

to compare the ordinary volume of the base of a fetal cranium, with the cavity through which it has to pass, and calculate what advantage may be gained by bringing the base of the skull sideways, or somewhat endways, and, from this calculation, we should endeavour to determine, whether the sacrifice of the child's life will afford us reasonable expectations of preserving the parent. For, as I have before observed, I do not think an accoucheur warranted in opening the head of a living child, as an experiment. He ought, in my opinion, to be convinced in his own mind, before he has recourse to this dreadful expedient, not only that he can accomplish the delivery *per vaginam*; but, further, that there is reasonable ground for expecting to preserve the mother by this means.

I shall now beg leave to add, that in some cases, *where it is possible to extract the child by the crotchet*, the injury, which must necessarily be done to the mother, in order to effect the delivery, may, in my opinion, prove much more dangerous than the Cesarean section. And *where the child is certainly known to be dead, and the delivery cannot possibly be accomplished by the crotchet*, I am of opinion, that it is the duty of the accoucheur to propose the Cesarean operation, if he shall be

called in, before the patient's strength is so much exhausted, as to preclude every possible hope of her recovery.

A very little consideration will teach any one, that *cæt. par.* the more nearly the anterior, and posterior lines, which bound the superior aperture of an extremely contracted pelvis, approach to straight lines, the more favourable will the pelvis be found for the transmission of the base of the fetal cranium. And a slight attention to the engravings given at the end of this work, will convince any one, that an unnatural degree of curvature of the anterior, and posterior boundaries of the pelvis, may render delivery by the crotchet impracticable, although the dimensions be greater, than would be required, if the figure of the pelvis were better adapted to favour the extraction of the base of the fetal cranium.

Having seen how insufficient the pelvis, under consideration, is, in its entire state, for the passage of the foetus, let us next view it, with its capacity enlarged by the Section of the Symphysis Pubis, and the laceration, or rupture of the Sacro-Iliac Symphyses, as expressed in Plate VII. by the dotted line.

The Ossa Pubis are separated, from each other,

to the distance of two inches and a half; and the Ossa Iliæ are forced from the Os Sacrum, to the distance of more than a quarter of an inch at the anterior part of the symphysis; the bones of the pelvis are therefore separated to such an extent, as has, I believe, invariably destroyed the patient, for we have no example of a recovery, under such circumstances, recorded, that I know of.

The transverse diameter now measures, in the widest part, rather more than four inches and three quarters. The divided extremities of the Ossa pubis are on each side about three inches distant from the base of the Os Sacrum.

That part of the Linea Innominata, which corresponds with the middle of the *right* Acetabulum, is about  $1\frac{1}{2}$  inch distant from the most contiguous part of the base of the Os Sacrum, and, farther back, the pelvis is of about the same dimensions from the Ilium to the Sacrum. That part of the Linea Innominata, corresponding with the middle of the *left* Acetabulum, is not so far distant from the nearest point of the base of the Os Sacrum, by nearly a quarter of an inch; but farther back the pelvis becomes again somewhat wider.

The widest circle, that can now be described,



in the intervals of the bones, amounts only to two inches in diameter.

If upon the superior aperture of the pelvis, thus enlarged, we place the same fetal cranium turned sideways, with its long diameter in the direction of the long diameter of the pelvis, we shall find, that the facial extremity on the right side, and the occipital extremity on the left side, will extend considerably beyond the limits of the pelvis; and that there will thence arise an insurmountable obstacle to the extraction in this direction. But this is an unfavourable position for the extraction of it. The most favourable direction, in which the base of the skull can be placed in the superior aperture of this pelvis, is with the chin to the left os pubis, and the occiput in the space betwixt the right os ilium, and sacrum; the next most favourable position is, with the chin to the right os pubis, and the occiput between the left os ilium and sacrum.

In either of these positions, the base of the cranium appears capable of passing sideways through this aperture, when the bones are denuded, and the head of the foetus is separated from its neck and body. But whether it would be in the power of the Accoucheur to give to the base of the skull either of these favourable posi-

tions, and, if so placed, whether it would pass, when covered by the integuments and attached to the body, and when the pelvis is diminished in its capacity, by the uterus, &c. it is not easy to determine. But we can determine, what is much more material, namely, that the child will be inevitably destroyed by the attempt, and that so much mischief will be done to the mother, at the posterior part of the pelvis, by tearing asunder the Sacro-Iliac Synchondroses, and, at the anterior part, by cutting the Symphysis Pubis, and separating the bones to the distance, required for the delivery, as has been found to prove fatal in every instance, according to the observations and histories collected by Baudelocque.

You have, indeed, said at page 67, “ The Sacro-iliac ligaments, would certainly not be injured by choice, but the consequences, I believe, are not generally fatal.” But, can you adduce a *single* example of the Sigaultian operation, wherein this accident has taken place, without proving fatal to the mother ?

If, in cases of extreme deformity of the pelvis, the compound operation, recommended by you, can be thus shewn to promise so little advantage, whilst the fœtus remains in utero : Still less can be expected from it, when the fœtus has escaped

into the cavity of the abdomen, through a rupture of the uterus, as in the cases of Jane Foster, and Mrs. Scott, which occurred to Mr. Barlow, and Dr. Hamilton. In these two instances, it was impossible to perforate the child's head, and apply the crotchet.

Of the former a short account is given in the Synoptical Table at page 68. The Cesarean operation was performed, and the mother recovered.

Of the latter, which is inserted in the fourth edition of Hamilton's *Outlines of Midwifery*, I will give an abstract, as it will serve to shew how little reliance ought to be placed in the powers of nature, which you regard as our *only hope*, (See Page 94th of this letter,) where the pelvis is so extremely deformed as to be supposed to render the Cesarean operation necessary.

Mrs. Scott (*Æt.* 30) was attacked with spurious pains in the evening of March 22d, 1795.

The previous state of her health being very particularly enquired into, it appeared, that at the time of her marriage, five years before, she was a healthy, well-formed woman, and continued so till she was about three months advanced

in her second pregnancy. She then became indisposed, owing, as she thought, to exposure to cold, and was confined to her bed for some time. She felt a weakness in her lower extremities from this time, was in some degree lame, and became considerably diminished in her stature. She, however, carried this child to the full time, and bore it with great difficulty: It was born alive, but died in a few minutes.

Notwithstanding her complaints continued to increase, she conceived a third time, and in July 1793, was delivered, with great difficulty, of a full grown fœtus, which, for a few minutes only, shewed signs of life. For some time, her recovery was very doubtful, and proved exceedingly tedious. In addition to the complaints, mentioned above, she now had a *Hernia Umbilicalis*.

Her Health still declining, she conceived again towards the end of June 1794. Her height was now (March 22, 1795) diminished, in her own opinion, a foot at least, and her lameness had increased so much, within the last four months, that she could no longer use her crutches; she was unable to move farther than from her bed to her chair, and, to do this, she was obliged to support herself upon her hands. She was incapable of standing erect, and, as she could not lie

in bed above a few hours, without being affected with violent coughing, she was under the necessity of almost constantly sitting in an easy chair. She had suffered much from pain in her shoulders during the winter, which had rendered her arms extremely weak.

March 24. She was brought into the hospital.

March 31. Real labour commenced at three o'clock A. M. ; the pains became very strong and frequent at four, and the membranes gave way spontaneously about an hour after. At six, the pains increased so prodigiously, both in frequency and strength, that there was the greatest reason to dread, during every pain, a rupture of the uterus. At this time she was examined with great care, and the pelvis was found to be extremely distorted. The dimensions, as ascertained after the death of the patient, were the following. " *At the brim*, from the centre of the Sacrum to the most diverging point of the Pubes,  $3\frac{1}{2}$  inches ; from ditto to the part, at which the Pubes approximated,  $2\frac{1}{4}$  inches ; from the Sacrum to the Linea Innominata, at the top of the Acetabulum, one inch and five eighths ; therefore the short diameter, at the brim, was for the extent of an inch,  $2\frac{1}{4}$  inches, but in the remainder of the space only one inch and

five eighths. *At the outlet*, the space between the tuberosities of the Ischia was five eighths of an inch. The spinous processes of the Ischia were distant three inches and one sixth. The point of the Coccyx, when drawn back was distant from the junction of the Ischia  $2\frac{1}{2}$  inches; and the same from the tuberosity of the Ischium on the left side, but on the right side, it was half an inch less. The *depth* of the Pelvis, both anteriorly and posteriorly, was  $4\frac{1}{2}$  inches."

No part of the child could be felt: And the pains continuing, as violent as before, the sufferings of the patient were truly agonizing.

At a quarter past ten A. M., the head was felt to press on the brim of the pelvis. And, a consultation being held, it was agreed to wait a few hours, in order to see whether the action of the uterus would force the head of the child lower.

About a quarter past eleven the pains suddenly ceased entirely, vomiting took place, the pulse became feeble, the countenance turned pale and ghastly, and the strength appeared very much exhausted: But there was no discharge of blood *per vaginam*. The abdomen was sore to the touch, and felt differently on being examined,

but no inequalities, like those arising from the limbs of a child, were perceived. As it was hoped that the exhaustion was the effect of her former sufferings, it was expected to be temporary only, and it was determined to administer cordials, and wait for a return of her strength. But at half past one P. M. the symptoms of exhaustion, and the pain and soreness of the abdomen, remaining, it was judged necessary to make an attempt to open the child's head. Two fingers, therefore, being passed along the Sacrum, so as just to reach the scalp of the child, the perforator was insinuated along the fingers; but on pushing forward the instrument, the head instantly receded. As no part of the child could now be felt, every attempt to deliver the poor woman was given up.

From this period she had constant vomiting, her pulse was exceedingly frequent, and feeble, and she complained of great soreness and fullness in the abdomen, but no uterine pains returned.

April 1st. In the morning she appeared much in the same state. About ten A. M. what she vomited was of a dark-green colour, resembling feculent matter. About two P. M. she passed by stool some of the same matter. In the even-

ing her extremities became cold, her pulse continued very feeble, and from 120 to 130 in a minute.

April 2. At one A. M. no pulse could be felt at the wrists; the uneasiness of the abdomen increased, and her respiration became hurried. At six A. M. she grew somewhat easier, and remained perfectly sensible; but vomited a brownish stercoraceous matter, and her pulse was imperceptible. About a quarter past eight A. M. she cried out, that she felt herself growing blind, and a few minutes after expired. During the last moments, the hands were kept applied to her abdomen, to feel if the child exhibited any symptoms of life, but no motion whatever was perceived.

The body was opened thirteen hours after death. A considerable quantity of extravasated blood was found, covering the anterior surface of the intestines. A lacerated wound about four inches in length, and in a longitudinal direction, was found in the left side of the uterus. The uterus was contracted so much, as to be only about  $6\frac{1}{2}$  inches in length, and  $5\frac{1}{2}$  in breadth. The Fœtus was situated in the left side of the abdomen, surrounded by the intestines, and completely envelopped in the secundines. On opening the membranes no Liquor Amnii was found.



The child, which was a female, was in a highly putrid state. It appeared that the perforator had penetrated only the external lamella of the presenting portion of the membranes.

Dr. Hamilton observes upon this case, that when the consultation was held, it appeared to be utterly impossible to open the head with safety, because the depth of the pelvis anteriorly, and the contracted state of the inferior aperture, rendered it impossible to introduce two fingers, so as to guard and direct the points of the perforator. And that, "As it seemed exceedingly problematical how far it was justifiable to destroy the child, while the chance of the woman surviving the operation was rendered doubtful, from the great resistance that would be experienced in making the extraction, another reason for waiting, was to ascertain, by the effects of the uterine action, whether the child might not be of an unusually small size." He further observes, that "When the situation of the patient became almost hopeless, it was judged more prudent to attempt the delivery by embryulcia, than by the Cesarean operation, because the head seemed a little lower than formerly, and no decisive evidence of the child being alive had occurred even for a day before labour commenced." He says, "It may, therefore, be concluded that, in some species

of defective pelvis, although the apertures be such as to be capable of allowing the mangled child to be extracted through them, it is impossible to diminish the head sufficiently with safety, or, that being accomplished, the extraction would be productive of such injury as to cause death." And he adds, " In confirmation of this latter proposition, it may be remarked, that where the operation of Embryulcia has been performed, *in cases of extreme deformity of the pelvis*, it has most commonly been succeeded by the death of the woman ; for every such case where this event has not happened, may be regarded as an exception of the general rule." *Outlines*. P. 285 to 287.

I have the honour to be acquainted with an Accoucheur of very great eminence, who, in the course of a long, and extensive practice, has been called to five women in labour, whose pelves were so excessively distorted, that he found it impossible to deliver them by embryulcia, although he has, I believe, had occasion to use the perforator and crotchet, as frequently as any man in the kingdom. In *one* of these cases the presentation of the child was preternatural, and judging it proper to make an attempt to turn the child, he, by great perseverance, succeeded in passing his hand through the superior aperture of the pelvis, but he met with so much difficulty

in effecting this, that he immediately relinquished his design of attempting to bring down the feet of the child, and was satisfied with being able to disengage his hand. As the Cesarean Section was not submitted to, in any of these cases, *all the ten lives* were lost. In all these instances the deformity was induced in consequence of *Malacosteon*.

Since *Malacosteon* is a disease of rare occurrence; and since *Rachitis* frequently affects children, and, when it is not soon cured, very generally occasions distortion of the pelvis; it may, at first view, appear rather singular, that so great a proportion of the cases, mentioned in this letter, which have rendered the Cesarean operation necessary, have been produced by the former disease. This circumstance will, I conceive, admit of a satisfactory explanation on the following grounds. When *Malacosteon* takes place, and attacks the bones of the pelvis, as we have hitherto been unable to put a stop to its progress, these bones become gradually more distorted, till the disease, or, if the patient be a child-bearing female, till a difficult labour, and the disease combined, prove destructive of life. But when *Rachitis*, which is an infantile disease, occurs, the pelvis is proportionally of small dimensions; and although it should at that time be very

much distorted, if the child, as is frequently the case, be perfectly cured, the successive expansion of this part, during the future growth of the body, may sometimes proceed so far, as to render the diminution of its capacity not very considerable, and will generally enlarge it sufficiently to allow of delivery by *Cephalotomia*.

I could adduce many more instances of women dying undelivered in this kingdom; but it is not in my power to bring forward a single case, which has occurred in Great Britain or Ireland, where the life of the parent, or child, has been preserved, by the powers of nature, after labour has commenced and delivery *per vaginam* found impracticable; unless the case of Elspet Grant may be so considered. It is related in the 2d. Vol. of a very valuable work, namely, *Essays and Observations Physical and Literary*. And as it is the only case upon record, with which I am acquainted, that can be regarded as a Cesarean Birth, effected solely by the powers of nature, I will relate it in this place.

“ In April 1736, Elspet Grant, in the parish of Moy, being with child took her labour pains. After she had continued three days with the child in the birth, two cracks, as if the rafters of the house had broken, were heard about the sick

wife, and her belly was rent from near the navel with a squaint downwards, and to the left side, to near the share-bone. At this rent the child came into the world, the after burthen was brought away, and the entrails were seen.

The rent was cured without any other application than that of Butter mixed with white Sugar, and its scar was only as the scratch of a big pin.

These facts are attested by the judicial oaths of Anna Kennedy, a midwife, and Mary Ogilvie, a neighbour, who were present when the rent was made, and the child came out of it; of Margaret Dallas, who assisted to bring away the after burthen; of Robert Smith, who saw the rent, and entrails immediately after this, and of Isabel Tarrel, who afterwards examined the scar. Taken and Subscribed by James M<sup>c</sup> Quean, Younger, of Corrinbrough, baillie to the Laird of Mackintosh, at Moy Hall, Nov. 22d. 1738. Of which the original subscribed copies are kept by the Secretaries of the Philos. Soc. of Edinburgh."

The Annals of other nations afford us only very few examples of a recovery, *by the powers of nature*, under the circumstances mentioned above. Of these I find no more than one, in which the foetus is said to have remained

in the Uterus, namely, the curious case of *Lithopædion* related by Albosius, at the end of Bauhin's Translation of Rousset, and illustrated by an engraving. As I have a remark or two to make upon the case, I shall give the following short account of it. *Columba Chatry* of Siena, being near the full term of utero-gestation, was attacked with severe labour-pains, which after some time became more tolerable. The motions of the child were observed to become more languid, and afterwards ceased. She remained so much indisposed as to be confined to her bed three years; nevertheless she carried this child to her death, a period of twenty-eight years; and being then opened, the uterus and infant are stated to have been found in a petrified state.—That the uterus does occasionally become very much indurated, I have not the least doubt, as many cases of this kind are recorded by authors of great respectability. See Lieutaud Hist. Anatomico-Med. Tit. *Uterus scirrhusus & cartilagineus, & Uterus lapidescens*. But as this is the only case I have met with, where the impregnated uterus is said to have been completely indurated, and the patient has so long survived the morbid change; as the circumstance of an extra-uterine conception, was not, I believe, understood at the time Albosius wrote; and as

we have several instances recorded of females carrying extra-uterine foetuses, either incrustated with an indurated mucus, or actually converted into a hardened state, during many years (See Dr. Garthshore's Observations on Extra-uterine cases, inserted in the 8th Vol. of the London Medical Journal); I am of opinion, that the situation of the infant, in the case he relates, was either *ab origine* extra-uterine, or rendered so, in consequence of a rupture of the uterus, and that the indurated secundines were mistaken for this viscus.

All the other instances, with which I am acquainted, were evidently cases of ruptured uterus. Since they are not numerous, and place the powers of nature in a very striking point of view, as well with regard to what they can effect, as what they can sustain, upon particular occasions, I shall in this place insert a brief account of these cases.

The case of a woman at Thoulouse is related by Astruc, *L' Art d' Accoucher*, p. 288, whose uterus was ruptured by the violence of her labour-pains; the child passed into the cavity of the abdomen, and remained there twenty-five years, as was proved by an examination of her body after death.

M. Debois has communicated the case of a woman at Rochfort, in the *Hist. of the Roy Med. Soc. at Paris*, V. 1. for 1776. who, in her fourth labour, after sustaining the most excruciating pains for thirty years, suffered a rupture of the uterus, and the child passed into the abdomen. After two months the integuments of the abdomen began to inflame, and four ulcers were formed. In the third month, after the inflammation had taken place, this poor woman was removed to the Hôtel Dieu at Paris, and the bones of a full grown child were extracted after dilating the largest of the abdominal ulcers. In four months, this woman recovered her looks and strength, but had a fistulous ulcer at the navel, which besides a white purulent matter, sometimes discharged the fæces.

A case similar to the last is inserted in the *Journal Encyclopedique* for June 1777. And M. Littre has communicated one of the same kind in the *Mem. de l'Ac. Roy. des Sc. an. 1702*, p. 234, which differs from those only, inasmuch as the bones of the child, in this instance, made their way through the *rectum*.

Th. Bartholin in his *Diss. de Insolitis Partus Humani Viis* has furnished us with four cases, in all of which the uterus was evidently ruptured



either in the latter end of pregnancy, or in labour, and the child passed into the abdominal cavity. In two of these cases the fœtus made its way through the integuments of the abdomen, and in the two others passed by the intestines. Of these women three recovered entirely, and the fourth survived some time, and voided many of the bones of her fœtus by stool, but did not live sufficiently long to discharge them all.

To these might be added some cases of fœtuses removed from the uterus in a similar way, either wholly, or in part, by the powers of nature, in the *earlier months* of pregnancy. See Dr. Garthshore's Paper, referred to above. But I shall not here enter into the consideration of these, as they are not accompanied with equal danger.

If, in addition to the instances already adduced, we suppose an equal number to have occurred, wherein women, who could not be, or at least were not, delivered *per vaginam*, have recovered *by the powers of nature*; and compare them with the very great number of females, who have perished with their infants unborn, the proportion will be found so extremely small, as scarcely to leave us any expectation of seeing our unfortunate patients restored by a reliance on these powers. A recovery, indeed, under such circumstances, is

hardly to be wished, for the sufferings of the poor woman must necessarily be so great, and continue so long, that to perish in labour, dreadful as it may appear, seems the more desirable lot.

On the other hand, the number of lives, saved by the Cesarean Section, bears a very large proportion to the number of the operations, as far as we are enabled to judge from the cases on record; and the sufferings of the patient have been comparatively small. This operation, therefore, in cases of extremely distorted pelves, is greatly preferable to either the combination of Embryulcia with the Section of the Symphysis Pubis, or a reliance on the powers of nature.

Having now adduced such arguments, as will, I trust, convince a very great majority of medical men, *that the Cesarean Operation is not only a justifiable, but a valuable and necessary resource; and, that the Operator, in the case of Ann Lee, alluded to by you as a late occurrence, neither deserves reprehension for his inexcusable ignorance, nor cruel inattention;* I shall conclude this letter with expressing a hope, *that you will be less disposed, in future, to bring forward unfounded accusations against your professional brethren, and with subscribing myself,*

Sir,

Your most obedient Servant,

JOHN HULL.

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### CORRECTIONS.

Page. Line.

- 4— 2. Before publication insert intended.  
 22—25. For Quæ. read Quæ,  
 28— 2. For etram read etiam.  
 31—23. For *lauge* read *longe*.  
 46— 4. For wahr scheinlich read wahrscheinlich.  
 159—16. Before acute insert more.

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Your most obedient Servant,  
 John Hull.

Tab. I.

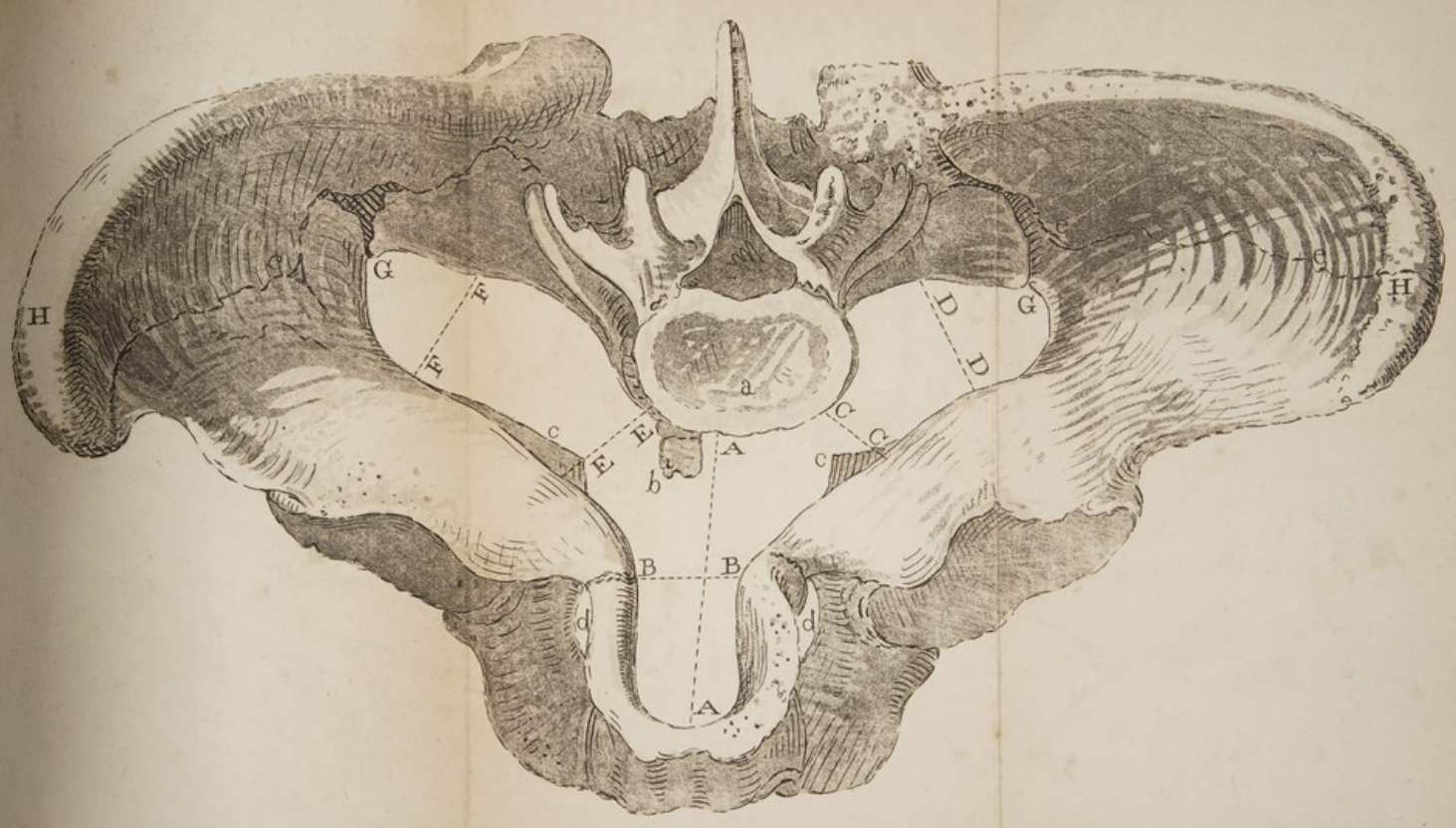
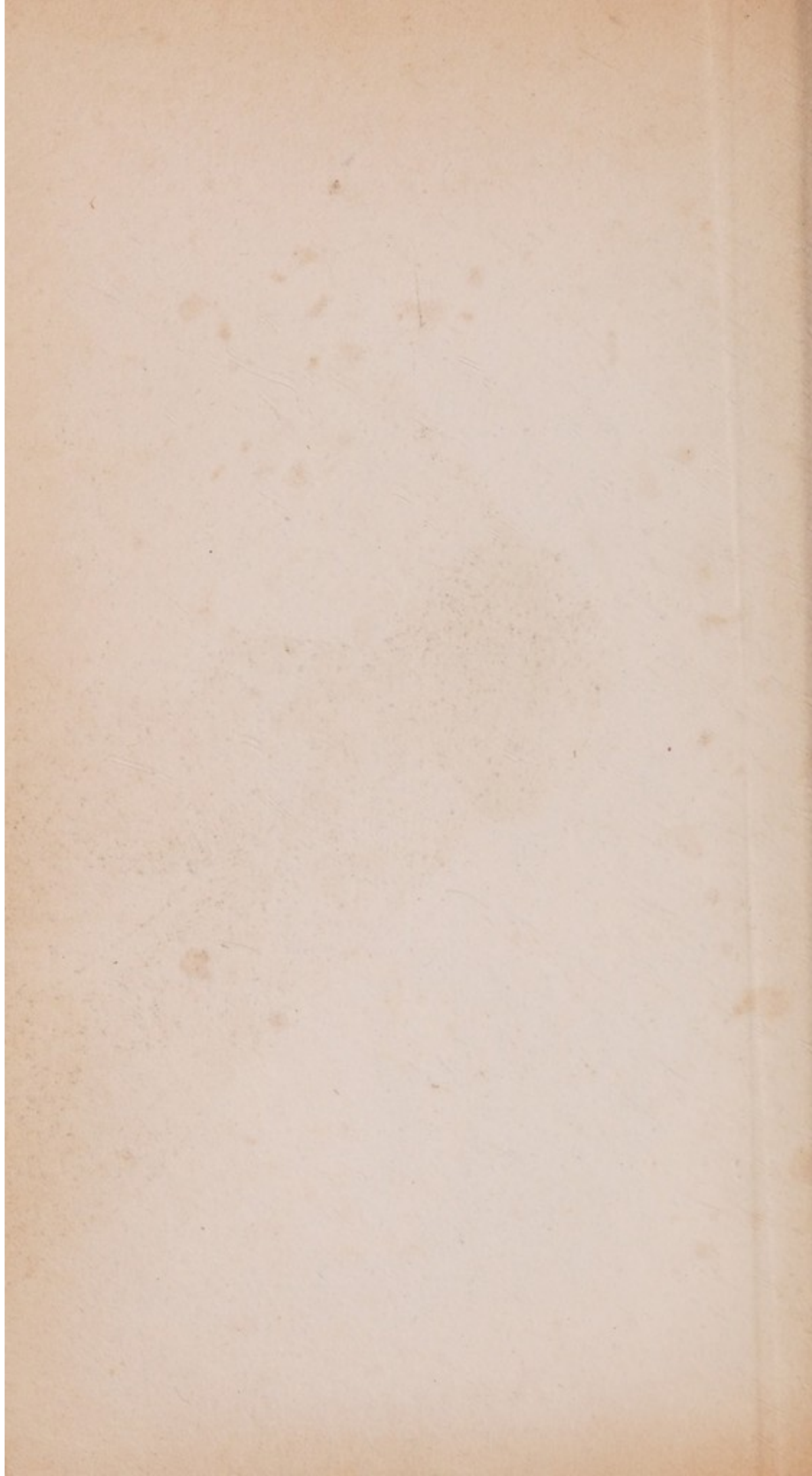
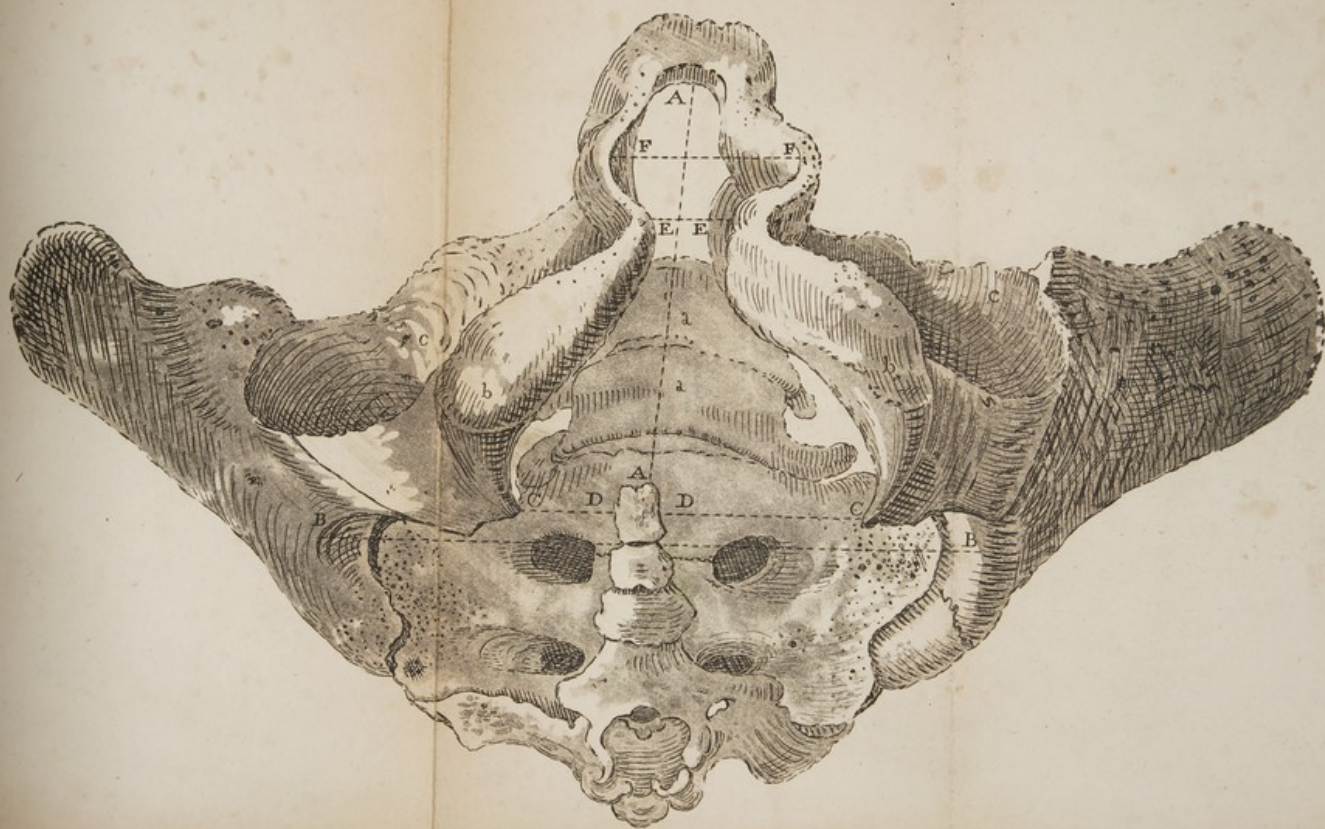
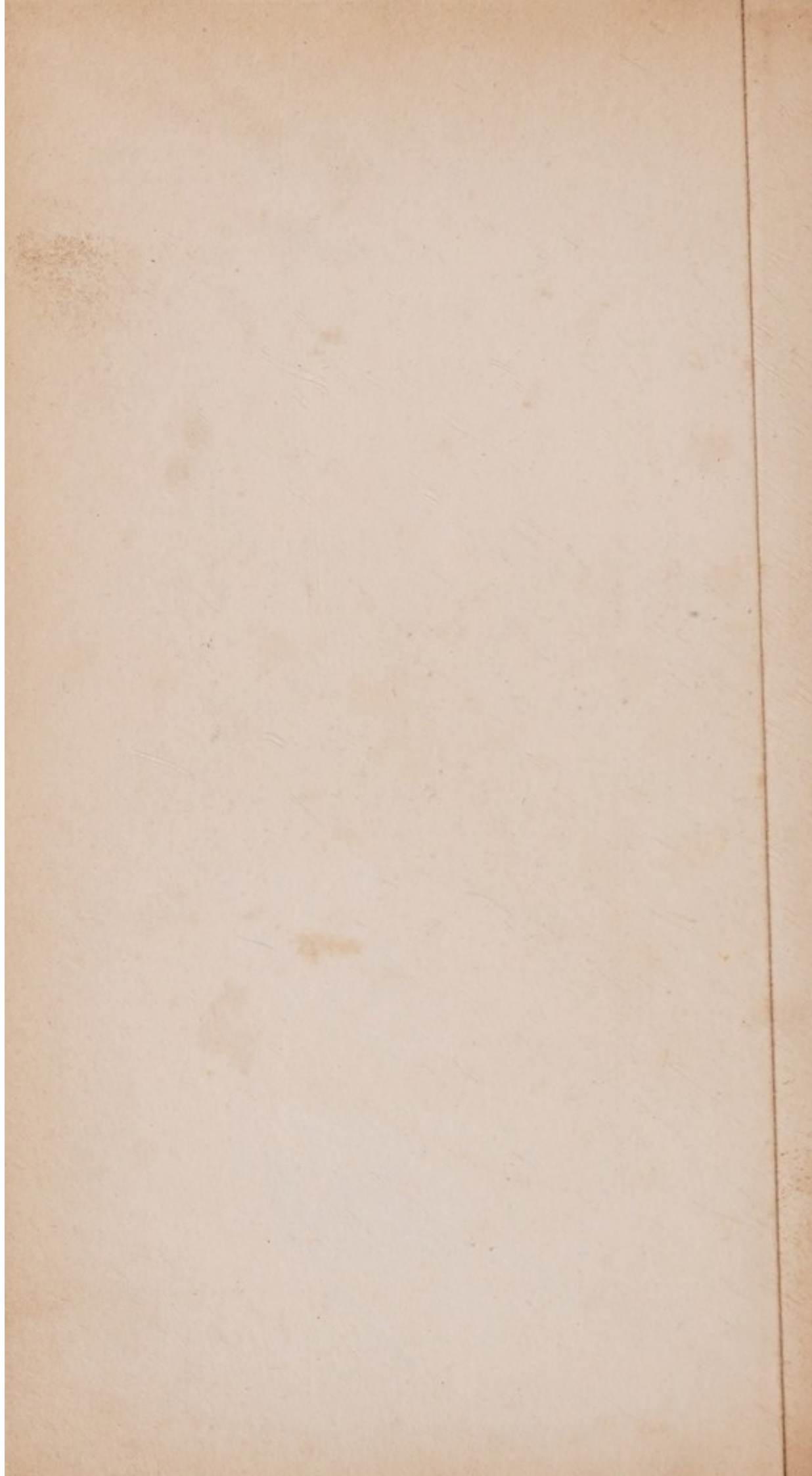


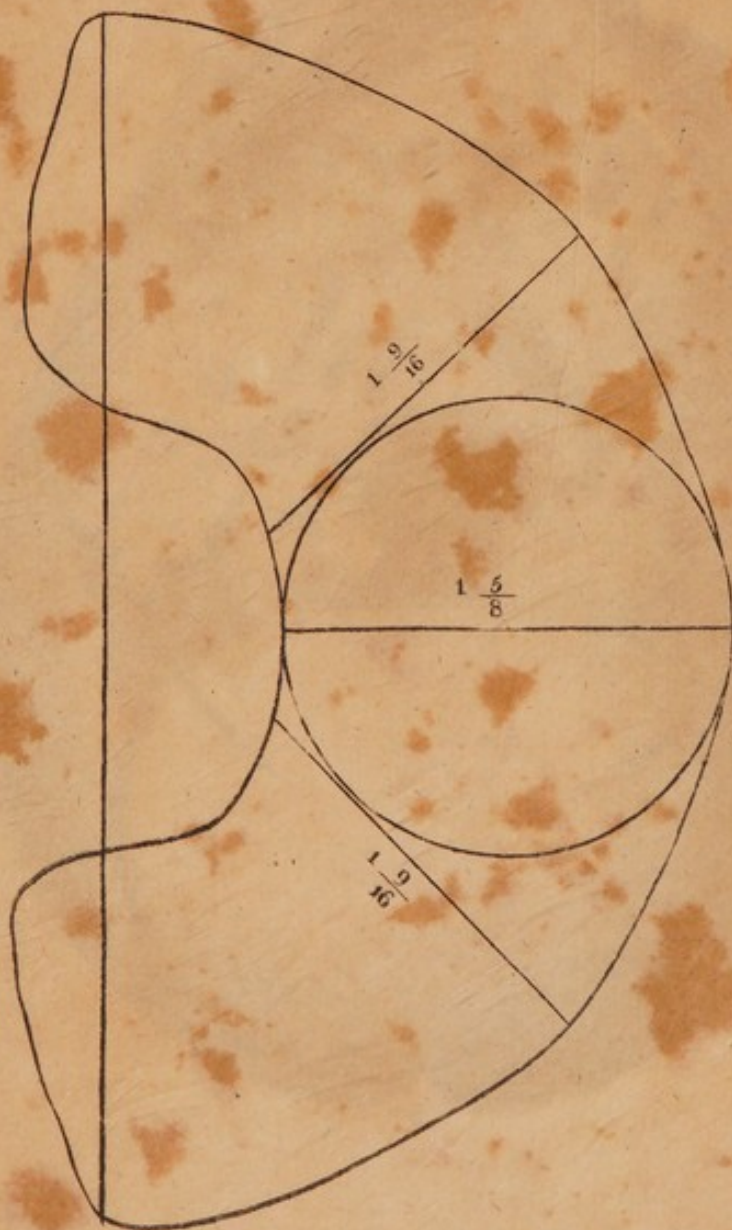
Fig. 1.







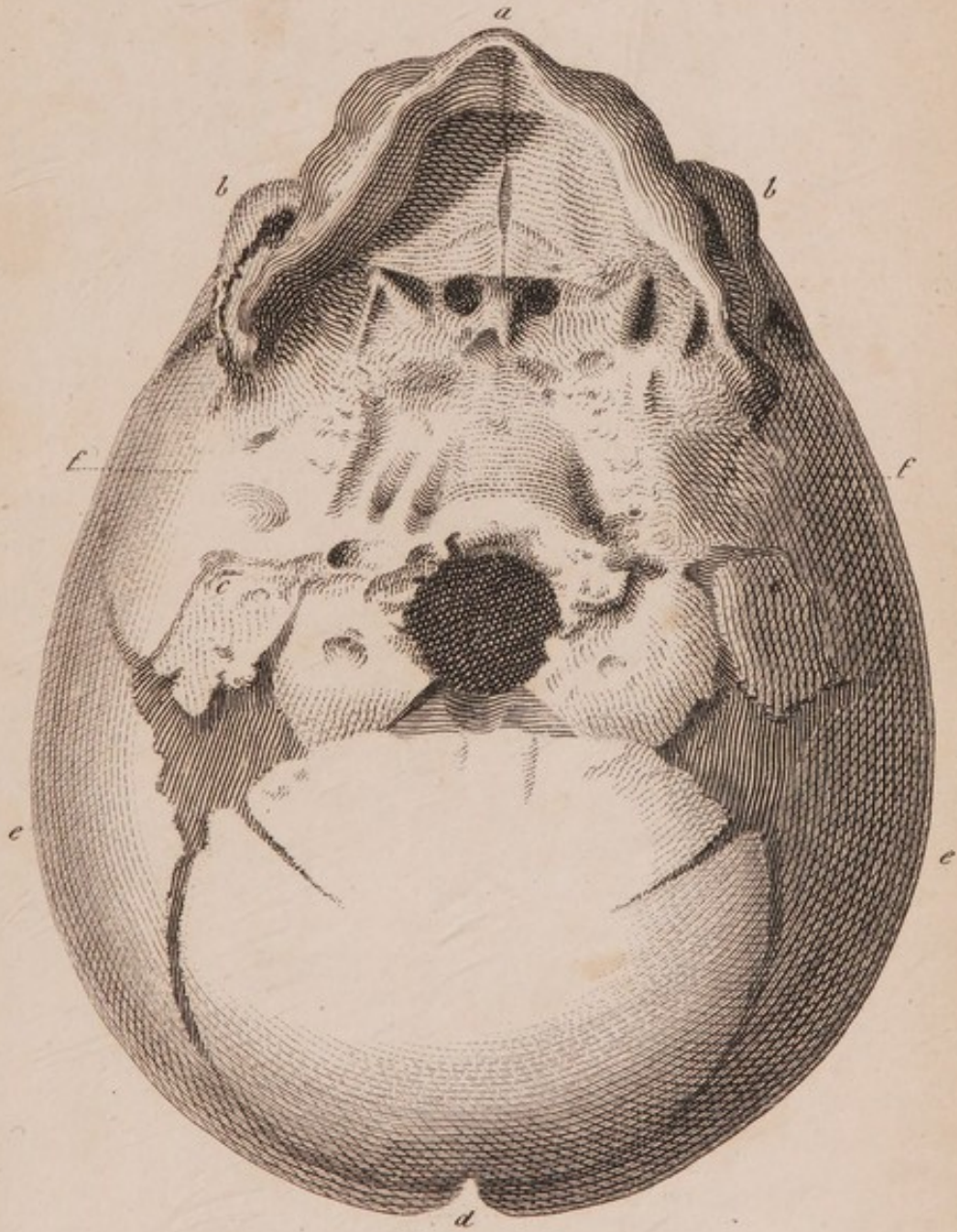
*Pl: 3.*



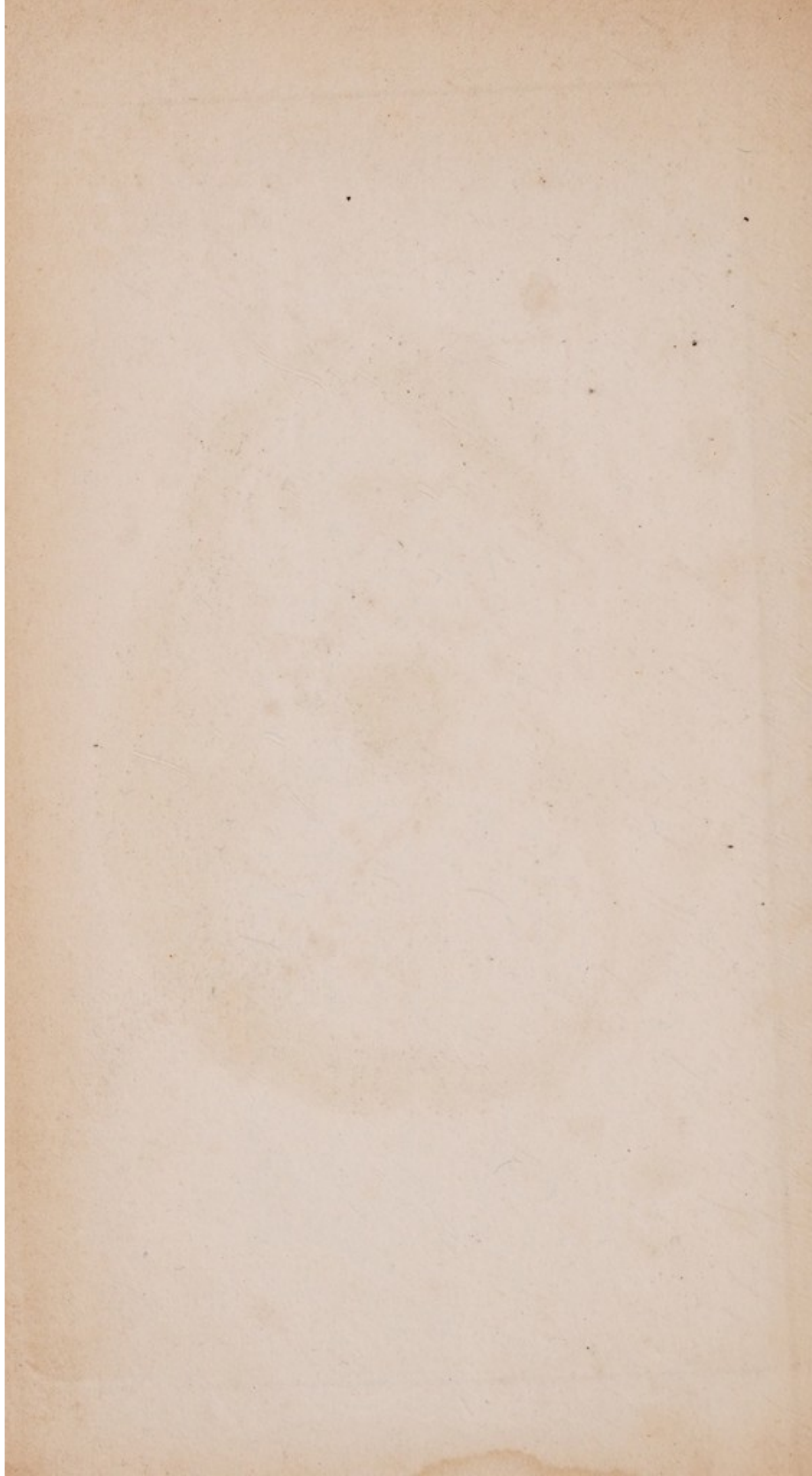


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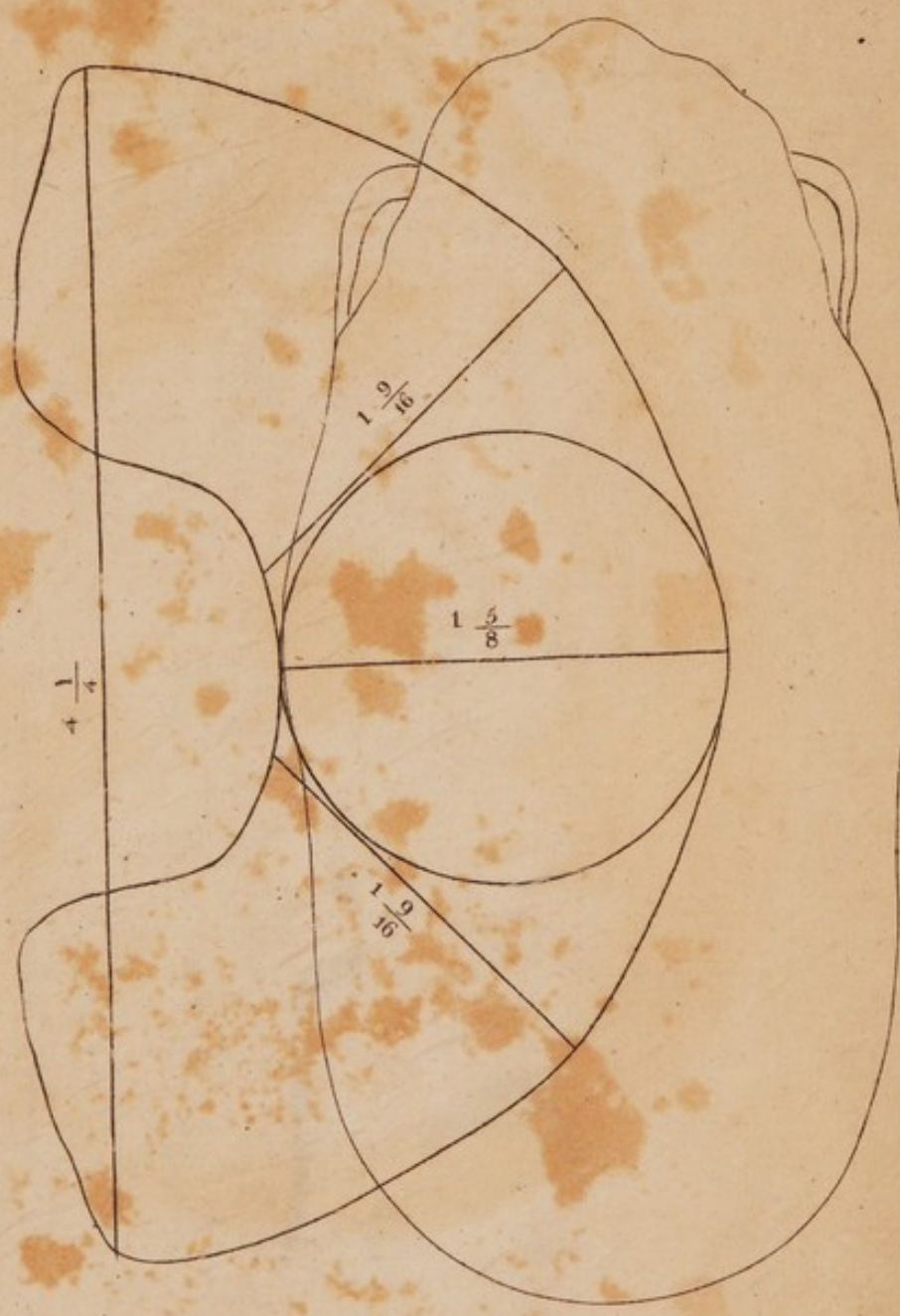


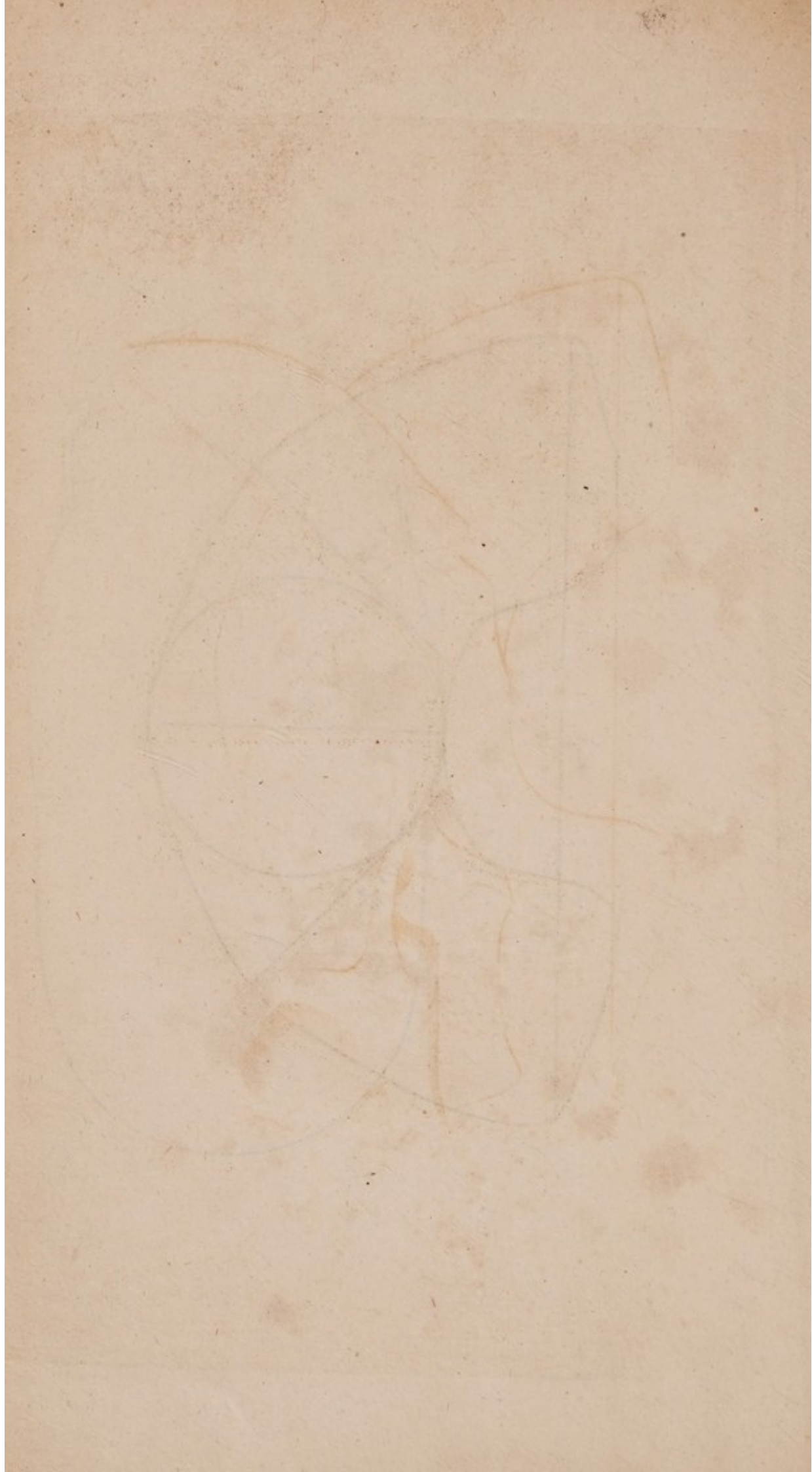


C. Pye delin et fecit.



Pl. 5.







31/11

117





*Elysi*



