

A letter to William Smellie, M.D., containing critical and practical remarks upon his Treatise on the theory and practice of midwifery / By John Burton, M.D. Wherein the various gross mistakes and dangerous methods of practice mentioned and recommended by that writer, are fully demonstrated. And generally corrected.

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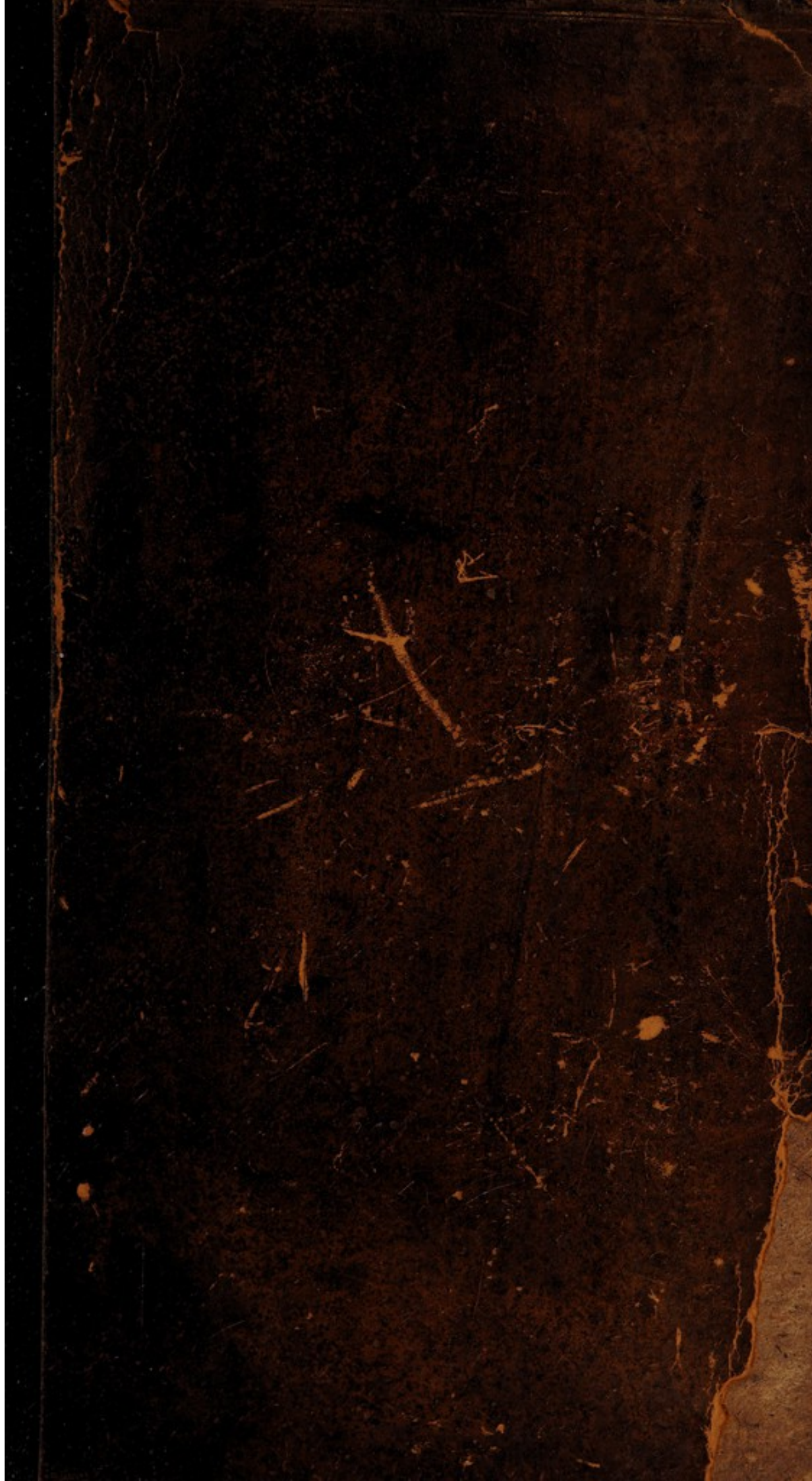
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LETTER

WILLIAM SMITH, M.D.

R. F. M. A. R. K. S.

STORY and FRAGMENTS of MINORITIES
AND
STORY OF THE

Great Nations and their various Methods of

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LETTER

T O

WILLIAM SMELLIE, M. D.

Containing CRITICAL and PRACTICAL

REMARKS

Upon his *TREATISE* on the

THEORY and PRACTICE of MIDWIFERY.

By *JOHN BURTON, M. D.*

Wherein the various

Gross Mistakes and dangerous Methods of Practice

Mentioned and recommended by that Writer,

Are fully demonstrated and generally corrected.

Likewise the several Advantages or Dangers, to both Mother and Child, attending the Turning the last in the Womb to extract by the Feet, or that accrue from the Use of each particular Kind of Instrument, employ'd in delivering Women, are shewn in a more ample Manner than heretofore.

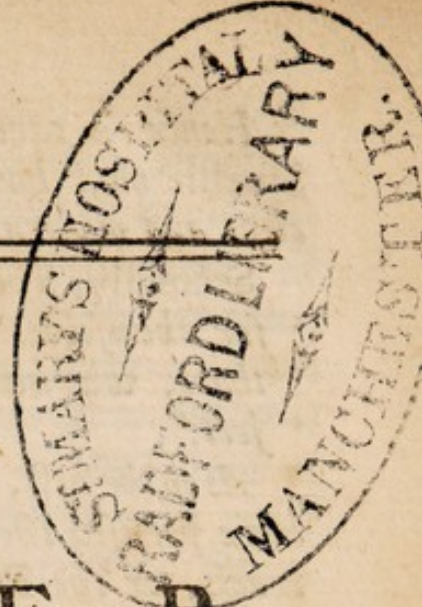
Being as an APPENDIX, to both the above-mentioned Authors *Treatises on Midwifery*; absolutely necessary to be perused by all who have read the former's Book, or attended his Lectures with a View to Practice.

To which is affixed a COPPER-PLATE, representing several Sorts of Instruments used by the Ancients, with the Fillet as improved by the Author thereof.

L O N D O N:

Printed for W. OWEN at *Homer's Head, Temple-Bar.*
M DCC LIII.

TO THE
R E A D E R.



IN the following Remarks upon Dr. Smellie's *Treatise on the Theory and Practice of Midwifery*, I have considered that Author in several Lights, as an historical Writer, as an Anatomist, as a Theorist, and a Lecturer or Practitioner.

First then, as an historical Writer he tells us in his Preface (a), that 'The Introduction contains a summary Account of the Practice of Midwifery, both among the Ancients and Moderns, with the Improvements which have been hitherto made in it; and this he has exhibited for the Information of those who have not Time or Opportunity to peruse the Books from which it is collected; that by seeing at once the whole Extent of the Art, they may be more able to judge for themselves, and regulate their Practice by those Authors, who have written most judiciously upon the Subject.' And in the Introduction (b) he says, 'He shall give a short detail of the Practice of Midwifery, with the Improvements which have been made in it, at different Times; as he had been able to collect the Circumstances from those Authors, ancient as well as modern, who have written on the Subject.'

(a) P. 2. (b) P. 1.

Hence a candid Reader would imagine, first, That Smellie must have read a great many Authors both ancient and modern, to enable him to make these Extracts.

Secondly, That they are to enable the Readers to 'judge for themselves and regulate their Practice by those Authors, who have written most judiciously upon the Subject.'

As to the first, I shall shew that there was no occasion to have perused the Originals quoted, since the pretended Extracts, or the Places they are said to be taken from, may be seen in one single folio Volume collected by Spachius from Hippocrates's Time (When Smellie begins his Account) down to Guillemeau, who published in 1582; a few Lines out of Le Clerc and Friend's History of Physic excepted. Hence no great Time was requisite to read the Parts whence they are pretended to be collected.

Secondly, It appears that Smellie has never read either the Originals or Spachius, or else did not understand them, or has wilfully misrepresented their Meaning to countenance some dangerous Methods of Practice. Otherways it is impossible to account for the representing some of those Authors as laying down Rules or Methods of Practice, directly the Reverse of what is to be found in their Works. For my own Part I should rather have imagined, that as Smellie had employ'd one Person to model or draw his Book up in the Form it has appeared, so he might have set another Man to copy or make Extracts for him out of Spachius, who had neither understood the Subject, nor the Language of the Authors quoted; had not those pretended Extracts been brought to give a Sanction, or to authorize Smellie's Method of proceeding; because thereby his Readers were to judge and regulate their Practice. Hence it was absolutely necessary that his Readers and Pupils should be properly informed thereof, to avoid the fatal Mischiefs that must of consequence ensue, if those Methods should be put into Execution.

Thirdly, It is evident that Smellie is so far from giving a regular Series of Things beneficial in Practice, that from 1597 (the Date of the last Edition of Spachius) to 1668, (when Mauriceau printed his Midwifery) he has taken no Notice of any Author; seemingly for want of another Collector like Spachius; because there are many Writers during that Interval of Time, who have published several Things in the various Branches of these Studies, more useful than many of those that Smellie takes notice of; many of which I have named, in order to fill up, in some measure, that great Chasm betwixt the Times above-mentioned.

Lastly, Our Author has not given (as he pretends) an Account of the Improvements that have been hitherto made in the Practice of Midwifery amongst even the Moderns; ending with Mesnard's Treatise published in 1743, at Paris, altho' his own Book was not published till 1752. I can't omit observing, that quite thro' Smellie's Book there seems to be an Affectation of deviating from every Author, altho' even in Trifles; but more particularly where they have been universally applauded for any Methods or Observations they had made. Thus he endeavours to lessen the Merit of Deventer, La Motte, Ruysch, &c. all which are mentioned in the following Remarks, where those Writers are vindicated.

In the next Place I have considered Dr. Smellie as an Anatomist; who has laid it down as a Rule (c), That 'those who intend to practise Midwifery, ought first of all to make themselves Masters of Anatomy;' in which, I believe, every Accoucheur will agree with him. But he is so far from giving Proofs of his being thus qualified, that he has brought himself into this Dilemma, either of owning his Ignorance in that Branch, so necessary to be understood, or that knowing better, he yet wilfully gave a wrong Description of the Parts proper to be known. For I don't believe there is one modern Writer, who pretends to give the least anatomical Relation of the Parts,

that abounds with so many Defects, or with such false Accounts, Part of that of the Pelvis excepted; and altho' his Description of this last is pretty accurate, yet in some Respects he is wrong, especially in some Parts of his Theory that he builds thereon. From all which it is evident, that Smellie's Pupils or Readers (supposing them to have no better Instructions) must not only be very deficient in the Knowledge of that Part of Anatomy, but must be greatly misled.

Thirdly, I consider Smellie as a Theorist. In one Place (d) he says, 'Theory is but of little Service towards ascertaining the Diagnostics and Cure of Diseases, or improving the Practice of Midwifery.' In another Part (e) he says, That Theory is the Means of introducing more valuable Discoveries; and as a Proof thereof, he shews in several Places (f) the good Effects arising from Theory, as well in others as himself; all which Contradictions and Inconsistences are remark'd in their proper Places.

Fourthly and lastly, In the Light of a Lecturer and Practitioner I have examined all his Methods of Practice; and where I judged it wrong, or knew a better Method, I have given my reasons for so doing; and have set forth my own Practice more fully, with my Motives in support of it: All which are laid before the intelligent and candid Reader, who must judge betwixt us.

As Smellie seems so desirous of introducing his favourite Instrument the Forceps into a more general Practice than I am certain is necessary, I was obliged to shew the Advantages and Dangers that attend the turning a Child in the Womb with a View to extract it by the Feet, in a fuller and more conspicuous Manner than heretofore; whereby it is demonstrated, that Smellie uses the Forceps in Cases that don't require it, and thereby increases the Dangers to both Mother and Child. This also naturally led me to set forth the Advantages and Perils that attend the Use of

(d) Introd. p. 69. (e) Pref. P. 2. (f) Introd. p. 64, 65.
the

the Forceps ; and indeed of the other Instruments also, with the various Methods of putting them into Practice ; which I have done in a clearer and more ample Light than heretofore. Whereby it is evident at one View, that by Smellie's Method the Patients endure not only greater Pain, which is also of longer Duration, but is attended likewise with more Danger than by my Method ; as may be seen in the summary Recapitulation of some Cases, from p. 217 to 222.—To conclude, in the Course of these Remarks the Weakness of Smellie's Arguments are shewn in various Places ; and it is likewise demonstrated, that ' his Instructions are neither so clear and perspicuous, nor his Remarks so judiciously and happily deduced, nor yet his Practice so unexceptionable,' as the Review Writer informs us below (g), as will be seen in several Places of the ensuing Letter ; particularly in his contradictory Directions what Method is to be taken when the Head of the Child is too large, or the Pelvis of the Mother too narrow (h) : For in one Place he directs that the Operator ' should not attempt to turn the Child, but try the Forceps ; and if they do not succeed, diminish the size of the Head and extract it with the Crochet.' In another Part in the like Case, he orders ' the Head to be extracted by the Crochet ; but the Forceps, says he, ought first to be tried : ' Yet but two Pages before he told us in the same Case, ' The Head will in Time slide gradually down into the Pelvis, even when it is too large to be extracted with the Fillet or Forceps.' And in another Place he says, ' The Position of the Head should be replaced always, and more especially when the Pelvis is too narrow or the Head too large.' Again he tells us, ' If the Head be large or the Pelvis narrow, the Child is seldom saved either by turning or using the Forceps, untill the Head shall be farther advanced.' In another Part he says, ' The Child is seldom now destroy'd but when the Pelvis is

(g) See p. 4. of the Letter.
291, 294, 356, 357.

(h) P. 247, 255, 257, 280,

‘ too narrow or the Head too large.’ And when the
 ‘ Pelvis is very narrow or the Head too large, place
 ‘ the Head right and let Labour go on.’ All these va-
 rious and contrary Methods are taken notice of in their
 proper Places.

*Affixed to this Letter are a few Remarks upon the 33d
 Article of the Monthly Review for Sept. 1751. wrote
 by one Kirkpatric an Irishman; wherein his Partiality
 and want of Candour are shewn in several Instances;
 which are indeed so evident to any attentive Reader, that
 I should not have taken any notice of them in Print, had
 not this Opportunity offered.*



THE

T H E

C O N T E N T S.

P roved that Smellie (or the Person he copies from) has never read the Authors quoted, never understood them, or wilfully misrepresented their Meaning, from	Page 1 to 59
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——Practice in Floodings after Delivery, ineffectual or dangerous.

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235 to the End.

S I R,

UPON a cursory Perusal of your *Treatise on the Theory and Practice of Midwifery*, with the Introduction thereto; and comparing them with a few common-place Remarks I had made some Years ago upon this Subject, I cannot help thinking you are grossly mistaken in various Parts.

To confound all Nature—all Distinction of Sex—To make Animals Vegetables, and one and the same Author two different Persons; and neither Character agree with the true one—To palm upon us an Author that never existed—To pass over in Silence several material Things that contradict your own Practice in those Authors that are genuine, and make them say Things they never dreamed of, in order to countenance it, &c. &c. is such a Piece of History as the present Age cannot boast of; yet, strange as this may seem to be, you have done it. I would not forestal my Readers, but my References will sufficiently confirm the Truth of these Observations; and if any Thing can be added to shock human Faith, or prejudice your Character as an Historian or Translator, it is your having converted *Lithopædii Senonensis Icon*, (which you call *Lithopedus Senonensis*) an inanimate, petresied Substance, into an Author, after you had been *six Years cooking up your Book*.

Such uncommon Errors, with many more, as I shall shew in the Sequel, betray so great a Negligence in an Author, and Disregard of his Reader's Understanding and Judgment, that I fear the Writers of the *Monthly Review* will greatly incur the Displeasure of the Public, for not only *omitting to take notice of them*, but on the contrary for *applauding such a Performance*. Indeed as they are but *Men*, they must be *liable to err*,

while human Sense and Reason are in the present imperfect State, in proportion to the Degree of their Learning, and Knowledge of the Subject treated of, and according to the *various Passions* and Frailties, that are hard to be separated from human Nature. To the Predominance of which of these, the Account in the following Article in the *Review* is to be imputed, I will leave the Public to determine, after having perused these Remarks.

As I shall have frequent Occasion to refer to some Part or other of the 61st Article in the *Monthly Review* for *December 1751*; and as the Reader may not have that Number by him, I shall here prefix a Copy of it, that he may be better able to judge, from the Arguments and Facts I shall produce, how far the Writer has dealt *partially* or *impartially*, in regard to your Treatise on Midwifery, supposing him to have understood the Subject, which in Charity I hope he did not.

After giving the Title of your Book, the Writer of the Article proceeds, and divides the Account into four Paragraphs, to each of which I shall prefix a Number, for the easier finding out the Part I shall refer to in my Remarks.

Sixty-first A R T I C L E.

1. " To this Treatise is prefixed a short Preface,
 " apprizing the Reader of the Doctor's Motives, for
 " committing himself to the World, and containing a
 " succinct Account of the Work, which begins with
 " an Introduction, exhibiting a *summary Synopsis*
 " *of the Practice of Midwifery*, both among the *An-*
 " *tients* and *Moderns*, with the *Improvements*, which
 " have been made in it, from the *Time of Hippocrates*
 " *to the present Age*; then follows a *distinct and regular*
 " *System of the obstetric Art*, in *all its Branches*, com-
 " *prehending the Anatomy of the Parts*, the *Diseases* in-
 " *cident to pregnant Women*, the *various Methods* of
 " *delivering in natural, preternatural and laborious*
 " *Cases*; the Disorders proper to Mother and Child,
 " either

“ either at, or after the Birth, and the Choice and
 “ Management of Nurses, whether wet or dry.

2. “ In perusing this Treatise, one may *easily* per-
 “ ceive, that the Author is *perfectly Master of his Sub-*
 “ *ject*, and that *far from endeavouring* to amuse his
 “ Readers with *vain Hypotheses*, or, *as vain Exaggera-*
 “ *tions of his own Success*, he asserts *nothing that is not*
 “ *justified* by his own Experience, and *fairly owns the*
 “ Circumstances of his own Miscarriage, in those In-
 “ stances wherein his Attempts have failed.

3. “ His Description of the Pelvis is accurate, his
 “ Observations on its Structure, and that of the
 “ Child’s Head, useful and ingenious ; and, if we are
 “ not mistaken, he is the first Writer, who upon me-
 “ chanical Principles hath demonstrated the different
 “ Modes of Operation, in all the Emergencies of
 “ Practice : he, in a very *minute Manner*, recom-
 “ mends and describes the Use of the Forceps, as he
 “ himself hath improved that Instrument, and then
 “ proceeds to give *a Detail of other Expedients* used in
 “ the Practice of Midwifery, some of which he hath
 “ also rendered more commodious ; and tho’ *he has*
 “ *laid repeated* Injunctions on the young Practitioner,
 “ *to avoid as much as possible the Use of Instruments*,
 “ he has likewise proved, beyond all Contradiction,
 “ that, in some Cases, they are absolutely necessary for
 “ the Preservation of the Patient’s Life ; *he confutes*
 “ *the erroneous Notions that have been entertained by the*
 “ *modern Writers on this Subject*, *rectifies certain Mis-*
 “ *takes of Daventer*, *touching the different Situations of*
 “ *the Uterus*, and justly blames *La Motte* for having
 “ essayed to *mislead young Men* in their Opinions, by
 “ concealing the unsuccessful Part of his Practice.
 “ which must have been considerable, if he, on all
 “ accounts, neglected the Use of Instruments, against
 “ which he indiscriminately exclaims.—In a Word,
 “ Dr. Smellie’s Improvements are, in our Opinion,
 “ *solid and effectual*, *his Instructions clear and perspicu-*
 “ *ous*, *his Remarks judicious*, and *happily deduced*, *his*
 “ *general Method of Practice unexceptionable* ; and there

“ is an *Air of Candour, Humanity, and Moderation*,
 “ through the whole Book, which cannot fail to
 “ engage the Reader’s Favour and Esteem.

4. “ Affixed to this Treatise are the Author’s Pro-
 “ posals for publishing a Set of anatomical Figures,
 “ engraved after the Drawings of a very able Artist,
 “ who drew them from the human Subject, under the
 “ Doctor’s own Eye and Direction ; and if the whole
 “ are as well executed as those Specimens left with the
 “ Publisher, it is not to be doubted but the Subscrip-
 “ tion will soon be filled ; for, in point of *Design and*
 “ *anatomical Exactness*, we may venture to pronounce
 “ them to be superior to any Figures of the kind *hi-*
 “ *therto* made public.”

Now I must own, Sir, from this Writer’s Style and
 Manner, one would think him your Eccho ; for in
 your Preface, Page 2, you tell us, “ That the Introduc-
 “ tion contains a *summary Account of the Practice of*
 “ *Midwifery*, both among the *Antients and Moderns*,
 “ with the *Improvements* which have been *hitherto made*
 “ *in it* ; and this I have exhibited for the Information
 “ of *those* who have not *Time or Opportunity* to peruse
 “ the Books from which *it is collected* ; that by seeing
 “ *at once* the *whole Extent* of the Art, they may be
 “ more able to judge for themselves, and *regulate their*
 “ *Practice* by *those Authors* who have wrote most judi-
 “ *ciously* upon the Subject :” And in the 4th Page you
 add, “ nor will the Reader, I hope, imagine, that this
 “ Treatise is cooked up in a Hurry, when I inform him,
 “ that above six Years ago I begun to commit my Lec-
 “ tures to Paper, for Publication ; and from *that Time*
 “ altered, amended, and digested what I had written,
 “ according to the *new Lights* I received from Study
 “ and Experience.” And “ after your long Practice
 “ in the Country, and *ten whole Years* in London——
 “ after reading 280 Courses of *Midwifery*, to perhaps
 “ 1000 People male and female—after *thousands of*
 “ *various Deliveries* ; who can doubt, I say, after
 “ *those Considerations*, that this Treatise on *the Theory*
 “ and Practice of Midwifery, together with the Prints
 “ men-

“ mentioned in your Advertisement, and the Volume of
 “ Cases hereafter to be published, will not compose
 “ one of the *most complete* Systems in the World?”
 After reading this pompous Paragraph, an indifferent
 Person will be apt to cry out with *Horace*,

“ Quid dignum tanto feret hic promissor hiatu?”

ART. POET. v. 138.

And then having seriously perused your Book, and
 these Remarks, if he is the least acquainted with the
 Subject, will he not be apt to add? “ Paturiant mon-
 tes, &c. &c.”

In Page 3 of the Preface, you say, “ This Work
 “ was principally undertaken with a View to refresh
 “ the Memory of those who have attended you, and
 “ for the Instruction of young Practitioners in gene-
 “ ral.”

This being your Design, I shall principally regard
 two Points.

First, The Subject Matter of your Treatise; and,
 Secondly, The Persons for whose Use it is chiefly
 designed.

The Subject Matter of it, when *faithfully* and *me-
 thodically* delivered, makes a considerable and useful
 Part in the Province of *Physic*; but whenever *errone-
 ously* set forth, and *blindly* pursued, must unavoidably
 be the *Source of irreparable Injuries*.

And, as to your Pupils, for *whose Use this Treatise
 of yours is chiefly designed*, they are, generally speaking,
 at that Age incapable of forming any Judgment of
 the Truth or Falshood of your *Doctrine* laid down, or
 the *Practice* recommended to them in such a *pompous
 Manner*, and therefore may be too liable to follow
 both.

To obviate so great an Evil, was the chief Motive
 that induced me to animadvert on your Performance,
 which I shall do in as full and clear a Manner as I am
 able; and that your Reasonings may not lose any of
 their Force, by my Misapprehension or Misrepresenta-
 tion of them, I shall every where give *your own* Argu-
 ments in *your own* Words, that the Reader may have

the Advantage of seeing the Strength and Weakness of them, and the Justness or Deficiency of my Objections.

This I do for the sake, if possible, of coming at the Truth, without the least Anxiety on my Part, to bring People, at any rate, into my Way of thinking; I hope you (as an honest Man) on your Part, will not value a Victory in Point of Argument near so much, as you would be satisfied to see the Truth ascertained by our Labours, tho' Judgment should be given against you. The Case therefore betwixt us is, That we only differ in Opinion in an Enquiry after Truth; and not being able to convince each other, are willing to appeal to better Judges, that they may determine who has the greatest Probability on his Side, without believing our Honours at Stake, which ever Way the Sentence is given.

I shall not take upon me to point out all the Errors you have fallen into; that would carry me farther than my Plan allows; it is sufficient for my Purpose to give some of the most material Instances; that from these your Readers may be cautious how they depend on your other Directions, notwithstanding your dictating to them with such an *Air of Confidence*.

You intitle your Book, *A Treatise on the Theory and Practice of Midwifery*, by which I apprehend you mean not only the Art of delivering Women; but also the Science or Knowledge how to treat them during and after the Time of Labour, and in the pregnant State, in all the Disorders they are therein subject to. This must be your Intention, or else the greatest Part of your Introduction, and also a considerable Part of your Treatise, must be superfluous.

Of the thirty-three Authors (as you call them) from whom you say (a) you give us *the Practice of Midwifery among the Antients*, there are fourteen of them whose Names are only inserted, together with their Place of Abode, or the Time some of them lived in; and this

(a) Preface, p. 2.

you tell us, “ you have exhibited for the Information
 “ of those who have not had *Time* or *Opportunity* to
 “ peruse the Books from which *it is collected*, that by
 “ seeing at *once the whole Extent* of the Art, they may
 “ be *more able to judge* for themselves, and *regulate their*
 “ *Practice by those Authors*, who have written *most judi-*
 “ *ciously upon the Subject.*” To what Use or Purpose
 have you only given us these Authors Names? What
Information have we from them in regard to the *Prac-*
tice of Midwifery? Or *how can we regulate that Practice*
 from the History you have given us of them? And as
 to the rest, I shall shew, that the *whole Substance* of
 your Extracts, which you affirm to be taken from the
 Originals, may be found in one single Volume in Fo-
 lio, collected by *Spachius*, except a few Pages from
Le Clerc’s and *Friend’s* History of Physic, in which your
 Readers may find a much better and fuller Account than
 you have given us. And lest the Reader or you should
 imagine I boast of more than I can perform, I shall point
 out where, in general, *each Part of your Account* may
 be found.

Part of the second and third Page of your Introduc-
 tion is taken from *Le Clerc* (b), but with what Pro-
 priety you (or the Person you take it from) can trans-
 late, *divers Fragmens des Livres*, into some Chapters,
 I am at a Loss to know.

Altho’ your great Modesty would not let you give us
 your Authority, yet I suppose Part of the 4th, 5th, and
 6th Pages, were first borrowed from the same Author,
 because they happen to be an *exact Translation* of his
 very Words (c), with this Difference only, that you
 have omitted a very prudent Caution mentioned by
Le Clerc, as taken from *Hippocrates* (d).

In Page 6 you tell us, that *Hippocrates*, amongst
 other Diagnostics of the *Fluor Albus*, says, “ *The Urine*
 “ *is like that of an Ass.*” but he says (e), *ῥόδς λευκός ὅτε*
λευκόν, ὡς ὄνυ αἴνον, “ in fluore albo effluit quid album, velut

(b) *Histoire de la Medecine*, part. 2, livre iii. chap. 13, p. 136.

(c) Part 1, p. 216, 217. (d) *Spachii Gynæcior*, p. 609, 610,
 611, &c. and 755. (e) *De Morb. mulier*, lib. ii. p. 641, line 8.

“ asini urina.” I fancy the following Passage, in another Place of the same Author (*f*), with the Translation, as there given, may have caused this Error by the Copier’s not understanding the Original; *οὐρανὸν δὲ γαστρὸς ὁ ῥοῖς ἐγξενται ὅσον οὔρου φαίνεται*; thus translated, “ cum fluor albus subortus fuerit, urina qualis asini apparet”; but in *Spachius* (*g*) it is rendered thus, “ cum fluxus albus obortus fuerit, velut urina asinina apparet;” and in the very next Page he says, “ Fluxus albus fuit veluti alba asini urina.” In the *Oeconomia Hippocrat.* (*h*), it is said, *ὅσον ἔρον*, may be read *ὄνειον ἔρον*. This, I think, a strong Proof, that you either have *not read*, or *not understood either* of these Authors. Moreover, *Hippocrates* has given the Diagnostics of this Disorder, much fuller and better expressed (*i*), which, in Justice to the Author, as well as to your Pupils, you ought to have mentioned.

The latter Part of your 7th, 8th, 9th, 10th, and Part of the 11th Pages of your Introduction are almost a verbal Translation of different Parts in *Spachius* (*k*), as taken from *Hippocrates* (*l*), excepting the following Passage in your 9th Page, where you make the Author say, “ The Parts (the *Os uteri*) are to be anointed with some unctuous Medicine, and *cautiously separated*,” whereas in *Spachius* (*m*), it is translated, “ *oscula dilatare*, and Hippocrates says (*n*), *τὰ σόματα μαλθακοῖσιν ἐξανόγειν*, “ *oscula emollientibus aperire*,” so that you do not find in either of these Authors any Directions *cautiously to separate* the Parts, altho’ you have ordered it, instead of dilating an elastic Orifice.

In the same Page you make *Hippocrates* say, “ The Woman *may be refreshed* by sitting over the Steams of hot Water;” but the Original is, (*o*) *ἀχρεὶς ἄν ιαίνεται*, “ *donec perfundatur*,” which is thus explained in the Commentaries in *Spachius* (*p*), “ *dum muliebria*

(*f*) De natur. muliebr. p. 567, l. 51. (*g*) P. 856. (*h*) P. 706, not. 52. (*i*) De morb. mulier. lib. ii. p. 641. (*k*) P. 602, 603, 677, 678, 679, 683, 684, 685, 696, 1053, 1061. (*l*) P. 602, 603, 617, 618. (*m*) P. 680. (*n*) P. 617, l. 43. (*o*) De morb. mulier. lib. i. p. 618. l. 9. p. 719. (*p*) 682.

“ pudenda tepescant, mollescant & dissolvantur ;” for *Cordæus* says, *ιαινισθαι*, “ hoc loco, idem significat “ quod” *τενεσθαι* κὲ *διαλύεσθαι* : and *Heysichius* explains *ιαινισθαι*, *διαχεῖσθαι*, in the same manner.

The remaining Part of your 11th and 12th Pages are likewise in *Spachius* (q) and may be found in *Hippocrates* (r) ; but I dare say you cannot have taken them from either of their Works, because you have totally inverted the Order in which *Hippocrates* has delivered them, when there can be no Manner of Reason assigned for so doing : For he says (s), *ἰφ' ὧν μάλιστα καθαίρεται τὰ λοχεῖα, σπόροδα ἐφθὰ, ἢ ὅπτα ἐν οἶνῳ καὶ ἐλαίῳ μετὰ πελυποδίων, καὶ σηπιδίων* “ ex quibus puerperii purgamenta potissimum expurgantur, allia cocta aut assa, ex vino & “ oleo, cum parvis polypis & sepiolis ;” and in Line 32, he says, *κάφεα δὲ ἢ νάρκον πινέτω, πίνειν δὲ καὶ πήγανον ἐν οἶνῳ μελάνι γλυκεῖ, νῆστις, ἢ ἀνευ οἶνου*, “ castoreum autem aut nardum bibat. Ruta etiam jejunæ ex vino nigro dulci bibenda, aut sine vino.” This Part you have translated into *Garlick, boiled or roasted, small Onions, Castor, Spikenard, Rue, and Black Wine*. In Line 46 *Hippocrates* goes on *ἀριστον δὲ πάντων οἶδα, ἀρτεμισίην βοτάνην, καὶ δίκταμνον, λευκοῖον ἀνθος καὶ ὅπον σιλφίον*, “ omnibus autem præstare novimus artemisiam “ herbum, & dictamnnum, ac albæ violæ Flores, & “ Laferis succus :” And in Line 50, *Hippocrates* proceeds : *καῖπειτα πέταλα τῆς ἀγνίου τρίψας ἐν οἶνῳ, καὶ μελίτι*, “ deinde agni casti Folia ex vino & melle trita.” Whence you see *Hippocrates* began with those Things, which he thought the mildest, and proceeded to those which he says are *ἀριστον δὲ πάντων οἶδα*, &c. “ omnibus autem præstare novimus, &c.” but you have perverted his Method ; and have directed to begin with the last.

The first Paragraph of your 13th Page may be found in *Spachius* ; (t) and in your next Paragraph the Original is misconstrued. For you have made *Hippocrates* say, “ If the Woman could not be delivered without the Help of Machines the Child is generally “ weak ;” but that Author says, (u) — *καὶ μηχανῇσιν ἰητρικῇ*, et sine ope medici. How you could commit such

(q) P. 631, 632, 633, 682, 712, 713, 715, 716. (r) P. 608. (s) P. 608, l. 29. (t) P. 789, 1057, 1058, (u) P. 261, l. the last.

a Mistake I cannot conceive: For first, had you only attended to the Sense as translated by *Fæsius*, you could not have understood him in that Light; for he says, “ muliere ægrè pariente, si Foetus in naturalibus locis hæreat, neque facilè exeat, sed cum labore, neque sine medici ope.” And secondly, a Person so well versed in the Methods used among the Antients, as you inform us you are, cannot forget, that we read of *no Machines* wherewith to deliver a Woman, but what killed the Child, (except the Fillet) till *Avicenna’s* Time, who was born according to *Friend* (w) in A. C. 980, and dyed 1036, about 1400 Years after *Hippocrates’s* Death, which happened above 360 Years before the Nativity of *Christ* (x). Thirdly, a Man of your Practice cannot be ignorant that when ever the Woman has a difficult Labour, and the Child sticks in the Passage for any Time, it generally is weak, especially if the Woman has been so enfeebled as to have Occasion for Medical Assistance to increase her Pains. Fourthly, *Hippocrates* does not tell us that the Child is generally weak; for he says (y) ταῦτα τὰ παῖδια ἀρτίζωα “ pauci sunt Temporis; they generally don’t live long; ἀρτίζωα ὀλιγοχρόνια.— “ Exponit Galenus,” and in this Sense also, *Heysichius* takes it. Lastly, you seem not to make the proper Distinctions betwixt a Child’s being generally weak, and being generally short lived; in the first Case, tho’ weak, it may recover and live many Years; but in the last it is commonly weak while alive.

Your translating μηχανῆσι into *Machines*, puts me in mind of the Story of *Pallet* the Painter in *Peregrine Pickle*, (z) who hearing the Swiss pronounce the Word *Magnifique*, mistook it for *Manufac*, as he did *Un Bon morceau*, for a Painter. Had I the Talents of the ingenious Writer of that Book, what a pathetic Harangue might I here make on the Usefulness of critical Skill in

(w) Hist. Phys. part 2. p. 39. Part 2. (x) Wolfgang. Justus in Chronolog. medic. juxta Renat. Moreau, Nat. ante Christ. 453. (y) De superfæt. p. 261. Line the last. (z) Vol. 2. Chap. 46. p. 61 & 63.

Language in these Cases? Some Latitude may be indeed allow'd for peculiar Graces and different Idioms, in different Languages, especially in Poetry; but in Matters of *Faith*, and Matters of *Fact* and *Experience*; a Translator's first Aim is to be, "Fidus Interpres." With such an *Aid de camp* I might hope to make even these Remarks very agreeable.——But *plain Sense* and *Usefulness* is all I ever desired; and I must own, I had rather find out one good Rule or Method of Practice, than be the finest Writer in the World in point of Style.

"Non nobis licet esse tam disertis,

"Qui musas colimus severiores."

MARTIAL. Lib. ix. Ep. 12. v. 17.

But to return——your 14th Page was originally extracted from *Spachius* (a) with this Difference, that you have omitted to give a material Symptom or Diagnostic; for *Hippocrates* says (b) καὶ ἡ γαστήρ ἐπαίρηται "et venter attollitur," and the Belly is swelled.

A few Lines below, you say, *Hippocrates* prescribes "Garlic, Castor, or Rue boiled with Oatmeal," but the Original runs thus, (c) παραμύσγοντα ἢ τῆς σπηπίνης τῶν ὀνίων ἢ τῆς κάσσιος "admixtis sepiaë ovis et castorio:" in another Place he says (d) σπηπίνης ὄσπραδον "Sepiaë Testam," both which he repeats in several other Parts of his Works. (e) What should induce you to translate, Sepiaë Ova into *Garlic* or σπηπιδίων, Sepiolis (f) into *small Onions*, as you call them in your 12th Page, is to me no small Surprise; because, when a School-Boy, you might have read in *Persius*, that Sepia is not a Vegetable, but an Animal;

"Nigra quod in usâ vanescat sepia Lymphâ.

SATYR iii. v. 13.

Johnston (g) also would have convinced you, that Sepia and Sepiola were not Vegetables, and were often prescribed both in Diet and Medicines; nay, had you

(a) P. 609, 610, 611. (b) P. 603. lin. 49. (c) P. 604. lin. 3. (d) De Superfæt. p. 256. lin. 49, 267. lin. 9. (e) P. 576, 624, 625, 632, 651, 653. (f) Hipp. p. 608. lin. 30. (g) Nat. Hist. de Exanquib. a quat. lib. i. Tit. ii. cap. 2. p. 8.

perused *Celsus* (whom, on other Occasions you quote) *Galen*, *Dioscorides*, *Pliny*, and almost any other antient Writers, you could not have committed such a gross Mistake: and I must add, that in this Part of *Hippocrates*, whence your Extract was originally taken, there is no mention of Onions at all.

In the next Place, the following Words of *Hippocrates* are again misconstrued, for he says (*b*) ἀλῆτον ξὺν πηγάνῳ ἰφθόν, “*Farinam cum Ruta coctam* ;” but you have called Farina Oatmeal, whereas ἀλῆτον made so often Use of by *Hippocrates*, ἄλευρον “*dici scribit Heyfichius et præcipuè Tritici Farinam significat*,” (*i*) and whenever that Author orders the Use of Farina, without specifying what Sort, *Heyfichius* says, it always signifies Wheat-meal; for, where *Hippocrates* intends any other Sort of Farina, he names it, as for Instance, (*k*) ἄλων καὶ φακῶν ἄλευρον, “*Lolii et Lentium farinam*, and (*l*) ὡμήλυστιν farinam hordeaceam,” and so of the other Sorts. Moreover, in all that Part of *Hippocrates*, whence your Extracts were first taken, there is not the ἀλῆτον ἑρμῆς, “*Farina Avenæ*.” True indeed, their Triticum and our Lammas Wheat are different; the first being bearded, and therefore called *Arista*, which is often used by the Poets to express Wheat; and all the Statues and Medals of *Ceres*, that I ever saw, have no other Corn represented on them, than that which is bearded (*m*).

As you have mentioned (*n*) several Medicines prescribed by *Hippocrates* to bring away the Secundines, I am surprised you should omit the ὄπον σίλφις. “*Succus Laserpitii vel Cyrenaicus*,” so often ordered by him upon those Occasions. And likewise as you have been at so much Trouble to draw a summary Account of these Things from the Antients, it is a Wonder you should have omitted to give your Readers that minute Description of the Diagnostics, &c. of an Inflammation

(*b*) P. 604. lin. 5.
cit. et pa. 668. lin. 3.

(*i*) Œcon. Hipp. p. 19.
(*l*) P. 570, lin. 4.

Georg. by Martin, lib. i. v. 219.

(*n*) P. 12.

(*k*) Loc.
(*m*) Virgil

of the Uterus, after Delivery, with the Method of Cure, as told us by *Hippocrates*, (o) since you have taken Notice of so many less useful Things. In short, whatever you have mentioned, as from *Hippocrates*, may be found in *Le Clerc's* History of Physic, and in *Spachius* (p) (except the Errors above mentioned) and I must add, that you have not given us the least Hint of *Hippocrates's* "Liber de Foetus in utero mortui executione (q).

After *Hippocrates*, the next Author you mention is *Aristotle*. (r) But as little as you have said of him, it may be found in *Spachius* (s). Where may be seen several Observations of his worthy of Notice although omitted by you; one of which is, "(t) Post partum et
 " post Lactia lactescere mammas, et quamdiu Lactia et
 " Menses feruntur Lac non effundendum, neque enim
 " natura inquit tam largè profundere potest per utram-
 " que partem; sed si in alterutram partem secernit, in
 " altera deest, nisi quid accideret violentum, et præ-
 " ter id quod magna ex parte consuetum est."

Celsus comes next; and although the whole Chapter does not exceed four small Octavo Pages, they contain all he says upon our Subject; (which may be found also in *Spachius*) (u) and yet the most material Part you have omitted; for speaking of the Manner of using the Crochet, you tell us, *it is to be fixed upon the Head*; but *Celsus* says (w) "Tum demitti debet uncus, undique lævis, acuminis brevis, qui, vel oculo, vel auri, vel ori, interdum etiam Fronti rectè injicitur." You have likewise omitted a prudent Caution, for he directs "trahere autem dextra manus uncum; sinistra, intus posita, infantem Ipsum simulque dirigere eum debet," from whence it is evident that *Celsus* was no Stranger to the Necessity of keeping the Apex of the Child's Head in the Center of the Passage. He likewise gives Direction how to extract the Placenta, for he says, "Quoties

(o) P. 609. (p) P. 600. et sequent. (q) P. 914. (r) P. 15.
 (s) P. 757, 773, 782, 787, &c. (t) Hist. Anim. lib. iv. cap. 10.
 lib. x. cap. 11. Spach. p. 792. (u) P. 796. (w) Lib. vii. cap. 29.
 p. 491.

“ Infans protractus est, Medicus deinde sinistrâ manu
 “ leniter trahere Umbilicum debet ita, ne abrumpat,
 “ dextraque eum sequi usque ad eas quas secundas vo-
 “ cant, quod Velamentum infantis intus fuit: hisque
 “ ultimis apprehensis, venulas membranasque omnes
 “ eâdem Ratione Manu diducere à Vulva, totumque
 “ illud extrahere, et si quid intus præterea concreti
 “ sanguinis remaneat, &c.

Moschion is the next Author, and although his Work is in the Volume of *Old Moderns* as you call them, (x) collected by *Spachius*; yet you exhibit him here as an *Antient*. As the learned *Haller* (y) says, it was wrote originally in Latin and translated into Greek, I shall follow the former; but the chief Part of both is in *Spachius*, and the Extracts, you say, you give us from *Moschion* are in his Collection (z). However you have omitted some of his good Rules and Methods of Practice, and make him speak *Impossibilities*, or what can never happen in a regular made Child. For you say (a) he tells us that “ the best Position is that of the
 “ Head presenting, the Hands and Feet *being mingled*
 “ *and disposed along the Sides.*” But the Original runs thus, (b) “ quoties in caput feruntur, ita ut in orificium
 “ matricis directum caput ejus inveniatur, manibus
 “ scilicet lateribus et femoribus junctis.” But lest you should charge me with not giving a fair Account, I will here present you with the Greek Translation also.

(c) οσάκις κατὰ Κεφαλὴν φέρεται ἕτως ὥς εἰς τὸ σῶμα τῆς μήτρας εὐθιῶς ἢ κεφαλὴ αὐτῷ εὐρέθῃσεται, τὰς χεῖρας δηλοῦσθαι ταῖς πλευραῖς ἐξευγμέναις.

So that take which you please, *Moschion* does not say any thing of the *Hands and Feet being mingled and disposed along the Sides*. Moreover you must know, that when a Child presented in *the best Position*, it was impossible that the *Hands and Feet could be mingled and disposed* in the Manner mention'd. Whence it is evident that your Extracts are not taken from the Originals.

Your next Author is *Rufus Ephesius*, but all you say

(x) Introduct. p. 46.

(y) Meth. stud. med. p. 581.

(z) P. 11. and 12. (a) P. 19.

(b) P. 10. in *Spachius*. (c) Cap.

147, 148. p. 19.

of him is taken “*verbatim*” from *Le Clerc* (d); so there is no Occasion to consult the Original for your Extracts.

You tell us nothing of *Galen* worthy of Notice; and what you say of *Oribasius*, may also be found in *Le Clerc* (e). The two last Books of his (*Oribasius*’s) Works are so nearly copied from *Galen*, that he was called *Simia Galeni*, *Galen*’s Ape, as *Friend* tells us (f); but you have so far mistook, as to make an Ape of *Aëtius* (g) who is the next original Author you say (h) you have taken Extracts from, which fill up 18 Pages of your Book; but every Thing material that you have copied, may be seen in *Spachius*, chiefly from Page 1053, to 1063 *inclusive*; where your Reader may find whole Pages translated *verbatim* from him.

In your 30th Page you say, “That *Aëtius*’s 23d Ch. “contains the Method of Extraction and Exsection of “the Fœtus, from *Philumenus*.” In your 36th Page you tell us, “The Substance of his 24th Chapter is also “taken from *Philumenus*;” and in the 38th Page you say, “*Paulus Aegineta*’s Practice is much the same as “that of of *Aëtius* and *Philumenus*.” And in the next Page you say, “His Method of extracting a dead “Child and the Placenta is much the same as that al- “ready described by *Philumenus*.” And in your 41st Page you say, “*Avicenna* took the Extraction of the “Secundines from *Philumenus*”; and “the Operation “for the dead Child from *Paulus*” (*Aegineta*), who you told us just above (i) “took it from *Philumenus*”; And lastly, in Page 70th, you tell us, “*Philumenus* “goes still farther, &c.” From all which Extracts your Reader, I dare say, will imagine, that there had been some Book published of *Philumenus*’s, and that you had read it, and compared his Works with the 24th Chapter of *Aëtius*; or else, how could you have

(d) Hist. de la Medic. Part 3, Lib. ii. Chap. 3, p. 105.
(e) Ibid. part. 3, lib. iii. chap. 1. p. 108, 109, (f) Hist. Phys. part 1, p. 6. (g) P. 22. This Mistake the Author has corrected in the 2d Edition. (h) P. 21. (i) P. 39.

discovered, that the Substance of that, as well as of his 23d Chapter “ contains the Method of Extraction and Exsection of the Fætus from *Philumenus*?” whereas *Philumenus*, who died A. C. 350 (k), never wrote any Thing that was published, except *Fragmenta Varia*, which were printed amongst the other Collections made by *Aëtius Amadeus*; and those upon our Subject, viz. *De Fætus extractione*, &c. are to be seen at large in the 23d, 24th, 27th, 28th, 83d, and 105th Chap. *Tetrab.* 4, Sermon 4th, and composed that Part of *Aëtius*’s Works: But you have mentioned them as the Performance of different Persons; or else *Ægineta*’s Practice would scarce be the same as that of *Aëtius* and *Philumenus*; whereas *Philumenus* wrote these which were only collected and published by *Aëtius*, and composed the Books as above.

Paulus Ægineta is the next Author after *Aëtius*, and the Extracts from him also may be seen in *Spachius*, in which your Readers may find, that *Rockæus* (l), as taken from *Ægineta* (m), tells us, “ Si os cervicis uteri obliquum fuerit, &c. difficillimè pariunt:” And in the next Page he says, “ Humore siquidem, qui in utero collectus fuit, vacuato, ægerrimè delabetur Embryo propter Ariditatem.”

Your Account of *Paulus Ægineta* may be seen in *Friend*’s History (n) of Physic, where you may find this Author copied many entire Passages from *Alexander de Tralles*, in his very Words, as did *Serapion*, your next Author (o), after whom follows *Rhazes*, who was the first Person that wrote a Book on the Diseases of Children (p); and, according to your Introduction, (q), is the first Person that used the Fillet. The next to him you have placed *Avicenna*, who is the first that has mentioned any Instrument to extract and preserve the Child, except the Fillet; for, says *Mercurialis* (one of the Authors in *Spachius*) (r), as taken from *Avicenna*, “ Prima (regula) est, ut obstetrix tentet manibus edu-

(k) Vander Linden de Script. Med. p. 923. (l) Spach. p. 103.
 (m) Lib. iii. cap. 76. (n) Part 1. p. 85. (o) Ibid. part 2, p. 23.
 (p) Ib. part 2, p. 30. (q) P. 41. (r) Lib. ii. cap. 3, p. 236.

“ cere ; si verò manibus non potest, fascia circumli-
 “ getur fætus corpus, atque ita paulatim educatur. Si
 “ verò hoc non succedat, habent obstetrices quædam te-
 “ nacula quibus circumligant pannos ne lædant vel of-
 “ fendant fætum iisque educant.” This Instrument
 we suppose to be the Forceps, altho’ he does not de-
 scribe its Shape or Form. *Vide* Chap. 8.

Your next Writer is *Albucasis*, whose Works are in that Volume of *Old Moderns*, as you call them (s), collected by *Spachius* ; and even that Account is also taken from *Friend* (t), where your Reader may find what is mentioned in the *Arabian Manuscripts*, that is lodged in the *Bodleian Library*, without going to *Oxford* to consult the Original.

After *Albucasis* you place *Raynald*, who published in 1565 ; but as he translated *Eucharius Rhodion de Partu Hominis*, whose Works I have never seen, I can say nothing about him. I come now to that great Fund whence your preceding Accounts have been chiefly extracted, contained in one Volume in Folio, under the following Title, viz. “ Gynæciorum sive de Mulie-
 “ rum tum communibus, tum Gravidarum, Parien-
 “ tium, & Puerperarum affectibus & morbis, Libri
 “ Græcorum, Arabum, Latinorum veterum & Recen-
 “ tium editi, opera & studio Israelis Spachii, Argen-
 “ tinæ, 1597.”

In this single Volume are contained the Works of twenty-one Authors, as you call them ; fourteen of which you only just name ; wherefore I shall once for all acquaint the Reader, that I shall pass them by in the same Manner, except in such Things as are worthy of Notice.

Platerus leads the Van, and immediately precedes *Moschion*, whom you have already mentioned amongst the antient Writers. Next to him succeeds the *Harmonia Gynæciorum*, &c. and then follows *Eros*.

You say *Eros* or *Trotula*, as if there was a Dispute which of the two was the Author of this Treatise, “ De

(s) P. 46. (t) Part 2, p. 66.

“ *Passionibus Mulierum* ;” but had you read the Book, you might have found that *Eros* mentions *Trotula* as a different Person, and not as the Author ; for he says (u), “ Undè communiter *Trotula* vocata fuit, quasi “ *magistra Operis* : Cum enim quædam puella debens “ *incidi propter hujusmodi ventositatem, quasi ex* “ *ruptura laborasset* : cum eam vidisset *Trotula*, ad- “ *mirata fuit quam plurimum.*” Had you even read the Title-Page of this small Treatise, you certainly would not have named *Trotula* at all ; for it runs thus, “ *Erotis Medici Liberti Juliæ, quem aliqui Trotulam* “ *ineptè nominant Liber, &c.*” Whence I think it is pretty evident that you have never read this Part of *Spachius*.

You then proceed, Page 47, to *Nicholaus Rockæus*, whose Works, you say, are taken from the *Greeks* and *Arabians* : But had you ever read him, you might have found, that he copied also from the *Latins*, and others ; particularly from *Celsus* (w), *Pliny* (x), and from *Eucharius Rhodion*, a *German* (y).

You say, “ His 30th Chapter contains Directions for “ *extracting the Placenta, when it adheres ; in which* “ *case the Os uteri must be dilated, and the Acconcheur* “ *taking hold of the Funis, must pull gently from Side* “ *to Side, lest the Uterus should be brought down.*” But *Rockæus* (z) says, “ *Si itaque Os Uteri diductum* “ *fuerit, & secunda, quæ inibi relictæ est, alicui parti* “ *uteri orbiculatim, ac pilæ modo convoluta inhæserit,* “ *facile educitur, manu siquidem sinistra calida pin-* “ *guique illita in Fundum demissa, secundum subal-* “ *bentem extrahere oportet. Si autem Fundo uteri fit* “ *connexa, demissa simili modo manu calida, & pingui* “ *inuncta apprehensam Secundam trahemus, non tamen in* “ *rectum, ne uterus procidat, neque violenter admodum,* “ *sed lenitè ac placidè primum in obliquum diducemus,* “ *huc atque illuc circumagentes ; deinde paulò validius*

(u) Cap. 20, vide Spach. p. 50. (w) See Spachius, p. 62.
(x) Lib. x. cap. 64, Spachius, p. 79, 105. (y) De Partu Homi-
nis Spach. p. 107. (z) Spachius, p. 107, from Fuchsius, lib. iii.
De Morb. mulier. cap. 64.

“ attrahemus, hoc enim pacto obsequuntur, & a con-
 “ nexu solvuntur :” Whence you find he does not direct
 the Operator to pull the Funis at all, because he does not
 so much as name the Word Funis or Umbilical Chord.
 Whether you have wilfully misrepresented the Author’s
 Meaning, in order to justify a Method of Practice re-
 commended by you, must be left to the Reader’s Judg-
 ment.

Ludovicus Bonaciolus is the sixth Author ; but altho’
 you pass on without taking any further Notice of him,
 I shall shew a very beneficial Method of Practice re-
 lated by him, which you have omitted ; for his Me-
 thod will preserve many Lives, which by yours
 must generally be lost. In giving an Account of the
 Duty of a Midwife, he says (a), ‘ Peritiores nonnullæ ob-
 ‘ stetrices cruentum succum intrò de umbilico reprimunt,
 ‘ quo diligentissimè per actò, infans, qui modo exan-
 ‘ guis exanimatusque è vita excidebat, mox redivivatur,
 ‘ recreatur, vitæque restituitur.’

The next is *Jacobus Sylvius*, who is followed by *Ja-
 cobus Ruffus*, as you called him in the first Edition ;
 but his real Name is *Rueff*, if we are to trust the Title-
 Page of his Treatise ; as in *Spachius* (b), ‘ De concep-
 ‘ tu & generatione hominis, & iis quæ circa hæc potis-
 ‘ simum considerantur, Libri sex, congesti operâ Ja-
 ‘ cobi Rueff, Chirurgi Tigurini.’

You have omitted to tell us, that he directs (c) to
 fetch the ‘ Secundines, matrice adhuc diducta & aper-
 ‘ ta, antequam restricta denuò conniveat.” In Pages
 48, 49, you tell us, that ‘ *Ruffus* is the first that gives
 ‘ a Draught of the Speculum Matricis, for dilating the
 ‘ Os Internum, which he directs to be stretched in
 ‘ Width ; but by no means Lengthways, lest the Liga-
 ‘ ments breaking, the Womb should fall down ;’ but
 in the Original you will find it thus (d) : ‘ Hanc autem
 ‘ viam (os Uteri) quando infans per se (uti aliàs na-
 ‘ tura solet) neque invenire, neque aperire propter re-
 ‘ strictionem interioris Portæ, & propter Claustra ejus

(a) Spachius, p. 142. (b) P. 166. (c) P. 175, Spachius.
 (d) Lib. iii. cap. 6. Spach. p. 177.

‘ impedita valuerit, tunc obstetrix, perunctis manibus,
 ‘ digitos inferat, eamque angustiam quam commodissi-
 ‘ me poterit in Latitudinem tantum diducat, in Longi-
 ‘ tudinem verò nequaquam, ne Ligamenta Matricis rum-
 ‘ pantur, & incurabilis morbus Præcipitatio matricis se-
 ‘ quatur, ejus inquam Inversio, cum Exitu & eminentia
 ‘ colli matricis. Itaque obstetrix in dilatando interiorem
 ‘ partem antrorsum moveat, ut caput Infantis quod pro-
 ‘ ximum est inde se exerat, & in exteriorem partem, col-
 ‘ lum inquam matricis, prodeat. Nam modo dicta dila-
 ‘ tatio interioris partis, neque matri neque proli quicquam
 ‘ incommodare poterit, utpote quam & natura ipsa in
 ‘ facili partu sponte diducit, & post partum restrin-
 ‘ git iterum.’

I must here observe, *first*, That in this Paragraph *Rueff* does not so much as mention any Instrument at all; neither does he take any Notice of the Speculum, till the third and fourth Paragraph after this.

Secondly, That in no other of these following Paragraphs does he direct how the Womb is to be dilated.

Thirdly, That *Rueff* directs us in dilating the Os Uteri antrorsum movere, because, ‘ Natura ipsa in facili partu, sponte diducit;’ the very reverse of which you seem to want to prove, or otherways how could you take a small Part of the fifth Paragraph, wherein the Speculum Matricis for dilating the Os Internum, is mentioned, and place it before a Part of the first Paragraph, where the Method of dilating the Os Uteri with the Hand only, is directed, whence you have evidently misrepresented the Author’s Meaning?

You take no other Notice than of the Names of the four next Authors, *Mercurialis*, *Montanus*, *Trincavel- lius*, and *Albertus Battonus*; but you have mistook the last mentioned for *Albertinus Bottonus*, as you might have seen in *Spachius* (e), had you read more of him

(e) P. 338. In the second Edition the Author pretends to correct this Error; but by following the ‘ Catalogus Authorum’ above mentioned, he is yet misled, which is a further Confirmation that he has never seen the Works of *Albertinus Bottonus*, there being no Author of the Name of *Albertus Battonus*, who wrote upon this Subject.

than the ‘*Catalogus Autorum qui in hoc volumine continentur*’ which follows after the Preface: There indeed you may find *Alberti Bottoni*, &c. by the same Means, I suppose, you have been led into the Error about *Trotula* and *Lithopedus Senonensis*.

The next Author, *Johannes Le Bon*, you only name, who is succeeded by *Ambrosius Paræus*; but you postpone your Account of him, and then proceed to *Albucasis*, the *Old Modern*, already taken notice of amongst the *antient* Writers. Then follows *Franciscus Rousetus*, who wrote on the *Cæsarean* Operation; but you have not mentioned that he (*f*) gives us several Histories of the Uterus being taken off, and yet the Patients recovered; and in his sixth Section he tells us of several Women becoming pregnant while they wore Pessaries.

The seventeenth Author, collected, as you tell us, by *Spachius*, is *Lithopedus Senonensis*, (*g*), which instead of being an Author, is only the Drawing of a petrefied Child, when taken from its Mother, after she was opened; and this is evident from the Title, *Lithopædii Senonensis Icon*, which, with the Explanation, is contained in one single Page only. The Account of it, as published by *Albosi*, in 1582, in Octavo, may be seen at the End of *Cordæus*’s Works in *Spachius* (*h*), whence again, I think, it is evident you must have taken your Extracts from some bad Copier.

Your next Author that follows *Lithopedus Senonensis*, as you call him, is *Caspar Bauhinus*; and after him is *Mauricius Cordæus*, who wrote Commentaries upon the first Book of *Hippocrates* de Muliebribus.

Altho’ you thought proper to tell us no more of him than his Name and Place of Abode, yet the chief of what you give us, as taken from *Hippocrates*,

(*f*) P. 464, Sect. 4, Chap. 5. (*g*) P. 479. (*h*) P. 740. This Error is corrected in the second Edition; but how the Author, as he tells us, *he was six Years in cooking up this Performance*, could at first mistake the Title, and represent the petrefied Child as an Author that he had perused, and taken Extracts from, *for the Information of those who have not Time or Opportunity to peruse the Books from which they are collected*, is what surprises me very much.

is to be found in him, except the very first Part, which is taken from *Le Clerc*, before mentioned. As a Specimen, let any Person compare what you say in Part of the 8th, 9th, 10th, and Part of the 11th Pages of your Introduction, with the 677th, 685th, and 796th Pages of *Spachius*, and there he will find not only the Substance, but a verbal Translation of them. Likewise let him compare your 7th and 8th Pages with the 602, 603, and 1053 of *Spachius*; and your 12th with Pages 631, 632, and 633; as also your 13th with the 1052d Page of the same Author, and he will find there is no Difficulty to extract all you have said, as taken from *Hippocrates*, out of that single Volume of *Spachius*, where the Reader may find many other Things of Moment.

The next Author you name is *Martinus Akakia*, of *Paris*, without taking any other Notice of him; and yet he confirms the Method of recovering a new born Child, as I have already mentioned in my Remarks upon *Bonaciolus* (i) For *Akakia* says (k), ‘Sæpè visus est puer semi-mortuus nasci, cum ei infirmo priusquam deligaretur umbilicus, sanguis à puero ad umbilicum & circa efflueret, unde obstetrices peritiores reprimunt intro de umbilico sanguinem, quo factò statim Infans, qui modo exanguis deficiebat, recreatur, vitæquè restituitur.” If you knew any thing of these Passages in either of these Authors; I think you would not have put your Pupils upon such a dangerous, nay, I may say, fatal Method of treating new-born, weakly Children, as is mentioned in your Midwifery, from Page 225 to 231, of which I shall take notice in its proper Place. And *Mercatus* tells you (l), delaying to tie and cut the String is dangerous. ‘Nam si diutius differamus, puer periclitabitur aut morbosus evadet.” And in the next Page he says, ‘Si tamen umbilicum refecare ob ingentem necessitatem, & ne foetus pereat cogaris, &c.’ From which it is plain, That by Observation the

(i) Spach. p. 142. p. 19. of this.
Lib. ii. cap. 7.

(l) P. 1058.

(k) Spach. p. 787, 788.

Antients had found the Child's Life in Danger, while the Passage through the Umbilical Chord was open, and permitted the Blood to pass to the Placenta.

But you say (*m*), ' If the Air does not immediately rush into the Lungs, and the Circulation continues between it (the Child) and the Placenta, the Operation of tying and cutting must be delayed; and every Thing tried to stimulate, and sometimes to give Pain. If the Circulation is languid, Respiration begins with Difficulty, and proceeds with long Intervals; and if it be intirely stopped in the Funis, the Child, if alive, is not easily recovered. Sometimes a great many Minutes are elapsed before it begins to breathe. Whatever augments the circulating Force, promotes Respiration; and as this increases, the Circulation grows stronger, so that they mutually assist each other. In order to promote the one and the other, the Child is kept warm, moved, shaken, whipt; the Head, Temples and Breast rubbed with Spirits, Garlic, Onion, or Mustard, applied to the Mouth and Nose; and the Child has been sometimes recovered by blowing into the Mouth with a Silver Canula, so as to expand the Lungs.'

Your first Direction is, ' If the Air does not immediately rush into the Lungs, and the Circulation continues between it and the Placenta, the Operation of tying and cutting (the Chord) must be delayed, and every Thing tried to stimulate, and sometimes to give Pain.'

Here you have contradicted what *Bonaciolus*, *Akiskia*, and *Mercatus*, have directed, without any Reason assigned; and I must likewise remark, that as the Authors above-mentioned were Strangers to the Laws and Manner of the Circulation of the Blood, they were not so capable of giving a Reason for what had been found, by repeated Observation, to be the most salutary Practice; which, since the Improvements made in Ana-

tomy, and since the Circulation of the Blood has been found out, and the Use thereof more known, may be easily accounted for, as I shall explain in the Sequel.

You seem to found this Practice of yours upon the chimerical Notion that the Placenta does the same Office before the Child breathes, that the Lungs do after Respiration begins: For (*n*), you say, ‘ That the Umbilical Vessels are supposed to do the same Office in the Placenta, which is afterwards performed in the Lungs by the pulmonary Artery and Vein, until the Child is delivered, and begins to breathe; and this Opinion seems to be confirmed by the following Experiments.

First, ‘ If the Child and Placenta are both delivered suddenly, or the last immediately after the first; and if the Child, tho’ alive, does not yet breathe, the Blood may be felt circulating, sometimes slowly, at other Times with great Force through the Arteries of the Funis to the Placenta, and from thence back again to the Child, along the Umbilical Vein.

Secondly, ‘ When the Vessels are slightly pressed, the Arteries swell between the Pressure and the Child, while the Vein grows turgid between that and the Placenta; from the Surface of which no Blood is observed to flow, altho’ it be lying in a Bason among warm Water.’

Thirdly, ‘ As the Child begins to breathe, the Circulation, tho’ it was weak before, immediately grows stronger and stronger, and then in a few Minutes, the Pulsation in the Navel-string becomes more languid, and at last entirely stops.

Fourthly, ‘ If, after the Child is delivered, and the Navel-string cut, provided the Placenta adheres firmly to the Uterus, which is thereby kept extended; or if the Womb is still distended by another Child, no more Blood flows from the Umbilical Vessels than what seemed to be contained in them at the Instant of cut-

‘ting; and this, in common Cases does not exceed the Quantity of two or three Ounces.

Fifthly, ‘And finally, when in consequence of violent Floodings, the Mother expires either in Time of Delivery, or soon after it, the Child is *sometimes found alive* and vigorous.’

It may not be improper in this Place, before I proceed any further, to shew what the chief Use of the Lungs is. One great Use then is to mix the Blood, Chyle, and other Humours at every Inspiration and Expiration of the Air, and to break their Viscidity, which the Motion of the Lungs is well adapted for; and at the same Time to admit such necessary Parts contained in the Air, into the Blood, without which an Animal can’t long exist. These being the two chief Benefits the Lungs afford us, I shall now proceed to examine, how far your Arguments prove that the Placenta can answer the same Purpose in a Child before its Birth.

First, then the Force of your first and second Arguments proves no more than that there is a Circulation carried on betwixt the Child and Placenta; and the same Method will shew there is likewise a Circulation betwixt the Toes or Fingers and the Heart, but does not prove from thence, that they perform the Office of the Lungs.

Your third Argument will prove as ineffectual as the two first, and does not in the least shew that the Placenta performs the Office of the Lungs as above described. Because any Person, ever so little versed in Business, knows that when the Child’s Head has been greatly and long compressed, the Circulation is weak; and as the compressing Force is lessened after Delivery, the Circulation grows stronger and stronger. This is the Case of a new born Child, whose Head has been squeezed in the Passage, which soon resuming its Form, the Circulation grows stronger, and as that increased Force is exerted, it drives Part of the Blood into the Vessels of the Lungs, and as they open, the Blood gets a freer and shorter Passage through them; whereby

whereby they are enlarged, and the Motion through the Umbilical Vessels grows more languid.

Your fourth Argument only proves, that by cutting the Umbilical Chord, the Circulation in the Placenta ceases, and will not the Circulation cease in a Leg or an Arm when cut off? and will any Person thence conclude, that a Leg or an Arm does the Office of the Lungs?

Lastly, you say when the Mother expires, either in Time of Delivery *or soon* “*after it*, the Child is sometimes found alive and vigorous.”

This only proves that the Circulation in both Mother and Child depends upon the Motion of their respective Hearts and Vessels; as I have fully shewed in my *Essay on Midwifry*. Besides the latter Part of your Argument is very remarkable; for how can a Child be found alive and vigorous in the Womb when the Woman expires *soon after Delivery*? Moreover there is no Occasion for the Placenta to refine the Blood of the Foetus in utero; because the Foetus does not receive Chyle, but digested and well mixed Humours from the Mother, which have imbibed the necessary Qualities from the Air through her Lungs; and therefore the Child unborn has no Occasion for any Part to perform such an Office; whence on that Account the Placenta would be useless.

From all which it plainly appears that you have not avoided *all vain Hypotheses*, Number II. and also that your *Instructions* are not so *clear and perspicuous*, nor your *Remarks* so *judicious and happily deduced*, as the *Review Writer* has informed the Public, Number III. But to return.

You next tells us “that whatever augments the “circulating Force promotes Respiration.” As an Application to the Part itself must be of more Service than when more remote; the Naval String should be immediately tyed to prevent the Blood from passing that Way; by which Means the Heart will drive it sooner into the Lungs, than if the same Quantity of Blood had two Outlets or Ways of passing; whence
there

there must be some greater Motion in the Vessels of the Lungs, than before such Ligature, and this is confirmed by the Observations of the Authors above-mentioned; “Unde Obstetrices peritiores reprimunt intrò
 “de Umbilico sanguinem, quo facto statim Infans,
 “qui modo exanguis deficiebat, recreatur, vitæquè re-
 “stituitur.” Hence also it appears your *Instructions* are so far from being *clear* and *perspicuous*, that you have in this last Case brought a strong Argument against yourself, and which also proves that your *Remarks* are not so judicious and happily deduced, nor your *Practice* so unexceptionable as the *Review Writer*, Number III. would make us believe: but more of this hereafter.

The last of the Authors in *Spachius's* Collection is *Ludovicus Mercatus*, Physician to *Philip* the Ild. King of *Spain*. And although you give us some Extracts as from him, wherein, I think, you have also mistook the Author's Meaning, yet as they are not very material, I shall not regard them. You then say (q) “having thus given
 “a short Sketch of the Authors collected by *Spachius*,
 “I return to *Paræus*, who directs us to bring away
 “the Secundines immediately after the Child is delivered.” But you have omitted to give us the remainder of the Paragraph; which should seem like an Imitation of your Design in the Omission if you had ever seen the Original. For he proceeds thus (r)
 ‘Molli si fieri potest Umbilici Tractu. Quod si sic non
 ‘licet, Obstetrix, oleo inunctam manum blandè in
 ‘Uterum immittet, ducem secuta Umbilicum, sicque
 ‘comprehenses secundas, si adhuc hæreant Utero, leniter hæc et illâc concutiet, ut sic excussas leniter educat, non autem violentius extrahat, ne una sequens
 ‘Uterus procidat. Si qui unâ cum Secundis in Utero
 ‘subsint sanguinei Thrombi, hos unâ eâdemque opera
 ‘Obstetrix revellet, et ad ultimum minimumque usque persequetur.’

(q) P. 52. (r) Cap. 18. *Spachius* P. 413.

You have likewise omitted to tell us, that he (s) open'd several pregnant Women, 'tenellos adhuc
' Fætus, quales quadrini sunt, figura orbiculari sitos,
' capite ingenua reclinato, geminis manibus sub ge-
' nubus, calcibus vero ad nates junctis:" of which I shall have occasion to take notice in another Place. You then add (t) "Cotemporary with him (*Paræus*)
" was *Jacobus Rueff*, who practised at *Frankfort*,
" and in his Writings recommends the Method
" of the Antients; a Circumstance from which we
" learn, that the Improvements had not then reached
" *Germany*." You told us before, (u) that this Author was the first that gave a Draught of the *Speculum Matricis*, which was then looked upon as an Improvement; and you also mention several other Things, as Amendments in that Author, of which I took notice in my former Remarks: whence it is demonstrable you must have taken Things from others, without ever thoroughly perusing the Originals: or you could never have brought *Jacobus Rueff* at *Zurich* and *Frankfort* to prove there were Improvements made in Midwifry, and again produce the same *Jacobus Rueff*, who practised at *Frankfort*, to shew that the Improvements had not then reached *Germany*.

You tell us (w) that *Jacobus Guillemeau* was the next Author; but you have omitted to acquaint your Readers, that he orders Women to be delivered immediately, when they flood; and that he had seen Wombs burst in Labour, of which I don't remember you have ever taken the least Notice through your whole Book; as if such Misfortunes were not worth remarking.

I have now made my Observations upon the Antients, and old Moderns, as you call them, down to the sixteenth Century, no less than thirty-three in Numbers, including your *Lithopedus Senonensis*. To have perused all the Works of so many Authors, would in-

(s) Cap. 14. Spach. p. 410.
and of this p. 1).

(w) P. 54.

(t) P. 54.

(u) P. 48.

deed require *much Time and Opportunity*; but when your Readers find the Sum Total is contained in *one single Volume in Folio*; a few Pages taken from *Le Clerc's* and *Friend's* History of Physic excepted, as before observed, their Wonder will soon cease; and more especially when I tell them that from the Time that *Guillemeau* published in 1582, to the Time *Mauriceau* appeared in Print in 1668 (being upwards of four fifths of a Century) you have not continued down the Series of Writers, for want of another *Spachius* to assist you, whose Contents indeed you, or the Person you copy from, may have seen, but can never pretend to have examined or understood. However, although you have left so great a Chasm; I can assure our Readers, that they may find several Things in the Writers of the fifteenth and sixteenth Centuries, before *Mauriceau's* Time, worthier of Notice, than many, which you have produced, as *Haller* will inform them. And in case they should be desirous of seeing that Part of the historical Account continued, which you have omitted, I will exhibit a few Authors, who wrote upon different Branches of this Part of Medical Learning, during the Interval of Time above-mentioned: That when the Readers have perused *Spachius*, they may know where to apply for farther Assistance; and where they may find more Matter to *enable them to judge for themselves and regulate their Practice by*, than what you have given them in your Treatise on that Subject.

Julius Cæsar Arantius published a Book de Formato Fœtu, in *Venice* in 1571, and in 1595; he was the first Person (I think) that denied there were any Anastomoses betwixt the Vessels of the Womb and those of the Fœtus; he describes the ‘ Sphincter Vaginæ and ‘ Placentæ membranam obversam utero.

‘ *Jasonis Pratenfis* de Uteri Morbis in 1549.

‘ *Johan. Baptista Conanus*, published in 1572. monuit
‘ in Gemellis unam Uteri caveam esse, leviter in dextram et sinistram divisam ”

‘ *Constantius Varolius*; in 1575. Clitorides ferè
‘ majores esse, quas pro Hermaphroditis habeant, monuit.”

‘ *Balduini*

‘ *Balduini Ronfæi* liber de morbis muliebr. cum morbis Infantum, Grandarum et Puerperarum in 1593,’ in which are Drawings of several Crotchets, and other Instruments.

Horatius Augenius gives us also an Account of, what you call Lithopedus Senonensis; in 1595, in Octavo.

‘ In *Severinus Pineus* (*Pineau*) de Graviditate et partu mulierum in 1597.’

Andreas Libavius published a Treatise ‘ de Vagitu expresso Foetus in Utero, Norimberg, 1597.’ Instances of which may be found in the *Philos. Transf.* Number 324, and in the *Act. Erudit.* 1686.

In the 16th Century several Authors wrote very well upon our Subject, some of the chief are *Alexand. Massaria* de morbis mulier. Conceptu et Partu in 1600.

Fred. Bonaventura, who published in 1601.

Johan Jessenius, *Jessen a Jessen* Eques Ungar in 1602.

Roderic. a Castro de universa muliebrium morborum, Medicina. 1604.

Riolanus, junr. in 1608.

Julius Casserius, in whose Tables you may see the ‘ Valvulæ, et media Eminentia Cervicis Uteri;’ which are also in *Spigelius* 1627.

Rudolphus (*Le Maitre*) Magister in 1613.

‘ *Hætoris Diascepsis* Anatomica de Vasis umbil. et secundinis,’ in 1608.

‘ *Franciscus Plazzonius*, de Partibus mulierum generationi inservientibus in 1621;’ where you may find the Lacunæ described.

‘ *Johannis Conradi Rhumelii*, de Humani Partus naturâ, Temporibus et Causis dissertatio 1624.

‘ *Adrianus Spigelius* de Formato Foetu, &c. extat in Plazzonio.

‘ *Gregorius Nymmannus* de Vita Foetus in Utero 1628, wherein he proves that the Child may live in the Womb, after the Mother is dead: This is also in Plazzonius.

Alphonfus a Caranza, a Spaniard, wrote very accurately upon Midwifry in 1629.

Michael Rupertus Beslerus, who died in 1661, has well described the Ova Muliebria ; and mentions a Case where the Uterus was two Inches thick. In the Observations of *Louise Burgeois*, in 1642, are many useful Things, with Descriptions of various human Ova. Du Verney, ex Vasis Uteri via in Uterum, glandulæ Uteri, in Philos. Transf. Number 26. Uterus Puerperiaræ in Number 269, Uterus Gravidus ejusque Glandulæ, Number 308.

C. Bartholin. describes the *muscular Fibres* of the Uterus, and the Glands on the Sides of the Vagina ; but chiefly from *Du Verney's* Experiments. ‘ *J. Peyssonel* Temporibus Humani Partus Secundum Hipp. 1666.’

From all these and many others you might have continued your *summary Account with the Improvements made during the great Chasm*, which you left, for the Space of near a whole Century ; whence it is evident, that your Readers cannot at once see from your *Extracts the whole Extent of the Art, among the Antients, with the Improvements made in it from the Time of Hippocrates down to the Time of Mauriceau*, as you have told us ; which the Writer in the Review, Number I. has echoed again, and endeavoured to confirm ; which is no doubt a *very strong Proof* of that Writer's being *Master of the Subject*. Your Omissions of the Improvements made by the Moderns also, or of some of those Authors, who wrote in this Century, I shall shew hereafter, and now return to your Introduction again.

In Page 55 you tell us *Mauriceau* published in 1668, ‘ after an extensive Practice for several Years.’ In the next Page you say, ‘ He invented a Tire-Tete, which cannot be applied until the Skull is open'd ; consequently can't save the Child : and granting the Fœtus to be dead, other Methods are much more effectual.’ But I believe I shall make it appear in Section 21. that his Method is not only as effectual as some you have mention'd, but more expeditious, and is at the same Time attended with less Hazard to the Woman than yours.

After

After *Mauriceau*, you tell us nothing material of any Writer 'till you come to *Henry Daventer*, as you call him; but his real Name was *Deventer*, as you might have seen had you consulted the Original. After postponing the Time of the Publication of his Book for a Year; you proceed to bring your Arguments, by which *the Review Writer says*, Number 3. *you have rectified certain Mistakes of Daventer touching the different Situations of the Uterus.* These Arguments I shall exhibit in *your own Words*: and then shall endeavour to prove that they are not so *clear and perspicuous, nor so judiciously and happily deduced* as that Writer, Number 3. tell us.

In Page 60, you say 'he (*Daventer*) *pretends to*
 ' have made several useful Discoveries, which *seem*
 ' feasible enough to those, who have not had the Op-
 ' portunity of an *extensive Practice*; such as the Side
 ' or wrong Positions of the Os Internum and Fundus
 ' Uteri, which (according to him) are chiefly the Oc-
 ' casion of lingering, difficult and dangerous Labours :
 ' He seems to be led into this Mistake, by supposing
 ' that the Placenta always adhered to the Fundus
 ' Uteri. As to the Difficulties proceeding from the
 ' wrong Position of the Os Internum, a Practitioner
 ' would be apt to believe he had *never* waited for the
 ' Effect of the Labour-Pains, which generally open it,
 ' by pushing down the Waters, or Head of the
 ' Child.'

' He was *seldom* call'd, except in difficult Cases,
 ' often proceeding from a distorted Pelvis, which is
 ' common in *Holland*; when this is the Case, the
 ' Head of the Child is commonly cast forwards over
 ' the Pubis, by the jetting of the Sacrum: or if one
 ' Ilium is higher than the other, the Os Internum and
 ' Fundus are thrown to different Sides; but then the
 ' chief Difficulty is owing to the Narrowness of the
 ' Pelvis. The Uterus is very seldom turned so oblique
 ' as he supposes it to be; or if it were, provided the
 ' Child is not too large, nor the Pelvis too narrow, I
 ' never found these Difficulties he seems to have met
 ' with:

‘ with : And should the Labour prove tedious, on account of a pendulous Belly, by altering the Woman’s Position, the Obstacle is commonly removed.’

‘ For Example : Let her Britch be raised higher than her Shoulders ; she may be laid upon her Side, in a præternatural Case, when it is necessary to turn and deliver the Child by the Feet. Nevertheless though he has run into Extremes about the wrong Positions of the Uterus, in which he is the more excusable, as he had the Fondness of a Parent for a Theory, that he alledges was his own, yet there are some useful Hints in his Book, particularly that about Floodings in which he directs us to break the Membranes, in order to restrain the Hemorrhage ; and his Method of dilating the Os externum.’

First you say ; ‘ *Deventer* pretends to have made several useful Discoveries, which seem feasible enough to those, who have *not had the Opportunity of an extensive Practice* ; such as the Side or wrong Positions of the Os intum and Fundus Uteri, which (according to him) are chiefly the Occasion of lingering, difficult, and dangerous Labours.’

That different Persons may find out the same Thing is no Wonder ; and although others have mentioned the Obliquity of the Womb, as a Cause of tedious or difficult Labours, long before *Deventer’s* Time, yet if he had never heard of or seen any Account thereof, he may be said to have made one useful Discovery without being called a *Pretender* to such Knowledge ; especially as he has drawn more just Consequences from it than any of his Predecessors.

We find that *Hippocrates* (x); takes notice of the Obliquity of the Womb : For he says, ἦν δὲ τὸ ἰσχίον λεχοῖ καταστρεφίῃσιν, αἴτε ὑγέραι εἰς τὸν κενεῶνα, προσέθεσθαι χεῖρ πρὸς τὸ ὑγίης ἰσχίον, ἔλαιον αἰγυπτίον λευκὸν, ἢ βακκαρίται, καὶ ἐπὶ τὸ ὑγίης ἰσχίον κατακῆσθω. ‘ Si puerperæ Uteri ad coxendicem aut ad Lateris inanitatem (y), incubuerint, ad sanam cox-

(x) De Natur. Muliebr. P. 569. Lin. 47. (y) κενεῶνα, Inanitatem Lateris, that is the Space betwixt the Thorax and the Iliæ on each Side ; which shows that the Womb must, at this Time, be in a pregnant State, for it could never be so high in the Abdomen, in any other natural Way.

‘endicem oleum Ægyptiacum album; aut Baccarinum
 ‘unguentum admoveere oportet, & in sanam coxen-
 dicem decumbat.’ And in other Places he says (z),
 Καὶ ἢν ἀφ’ ἧ τοῦ δακτύλου ὀψὲν τὸ στόμα ἐν τῷ ισχίῳ. ‘Ac si digito
 ‘contigeris os in coxendice deprehendes.’ And this
 he often takes notice of in an unimpregnated State.

We likewise see that *Rochæus*, in *Spachius*, (a) as
 taken from *Ægineta* (b), who, according to *Moriceau*,
 lived about A. C. 380; *Le Clerc* says towards the latter
 End of the fourth Century; and *Wolfgangus Justus*
 (c) says he flourished under *Honorius*, and *Theodosius*
 junior, about A. C. 420, but *Friend* brings him down
 to the seventh Century. This Author, I say, so long
 ago, tells us, ‘Si Os Cervicis Uteri obliquum fuerit
 ‘difficillimè pariunt, which, as I observed before, you
 omitted to acquaint your Readers with; and had you
 been conversant in the History of Physic from the Time
 of *Spachius* down to this Century, you might have
 known that *Sennertus* (d), speaking of these Things,
 says, ‘Dum Uterus rectum situm non habet, & prop-
 ‘terea ejus os comprimitur;’ and *C. Bartholin* also,
 long before *Deventer*’s Time, observed that the Womb
 inclined sometimes to the right Side, and sometimes to
 the Left; for, says he (e), ‘In medio locatus est Ute-
 ‘rus, ad nullum inclinans latus, nisi aliquando, dum
 ‘gestat mulier masculum aut femellam: tunc enim
 ‘dextrum aut sinistrum magis occupare solet, quan-
 ‘quam non semper.’ *De Graaf* (f) assures us, it was
 the received Opinion among the Anatomists of his
 Time; for he says, ‘Non semper in medio præcisè
 ‘collocatur (Uterus) sed quandoque, licet rarius, illum
 ‘nunc magis versus dextram, nunc magis versus sinif-
 ‘tram Hypogastri partem situm offendimus; quod
 ‘præsertim in prægnatibus ab aliis Anatomicis notatum
 ‘invenimus.’

Whoever will be at the Pains to consult Messieurs

(z) Pa. 565, Lin. 43. (a) Cap. 27. P. 103. (b) Lib. 3. Cap. 76.
 (c) Char. Med. (d) Pract. Lib. 4. Part 2d Sect. 6. (e) Lib. 1.
 Cap. 23. P. 162. (f) De Part. Mulier. P. 232, 233.

Peu (g), *Amand*, (b); and *La Motte* (i) will see that these Authors have observed this Obliquity; and assigned it as a Cause of difficult and laborious Births: And *Mauriceau* (whom you acknowledge (k), had *an extensive Practice for several Years*) is very particular in the Matter. In his Observations he has given us several Histories of difficult Labours, proceeding from the bad Situation of the Womb; he tells us of one (l), 'whose Womb was inclined forward like a Bag to the Middle of her Thighs; he was obliged to twist his Arm, in order to bend it over the Os Pubis of the Mother, and search for the Child's Feet.' And again he says (m), 'Another had a very hard Labour, because, as the Child was altogether to the right Side, her Throws could not answer in a direct Line, that is, they could not press directly on the Orifice of the Womb;' whereby it is evident *Mauriceau* knew the Influence a direct or oblique Situation of the Womb had on easy or natural, and præternatural Labours. And I have, in my *Essay on Midwifery*, not only given the Cases mentioned by other People, but have shewn how the Obliquity may happen; and mentioned two Cases: In the first (n), 'I found the right Side of the Os Uteri exactly in the Centre of the Pelvis, and the left Side quite up above the Top of it; and the Fundus Uteri was mostly on the right Side.' I mentioned another Case (o), where I found 'the Os Frontis of the Child was strongly thrust against the Os Sacrum, and that I could only touch one Side of the Os Uteri, viz. that next the Os Pubis.' An Instance of the like Kind I since met with in *December*, 1751, but the Abdomen was not quite so prominent as in the last mention'd Case; although the Foreside of the Os Uteri was pushed down below the Pubis.

Heister (p), whom you commend (q), has carefully collected the Opinions of most Writers on the Subject and lays it down as a Rule to be observed in Practice.

(g) P. 285. (b) P. 19 and 24. (i) P. 322. (k) P. 55.
 (l) Obs. 18. (m) Obs. 683. (n) L. 78, p. 172. 176. (o) P.
 179. (p) Cap. de part. diff. (q) P. 67.

For he advises the Operator to introduce a Finger into the Vagina, thereby to learn in the Beginning of Labour, which Way the Mouth of the Womb is situated; whether it inclines to either Side, or is disposed directly in the Middle of the Pelvis.

Gottfrid. Wilham. Muller wrote expressly ‘*de Situ Uteri obliquo*’ in 1731, as did also *Ad. Bernb. Winkler* in 1745, who takes notice, that it was observed of old. And *Mesnard*, whom you also commend (*r*), inculcates (*s*) the same Doctrine; and gives many Instances of difficult Labours proceeding solely from this Cause.

How judiciously then is this Obliquity of the Womb characterised by you as only a *Pretence or Whim*! when it has been taken Notice of by so many Persons; some of whom you allow to have had *an extensive Practice*. Strange! I own, it is, to me, that a Person, who is endeavouring to shew how conversant he is with Authors, should upon *his bare Authority* call in question a Point of Practice so universally received, and so often taken notice of by some of the most eminent Writers in Midwifery; nay, and venture to stigmatize the Gentlemen who inculcate this Doctrine, as *Pretenders only* to such Skill; when it is an allowed Truth, and I appeal to all judicious Practitioners, if many difficult Labours do not arise *solely* from this Cause; and that the perfect Knowledge of the different Obliquities of the Womb is one sure Method to direct the Operator to the speedy and successful Practice of this Art. The two Observations already cited from *Mauriceau* would suffice to convince the practising Reader of this Fact. But yet to clear up this Matter, I can, with the strictest Truth affirm, that this was the Opinion of these great Men, whose Hearer I had the Honour to be, *viz.* the immortal *Boerhaave*, (as all those who have had the Happiness to be educated under him, will, I am confident, readily assert) *M. Albinus*, Public Professor at *Leyden*, and Messieurs *Gregoire* and *Dussè* at *Paris*; and I can with the same Truth affirm, that it is the unani-

(*r*) *Introduct.* P. 67, & in p. 364. (*s*) *Guide des accouchemens* P. 230.

mous Opinion of all the best Accoucheurs of Character in these Kingdoms. For as I had frequent Opportunities of conferring and corresponding with several of the greatest Men in that Profession; so for my own private Satisfaction I have had this Matter cleared up to me long since; and I have had several Opportunities in my own Practice, of, not only being confirmed in the same Opinion, but also of convincing others: And I will also appeal to the Gentlemen in *London*, indisputably the first in the Profession in this Kingdom, and as deservedly eminent in every other Branch of Physic, whether they, in the Course of their Practice, have not frequently met with this Obliquity of the Womb; nay, even the Women too will, I'll venture to say, agree with me in this, that they sensibly perceive the Child does frequently incline more to one Side than to the other. And Dr. *Southwell*, in his Remarks upon *Ould* (†), says, that Messieurs *Hanault* (Member of the Royal Academies of *Paris* and *London*, and Royal Professor in the King's Garden in *Paris*.) *M. Winslow*, well known to the learned World by his Treatises of Anatomy and Surgery, and Member of the Royal Academy of *Paris* and *Berlin*; and all his Acquaintance were of the same Opinion.

Now after such indisputable Authorities, how can you call in question the Veracity of so many honest and learned Men, who assure us they frequently meet with this oblique Position of the Womb, in the Course of their Practice? And altho' *Deventer* was not the first who observed it to be one Cause of tedious and difficult Labours, yet he was the first who has drawn more just Consequences from it, and considered how far the Knowledge of this was capable of improving the Art of Delivery, than any of his Predecessors; which was greatly applauded by many Persons of Note, as appears by their Letters that are published at the Beginning of his Book. But how much more conspicuous must your Error appear, when the Reader finds in *Deventer*, that the Universities of *Groningen* and *Leyden*

were lavish in their Praises for the thorough Knowledge and Improvement of this same Obliquity, which you characterise *a pretended useful Discovery*? Moreover, *Deventer's* Book has been approved of by the Faculty at *Paris*, as appears by the *French* Translation, as well as by the two Universities already mentioned. It was likewise dedicated to the greatest Physicians of the Age; the first Part to the King of *Denmark's* first Physician; the second Part to Messieurs *Boerhaave*, *Oosterdike*, and *Albinus*, Men of universal Character, and Professors of Physic in *Leyden*. The *French* Translation is dedicated to M. *Chicoyneau*, first Physician to the King of *France*; all of whom, I humbly presume, will be allowed to have been competent and unbiaſſed Judges of the Point in question; which I fancy cannot be said with equal Truth of *your Approvers*; who, in the *Monthly Review*, Number III. have boldly asserted, that you have rectified *certain Mistakes of Deventer, touching the different Situations of the Uterus*, without any other Reason or Argument than a 'Gratis Dictum' being brought against the Experience of so many learned and able Practitioners, who all unanimously proved the very contrary to what you have thus *boldly* advanced.

I think it is not altogether consistent with that *Candour* and *Moderation* which runs through your Book, as we are told by the *Review Writer*, to say, that this Obliquity of the Womb *may seem feasible enough to those who have not had the Opportunities of an extensive Practice*. Methinks it approaches very near to Arrogance and Vanity to insinuate, that all those who differ from you, and give Credit to *Deventer*, have not had *an extensive Practice*; and also, on your own sole Authority, to oppose a Point of Practice received by the most eminent Practitioners then living; and so strongly confirmed by others, your Contemporaries, who in difficult or præternatural Cases may have had, at least, *as extensive a Practice as yourself*.

Secondly, You tell us, (u), 'As to the Difficulties proceeding from the wrong Position of the Os Internum, a Practitioner would be apt to believe he (De-

‘*venter*’) had never waited for the Effect of the Labour-Pains, which generally open it, by pushing down the Waters, or Head of the Child.’

As a Practitioner, I can make no other Conclusion from this Paragraph, than that it rather shews your *Want of Candour* to suppose, that *Deventer*, who was so eminent for his obstetrical Skill (as the following Extract from the *Republic of Letters* for July 1701 will shew us) should be so ignorant as *not to wait for the Effect of the Labour-Pains*. For it is there said (*w*), ‘Entre les autres de M. Deventer qui lui ont acquis une si grand Reputation dans ces Provinces (Holland) & qui Lui attirent des Patient du Fond de L’Allemagne, il a encore celui d’entendre tres-bien l’Art d’Accoucher les Femmes, qu’il pratique *avec beaucoup de succes.*’ Whence we find, that ‘he acquired so great a Reputation, that People even from *Germany* employed him.’ And I am certain, that no Person who reads his Book, can thence with *Candour* draw such an Inference as you have done: For he adds (*x*), ‘If the Women Midwives do not succeed (in delivering Women, when the Womb is a little inclined) their *Resource must be Patience*, and altho’ they do not succeed, and the Woman has had the good Luck to be delivered after many Days of hard Labour, yet the Midwife is not one Whit the wiser, because she knew not the Cause of the Delay.’ From whence it is very plain, that *Deventer* knew very well the Consequence of *waiting for the Effect of the Labour-Pains*.

In the next Place, whenever the Uterus is displaced in the Manner mentioned, every Practitioner knows, that the Waters cannot replace it; and therefore their pushing down the Bag, will be nearly the same as when the Child lays cross-ways, and does not press to dilate the Os uteri, and therefore the Bag presents like the End of a long Gut, rather than as an inflated Bladder. Besides, when the Uterus is so misplaced, as neither Child nor Bag can advance far, the Membranes then being unable

(*w*) Pref. to the *French Translation*, p. 22. (*x*) Chap. 48.

to bear the whole Force of the Mother's Throws, are soon burst, because the Waters are the only contained Parts that can be propelled; and that Part of the Bag which can yield, can only press against one Side of the Os uteri, and therefore cannot dilate it equally. You seem to be conscious, that pushing down the Waters, or the Child's Head, in this Case, by the Labour-Pains, will not always succeed, because you make use of the Word *generally*, instead of *always*, which is an Implication, that *sometimes Deventer* may be right.

Thirdly, Your next Argument you bring to prove *Deventer* must be mistaken is, because (y) 'He was 'seldom called, except in difficult Cases;' which, among others might chance to be the very Case here mention'd: And is not such a Person more likely to become expert, and meet with uncommon and difficult Cases; than one who is chiefly employ'd in attending common, easy and natural Labours. Whence this is rather an Argument in behalf of *Deventer's* Opinion, than against it.

Fourthly, Your next Argument brought to confute *Deventer*, proves likewise the Reverse of what you would have it. For you say, 'that difficult Cases in *Holland* 'commonly proceed from a distorted Pelvis.' That this Argument might have answered your Purpose, you should have proved, that a distorted Pelvis cannot misguide the Uterus; whereas it generally, if not always, misplaces the Womb; as is evident from the Touch. For whenever any Person can only find one Side of the Uterus, near the Center of the Opening into the Pelvis, and that the other Side is very high up, he may be certain that the Uterus is misplaced, whether the Pelvis be distorted or not; and then, generally, there is Part of the Os Uteri and Vagina folded or hanging near the Center of the Pelvis, especially when the Fundus hangs over the Pubis; which shows the Dangers of using the Scissars, that you so frequently recommend to your Pupils.

Fifthly, you proceed, ‘When this is the Case (a distorted Pelvis) the Head of the Child is commonly cast forwards over the Pelvis, by the jetting of the Sacrum; or if one Ilium is higher than the other, the Os Internum and Fundus are thrown to different Sides.’

This Argument proves likewise what *Deventer* asserts, which you have effectually done by producing a known Fact: ‘But even then, you say, the chief Difficulty is owing to the Narrowness of the Pelvis.’ Which will not hold good. For if one Side of the Pelvis be higher than the other, although the Brim be of the usual Diameters; yet that Side will direct the Child from the Center, so as to make the Head pitch against some Part of the Pelvis instead of going through the middle. This is evident, because upon turning the Child, and bringing the Feet first; the Head passes with ease, which it would not do was the Brim too narrow.

Hitherto you have been attempting to prove that *Deventer* *only pretended to have made an useful Discovery*; but you are so far from bringing any Argument to support your Accusation; that your Prejudice has carried you beyond your Reason, and forgetful of what you had advanced before, you have proved *Deventer’s* Opinion to be well founded; and in the Sequel confirm it: So far are you from having *rectified certain Mistakes of Deventer as the Review Writer tells us, No. 3.* that you also contradict yourself in many Places; and even acknowledge, that the Womb may be misplaced.

You tell us, (z) ‘That the Uterus is very seldom turned so oblique as *Deventer* supposes it to be; or if it were, provided the Child is not too large, nor the Pelvis too narrow, *I never* found those Difficulties, which he seems to have met with.’

Here I must remark, that you seem to be convinced, that the Uterus may be oblique, even as *Deventer* re-

lates it ; but notwithstanding, *if the Head be not large, nor the Pelvis strait, then you never found those Difficulties he seems to have met with.* Which, in my humble Opinion, is saying no more, than that, when the Pelvis is large enough, and the Child's Head small, then there is not so much Difficulty ; as when the first was narrow, and the last large : Neither does *Deventer* make so much Difficulty as you have told us, because in that Case the Child may easily be turned and brought away by the Feet.

In the preceeding Paragraph, you have endeavour'd to represent what *Deventer* says, as a very slight and trifling Observation ; but in the very next Sentence you say, ' And should the Labour prove tedious, on Account of a pendulous Belly, by altering the Woman's Position, the Obstacle is commonly remov'd.' Here again you seem to allow that *Deventer* may be right, but that you would make no Difficulty in delivering the Woman ; ' by only altering her Position,' which will not so readily answer the End unless you bring the Child by the Feet ; because, in that Case, the abdominal Muscles are so over-stretched that they cannot add so much to the Mother's Throws, as otherways they would do.

Forgetful of what you told us before, you say (a) ' That Women in the last Months must not be too strait swathed ; lest the Womb should be *determined*, in stretching over the Pubis, and produce a pendulous Belly ; which is *often the Cause of difficult Labours.*' Is it not then evident, that the Danger arises from misplacing the Womb ; which is the very Thing, you say, *Deventer* pretends to have discover'd : And, in another Place, you are obliged to acknowledge what *Deventer* said, to be true ; for you tell us (b) ' In the Ninth Month, the Fundus Uteri rises even with the Scrobiculum Cordis, except in pendulous Bellies : But all these Marks may vary in different Women ; for when the Belly is pendulous, the Parts

‘ below the Navel are much more stretched than those
 ‘ above, and hang over the Os Pubis ; the Fundus
 ‘ then will be only equal to a little higher than the Na-
 ‘ vel.’ Yet, notwithstanding this, you again (c) fall
 foul upon *Deventer*, telling us, that ‘ He alledges that
 ‘ præternatural as well as laborious Cases proceed from the
 ‘ wrong Position of the Os and Fundus Uteri ;’ which
 you treat as a ridiculous Notion, and then acknowledge,
 that you *sometimes*, indeed, meet with pendulous
 Bellies, in which the Os Uteri is turned farther back
 than usual ; and you likewise acknowledge the Os In-
 ternum is in a streight Line with the Fundus Uteri,
 which consequently must then be misplaced.

You have here endeavoured to make your Reader
 believe that *Deventer* ‘ Alledges that præternatural, as
 ‘ well as laborious Cases, proceed from the wrong Po-
 ‘ sition of the Os and Fundus Uteri.’ But he is so far
 from such an Attempt. (d) that he says, ‘ Difficult Births
 ‘ arise either from the Mother, from the Child, or
 ‘ from the Midwife ;’ and proceeds to give the vari-
 ous Causes, and how to remove ’em all, contain’d in
 18 Chapters (e) but those caused by a Male Situation
 of the Womb are contain’d only in 3 Chapters. (f)

Here you tell us, ‘ We *sometimes* indeed meet
 ‘ with pendulous Bellies, in which the Os Uteri is far-
 ‘ ther back than usual ;’ but, before (g) you told us,
 ‘ Pendulous Bellies are *often* the Cause of difficult La-
 ‘ bours :’ So that according to your own Words,
 There are *sometimes* indeed, pendulous Bellies, which
 are yet *often* the Cause of difficult Labours, whence it is
 not so evident, as the Review Writer says, No. 3, that
 your Instructions are *very clear and perspicuous, and*
that your Remarks are judicious and happily deduced.

You then proceed to tell us here, ‘ that even in
 ‘ these Cases, when the Head is not very large, nor the
 ‘ Pelvis narrow, and the Woman is vigorous, and the
 ‘ Labour-pains strong, the Woman, with a little Pa-

(c) p. 308. (d) cap. 25. (e) from 27th &c. to 45 inclusive.
 (f) chap. 46, 47, 48, and something mentioned chap. 3. part 2d.
 (g) p. 151.

‘ tience, is, for the most Part, delivered without any
 ‘ other than common Assistance.’ If the common Assistance will do, how happens it ‘ that (b) these pendulous Bellies are *so often* the Cause of difficult Labours; ‘ which must require more than *common Assistance*?’

However, you go on thus, ‘ Or shou’d this Case, ‘ (which is often the Cause of difficult Labours (i) and ‘ the Woman, is, for the most Part, safely delivered, ‘ by the Assistance commonly given in a natural Way.) ‘ (k) Shou’d it, you say, prove tedious, she may be ‘ assisted in Time of Pain (l) by introducing one or ‘ two Fingres into the Os Uteri, and gradually bring ‘ it forwards.’

In this short Paragraph, I think, you have erred twice; for first, the Fingers are easier introduced, both for the Operator and Woman, during the Intervals between the Pains: Secondly, the Womb can’t be pulled right by this Method, because it is not one solid firm Body, like a Barrel or an Egg, therefore, bringing one Side of the Os Uteri forwards as little a Space as it can yield, will not affect the Fundus Uteri; but may hurt or tear the Part pulled at; neither can it alter the Situation of the Child in the Womb. And, thirdly, as in this Case, one Side of the Os Uteri, and perhaps Part of the Uterus, may be come down, betwixt the Os Pubis and Child’s Head, it will streighten the Passage, and it cannot be brought forwards, on Account of the Bones, but ought rather to be pushed up above the Pubis, during the Intervals between the Pains, and be there detained while the Throws are strong.

You say (m) ‘ Nevertheless, tho’ he (*Deventer*) has ‘ run into Extremes about the wrong Positions of the ‘ Uterus, in which he is the more excusable, as he ‘ had the Fondness of a Parent for a Theory, that ‘ he alledges was his own yet, there are some very useful Hints in his Book, particularly that about *Floodings*; in which he directs us to break the Membranes, ‘ in order to restrain the Hemorrhage; and his Me-

‘thod of dilating the Os Externum.’ Monfr. *Bruier*
‘d’*Ablaincourt* (n) says, ‘Les Figures ne sont pas le
‘seul Advantage qu’ait l’ouvrage de M. *Deventer* sur
‘ceux dont nous venons de parler ; le Grand Principe
‘de l’Obliquité de la Matrice, qu’il établit ; des In-
‘dications tires de l’Attouchement & de la Figure des
‘Eaux, et le caractère distinctif des Doleurs Fausses
‘et veritables, sont Toutes Observations qui lui sont
‘propres. The grand Principle of the Obliquity of
‘the Womb, which he has established ; the Indicati-
‘ons taken from the Touch and from the Figures of
‘the Waters ; and the Distinction between the false
‘and true Pains, are all Observations *proper to him.*’
But you seem to have allowed one more, by saying, ‘he
‘directs (*in Floodings*) to break the Membranes in or-
‘der to restrain the Hæmorrhage.’ Which you have
applied to a very different Use than what the Author
meant ; as is evident from what he says, (o) ‘Un
‘second Signe de la chute du Placenta, est la Perte de
‘sang qui l’accompagne, quelquefois même avec tant
‘d’abundance, quelle met la mere, et l’Enfant dans
‘un danger evident, dans ce cas il faut faire sortir
‘l’Enfant le plutôt que faire se peut :’—He then goes
on to tell us how to pierce the Membranes or Placenta,
and then to bring the Head to present, or turn the Child,
and bring it by the Feet, and says, ‘Dans l’Etat des
‘choses, il ne faut pas s’amuser ; car l’Enfant ne
‘sçauroit ~~une~~ long-tems. C’est pourquoi une Sage-
‘Femme prudente doit le tirer le plutot qu’elle peut,
‘sans précipitation cependant ; et aussitôt que l’Enfant
‘est venu, faire l’Extraction de l’arrière-Faix, que le
‘le sang caillé colle quelquefois si étroitement a l’ori-
‘fice de l’Uterus, ou au vagin qu’ on le prendroit pour
‘une excroissance de la partie.’ A second Sign of the
‘Separation of the Placenta from the Womb, is the
‘Loss of Blood which accompanies it, and sometimes
‘in such Quantity, that both Mother and Child are in
‘Danger. In this Case the Woman must be delivered

(n) In his Preface to the *French Translator of Deventer.* p. 17.

(o) cap. 31. p. 180. cap. 33.

‘ immediately. — In these Cases no Time is to be lost, for the Child can’t live long, wherefore a prudent
 ‘ Accoucheur ought to extract it as soon as possible,
 ‘ with Safety, and bring away the After-Birth im-
 ‘ mediately after the Child.’ Whence it is very evident
 you have mistook the Author’s Meaning, and have
 thereon founded a most dangerous Practice, whereby
 both the Lives of Mother and Child are brought into
 imminent Danger. For altho’, he says, the Flooding
 abates upon the Evacuation of the Waters: yet, you
 see, he advises, that the Woman shou’d be delivered
immediately; which he afterwards repeats (p) ‘ il la
 ‘ faut accoucher promptement, et sans attendre a l’ex-
 ‘ trêmité, sur tout, si l’on connôit par l’attouchement,
 ‘ que le Placenta est tombé a l’orifice.—Si le Pla-
 ‘ centa détache cause l’Evacuation; les Remedés sont
 ‘ inutiles. L’Operation seule *peut l’arrêter*. l’Opera-
 ‘ tion, dis-je, faite de bonne heure, si l’on ne veut
 ‘ s’exposer a voir mourir la Femme entre les Mains
 ‘ de la sage Femme. Dans la cas de cette Hæmorra-
 ‘ gie, cette Operation est necessaire en tout état de la
 ‘ grossesse; mais si elle se fait promptement après le
 ‘ septième mois, il y a plus d’Esperance de sauver la
 ‘ mere et l’Enfant.’ ‘ The Woman (who floods, and
 ‘ is going to miscarry) must be delivered immediately,
 ‘ without running any Hazards, especially, if by the
 ‘ Touch the Operator finds the Placenta separated, and
 ‘ at the Os Uteri.—If the Evacuation proceeds from a
 ‘ Separation of the Placenta from the Womb, Medicines
 ‘ are given in vain. The Delivery must stop it, and
 ‘ that soon too, unless you would *hazard the Woman’s*
 ‘ *dying* under your Hands. In case of Floodings, De-
 ‘ livery is necessary in all Stages of Pregnancy; and
 ‘ after the 7th Month, the *sooner the* Woman is de-
 ‘ livered the better Chance there is of saving both Mo-
 ‘ ther and Child.’ And, in giving us Directions how
 to deliver the Woman in such a Case, he says, ‘ L’Ori-
 ‘ fice de l’Uterus étant ainsi ouvert, si la membrane

‘ se presente, il faut la déchirer avec les Doigts ou les on-
 ‘ gles. S’il est besoin. Les Eaux s’écoulent promptement.
 ‘ Pendant ce Tems ou avance la main par l’Overture de
 ‘ la membrane, jusqu’ à ce qu’on trouve les Pieds de
 ‘ l’Enfant, &c. The Os Uteri being open, if the
 ‘ Membranes present, they must be torn open ; when
 ‘ the Waters will immediately gush out, *during which*
 ‘ the Hand must be *immediately* introduced to search for
 ‘ the Child’s Feet, &c.’ From whence it is very evi-
 dent you have entirely perverted *Deventer’s* Meaning,
 and have commended him for what he ought to be
 blamed, had he directed what you have said he did.
 Altho’ *Deventer* orders us, when the Woman floods,
 that she should be delivered *immediately*; yet he was
 not the first who advised that Method; for we find
 that *Guilemene* (as I observed before) recommended
 the same Thing; as every skilful Practitioner has done
 from that Time to this, and with good Reason. How
 dangerous then must be that Method recommended by
 you in the following Paragraph?

You say, (q) ‘ It is happy for the Woman, in this
 ‘ Case (Flooding) when she is near her full Time, that
 ‘ that she may be sustained till Labour is brought on;
 ‘ and this may be promoted, if the Head presents, by
 ‘ gently stretching the Mouth of the Womb, which
 ‘ being sufficiently opened, the Membranes must be
 ‘ broke; so that the Waters being evacuated, the
 ‘ Uterus contracts, the Flooding is restrained, and the
 ‘ Patient is delivered.’ Your Instructions given in
 this Paragraph are *not so very clear and perspicuous* as the
Review Writer informs us. For I suppose you mean,
 that ‘ when the Patient floods, the Membranes are to
 ‘ be open’d for the speedy Discharge of the Waters,
 ‘ then the Woman is to remain so for some Time,
 ‘ that the Flux may be restrained; and then after-
 ‘ wards she may be delivered.’ This, I say, must be
 your Meaning, as the Words which follow imme-
 diately, explain. For you then proceed; ‘ At any
 ‘ Rate, if the Hæmorrhage returns again with great

‘ Violence, there is no other Remedy than that of delivering with all Expedition.’ Which implies, that she was not to be delivered immediately after the Discharge of the Waters, but first to have the Flooding restrained, and then to bring forth the Child some Time after.

Whether you have wilfully misconstrued *Deventer's* Meaning, and therefore have commended him for advising a Method of Practice follow'd by yourself, or you really mistook him, and have adapted the Method you thought he recommended, I can't take upon me to say ; but be that as it may ; the Consequences which must necessarily ensue, call aloud, that your Readers may be set right. For the Dangers arising from this Practice may be said to be threefold ; First,

Those arising from a premature Discharge of the Waters.

Secondly ; from the Uterus contracting too closely about the Child.

And Thirdly ; from the Loss of Blood.

First, then, the Loss of the Waters, before Delivery, has been look'd upon as one Cause of difficult Labours so long ago as *Ægineta's* Time, as I mentioned before ; which, however, you had omitted to take Notice of (*r*). For *Rocheus* tells us, he says ‘ Humore siquidem qui in utero collectus fuit, vacuato ægerrimè delabetur Embryon propter ariditatem.’ I likewise took Notice that you omitted to acquaint us, that *Mercatus* in *Spachius* (*s*) Says, ‘ quæ aquam sensim expurgant, difficulter pariunt : dilabitur enim ocius per madidas et lubricas partes Fœtus quam per siccas.’ And this is confirmed by all the best Practitioners down to this Time. The Bag likewise being full, continually presses against, and extends the Os uteri ; which, upon the Discharge of the Waters, frequently contracts again ; especially if the Pains abate or stop, as is too often the Case, particularly in Floodings. For I mentioned in my Essay on Midwifry (*t*) ‘ As the Expulsion of the Infant is performed by the Contraction of the Dia-

(*r*) Spach. P. 103. *Æginet.* Lib. 3. cap. 76. (*s*) p. 1052. Lib. 4. cap. 3. (*t*) p. 112.

‘phragm and abdominal Muscles on the Womb, and
 ‘by a contractile Disposition peculiar to the Womb it-
 ‘itself; it is evident from the Nature of Things, that
 ‘this united contractile Force decreases in Proportion
 ‘as the Object recedes from its Influence, or, in other
 ‘Words, as the Contents of the Womb are discharged.’
 Wherefore the Membranes should never be broke (if
 possible to be avoided) till every Thing is prepared for
 an immediate Delivery. And la Motte (*u*) observed
 ‘that the Pains often cease, after the Coming away of
 ‘the Waters,’ which is confirmed by daily Experience.

Secondly, from the Uterus contracting too closely, it
 may compress the Child, and sometimes so as even to
 stop the Circulation of the Blood thro’ the Umbilical
 Chord, both which Dangers, the Waters, while in the
 Bag, defend it from. Whoever considers in how
 short a Time the Womb contracts after the extending
 Force is abated, and likewise knows the Force requi-
 red to turn the Child in the Womb, that closely em-
 braces it, together with the Danger which may accrue
 to both Mother and Child, from such an Operation,
 will, I am thoroughly convinced, condemn such a
 Practice as you recommend. And you tell us in an-
 other Place (*p.* 330) that the Operator, as soon as
 the Membranes break, ‘must run up his Hand, as
 ‘quick as possible, into the Uterus, because then
 ‘the lower Part of his Arm will fill up the Os Ex-
 ‘ternum, like a Plug, so that no more Water can
 ‘pass.—Let the Hand be pushed up no further than
 ‘the Middle of the Child’s Body, because, if it is
 ‘advanced as high as the Fundus, it must be with-
 ‘drawn lower, before the Child can be turned; by
 ‘which Means the Waters will be discharged, and the
 ‘Uterus of consequence contract, so as to render the
 ‘the Turning more difficult.’ If the Uterus can con-
 tract so soon, almost instantaneously, as to require
 this great Caution, how much worse must be the Con-
 sequence of leaving the Child *ten or fifteen Minutes, or*
longer, in the Womb, as you have directed in *p.* 335?

(*u*) Obs. 243. and in Lib. 4. cap. 7. p. 422.

When Nature is prepared, and the Waters are discharging, the best Method is certainly to bring away the Child immediately by the Feet, and not to let the Woman remain undelivered after the Membranes are burst, when perhaps her Pains will never again be strong enough to force out the Child, especially after the Waters are evacuated, on Account of the Hemorrhage; her Strength will also, at the same Time be lessened; and, after all, perhaps the Child must be brought away by the Feet. *La Motte* confirms this, (*w*) for ‘he found but
 ‘ a little Difficulty in pushing back the Shoulders, be-
 ‘ cause there were some Fluids left in the Uterus, in
 ‘ which Case, the turning of Children is not attended
 ‘ with any Difficulty, whereas it is *very laborious*
 ‘ when the Uterus is quite dry;’ he likewise tells us,
 ‘ that after the Discharge of the Waters, he has found
 ‘ the Mouth of the Womb exactly closed.’ To this may be added, *Thirdly* and lastly, That the Hemorrhage will yet continue till the Contents of the Womb are all extracted. The Consequence of which will be either immediate Death, or the Forerunner of some other Diseases, as Dropsies, Leucophlegmatia, &c. And you tell us in p. 403, that one Cause of Flooding after Delivery, ‘is owing to Floodings before it, and
 ‘ also to Part of the Placenta, or coagulated Blood left
 ‘ in the Womb.’ And I have shewn in my Essay on Midwifry, (*x*) ‘that many People have expired by
 ‘ these Floodings, and others have discharged almost
 ‘ incredible Quantities of Blood in a very little Time;
 ‘ altho’ only a small Part of the Placenta has remained
 ‘ in the Womb, to extend the Orifices, that open out
 ‘ of the Sinuses into the Cavity of the Uterus.’ What Dangers then may not accrue from permitting the Child to remain in the Womb after the Waters are discharged, and the Placenta is in Part or wholly separated from the Uterus, in which Case, these Orifices, as well as the Sinuses are consequently more dilated? And you acknowledge (*y*) ‘That as the Uterus contracts, it *less-*

(*w*) In the Reflexion upon Obs. 249. (*x*) §. 157. p. 324.
 (*y*) p. 216. 217.

‘*sens the Mouths of the Vessels ;*’ when therefore such Discharges may happen while the Womb is only distended to a small Degree, how much more must the Danger be increased while the Child remains therein ? I must here likewise observe, that, altho the Patient may chance to escape Death, yet her Constitution may be so impaired, that she may never recover her Health again. I can bring a great Number of Authorities from the best Writers against your Practice, but I think what I have here said is sufficient for my present Purpose, without increasing the Bulk of this Work more than necessary, and therefore I shall now proceed, first premising, that I shall hereafter have Occasion to take Notice of this again in §. 32.

The Review Writer above mentioned says, No. 3. ‘*you justly blame La Motte for having essayed to mislead young Men in their Opinions, by concealing the unsuccessful Part of his Practice, which must have been considerable. if he, on all Accounts, neglected the Use of the Instruments, against which he indiscriminately exclaims.*’ But you only say (z) ‘*you are afraid, that he (La Motte) like other Writers, has concealed those Cases that would have been more useful to the young Practitioner.*’ But I believe that neither of you have any Foundation for such a severe Accusation.

You have endeavoured to lessen *Deventer’s* Credit, and now the Review Writer makes a Sacrifice of *La Motte’s* Reputation, in order, I suppose, to prejudice his Reader in your Favour. For my own Part, I do not remember any Author who offers to accuse him (excepting the Review Writer and yourself) and I leave the Reader to judge, from a few Extracts out of *La Motte’s* Book, whether such an Inference can be candidly brought from what he says, and from thence I shall shew,

First, that so far from ‘*essaying to mislead young Men, by concealing the unsuccessful Part of his Practice, that he acquaints his Reader therewith in several Cases.*’

Secondly, That so far from *indiscriminately* exclaiming against the Use of Instruments, he shews the *Necessity* of using them. And,

Lastly, I shall shew he *frequently* used *various kinds* of Instruments.

First, then, *La Motte* says, (a) ‘all Authors advise to seek for the Feet, when the Child presents with the Face upwards; but there is nothing harder than to discover it, as I speak *knowingly*, having, *several Times been deceived* in it, for near 30 Years that I have practised.’

Again he tells us, (b) ‘in using the Crotchet, I found that the Child had the Face upwards, which *surprised me*, not *suspecting* any Thing else besides the Head being locked in the Passage.’ And a little below, he says, ‘out of *four Cases*, where Children came away of themselves, I have, *at least*, been *deceived in two*, as to their Situation.’

In another Place, he adds, (c) ‘I could not blame the hasty *Officiousness* of the Husband, whom he had got to assist him (in pulling off the Child’s Head) his Intention was good, and *my want of Precaution*, was the *sole Occasion* of this Accident.’

And in another Case, (d) ‘I followed this Method before *Experience and Reflexion* had taught me another. Again he tells us, (e) That notwithstanding I put in Practice the most *violent* Endeavours, I found it impossible to make any Alteration in the Situation of the Feet; but at last, the Feet slipped down, and the Body followed immediately, without my knowing how. The Arms were broke, which I did not perceive before the Delivery; they were *not* broke in disengaging them, but *in the Violence I used to finish the Labour*.’ And in his very last Reflection (f) speaking of *Mariceau’s Fillet*, he says, ‘I have try’d to use it several Times, but *without Success*, owing, perhaps, to *my Want of Dexterity*.’

(a) Reflex. on Obs. 114 in 1689. (b) Obs. 250 and Reflex. thereon in 1684. (c) Reflex. on Obs. 260. in 1691. (d) Reflex. on Obs. 271. in 1697. 1686. (e) Obs. 277. (f) in 1719.

Secondly, I propose to shew that *La Motte* does *not indiscriminately* exclaim against the Use of Instruments, for he says, (g) ‘ we are obliged to have Recourse to Instruments, but even then the Hands come in afterwards, which I always prefer to Instruments, when ever they can be used.’

In another Place he tells us, (h) ‘ The Operator is forced to have Recourse to several Instruments ;’ and I do not find, in any Part of *La Motte*’s Book, the least Foundation for this heavy Charge, unless the Review Writer would misapply the following Passage, where *La Motte* says, (i) ‘ There are still many Surgeons, whose only Refuge in difficult Labours consist in an Instrument *unskilfully* managed, that always killed the Child, and often exposed the Woman to imminent Danger.’ But here I must observe, he only exclaims against the *unskilful* Management of Instruments. A little after this, he says, (k) ‘ those who use the Hand *unskilfully*, are no less to blame than those who use the Crotchet,’ and then he mentions several Instances of the Mischiefs owing to such Mismanagement.

He says, (l) ‘ When once the Child is engaged in the Passage, it is past our Skill to push it back : Could an Operator foresee this, he would save the Woman a great deal of Pain ; but this is impossible, but when it does happen, all we can do, is to wait patiently for the Pains to do the Work, or have Recourse to the Crotchet, or such like Instruments ; tho’, considering the great Improvements made in this Art for the last Century, we need not despair of some new Means being one Time or other found out, to help these Sort of Labours.’

Lastly, I shall shew, he used different kinds of Instruments ; for he says, (m) ‘ The Head’s presenting may, by not coming directly right, cause the most

(g) Reflect. on Obs. 254. (h) Lib 3. cap. 1. p. 312. cap. 16. (i) Prefac. p. 3. (k) Pref. p. 7. (l) Reflex. on Obs. 313. in 1711. (m) Lib. 3. cap. 1. and cap. 16. p. 312.

‘ dangerous of all Deliveries, for in other Situations, the Hands alone will do, the Child only suffers a little more, without the Mother’s running any Hazard at all; but in this the Operator *is forced to have Recourse to several Instruments*, each according to his particular Method.’

Sometimes *La Motte* (*n*) used the Crotchet, ‘ but finding the Dangers thence arising, he substituted other Methods, and never used (*o*) the Crotchet twice in Thirty Years; for having found (*p*) the great Benefit that accrues from evacuating the Brain,’ he says, ‘ I resolved, from thence, never to use the Crotchet, but when all other Methods proved ineffectual. The opening into the Skull ought to be made with different Instruments, according as the Head is more or less advanced; if it presents at the Covering, the Knife may be used; there being no Danger, so long as the Sight directs the Instrument; if it be some little Way in the Vagina, the common Scissars may be thrust into the Head, opening them wide to enlarge the Orifice, and in fine, if it be at the Extremity of the Vagina, I use a Piece of Card, or Leather, which I conduct with my Hand, and apply on the Head, sliding along it a Knife which cuts but on one Side, and which I thrust into the Cranium to make a proper Orifice.’

In several Places (*q*) when the Head was advanced, he used ‘ the Knife, introduced his Fingers into the Opening, evacuated the Brain, and sometimes brought out Parts of the Cranium; and then, using his Fingers Hook-Fashion, finished the Operation, without giving the Woman any, or but little Pain. When the Passage,’ he says, ‘ is so exactly filled, as there is no introducing the Finger far enough to get Information, we are *obliged* to have Recourse to Instruments.’

In Cases where the Head presented at the Bottom of

(*n*) Obs. 245. in 1683. Obs. 248. in 1686. Obs. 250 in 1684.
 (*o*) Pref. p. 6. (*p*) Obs. 250. in 1684. (*q*) Obs. 232. in 1699. Obs. 247. in 1689. Obs. 252. Obs. 254. in 1686. Obs. 255. in 1699.

the Vagina, he says, (r) ' I open'd the Cranium with
' my Scissars, took away several Bones : I then used a
' Crotchet, which always gave way, but with a Pair of
' Blacksmith's Tongs I took hold of the Occipital
' Bone and performed the Delivery.'

He afterwards tells us, (s) ' that he open'd Heads
' with the Scissars, &c. and then with a Pair of For-
' ceps (used for extracting the Stone) by fixing one
' Branch in the Inside of the Skull, and the other on
' the Outside ; or with two Pair of such Forceps fix-
' ed in the same Manner, he extracted the Child.'

In another Place he tells us, (t) ' When the Head
' of the Child was severed from the Body, and left in
' the Womb, I passed my Left Hand into the Uterus,
' keeping the Head steady with it, and with the Right,
' slid a Canula, in which was a Knife ; and with it
' made an Opening large enough to admit of my Fin-
' gers, I enlarged it afterwards, and emptied Part of the
' Brain ; after which I found a Hole strong enough to
' bring out the Head by, its Size being considerably
' lessened.' He likewise used (u) ' the Scissars to cut
' the Naval String, when twisted about the Child's
' Neck.' Hence we see, first, that *La Motte*, was so
far from concealing his bad Success to mislead young
Men (which the Review Writer says you *justly blame*
him for) that he has very fairly confessed his bad
Success, Ignorance and Want of Dexterity.

Secondly, That so far from *indiscriminately* exclaim-
ing against the Use of Instruments, he says, that there
is an *absolute Necessity* for using them in *several Cases*,
and only condemns the *unskilful* Use of them : in which
he is certainly right, as is acknowledged by every ju-
dicious Operator.

And, thirdly, you see, he has mentioned several
Cases wherein he used Instruments, and what Sort they
were, viz. The Crotchet, The bare Knife, The
Knife guarded by a Card, Leather, or a Canula ; The

(r) Obs. 316. in 1712. Obs. 403. in 1715. (s) Obs. 401.
in 1718. Obs. 407. in 1719. Obs. 408. in 1717. (t) Obs. 260.
in 1691. (u) Obs. 121. in 1697.

Scissars, The Pair of Blacksmith's Tongs, and the Forceps for extracting the Stone out of the Bladder; to which may be added *Mauriceau's* Fillet, altho' he used it without Success, 'owing, says he, perhaps to *' my want of Dexterity.'*

Not content with lessening the Reputation of *Mauriceau*, *Deventer* and *La Motte*, you bring a heavy Charge against 'other Writers, for concealing those ' Cases that would have been more useful to the young ' Practitioner.' As you have not specified any particular Author, this cruel Accusation must lie upon the whole Body of Writers, which must be looked upon, by every impartial Reader (because you bring no Authority to support your Assertion) as no greater Proof of your own *Candour*, *Humanity*, and *Moderation*, or of *your Want of vain Exaggerations*, as the Review Writer says, than of that Person's *Judgment*, *Integrity* and *Impartiality*.

As you say nothing more in the Remainder of your Introduction, but what falls more properly under my Cognizance in the Sequel, I shall conclude these Remarks upon your Introduction, by shewing there are Authors in this Century, and some of them Cotemporaries with yourself, whose Improvements you have omitted, as well as some of those of former Ages, notwithstanding your Promise in the Preface (*w*) to *exhibit them all down to the Time of publishing your own Book*.

' Joh. Adriani Slevogt disputatio, de muliere gravida, prolapsu Uteri laborante, ubi recenset historiam ' resecti faeliciter uteri.—de Partu difficili et Perinceo ' inde rupto, et de Femina Mola laborante, 1700.—de ' Dolorum Partus Spuriorum cum veris collatione in ' 1702.—De singularibus quibusdam Partis impedimentis, *de ægrâ Secundinarum Retentione* laborante, ' et in 1704 Partus naturalis collatus cum Preternaturali in 1705.

In the Commentar. of the new Academy at Paris: ' *Littre de Utero diviso* in 1705,' the same Writer

takes notice of the Uterus Musculosus in puerpera, in 1706.

‘ Andr. Jul. Boetger. de Respiratione Fœtus in Utero
‘ Dis. in 1702.

‘ Andrææ Ottomari Goelicke Dis. de novo Artificio
‘ curandi procidentiam Uteri Veram, 1710. qua ela-
‘ stica ferrea fila in speciem Pessi torta commendat.
‘ Christian Vater. de Partu Hominis post mortem ma-
‘ tris Dis. 1714.

‘ J. G. Bergen de Vagitu Uterino, 1714.

‘ J. Antonii Terenzoni de Morbis Uteri, in 1715.
‘ Observationes Varias non vulgares habet, et Scabiosas
‘ Asperitates, Tubercula, squamas, cristasque Utero.

‘ Chr. Frid. Pistor. de Fœtu e rupto Utero in ab-
‘ domen prorumpente, 1716. A. Vater. de Utero
‘ gravid. in 1725.’ wherein he gives the Description of
the Sinuses in the Substance of the Womb.

‘ Frid. Hoffman de ignorata Uteri Structura multo-
‘ rum Fonte, 1726.’

In the Academy of Sciences at *Paris*, in 1724, may be seen *Duffèe’s* Method of stopping Floodings after Labour, by a gentle Compressure. In 1732 may be seen the Account of a Prolapsus Uteri a Sarcomate detracti.

In Commercio Norisico, among other Things, are the Descriptions of the Musculi Uterini.

‘ J. Henr. Cohausen, Lucina Ruyschiana, 1731.’
He says, the Placenta ought not to be left in the Womb; and that the *Muscular Fibres* in the Substance of the Womb, help to reduce it after Labour, to its former Size.

‘ Abraham. Vater. Dis. de Partu Difficili ex Infantis
‘ Brachio prodeunte, 1732.’

Cornelius Gladbach published at *Leyden*, 1732, for opening the Child’s Head. He applauds the Scalpel-
lum in sulco occultum.

‘ Petri Stuart de Secundinis salutiferis atque noxiis
‘ Disp. 1736.’ In the same Year *J. Frid. Bebling* pub-
lished his Meditationes super Uterum in partu Rup-
tum,

‘ Albert. ab Haller Fæmin. gravid. Hiftor. 1739.’
He gives the Description of two Women big with
Child, whom he open’d: He likewise takes Notice
of the Cicatrix in the Ovarium, &c.

‘ J. And. Deifch de neceffaria in Partu Instrumen-
torum Applicatione, 1740.

‘ Fr. de Buchwald, Thef. decad. de Musculo Ruysf-
chii in Uteri Fundo, 1741. He defends Ruysch.

‘ P. A. Boehmerus de Situ Uteri grandi in 1741,
cum Icone.

‘ J. Car. Voigt. de capite Infantis abrupto, et variis
‘ illud ex Utero extrahendum Modis 1743.’ in which
he describes the various Instruments used.

‘ Onymos de naturali Fœtus in Utero Materno fitu,
§ 1743. defendit Fœtum nunquam aliter nifi capite cer-
‘ nuo, in Utero federe.

‘ Fr. J. Menzler de Venæfectionis in Puerperis Abu-
‘ fu et Ufu, 1744.

‘ Cl. Boltenius Fœtum respirare in Utero defendit
‘ vid. Comm. Lit. 1744, p. 355.

‘ Muller de Utero Rupto. Dif. 1745. Fibras Vor-
‘ ticoſas Fundi Uteri describit.

‘ J. Caffimiri Aulber de Fœtus prægreſſo capite par-
‘ tum retardante 1745. He mentions ſeveral Things
worthy of Notice, ‘ et deſcripſit Instrumenta et En-
‘ cheireſes pro capite impacto.

Wm. Dougla’s Letter to you in 1748, againſt the
Uſe of your Wooden Forceps.

Benjamin Pugh in the ſame Year publiſhed his Trea-
tiſe of Midwifry, in which he deſcrib’d his new Forceps.

‘ J. Chriſtian. Kiſner de morbis Puerperarum, 1748.

‘ Phil. Jac. Walther. de partu naturali ejuſque cauſa,
§ 1748.

‘ Ericus F. Elf. de Hæmorrhagiis Uteri ſub ſtatu
‘ graviditatis, 1749.’

Exton’s Midwifry, 1751. and in the ſame Year I
publiſhed ‘ my Eſſay towards a complete Treatiſe of
‘ the Theory and Practice of Midwifry.

If the Authors above mentioned, or any of ’em,
have publiſhed the leaſt new Invention, or made any

new Improvements, you have not done that Justice, which in your Preface you promised. If what they say be all Pretence and Amusement only, it was incumbent upon you to prove it so. Then, indeed, you would have shewn, not only an Air of Candour and Humanity, but have been a real Friend to Society. With Regard to myself, I hope every honest Reader will be convinced that I've herein thus far performed my Promise.

I shall now only add, that I have, as carefully as possible, avoided to give any wrong Quotations, and have endeavoured to come at the true Meaning of the Authors, that neither the Public, you, nor I might be deceived.

Having thus far examined your Introduction, I shall now proceed to the Treatise itself.

The first Thing of a Book that offers itself, is the Title, which, you say, is 'a Treatise on the Theory and Practice of Midwifry,' which (we are told at the End of this Volume) 'together with your Prints, and the Volume of Cases, hereafter to be printed, will compose a complete System of the Art.' How far you have accomplished your Design, I leave the Reader to judge, after having perused the Sequel; and if he finds my Remarks justly made, then the first Part or Foundation of your System will be very defective; and want many Repairs before you build the Remainder of your Superstructure.

It may seem odd to some People, that I should mention the Title Page, after having gone thro' the Introduction; but my Remarks upon the History of this useful Art seem naturally to demand the first Place; and, in my future Proceeding I shall be obliged to refer from one Part of the Book to another, as the Subject Matter obliges me; and by comparing 'em shall shew your several Contradictions therein, &c.

I shall begin with repeating Part of the requisite Qualifications of an Accoucheur, which you have given us at the latter End of your Book.

You there (x) say, that ‘Those who intend to practise Midwifry, ought, *first of all to make themselves Masters of Anatomy*, and acquire a competent Knowledge in Surgery and Physic; because of their Connections with the Obstetric Art, if not always, at least, in many Cases.’ That a Man Midwife ought to be thus qualified, I entirely agree with you: But, should it appear from these Remarks (as I believe it will) that your Performance does not shew you to be thus qualified; then you have laid yourself open to the Censure of every Person, who has any just Pretence to the Knowledge abovementioned; notwithstanding that the Review Writer tells us, No. I. ‘your Book contains a distinct and regular System of the Obstetric Art, in all its Branches, *comprehending the Anatomy of the Parts*.’ Should it, I say, appear, that you have scarce described one Part right, then either the *Ignorance or Partiality*, or both, of the abovementioned Writer, will be *very* evident.

You lay it down as a Rule, that those who intend to practise Midwifry, ‘*ought first of all to make themselves Masters of Anatomy*;

’ by which, I suppose, you mean, at least, that Part of Anatomy in Females, principally concerned in the Propagation of our Species: this, I likewise conclude, was your Inducement for attempting to give an Anomalous Description of those Parts, as a proper Foundation for your Pupils to build upon: But, I fear, if they have no better Accounts from others than they can meet with in your Book, they will not only be very deficient in that requisite Knowledge, but will be frequently misled.

‘You say, (y) the lower Edge of the Pubis is equal to the lower Edge of the Frænum or Fourchette, which bounds the inferior Part of the Fossa Magna and Os Externum.’

Your Description here is far from being just, whether the Woman be lying on her Back or standing erect; by what you say in one Place, the Reader would ima-

gine you speak of a Woman laid on her Back, for you say in this same Paragraph, ‘ that the Meatus Urinarius is *immediately below* the under Edge of the Symphysis of the Ossa Pubis, and at *the upper Part* of the Os Externum, which is the Orifice of the Vagina, situated immediately below the said Bones of the Pubis :’ so that if the Woman be lying down, the *lower Edge* of the Frænum cannot be equal to, that is, be upon a Level with, the *lower Edge* of the Pubis : And if she be erect, how can *the upper Part* of the Os Externum, which is situated immediately below the Pubis, *be equal with the lower Edge* of the Fourchette ; which bounds the *inferior Part* of the Os Externum ? or, in other Words, How can the *upper Part* of the Os Externum be equal with the inferior Part ? This shews how well the *Review Writer* has attended to the Subject ; when he says, No. 3. that ‘ your Instructions are *clear and perspicuous* and ‘ your Remarks *judicious* and happily deduced.

An attentive Reader may prove you are mistaken from your own Words, for you say, (z) ‘ that from ‘ the Upper Part of the Sacrum to the Coccygis is five ‘ Inches, and from the upper Part of the Pubis to the ‘ lower, only two Inches ;’ and as the upper Part of the Os Externum is immediately below the Pubis, while the lower Part is formed by the Fourchette and Perinæum, which is fixed to the Coccyx, it is evident, that allowing the Top of the Pubis to be two Inches below the Level of the upper Part of the Sacrum ; yet the *upper Part of the Os Externum* cannot be equal, that is, upon a Level with the Inferior Part.

You tell us, (a) that ‘ on each Side of the Meatus ‘ Urinarius in Women, are two small Lacunæ or ‘ Openings, The Tubes of which ending in a Kind of ‘ Sacculus, come from the Prostata Gland ; from ‘ these a thin Fluid is ejected in Time of Copulation, ‘ and sometimes to the Quantity of several Drams.’

As you are the first Person, I remember to have met

with, who pretends to know of *Sacculi capable of containing several Drams* of any Fluid, I can't help regretting your omitting to give a more accurate Description of 'em; because the most eminent Anatomists take no Notice of any Sacculi of such Dimensions: Those mentioned by *Mortgagni* and others being capable of containing only a very small Quantity of any sort of Fluid.

In the same Page you say, 'the Vagina is formed of a strong thick Membrane, of a spongy Texture.' Had you been more conversant in Dissections; or even better acquainted with Anatomical Writers of Character on the Subject, you would have found, that *De Graaf* (b) and *Winslow* (c) says 'it consists of two Coats, the Internal Membranous and much wrinkled, especially in Virgins. The External is muscular, being composed of longitudinal fleshy Fibres, interwoven with numerous Blood Vessels, &c.'

You say, (d) 'The Mouth of the Womb is often distinguished by the Appellation of *Os Tincæ*: but as the Mention of these Parts will frequently occur in the Course of this Treatise, I shall, in order to avoid Confusion and Mistake, call the Entry into the Vagina, the *Os Externum*, and the other the *Os Internum*, thro' the *whole Book*.'

In the first Place, can the *Os Internum* be less confused, or convey a better Idea to the Reader, of the Mouth of the Womb, than the accustomed Expression of the *Os Uteri*? and in the next Place, you are so far from calling it the *Os Internum* thro' the *whole Book*, as you say you will, that I can point out near thirty Places, where you use the very Expression of *Os Tincæ*, or of *Os Uteri* (e).

You tell us, (f) that 'The Uterus is formed, first of the inside Membrane, that rises from the Vagina, and Lines all the interior Parts of the Womb: Immediately above this Coat is the thick Substance of the

(b) *De Mulier. Organ.* P. 226. (c) *Exposit. Anatom. Traité de Bas Ventre* No. 645, 646, 648. (d) P. 95. (e) Pages 118, 119, 120, &c. (f) P. 97.

‘ Uterus, composed of a *Plexus of Arteries*, Lympha-
 ‘ tics, Veins, and Nerves, and the Vessels on its Sur-
 ‘ face, when injected, seems to run in contorted Lines.
 ‘ It appears to be of the same glandular Texture (*tho’*
 ‘ *not so compact*) as that of the *Mammæ* in the Breasts,
 ‘ without any *Muscular Fibres*, except such as compose
 ‘ the Coats of the Vessels; neither is there any Necessity
 ‘ for that Muscle which *Ruyseh pretended* to discover at
 ‘ the Fundus, for the Convenience of the forcing of the
 ‘ Placenta; because this Cake as frequently adheres to
 ‘ the other Parts of the Womb as to the Fundus.’

In this Paragraph there are so many Assertions contrary to Matters of Fact, that I can’t avoid being surprized how you could publish such gross Errors, many of which, several of your Pupils (to my Knowledge) could have corrected, while they attended your Lectures: And you likewise so far forget yourself, that what you flatly deny in one Part, you either doubt of, or acknowledge in another, which is the more amazing, as you tell us, *you was six Years in cooking up this Treatise.*

You say, ‘ The Uterus is formed, first of the In-
 ‘ side Membrane, that rises from the Vagina, and lines
 ‘ all the interior Part of the Womb.’ This Part contradicts what the best and most accurate Anatomists have said, who mention no *such Membrane to line all the interior Part of the Womb*: And I have told (g) you, ‘ That in the Womb of a Person who died unde-
 ‘ livered, at her full Time, neither I (nor those along
 ‘ with me) could find such a Thing as any Membrane in
 ‘ that Part to which the Placenta adhered; and upon
 ‘ wiping the Inside of the Uterus, very gently, with a
 ‘ Sponge, there seem’d to be Pieces of a thin trans-
 ‘ parent Membrane to adhere to it, in such Parts of
 ‘ the Uterus, where the Placenta did not stick to it;
 ‘ but as the Womb was somewhat corrupted, and the
 ‘ Membranes so very tender, we could not raise any
 ‘ Bulk of it, by either a Probe or Forceps, so as to be

‘certain what it was.’ I must further add, that this could probably be no more than the Mucus, which is squeezed betwixt the Chorion and Uterus, and may be frequently seen on that Part, somewhat resembling what I have mentioned. Such a Membrane, as you describe, would not only be useless, but would be very prejudicial, even so as to prevent the Fœtus from receiving the Benefit which it has, by the present wise Contrivance; as I shall make appear presently. *Heister*, indeed, (*b*) says, ‘The Cavity is lined with a porous and nervous Membrane; and in Women with Child, the Inner Membrane almost entirely disappears;’ but *Morgagni* (*i*) says, it is rather a Sort of Net-work than a Membrane; and *Albinus*, and other Anatomists, deny there is any Membrane at all.

But even supposing a porous Membrane, as *Heister* says, it yet *entirely disappears in Women with Child*. The scratching, therefore, or tearing this, can never occasion a Flooding, as you tell us in page 403, because it is of such a Nature as not to hinder a Flux of Blood, altho’ no Way scratched or torn.

2dly, You say, ‘The thick Substance of the Uterus is composed of a Plexus of Arteries, Lymphatics, Veins, and Nerves.’

As I shall presently shew the true Fabric of the Womb, I shall now content myself with observing, that any Part of an Animal, thus composed, can never exert any material compressing Power, which the Uterus does in a greater Degree than any other Part of the Body: and all Physiologists have hitherto estimated the contractile Force of any Part from the Number and Strength of its muscular Fibres (as you may see in *Borelli*, *Bellini*, *Baglivi*, *Bernouilli*, and others) and not from the Number of its Blood-Vessels, which rather argues a Weakness in the Part; for was it otherwise, how surprizingly great must the contractile Force of the Lungs be, whose Blood Vessels are near equal to the rest of the Body? The Lymphatics are not to be

(*b*) Compend. of Anatomy. p. 135. (*i*) Advers. 4. p. 47.
dif-

distinguished, but in a Pregnant Womb, (*k*) as *Morgagni* tells us.

3dly, You say, 'The Uterus appears to be of the same Glandular Texture (altho' *not so compact*) as that of the Mamma in the Breasts.'

From this an Anatomical Reader will be apt to say, you are as little versed in the Fabric of the Mamma in the Breasts, as you seem to be with that of the Womb. In several Parts of your Book, you allow the Womb has a very strong contractile Force, by which its Bulk will be reduced, in a short Time, from a very large to a small Size; yet no such Power was ever allowed to be *in the Mammæ in the Breasts*, or in any Gland or Number of Glands.

Winslow (*l*) tells us, 'The Substance of the Womb is 'spongy and compact, with a copious Intertexture of 'Vessels; and that the Body (*m*) of the Mammæ is 'partly Glandular, and partly made up of Fat.' 'Whence you see, first, that the Mammæ and Uterus *are not composed of the same Glandular Texture*; and secondly, that the Substance of the Womb is *more compact* than that of the Mammæ; the *very Contrary* of which you have asserted,

4thly, you then say, 'The Womb is without any 'Muscular Fibres, except such as compose the Coats of 'the Vessels; neither is there *any* Necessity for that 'Muscle which *Ruyfch* pretended to discover at the 'Fundus, for the forcing off the Placenta.'

I can't help remarking here, that thro' your whole Book, where you have Occasion to mention any Thing which had been universally approved of, that you then either deny there can be such a Thing, or you represent it as a trivial Affair, and that too, either without assigning any Reason at all, or else you bring such as have little or no Force to support what you would have it do; the Reader may be convinced of this by only looking back into these Remarks, as well as by what I am going to say. And, I must

(*k*) *Advers.* 4. P. 76. *Heister's Anat.* P. 136. (*l*) *Sect.* 8. No. 600. *Anatom.* (*m*) *Sect.* 9. No. 10.

observe, that whenever a Man takes upon him to contradict received Opinions, it is expected he should bring valid Proof of what he advances, and must at the same Time remember, *that to affirm is not to reason.*

Altho' you have positively asserted that the Womb is without *any Muscular Fibres*, except such as compose the Coats of the Vessels; yet, in your very next Page, you seem to doubt of what you have asserted, by saying, 'the Substance of the Uterus appears more compact and pale than that of Muscles.' Whence it is very evident, that it must be composed of something more than a Plexus of Arteries, &c. Moreover, you say, 'If it be muscular, at least the Fibres are more closely and more intricately disposed, than in other muscular Parts:' and what are Tendons but the muscular Fibres more closely and more intricately disposed, than even those of the Womb? and if, as you say, they are so intricately disposed; is it not a stronger Argument that they are rather muscular Fibres than a *Plexus of Vessels*?

In another Place, (n) when you give an Account of the Contraction of the Uterus; you say, 'The Vessels themselves, that were stretched, elongated, and seemed to recede from one another, are also contracted by Degrees, and that in such a Direction as to reduce the Uterus into the same Shape and Size, which it bore before Impregnation: Nay, the *Fibres* are again so compacted, that they, *and even the Vessels* are scarce discernable.' So that here you allow Fibres, besides those which compose the Coats of the Vessels, *which are discernable*, tho' with Difficulty, and in another Place, you allow 'there are Nervous Fibres in the Os Uteri.'

Altho' you take upon you to say *Ruyfch* only pretended to find out the Muscular Fibres in the Fundus Uteri; yet you see *C. Bartholin* also describes the Muscular Fibres, as I before shew'd; and *Littre*, in the Commentary of the new Academy at *Paris*, in 1706,

takes Notice of the Uterus Musculosus in puerpera. In Commercio Norisco you may find the Descriptions of the Musculi Uterini.

J. Henr. Cobausen, Lucina Ruyschiana in 1731 mentions the Muscular Fibres in the Substance of the Womb, which help to reduce it after Labour to its former Size.

Fr. de Buchwald, Tes. Decad. de Musculo Ruyschii in Uteri Fundo, in 1741, who defends *Ruysch's* Discovery. And

Muller in 1745 describes the *Fibrus Vorticosas Uteri*, in his *Dis. de Utero Rupto*. To all which may be added, my Account of the Fibres or Starlike Muscles, which I saw in the Womb of the Person who died undelivered; which I likewise shewed to those who were with me.

From hence you see, that *Ruysch* made a real, and not a *pretended* Discovery; and surely the Credit of all these Authors will be looked upon in full as strong a Light as one single Assertion of yours, especially as you offer no other Argument against the finding out of this Muscle, than that 'there is no Necessity for it, 'at the Fundus, to force off the Placenta; because 'the Cake as frequently adheres to the other Parts of 'the Womb as to the Fundus.' Which I shall take Notice of in its proper Place.

You then tell your Reader, (*p*) 'that the Blood 'Vessels of the Womb, in the Virgin, or unimpregnated State, are very small, except just at the Roots 'of the Ligamenta lata; but as soon, almost, as they 'enter the Substance, they are dispersed into such 'Numbers of smaller Branches thro' the whole, that 'when it is cut, we can observe but few, and those 'very small Orifices, much less any Cavities that deserve the Name of Sinuses.'

Any Person who will carefully observe an Uterus just open'd, especially if the Woman died of any acute Disease, or had the Menses at that Time, will easily

perceive that the Blood does not immediately come out of the Vessels: For let him gently wipe off such Blood as appears upon making the Incision, and he may see the Cavities whence the Blood was deterged, which were in so many small Lumps: Let the Person then gently squeeze the Womb, and he may see the Blood come out of the very minute Vessels of different Diameters into these Cavities or Sinuses; whereas, if a Blood-vessel be cut cross-ways, he will see the Blood issue out immediately; which wipe off, and then upon the least Compressure the Blood will appear again in as large a Drop, or Bulk, as before, coming out of a Vessel of the same Diameter; which appears otherwise in the Uterus, as above——But this will be more fully explained presently.

You say (q), ‘ In Coition, the Uterus yields three or four Inches to the Pressure of the Penis, having a free Motion upwards and downwards; so that the reciprocal Oscillation, which is permitted by this Contrivance, increases the mutual Titillation and Pleasure.’

I will not here enter into any Debate with you upon the Matter of Fact or Propriety of your Expression, but shall only observe, that to move the Uterus four Inches higher than *its usual Situation*, will require a Man of *extensive Abilities*; but it requires no great Capacity to know that it is the Friction on the Clitoris, that increases the Pleasure in the Female, to which this *Oscillation* of the Uterus can no way contribute, therefore their *mutual Pleasure* cannot be *thereby* promoted.

Having now shewn the Defects of your anatomical Account of the Womb; it is necessary to describe the true Fabric of the Uterus from the best Authorities, as collected in my *Essay on Midwifery* (r), that the Reader may the better understand what follows.

I told you, ‘ That the Womb is composed of a spongy Substance, something resembling that of the

(q) P. 102. (r) Sect. 7. p. 17.

‘ Spleen,

‘ Spleen, or rather that of the Corpora cavernosa Pe-
 ‘ nis, in which several Arteries open themselves into
 ‘ Cells or Sinuses, whose Orifices open into the Cavity
 ‘ of the Womb, and pour Liquors thereinto ; which
 ‘ may be seen to ouze out at any Time by gently pres-
 ‘ sing the Substance of an opened Uterus. These Cells
 ‘ or Sinuses in Time of Pregnancy, when distended,
 ‘ increase the Thickness of the Womb.’

Hence the Danger of attempting to extend the Ute-
 rus after it is closely contracted about the Child ;
 when the Vessels which thus conveyed the Blood to dis-
 tend the Sinuses, are, in a great measure, emptied, is
 very apparent ; wherefore such Hazards ought to be
 avoided, if possible.

I likewise said, ‘ The exterior Part of the Substance
 ‘ of the Womb was composed of reticular Bundles of
 ‘ muscular Fibres, mentioned by *Malpighius*, and al-
 ‘ so by *C. Bartholin* the younger : The inner Side of the
 ‘ Fundus, or Bottom of the Womb, is composed of a
 ‘ turbinated Set of Fibres found out by *Ruyfch*, and is
 ‘ therefore called his Muscle, or Musculus orbicularis ;’
 which has since been observed by several Persons of
 great Repute, as I shewed you a little above. ‘ In
 ‘ the Womb of a Person I saw opened, who died un-
 ‘ delivered, I not only observed these Fibres mentioned
 ‘ by *Ruyfch*, but also several muscular Fibres, which
 ‘ seemed to strike out from a Center, like so many
 ‘ Radii, which were placed betwixt the Orifices at the
 ‘ then Fundus Uteri, quite as far as where the Fallopian
 ‘ Tubes enter the Womb.

‘ These Orifices or Canals are found to abound
 ‘ more particularly in the Fundus Uteri, and are only
 ‘ the Extremities of the Canals that come out from
 ‘ the larger Cavities, or Sinuses, which are lodged
 ‘ within the Substance of the Womb ; and I observed
 ‘ several Orifices opening out of the Substance into the
 ‘ same Sinus, sometimes four, and sometimes five or
 ‘ six.’ All these Things I shewed to several By-
 standers.

‘ These Sinuses are membranous Cavities, commu-
 ‘ nicating with each other, and have numerous Arte-
 ‘ teries spread on them, whose lateral Branches open
 ‘ into Cells, the Veins go out to be joined to the other
 ‘ Veins, that return the Blood from the other Parts of
 ‘ the Womb. They are distended with Blood in the
 ‘ Time of the Menses, when the Orifices are also en-
 ‘ larged. *Mauriceau* opened a Woman that was
 ‘ hanged, whilst she had her Menses, and observed
 ‘ a little Blood came out of the Orifices, at the Fun-
 ‘ dus Uteri, which shews they did not come out of
 ‘ the Vessels, the Lumps being formed by the Sinuses.
 ‘ During Pregnancy the Sinuses and Canals that open
 ‘ into the Womb, are gradually distended and en-
 ‘ larged; insomuch, that at the End of the ninth
 ‘ Month of Gravitation, they are so large as to ad-
 ‘ mit the End of the biggest Finger, and the Canals
 ‘ or Orifices, which open into the Womb will admit
 ‘ the End of the little Finger. These Sinuses are to be
 ‘ found through the whole Substances of the Womb,
 ‘ but are largest in the Fundus Uteri, whereto the Pla-
 ‘ centa generally adheres, and that too in all Positions
 ‘ of the Womb. Hence we see both Arteries and
 ‘ Veins communicate with these Sinuses, and the Si-
 ‘ nuses open into the Cavity of the Uterus, and chiefly
 ‘ so at the Fundus; from whence we find the Menses
 ‘ and Lochia flow from these Canals.

‘ From this Make-Substance, &c. of the Womb,
 ‘ we may see the Usefulness of one Part of the
 ‘ Womb’s extending more than another.’

All these Accounts, for your’s and your Reader’s Sa-
 tisfaction, you may find amongst the following most
 eminent Writers, and most accurate Anatomists. From
De Graaf, *Malpighius*, *Ruysch*, *Littre* in the Me-
 moirs de l’Academ. des Sciences, *C. Bartholin*,
Morgagni, *Mauriceau*, *Deventer*, *Albinus*, *Schurigius*,
 and *A. Vaterus* de Utero Gravid. in 1725, who gave a
 Description of these Sinuses. All these, and many
 others, you have contradicted, without assigning any
 Reason

Reason, except the two following, which, I think, are very insufficient.

First, you say (s), ‘ If there were Sinuses, the same Mechanism must prevail in other Parts of the Body, through which the like periodical Discharge is made, when the Uterus is obstructed, as from the Nose, &c.’ but this does not follow ; for where ever the Humours are drove to any Part of the Body, if they cannot pass through the natural Courses, they will force their Way by bursting the capillary Vessels: And was there no other Use for these Sinuses in the Substance of the Womb, than barely for the Discharge of the Menfes, another Mechanism might perhaps have answered the End proposed? But their chief Use is during a pregnant State, and therefore they were not wanted in other Parts, whence Discharges only might flow.

Secondly, you say, ‘ Besides such an Accumulation in large Sinuses, though the Blood were not entirely stagnated, would produce a Viscosity, like that which obtains in Rheumatisms, and other inflammatory Distempers.’

Here, I think, you seem to confound Things together ; for you are now speaking of the Catamenia ; and use the Expression of *large Sinuses* ; whereas the Authors, as above named, mentioned the Sinuses to be *large* only in a pregnant State, and at or near the Time of Delivery ; and when the Womb is contracted into its usual Size, as before Impregnation, the Sinuses must be contracted in the same Proportion ; hence they are so small in that State, as not to appear *large*, altho’ distinguishable ; especially by gently squeezing the Womb when cut across, or laid open ; so that here is not Space sufficient for an Accumulation of much Blood in *large Sinuses*, so as to produce any great Viscosity, to occasion Rheumatisms, altho’ such like Complaints frequently attend the Flowing of the Menfes, viz. a Sensation of a Weight, Heat, and Pain.

From what has been said you see the Womb is increased in Bulk by the Blood distending the spongy

Substance ; and as all the different Parts must distend proportionably to their Strength, and the distending Power ; and as the Fundus Uteri has the largest Sinuses, it is distended most ; and so, in course, the Womb is less extended between the Os Uteri, and the Part where the Fallopian Tubes enter it, than between that Part and the Fundus, as it is at the Time of Delivery.

Hence we see the Method of enabling the Womb to be distended, is by filling these Sinuses ; for without that no human Art can extend the Uterus much without the Hazard of bursting the Substance, whence the Practice of forcibly extending the Womb to any considerable Degree, after it is strongly contracted about the Child, by the *too early Evacuation* of the Waters out of the Bag, is very dangerous, as I have sufficiently proved in my *Essay on Midwifery*, and is oftner the Cause of the Woman's Death, than most People, I fear, are aware of. Hence also the Dangers attending the Practice of evacuating the Waters to restrain a Flooding, as you recommended above, are more apparent.

It may not be improper here to clear up what is meant by the Fundus Uteri ; not only that we may understand each other, but that the Reader may attain the same Knowledge. The Fundus Uteri, in an unimpregnated State, is that Part which is opposite to the Os Tincæ, lying betwixt the two Entrances of the Fallopian Tubes into the Womb, and is then almost in a streight Line across the End within ; but in a Woman just before her Delivery, the Fundus is so extended as to form the End of an Ellipsis or Oval, from the Entrance of one Fallopian Tube into the Womb, to that of the other. Whence a Placenta adhering to any Part betwixt these two Tubes may justly be said to adhere to the Fundus, altho' it is not immediately opposite to the Os Tincæ : For supposing an impregnated Ovum to adhere to the Fundus Uteri nearer to one of the Fallopian Tubes, than to the other in the Beginning of Pregnancy ; then when the Uterus is fully extended at the Time of a regular

gular Labour, the Placenta will be found to adhere to one Side more or less, as it is fixed nearer to, or more distant from, the Part in which the Fallopian Tube enters the Womb; but yet may very justly be said to stick to the Fundus Uteri, as being betwixt the two Tubes; as I have fully explained in my *Essay* (t); and Nature seems to have pointed out this as the proper Situation of the Placenta: For the Sinuses are found to be larger at the Fundus than at any other Part of the Womb. Whence you are mistaken in saying (u), ‘ That the Placenta as frequently adheres to other Parts of the Womb as to the Fundus.’

In another Place (w) you seem to support what I have said, and to contradict yourself; for you say, ‘ it is supposed that the Ovum swims in a Fluid, which it absorbs so, as to increase gradually in Magnitude, till it comes in Contact with all the Inner Surface of the Fundus; and this being distended in proportion to the Augmentation of its Contents, the upper Part of the Neck begins also to be stretched; and about the third Month, nearly a fourth Part of the Neck, at its upper Part, is distended equal with the Fundus; and at the fifth Month, the Fundus is extended to a much greater Magnitude, and rises upwards to the Middle Space betwixt the upper Part of the Pubis and Navel, and at that Period one Half of the Neck is extended.’ All this shews the Adhesion of the Placenta to the Fundus Uteri to be generally as is above explained; and at the same Time convinces us of the Improbaility, nay, I might say, the Impossibility, of the Placenta ever adhering to the Os Uteri; because it sticks to the Womb in a very short Time after the Ovum enters therein; and you acknowledge, that at the 5th Month only one Half of the Neck is extended; How then can the Placenta adhere to the Inside of the Os Uteri, as you tell us in another Place?

You say (y) ‘ That the Ligamenta Lata are formed and rise from Muscles that cover the Inside of the I-

(t) Sect. 25, p. 52. (u) P. 98, and 137. (w) P. 117.
(x) P. 137. (y) P. 101, 103.

‘lia.’ You herein contradict the best Anatomists, particularly *Winslow* (z) and *De Graaf*, who tell us, ‘that the Portion of the Peritonæum, which envelopes the Womb, forms naturally on its lateral Edges two large Prolongations, or Duplicatures, *improperly* called Ligamenta Lata, these are extended from each Corner of the Fundus Uteri to the Sides of the Pelvis dividing it into two Cavities (Posterior and Anterior) and are afterwards continued in a loose Manner with the same Peritonæum to the Sides of the Pelvis, but are no Way fixed to, or inserted in the Os Iliæ, as some have imagined; *De Graaf* says, Ligamentorum latorum Beneficio Uterus non Offibus Iliis alligetur ut perperam creditum est.

You likewise tell us (b), ‘That the Ligamenta Rotunda seemingly arise from the crural Artery and Vein, from whence they are extended to the Sides of the Fundus Uteri;’ but *Albinus* (c), *Astruc* (d), *Winslow* (e), and *De Graaf* (f) inform us, ‘That they run through the Duplication of the broad Ligaments from each Corner of the Womb, just under the Fallopian Tubes, as far as the Opening of the oblique Muscles, thro’ which they pass, and under the fleshy Substance of the transverse Muscles, and slide over the Os Pubis obliquely, and reaching the upper and middle Part of the Groin, near the Clitoris, they divaricate in Form of a Goose’s Foot, into several small Branches, whereof most of them are lost in the Fat; but some of them are inserted in the Membranes (as well as the Fat) which are continued over the upper and interior Parts of the Thighs. They are not Ligaments, but only a Bundle of Arteries and Veins interwoven and connected together by a fine cellular Membrane of the Peritonæum; as *Winslow* (g), *Garengeot* (h), and *Morgagni* (i),

(z) *Traité de Bas Ventre*, Numb. 69, p. 622. (a) P. 269. (b) P. 104. (c) *Hist. Musc.* p. 288. (d) *Of the Diseases of Women*, p. 7. (e) *Ibid.* Numb. 59. (f) *Ibid.* p. 272, 273. (g) *Ibid.* Numb. 619. (h) *Splanchn.* p. 326. (i) *Advers. Anatom.* 4, p. 49.

‘ assure us ; and this last Author tells us, he has seen
 ‘ them distended with Blood to the Thickness of his
 ‘ middle Finger.’

Hence you find, that your anatomical Descriptions are not only very deficient, but actually contrary to the Accounts of all our best and most accurate Anatomists. May not therefore the *Judgment* or *Integrity* of the *Review* Writer, in *Number* I. very justly here be called in question, who has told us *you have given us the Anatomy of the Parts, &c.* a Branch of Knowledge that ‘ *every Accoucheur, you say, ought first to be Master of?*’ And may not the Reader be apt hence to judge, that there will not be so great an Accuracy in your anatomical Designs for Copper-plates, as the *Review* Writer, *Number* IV. has assured us of? because, if you have had such Opportunities as he insinuates, you must have seen the Sinuses mentioned to be in the Substance of the Womb, as well as muscular Fibres, &c. taken notice of by all the best Anatomists; which you have omitted to describe, altho’ they are capable of ocular Demonstration, and therefore ought to be very accurately delineated in your Drawings. And I must observe to you, that it is not the *beautiful Drawings of an able Artist*, but the *exact Imitation of Nature*, (altho’ by a *worse Hand*) that is to be regarded. But where Art and Nature conspire, as in *Albinus’s* Tables, &c. there we may expect something like Perfection. Some few indeed, and perhaps the wisest Spirits of the Nation, now attribute almost every Improvement in Art and Science to *Industry*, and a *right Application*; but I willingly submit to *Horace’s* Judgment in this Respect.

———— ‘ Ego nec Studium sine divite Venâ,
 ‘ Nec ruda quid profit video Ingenium. Alterius sic
 ‘ Altera poscit opem res, et conspirat amicè.’

ART. POET. Ver. 409, 410, 411.

You intitle your Book *The Theory and Practice of*
Mid-

Midwifery, but you have not explained what is meant by Theory in the Medical Profession.

What we mean by Theory cannot be a mere useless Speculation, or Consideration of an Object ; but that speculative Part of any Science which directs to the Rules of Practice. To be learned in an Art, &c. the Theory suffices, but to be Master of it, both Theory and Practice are requisite. And as Observation comprehends the sensible Qualities of Bodies, the Course of Diseases, their Symptoms, and the Effects of Medicines and Applications ; so reasoning from the Structure and Functions of the Parts, the Composition of mixed Bodies, the Qualities of the circulating Fluids, the Nature of Aliments, and the Action of Medicines, enables us to account for the Alterations we find. The Knowledge, thus founded, is what all judicious People call true Theory ; which is absolutely necessary to be understood by every Person who would become a Master of his Profession, as it will enable him the sooner, and more easily to learn the Diagnostics, and Method of curing Diseases, and to improve the Practice of Midwifery.

There are indeed some Things which may be said to be a mere Matter of Speculation, without any View to Practice or Application, concerning which any Hypothesis, however ingenious, may be deemed useless, and only made *to amuse the Readers*. Of this Kind is *Leeuwenhoek's* System of the Animalcula ‘ in semine ‘ masculino,’ whose Hypothesis *may be liable to Objections, and whose Systems may be overturned by the next that follows* ; but with this we have nothing to do, unless, as you say, *to amuse the Readers*.

The Theory, then, as defined above, seems to be that which you have made as Part of the Foundation of your own Work, if we are to judge from what you say in several Parts of the Book ; for you tell us (k), ‘ In ‘ the Course of my Deliberations on this Subject, I ‘ likewise tried to improve upon the Forceps, which

(k) P. 65.

‘ seemed

‘ seemed to me an Instrument more mechanically adapted, and easier applied than any other Contrivance hitherto used.’ Now this must be from Theory, that is, a Judgment formed from the Mechanism of the Forceps, the Make of the Pelvis, and the Shape and Size of the Child’s Head.

Again you say (*l*), ‘ The Ingenuity of several Gentlemen of the Profession was stimulated, in order to contrive some gentler Method of bringing along the Head (than with the Crotchet) so as to save the Child without any Prejudice to the Mother, and that their Endeavours have not been without Success.’ Did not this favourite Invention arise from the same Kind of Reasoning?

Again you say (*m*), ‘ I therefore (having before converted my principal Attention to the Study of Midwifery) began to consider the whole in a mechanical View, and reduce the Extraction of the Child to the Rules of moving Bodies in different Directions: In consequence of this Plan, I more accurately surveyed the Dimensions and Form of the Pelvis, together with the Figure of the Child’s Head, and the Manner in which it passed along in natural Labours, and from the Knowledge of these Things, I not only delivered with greater Ease and Safety than before, but also had the Satisfaction to find in teaching, that I could convey a more distinct Idea of the Art in this mechanical Light, than in any other.’ Is not this from Theory, that is, have you not reduced Observation and Practice to Rules, which is the Theory, as above defined? Nay in the very next Page you say, ‘ The Consideration of Mechanics applied to Midwifery, is likewise in no case more useful, than when the Child must be turned by the Feet, because there we are principally to regard the Contraction of the Uterus, the Position of the Child, and the Method of moving a Body confined in such a Manner; but I have advanced nothing in Mechanics, but what I find

‘ useful in Practice, and in conveying a distinct Notion of the several Difficulties that occur to those who are or have been under my Instructions, *for whom the Treatise is principally designed?*’ Was it not Theory that taught you to find out this Method, *so useful in Practice*, as you call it?

Again you say (n), ‘ As my chief Study hath been to improve the Art of Midwifery, I have considered a great many different Methods, with a View of fixing upon that which should best *succeed in Practice?*’ And was not your Knowledge in Philosophy, Anatomy, &c. your Guide and Foundation of these that you call Improvements?

These Instances are sufficient to shew what you mean by Theory, if you mean any Thing, because you give the Descriptions of the Pelvis, Child, &c. a thorough Knowledge of which, you say, is to be the Foundation of the different Methods of Deliveries: That is, Experience reduced into Rules for Practice. This shews the Advantage of establishing a proper Theory or System; nay, I may add, the *Necessity of doing it*, that your Pupils, and others, may have a proper Foundation, not only for understanding the present Practice, and the Reason for so doing, but to *induce or enable them to make future Discoveries*.

From perusing the foregoing Paragraphs, and other Parts of the Book, the impartial Reader would imagine your Theory to be a material Part (as certainly it is) of the complete System of Midwifery, as well as from reading your Title-Page, and the last Part of your Advertisement at the End of your Book. How great then must his Surprise be to meet with no Definition of this (as you term it) Theory in your whole Book, which is yet so necessary towards making your *Instructions so clear and perspicuous*, and *deducing your Remarks so happily and judiciously* as the Review Writer, Number III. tells us? And if Good-nature be not greatly prevalent, his Surprise must kindle in Indigna-

tion to find Theory only inserted *to amuse your Readers,* (Pupils) *for whose Use your Treatise of the Theory and Practice of Midwifery is chiefly designed* (o). What must he think of the Author who fills a great Part of his Book with what can only be called *Theory*, when the same Person tells him (p)? ‘ That Theory is but
 ‘ of little Service towards ascertaining the Diagnostics
 ‘ and Cure of Diseases, or improving the Practice of
 ‘ Midwifery, and therefore such Enquiries are the less
 ‘ material.’ And yet in your first Page you tell us,
 ‘ You have industriously avoided *all Theory*, except so
 ‘ much as may serve to whet the Genius of young Prac-
 ‘ titioners, and be as Hints to introduce more valuable
 ‘ Discoveries in the Art.’ If Theory be of so little Service as you have just told us, how can it serve *to whet the Genius of young Practitioners*, and be a Means of *introducing more valuable Discoveries*? This very last Expression implies not only its Use, but the Necessity of it. How can any of your Pupils reconcile these real Contradictions? How must he know what to trust to, when many and various Parts of this Book clash one with the other? Does not your following Paragraph betray a quaint Kind of Chicane and Arrogance, to condemn at once every Theory but your own? For you say, ‘ That the young Practitioner may not be misled by the useless Theories and uncertain Conjectures of both ancient and modern Writers, it may be necessary to observe in general,
 ‘ that all Hypotheses hitherto espoused are liable to many material Objections; and that almost every System hath been overthrown by that which followed it.’ And for the same Reason may not the next Book that is published overthrow your’s?

You say (r), ‘ The Coccyx is moveable at its Connection with the Sacrum, as are also the four Bones that compose it; and that in some Cases the different Pieces of this Bone are rigidly cemented together; but

(o) Pref. p. 3, p. 252. (p) P. 69. (q) P. 68. (r) P. 75.

‘ this Anchylosis seldom happens, because they undergo
 ‘ a gentle Motion at every Excretion of the Fæces,
 ‘ which helps to preserve their Mobility.’

First you say, ‘ *The Coccyx is moveable at its Connection with the Sacrum.*’ by which, I suppose, you mean *moveable outwards*, or else it will not answer your Purpose. This is so far from Fact, that Nature has made that Bone of the Coccyx, with a Process going obliquely upwards and outwards, called by *Albinus* *Processus Obliquus Externus*, which goes against the inferior Process of the last Bone of the Sacrum. This Process, he says, ‘ *cum superiore primi Ossiculi Coccygis committitur;*’ whence it is evident, that Providence seems to have done this to prevent its yielding that Way. You have likewise again laid it down as a Rule, that there are always four Bones to compose the *Os Coccygis*, whereas Anatomists frequently find only three.

You have also made a very bold Assertion, which, nevertheless, I believe, is not true in fact; for, let any Person try to press back the Coccygis in an adult Woman, or rather in several Women, and he’ll soon find out your Error; because it requires great Force to move it in most of ’em, in many it is impracticable; and, moreover, whatever Force the Excretion of the Fæces may have, it will be equally pressing on all Sides; and of course that Part, which can give the least Resistance will yield the most; therefore, that Part of the Rectum next the Vagina will first give Way, and sufficiently too, for the hardest Fæces to pass without the least Motion of the Coccyx. But as you have not proved your Assertion, it ought to go for nothing.

You likewise say, (s) ‘ The upper Part of a well shaped Pelvis represents a kind of imperfect Oval, or something that approaches to a triangular Figure,’ but you have omitted to acquaint the Readers, that the Sacrum projects into this Cavity, even in a well shaped Pelvis; insomuch, that if a streight Line be

drawn from one Side of the Pelvis to the other, and to touch the Projection of the Sacrum ; a considerable Vacancy or Cavity will be left betwixt the Line and Back, on each Side that Part of the Bone. This is very necessary for the Reader to remember, as he will find in the Sequel ; and is of such Consequence, that I am not a little surprized at the Omission.

You say, (t) ‘ That the Width of the lower Part of the Pelvis is the Reverse of the upper, when the Os Coccygis is pressed backward by the Head of the Child ; because, in that Case, the Distance between the Coccyx and the Lower-part of the Pubes is five Inches and a Quarter ; whereas the inferior and posterior Parts of one Os Ischium are no more than four Inches and a Quarter from the same Parts of the other. Indeed the Width of the lower Part of the Pelvis is naturally the same in both Diameters ; so that this Difference of an Inch is occasioned by the Yielding of the Coccyx in the Birth.’

But, in another Place, (u) you say, ‘ The Perinæum extends from this Border (the Fourchette) to the Anus, being about one Inch, or one and a half, in Length, the wrinkled Part of the Anus is about three Quarters of an Inch in Diameter ; from thence to the Coccyx, the Distance is about two Inches ; so that the whole Extent from the Fourchette to this Bone, amounts to about four Inches, or four and a Quarter ;’ and I may add that the Distance from the Fourchette to the Pubes, is at least one Inch, if not more, so that according to this Part of the Book, the Child’s Head might pass, tho’ very large, without ever extending the Coccyx.

As a great many of my future Remarks depend on the properly adjusting these Matters, the Reader will excuse me, for taking up so much Time as will be necessary to confute you, in what, *primâ facie*, he may think a very trifling Affair.

In the first Place, you here beg the Question, by supposing that the Coccyx will yield an Inch ; but you

(t) P. 78. (u) P. 92.

have brought no Argument to prove any such Thing: In the next Place, I (*w*) had given a true Anatomical Description of the Muscles which have their Origins and Insertions in the different Parts of the Pelvis, some of which are about two Inches in Length; especially the Coccygæi which arise from the acute Processes of the Ischium and are inserted into the Os Coccygis, which they pull forwards; betwixt the said Processes and the Os Coccygis the Distance is only about two Inches; so that was the Coccyx to lengthen and yield one Inch, these Muscles must either be torn asunder or be stretched one Half of their whole Length; which I believe to be impossible, without destroying their Elasticity, or Power of contracting again, at least we know of no Muscle or Fibre in the whole Body that will bear such an Extension, nay nor any Thing like it: This Argument, therefore, you should have answered.

As you say the Os Coccygis is pressed back one Inch by the Head of the Child; it would have been proper for you to have directed us how to come at that Knowledge; for the Distance ought to be measured very exactly, both before the Descent of the Child's Head into the Pelvis, and when it extends the Coccyx one Inch; The first is difficult to do, and the last much more so, if at all possible to be done; because, at that Time, the Head will press the other Parts outwards very much: To measure those Parts of a dead Subject, is a very uncertain Method, especially if a Person has a-mind to play Tricks, by extending the Coccyx beforehand.

You say again, (*x*) 'The Depth of the Pelvis, from the upper Part of the Sacrum, where it is articulated to the last Vertebra of the Loins, to the lower End of the Coccyx, is about five Inches in a streight Line; but when this Appendix is stretched outward and backward, the Distance will be one Inch more.'

I must observe, that in the last Paragraph, you made the Distance between the Coccyx and Pubes to be one Inch more, when pushed back by the Child's Head, before Labour; and in this you make it likewise to be an Inch longer, distant from the upper Part of the Sacrum.

You then proceed and tell us, ' That the Depth
' from the Sides of the Brim towards its Forepart, to
' the lower Parts of the Ischia, is four Inches, and
' from the upper to the lower Parts of the Offa Pubis,
' where they join, the Distance is no more than two
' Inches; so that in the Dimensions of the Pelvis, the
' Side is twice, and the Back Part three Times the
' Depth of the Fore Part.'

' The Sacrum and Coccyx being convex on the
' Out-side, exhibit a Concave Figure on the In-side;
' The Curve being increased toward the lower End,
' so as that from the Extremity of the Coccyx to the
' Middle of the Sacrum, the Sweep nearly resembles
' a Semicircle; and from thence the Bone slopes up-
' wards and forwards.' In this Place, you say, the
Sweep of the Coccyx to the Middle of the Sacrum is near
a Semicircle; but here lies a Difficulty you'll not easily
get over, for as the Coccyx will only be about a third
Part of this Semicircle, that is, at most, about two
Inches in Length, and as the first Bone (which is the
largest) joins the Sacrum, is defended from moving
backwards, the whole Extension must be made by the
other Bones, whether there be two or three. Is it,
therefore, probable, nay, I may say possible, for that
Part to become stretched out, or extended a full Inch
from a Semicircle to almost a streight Line, without a
Dislocation? But this you must make appear, or else
your Reasoning must be false, and if the Coccyx does
not stretch outward and backward one Inch (as it nei-
ther can nor does in a natural Way) then *the Back-*
part of the Pelvis cannot be three Times the Depth of the
Fore Part, which overturns a great Part of your Hy-
pothesis.

You proceed again (y) ‘ From the Upper Part of the Brim on each Side (but nearer the Fore than the Back Part) to the lower Parts of the Ischia, the Descent is perpendicular, and the Opening on each Side, betwixt the lower Parts of the Sacrum and the posterior Parts of each Ischium, is about three Inches deep, and two and a Half in width. The upper Part of this Vacuity, on each Side, gives Passage and Lodgements to a Muscle, Vessels, Nerves, &c. at its lower Part the Coccygæus Muscle and Ligament abovementioned are stretched across from Bone to Bone; and this Ligament is on the Outside strengthened with another strong Expansion, rising from the Tuberosity of the Ischium, and fixed into the Edge of the Sacrum and Coccyx. All these Parts yield and stretch, forming a Concave equal to that of the Sacrum, when the Fore or Hind-head of the Child is pushed down at the Side and Back-part of the Pelvis:’ but, according to you, it should do that without the Head pushing down so much, as will appear presently.

You say, ‘ That betwixt the lower Parts of the Sacrum and posterior Parts of the Ischium, is about three Inches deep, and two and a Half in Width, that at the lower Part of the Vacuity the Coccygæous Muscles and Ligament abovementioned are stretched across from Bone to Bone, and strengthened with another strong Expansion, rising from the Tuberosity of the Ischium, and fixed in the Edge of the Sacrum and Coccyx.’ You likewise tell us ‘ The Coccygæous Muscle and Ligament abovementioned are stretched across from Bone to Bone,’ by which, I suppose, you mean, that when the Woman is erect, that they then run horizontally: But *Winslow* says (as I shew’d in my Essay) (z) ‘ That the Coccygæus anterior, five Ischio-Coccygæus is fixed by a broad Insertion in the anterior Portion of the small Transverse Ligament at the upper Part of the Foramen

‘Ovale of the Os Innominatum. From thence it runs
 ‘between this great Ligament and the Musculus Ob-
 ‘turator Internus, with which it is often confounded
 ‘by Anatomists, and contracting in Breadth, it is in-
 ‘serted in the *lower Part* of the Os Coccygis.’

‘The Coccygæus posterior five sacro Coccygæus
 ‘is fixed to the Inner, or concave Edge of the *two*
 ‘*first Vertebrae* of the Os Sacrum, to the inner and
 ‘lower Edge of the Ligamentum Sacro-Sciaticum,
 ‘and to the Spine of the Os Ischium; from thence
 ‘contracting in Breadth, it is inserted above the for-
 ‘mer Muscle.’ Whence it is evident they do not run
 across, as you tell us. You have omitted to give us
 an Account of the Distance betwixt the Ischium and
 End of the Coccyx, whether accidentally or designedly
 you best know; but I have acquainted you, (a)
 they are about two Inches distant; you must, how-
 ever, allow, that they are not so far asunder as the
 same Part of the Ischium and Sacrum, which you have
 fixed at two Inches and a Half; and we do not yet
 know of any Muscle, Ligament, or Fibre in an Ani-
 mal, as I before mentioned, that can bear to be extended
 one Half, or near Half of its whole Length, without
 breaking, or being so much overstretched as never to
 return to its former State. This being a Fact, and the
 Foundation upon which I, in my Midwifry, have
 built, you ought to have taken off the Force of my
 Argument, and to have shown, to a Demonstration,
 how the Knowledge of the exact yielding of the Coc-
 cyx can be obtained.

You say, (b) ‘That on the whole, it is of the ut-
 ‘most Consequence to know, that the Brim of the
 ‘Pelvis is wider from Side to Side, than from the
 ‘Back to the Fore-part; but that at the Under-part
 ‘of the Basin, the Dimensions are the Reverse of this
 ‘Proportion’ (which I deny, and have given my Rea-
 sons above for so doing) ‘and that the Back-part, in

(a) P. 371. (b) P. 81.

‘ Point of Depth, is to the Fore-part as three to one,
‘ and to the Sides as three to two.’

I must remark, that as the Knowledge of this is of such Consequence, and as I had published my Reasons before you had printed your Book, you ought to have been particularly full in confuting my Arguments. You ought to have been very cautious in advancing any Thing as a Fact, but what was demonstrable, and this was the more incumbent upon you, as you contradict others of great Authority, and make a new Assertion; producing only your *Grratis Dictum*, which may indeed pass upon your Pupils, but not upon the more knowing Part of Mankind.

You have made (c) *the Width of the lower Part of the Pelvis to be naturally the same*; which is not true in fact, for the Distance is generally somewhat longer from the Pubes to the Coccyx, than from Side to Side.

I must likewise observe, that what you say confirms what I have mentioned (d) about the Impossibility of giving the boasted Assistance of introducing a Thumb or Finger to press back the Coccyx, as that Thumb or Finger will take up more Space than the Coccyx can yield.

You told us (e) ‘ That when a Woman, in the last Month of Pregnancy, is reclined backwards, or half-sitting half-lying, the Brim of the Pelvis is horizontal, and an imaginary streight Line, descending from the Middle Space between the Navel and Scrobiculus Cordis, would pass thro’ the Middle of the Cavity of the Pelvis.’ So that supposing the Person erect, the Top of the Pelvis, from the upper Part of the Sacrum, inclines downwards and forwards, till it comes to that Part of the Pubes over each Foramen magnum. This is evident to any Person who will examine the Skeleton, from which the Muscles, &c. have been just dissected; and let his Eye be placed upon an horizontal Level with the Pelvis; or if the Skeleton be laid flat on its Back, the Person may

look perpendicularly upon the same Part, and he will then only see the End of the Coccyx under the Union of each Bone of the Os Pubis; so that if it be as you say, *from the Top of the Sacrum to the Coccyx five Inches; and the Depth of the Pubis two Inches*, then the Level of the Top of the Sacrum will be above the Top of the Os Pubis full two Inches at least, and as the Coccyx is not so far from the upper Part of the Center of the Pelvis, as the lowest Part of the Ischium from the same Level, in a natural State, the Head of the Child must touch the Coccyx as soon as it can reach the lower Part of the Ischium, if not sooner; because, when a Person sits erect upon an horizontal Level, the lower Parts of each Ischium supports the whole Body; whence *Deventer* calls 'em *Ossa Sedenteria*. By this wise Contrivance the Coccyx (which is easier bent inwards than outwards) is guarded from being pressed or broke inwards, wherefore it is not so low down upon an horizontal Level as the lower Parts of the Ischia; 'Quod erat demonstrandum.' For if the Back Part of the Pelvis be then measured from the Level to the Top of the Sacrum, it will be found to be full five Inches and a Half, whereas, on the Fore Side, from the said Level, it will be only about three Inches and a Half at the most; the Side is not twice, nor the Back Part three times the Depth of the Fore Part, when the Woman is erect, because from the Back to the Fore Part of the Pelvis the Brim descends.

You say, (f) 'The Child's Head, that has not been misshapen, by the uncommon Circumstances of the Labour, is commonly about an Inch narrower from Ear to Ear, than from the Fore to the Under-part of the Hind-head.'

I must observe that you have omitted to give us the other Dimensions of the Head, because then your Hypothesis, I conceive, would have been overturned: but I shall endeavour to make up that Defect for the

Benefit of the Reader, and this I shall do from my own Book, where I said, (g) ' that from the Front to the Back of the Head is four Inches $\frac{3}{8}$; from the Chin to the Back of the Head five Inches $\frac{1}{8}$; the Depth of the Head from the Top to just below the Ears three Inches $\frac{1}{8}$; from Side to Side of the Temple three Inches.

Now then, supposing the Distance from Ear to Ear to be three Inches, or three and a Half, which is generally the largest, that from the Fore to the Under Part of the Hind-head, is one Inch more; and you have (b) before made ' the lower Parts of the Pelvis to be equally distant from each other, That is, four Inches, and one Quarter; but when the Child's Head presses against the Coccyx in the Birth, it will yield one Inch,' that is, the Distance then becomes five Inches and a Half betwixt that and the Pelvis, which is three Quarter of an Inch more than you yourself acknowledged the Child's Head required, even if the Parts of the Head do not yield at all.

And I must likewise observe, that you never met with a Child's Head naturally made whose Distance from the Fore to the Under-part of the Hind-head, is five Inches and a Quarter, after the Bones have been squeezed and moulded by a natural made Pelvis, whose Diameter from Sacrum to Pubes, is about four Inches and a Quarter, as you before told us. Besides (i) you say, ' When the Head is so far advanced, that the Back-part of the Neck is come below the Under-part of the Pubes, the Forehead forces the Coccyx, Fundament and Perinæum backwards and downwards,' so that unless the Diameter of the Head from the Back-part be above four Inches and a Quarter, when the Bones thereof have yielded, which is very rare, the Coccyx need not to give Way at all, especially if any Person will consider what you say in Page 92 and 208, ' that

(g) P. 101. P. 213. (b) P. 78. (i) P. 209.

' the Perinæum extends from this Border (the Four-
 ' chette or Frænum) to the Anus, being about one
 ' Inch, or one and a Half in Length; the wrinkled
 ' Part of the Anus is about three Quarters of an Inch
 ' in Diameter, from thence to the Coccyx the Distance
 ' is about two Inches; so that the whole Extent, from
 ' the Fourchette to the Bone, amounts to about four
 ' Inches, or four and a Quarter.' And you may very
 well add one Inch more, at the last, from the Four-
 chette to the Os Pubis; which will make about five
 Inches one Quarter, betwixt the Pubes and Os Coccy-
 gis, without the last being extended at all by the
 Child's Head. From all which Remarks it follows,
 that, in general, where the Child is naturally made, al-
 tho' the Woman has a difficult or præternatural La-
 bour, yet the Child's Head can never require the Coc-
 cyx to be distended back one Inch, nay it is impossible
 it should, *without breaking or being dislocated*, the Coc-
 cyx, as may be proved from your own Account, for
 you have said, (k) ' That the Depth of the upper
 ' Part of the Sacrum to the lower End of the Coccyx
 ' is about five Inches, but when the Coccyx is stretched
 ' outward and backward, the Distance will be one
 ' Inch more.' You then say, ' from the Extremity
 ' of the Coccyx to the Middle of the Sacrum, the
 ' Sweep nearly represents a Semicircle,' that is, one
 Side of a Circle, whose Diameter, we'll suppose to be
 four Inches, which will be about the Matter, as the
 whole Distance to the Top of the Sacrum, is about
 five Inches from the Coccyx.

The Circumference of this Circle will be twelve
 Inches, the Moiety of which is six Inches, which is
 the Distance from the End of the Coccyx to the
 Middle of the Sacrum, if you follow the Inside of the
 supposed Semicircle; about one third of which will be
 taken up by the Bones of the Coccyx, which, as I
 observed, are nearly as often only three as four in
 Number; the first of which cannot move at all, or

but very little. The Distance between the Inside of the Cavity and Outside Convexity, at the Union betwixt the Sacrum and Coccyx, we may safely fix at three Quarters of an Inch, and the thin End of the Coccyx to be near a Quarter of an Inch. By this then it is evident, that the Bones of the Coccyx must on the Inside be each full Half an Inch distant, and then the Bones must be absolutely separated; and if they ever join again, they will unite as a broken Bone, and become one solid Piece, so that it can never yield afterwards; whence every Woman can have only one Child to be born alive, if your Doctrine be just.

Having done with the Coccyx, I'll now proceed to the Child's Head, which, I observed above, is naturally never so large as to require the Coccyx, of a regular made Pelvis, to be extended one Inch, altho' no Way compressed; and when the Head is large, and has been any Time in passing betwixt the Sacrum and Pubes, which, in general, are about four Inches $\frac{1}{4}$ distant, that then the Head is moulded in an oblong Form, as (l) I observed. And you say, (m) in all ' laborious Cases, the Vertex comes down, and is ' lengthened in Form of a Sugar Loaf, nine and forty ' Times in fifty Instances;' which compressed Form, I must observe, has been made in the Passage betwixt the Sacrum and Pubes, is only about four Inches Distance, and that at most, for which Reason there is less Occasion to extend the Os Coccygis, as the Head is then of a less Diameter after, than before it became *oblong like a Sugar Loaf*, which Shape it will retain for a considerable Time after its Birth, if proper Means be not used to reduce it again; for the more oblong the same Substance is made, the transverse Diameter must be lessened in the same Proportion.

You likewise say, (n) ' That Part of the Head ' which presents, is the Space between the Fontanelle

‘ and where the Lambdoidal Suture crosses the End of
 ‘ the Sagittal Suture,’ which you call (o) ‘ The Vertex
 ‘ or Crown of the Head,’ and others call the Apex;
 ‘ for in most laborious Cases, when the Head is
 ‘ squeezed along with great Force, we find it pressed
 ‘ into a very oblong Form, the longest Axis of which
 ‘ extends from the Face to the Vertex.’ In another
 Place you say, (p) ‘ That betwixt the Vertex and
 ‘ Face or Forehead is greater, than that from the
 ‘ Forehead to the Back Part of the Hindhead or
 ‘ Neck.’

You then proceed, and say, ‘ From whence it ap-
 ‘ pears, that the Crown or Vertex is the first Part that
 ‘ is pressed down, because in the general Pressure,
 ‘ the Bones at that Part of the Skull make the least
 ‘ Resistance, and the Face is always turned upwards.’

Here you have attempted to assign a Reason why the
 Vertex or Apex is first pressed down, ‘ *because,*’ you
 say, ‘ *The Bones of that Part make the least Resistance,*’
 but I humbly conceive a better Reason may be offer-
 ed; for when the Head presents naturally, the Apex
 offers at or near the Center of the Opening of the
 upper Part of the Pelvis, because the Chin is pressed a-
 gainst the Child’s Breast and if either the Head be large,
 or the Pelvis strait, when the Pains protrude the
 Child, its Head on each Side must be greatly com-
 pressed by the Parts of the Mother’s Pelvis, and that
 Part of the Head which is nearest the Center of the
 Opening of the Pelvis, meeting with no Resistance
 in that Place, will become the most protuberant, as
 you inform us in the same Page; for you say, ‘ some-
 ‘ times indeed this Lengthening or Protuberance is
 ‘ found at a little Distance from the Vertex, backward
 ‘ or forward, or on either Side; and sometimes the
 ‘ Fountenelle presents, while the Vertex is pressed

(o) P. 221 (p) P. 318.

‘ and remains quite flat.’ Whence it is evident that the Lengthening is not owing to the *Bones at that Part of the Skull making the least Resistance*; for was that the Case, the Protuberance would always be in the same Part of the Head.

You said above, ‘ *That the Crown or Vertex is the first Part that is pressed down.*’ By which it is evident, that in a natural Way it is the first Part that presents, as it really does. But in other Places (*q*) you say ‘ When the Head *first presents* itself at the ‘ Brim of the Pelvis, the Forehead is to one Side, ‘ and the Hindhead to the other, and sometimes it is ‘ diagonal in the Cavity: thus the widest Part of the ‘ Head is turned to the widest Part of the Pelvis, and ‘ the narrow Part of the Head from Ear to Ear is applied to the narrow Part of the Pelvis, between the ‘ Os Pubis and Sacrum.’

The chief Hint of this imaginary Position you have from *Ould’s* Midwifery, altho’ you have altered his System, but I think not in the least for the better.

In my Essay (*r*) I have sufficiently confuted what *Ould* has laid down, and have proved, from the best Authorities, that whenever the Head presented, with the Chin to either Side of the Pelvis, the Birth was difficult and dangerous. I likewise shew’d, (*s*) ‘ That ‘ in the natural Posture of the Fœtus in Utero’ (which I accounted for, (*t*) ‘ the Chin of the Child lies on ‘ the Breast,’ which you allow to be right, (*u*); I therefore said, ‘ That *Ould*, in order to support his ‘ Opinion, should have shewn, from the Structure and ‘ Mechanism of the Parts, some probable Method of ‘ changing the original Posture of the Chin, on the ‘ Breast, and turning it on one Side, to the Shoulder. ‘ It cannot be the Womb, for that, in its quiet State, ‘ presses equally on all Sides of the Child’s Head, ‘ especially while the Waters are in the Bag; and when ‘ it begins to act, the first and greatest Effects for the

(*q*) P. 87. 221. (*r*) P. 50. P. 120. (*s*) *ib.* P. 122. (*t*) P. 39. (*u*) P. 175.

‘ Expulsion of the Child, are at the Bottom of the
 ‘ Womb, which presses directly on the Back Part of
 ‘ the Head, and turns it immediately downwards,
 ‘ with its Face towards the Mother’s Back. Hence
 ‘ we see, that this Change of the Posture of the Chin
 ‘ cannot happen in the Child’s rotatory Motion in the
 ‘ Womb; and every Pain afterwards prevents the
 ‘ Child from turning it, as it presses the Chin more
 ‘ forcibly against the Breast.’

But as you could not answer this Argument, you have endeavoured to prove, that the Situation of the Child in the Womb is not, as I, from the best Authorities, have shewn; and, ‘ That the Fœtus in Utero
 ‘ has one of its Sides always turned to the Mother’s
 ‘ Back, and the other to the Fore-part of the Womb;’ which you attempt to prove in the following Manner (w). First, you say, ‘ That the Fœtus in Utero
 ‘ being contracted into an oval Form, the greatest
 ‘ Length is from Head to Breech; but the Distance
 ‘ from one Side to the other is much less than that
 ‘ from the Fore-part to the Back-part, because the
 ‘ Thighs and Legs are doubled along the Belly and
 ‘ Stomach, and the Head bended forwards on the
 ‘ Breast.’

Secondly, ‘ The Uterus being confined by the Vertebrae of the Loins, the Distance from the Back to the Fore-part of it must be less than from Side to Side; so that in all Probability one Side of the Fœtus is turned towards the Back, and the other to the Fore-part of the Womb; but as the Back-part of the Uterus forms a little longish Cavity on each Side of the Vertebrae, the Fore-parts of the Fœtus may therefore, for the most Part, tilt more backwards than forewards.’

The first Part of the Argument I shall, for the present, allow you, but the latter is not true in Fact

(w) P. 176.

(as I believe will be made appear) and then it will over-turn your Hypothesis, or System; and this I shall, in part, attempt to do from your own Words.

You tell us (x), 'The Inside of the Basin (Pelvis) is bent downwards into a Concave behind, and descends in a streight Line before, while the Vertebrae of the Loins turn backwards, making an obtuse Angle with the Sacrum.' You also say (y), 'An imaginary Line taking its Rise in the ninth Month of Pregnancy, from the middle Space between the Navel and Scrobiculus Cordis, will pass through the same Point in the Pelvis.'

By this Fabric we find there is a far greater Space betwixt the Vertebrae of the Back and the Fore-part of the Abdomen, (which will yield to a compressing Body) than between one Side and the other; for they being confined by the Part of the Ribs, cannot give way so easily as the abdominal Muscles will do. By this oblique Inclination, upwards and backwards, of the Vertebrae of the Loins and Back (z), the Child, (as I from the best Writers have shewn) seems, as it were, to sit with its Breech upon the Projection of the lower Parts of the Vertebrae of the Loins (a); or, in other Words, the Womb rests, in Part, against that Place, (which otherways must wholly be supported by the Brim of the Pelvis) while the upper End of the Uterus goes to the Midway betwixt the Scrobiculus Cordis and Navel; by which Means, as the Womb inclines forwards and upwards, and the Vertebrae go backwards and upwards also, there is a considerable Space left for the Stomach to occupy: And as the Vertebrae project into the Cavity of the Abdomen, they make a large Cavity on each Side for the Kidneys, Spleen, and In-

(x) P. 81. (y) P. 77. (z) See my Essay, Table II. fig. 1.
(a) Paræus says, cap. 13. *Dissectis gravidarum mulierum cadaveribus, tenellos adhuc Fœtus, quales quadrini sunt, animadverti, figurâ orbiculari sitos, capite in genua reclinato, geminis manibus sub genibus, calcibus verò ad nates junctis.*

testines, wherein they lie safe from the Compressure of the Womb, which is chiefly supported by the Spine of the Back, and by the Brim of the Pelvis. Hence it is evident, that, in the last Months of Pregnancy, the Liver and Viscera of the Abdomen cannot be forced up into the Thorax, as you have asserted (b); as you might have been convinced of, if you ever saw a Woman opened, who died near her full Time undelivered, and had made proper Remarks thereon. The Ascent of the Uterus and Stomach alone is sufficient to occasion the Dyspnæa, which some are afflicted with in the latter Stages of Pregnancy. But to return.—As the Fore-part of the Abdomen always projects most in Pregnancy, and as the upper Part of the Sides thereof cannot yield (the Contents being confined by the Ribs) the greatest Diameter is from the fore to the Hind-part of the Woman; and the least Diameter is from Side to Side; and therefore the less Diameter of the Child will be more proper to answer the less Diameter of the Mother's Abdomen, as you said above, and consequently its Back should be to the Mother's Back, otherways the Head would press against the Woman's short Ribs in the last Month of Pregnancy; whereas if both the Child and Uterus be placed right, the Head is to be felt betwixt the Navel and Scrobiculus Cordis; and sometimes I have known it reach the Scrobiculus (c). But lest this Argument should not answer your End, you attempt to bring another, which, in my Opinion, is no better founded than the former. You tell us, (d), 'That it is the Child that turns itself;' for you say, 'The Forehead is turned to the Side of the Pelvis, because the Basin at the Brim is widest from Side to Side, and frequently before the Head is pushed in, and fast wedged among the Bones, the Child (after a Pain) is felt to move and turn it to that Side or Situation in which it is least pressed and hurt, if it was not presenting in that Position before.'

(b) P. 149.

(c) P. 320.

(d) P. 221.

You here take it for granted, that the Child (after a Pain) *is felt to move, and turn itself.* But I believe you will find no judicious Writer or Practitioner that will allow you this Position. When the Child's Head turns from the Fundus towards the Os Uteri, at the very Beginning of Labour, the Mother may indeed be sensible of the Motion, as she may be to that of its Feet and Hands, after it is turned ; but that she should perceive the little Quarter Rotatory Turning of the Chin from its Breast to the Shoulder, will scarce be allowed you, especially while the Waters are in the Bag, and the Mother is in Pain: and when the Head is pressed against the Top of the Pelvis, even before it be fast wedged, the Child has not Strength to move its Head ; and when the compressing Force is abated, I believe no Person will imagine the Child can have Foresight and Sagacity enough to know, which Position will injure it the least, during the next Pain : And I may add, that it is also necessary for it to know when the next Pain will begin, or else it must always hold its Face to one Side, to be in readiness. And if the Child was to move its Body as well as its Head, the Shoulders would be fixed on the Top of the Sacrum and Pubis, how then must it turn itself afterwards, for in that Position it cannot be delivered? Moreover, this Paragraph contradicts what you told us before (e), where you said *it frequently happens that the Woman never feels the Child stir during the whole Time of Labour ;* so that the Reader, from your own Words, will find, ' That the Child is ' *frequently felt to move, and turn the Head, and frequently the Mother never feels it to move at all.*' Whence you see, that your Instructions are not so *clear* and *perspicuous*, neither is your Book so void of *vain Hypotheses*, as the Review Writertells us, *Number III.*

You say (f), ' That the Head of the Child must ' always be downwards, because in the 4th, 5th, 6th, ' and 7th Months, the Head for the most Part presents.' This it will always do in a regular Way after

Labour-Pains, have begun, if the Waters do not come away too soon, as I have sufficiently explained before. But where Women have died without having had Labour Pains in different Stages of Pregnancy, the Child's Head has *always* been found at the Fundus Uteri, as *Paræus* observed before.

You then alledge, ' That by the Touch in the Vagina, the Head is frequently felt in the seventh Month, sometimes in the sixth, but more frequently in the eighth Month, &c. if the same Women are examined from Time to Time, till the Labour begins, the Head will always be felt of a round Substance, at the Fore-part of the Brim of the Pelvis, betwixt the Os Internum and Pubis, through the Substance of the Vagina and Uterus.'

In one Place (*g*) you told us, ' That the Neck of an unimpregnated Uterus is one Inch and three Quarters in Length.' In another Part (*b*) you say, ' That at the fifth Month of Pregnancy, about half of the Neck is extended ;' so that, according to your Calculation, it may then be about seven-eighths of an Inch thick ; and by the same Rule, at the Time you say ' the Child's Head is distinctly to be felt,' the Neck of the Womb is at least half an Inch thick. As this is the Case, how is it possible that you can tell the Head of the Child from its Breech or Knees, through such a thick Substance, especially while the Bag is extended by the Waters? And it is an Observation of the best Operators, that even when the Os Uteri begins to dilate, the Knees greatly resemble the Head, and are not easily distinguishable from it, till the Orifice be more dilated, especially while the Waters are in the Amnios.

A little above you said (*i*), ' That the Uterus forms a little longish Cavity on each Side of the Vertebrae,' and yet in other Places (*k*) you tell us, ' The Womb is distended in a globular Form.' How then can it

(*g*) P. 95. (*b*) P. 117, 118. (*i*) P. 176. (*k*) P. 114, 118,
132.

both be *globular* and have *longish* Cavities on each Side the Vertebrae? Which, according to you, would rather hinder it from being globular. Besides, as the Diameter from the Os Uteri in the Pelvis, to the Fundus Uteri (half way betwixt the Navel and Scrobiculus Cordis) is longer than any other, it is rather oval than globular, occasioned by the Compressure of the abdominal Muscles, and short Ribs, the Resistance upwards being the least, and the Fundus Uteri being at the same time more easily extended than that Part nearer the Projection of the Sacrum. The Womb may indeed be said to be more globular before it rises so high as to be compressed by any Part, as far as the Rigidity and Thickness of the Neck of the Womb will permit; but after it meets with any Resistance, the Form must be altered according to the Shape of the resisting Body, which it can the better do without injuring the Fœtus, as the Bag contains so much Water. Moreover, you tell us (*l*), ‘ That a Hog’s Bladder ‘ being introduced at this Opening (of the Bag) and ‘ inflated when laying in Water, will shew the Shape ‘ and Size of the inner Surface of the Womb.’

If you mean that a Hog’s Bladder thus inflated, will shew the ‘ natural Shape and Size of the inner Surface ‘ of the Womb,’ then you have brought a strong Argument against your own Assertion, when you say, ‘ The Uterus is globular; for an inflated Bladder is always more oval than globular, and consequently must represent the Bag in the same Shape, whether it was globular or oval, while extended in the Uterus. Besides, supposing the Womb in the above-mentioned State, to be globular, you will find then it more difficult to account for *the Side of the Child being always turned to the Mother’s Back*; for the Reason you produce to support your vain Hypothesis will not here hold good, because the Child being in a globular Vessel, filled up with the Waters, whether *the Distance from one of its*

Sides to the other, be more or less than from its fore to the Back-part, the Pressure must be equal, and consequently that cannot turn the Child's Side to the Mother's Back, as you pretend to shew.

You say (m), at the Approach of Labour ‘ the whole Substance of the Uterus is stretched, the Neck and Os Internum, which were at first the strongest, become the weakest Parts of the Womb, and the stretching Force being still continued by the Increase of the Foetus and Secundines, which are extended by the inclosed Waters in a globular Form, the Os Uteri begins gradually to give way.’ But you have not assigned any Reason why it gives way. May it not be owing to the Uterus (with what is within it) and the Viscera filling up all the Cavity of the Abdomen, while the Contents of the Uterus grew more bulky? For as all the other Parts of the Uterus at that Time meet with resisting Powers, the Force from within is chiefly pressed against the Os Uteri, which, as it has no external Body pressing against it, to enable it to resist the Force from within, must dilate, and grow thinner?

You likewise in the same Place add, ‘ That in the Beginning of its (the Os Uteri) Dilatation, the nervous Fibres in this Place being more sensible than any other Part of the Uterus (*which by the bye, is begging the Question*) are irritated, and yield an uneasy Sensation; to alleviate which the Woman squeezes her Uterus, by contracting the abdominal Muscles.’ Here you hint, that the Woman does this to alleviate the Pain; but in the next Page you say, ‘ That the Pain is increased by it;’ so that the Pain makes the Woman squeeze, and ‘ the squeezing increases the Pain, for which Reason the Woman is unable to continue this Effort as it occasions so violent Pain, and then there is a Remission; which Remission of Pain the Patient enjoys for some Time,

‘ until the same increasing Force renews the stretching
 ‘ Pains.’ Pray what occasions this Remission? This is
 another Specimen of your *Perspicuity* and *Clearness*, so
 much applauded by the *Review* Writer.

After having attempted to prove the Child turns its
 Chin on one Side of the Pelvis, while its Head is at or
 within the Brim, but yet within the Os Uteri; to carry
 on your chimerical Hypothesis, you are also obliged to
 attempt to shew how the Chin is replaced after the
 Head is within the Pelvis, and below the Brim; and
 this you attempt in the following Manner.

You say, (*n*), ‘ The Head (of the Child) being
 ‘ squeezed along, the Vertex descends to the lower
 ‘ Part of the Ischium, where the Pelvis becoming
 ‘ narrow at the Side, the wide Part of the Head can
 ‘ proceed no farther in the same Line of Direction;
 ‘ but the Ischium being much lower than the Pubis,
 ‘ the Hind Head is forced in below this last Bone,
 ‘ where there is the least Resistance.’

In another Place you told us, (*o*) ‘ That the upper
 ‘ Part of the Os Externum is situated immediately be-
 ‘ low the Os Pubis, the lower Edge of the Frænum
 ‘ or Forchette, which being joined to the lower End
 ‘ of the Coccyx, is near upon a level with it’ (sup-
 ‘ posing the Woman to be sitting erect); but the Coe-
 ‘ cyx is not so low down as the *lower Part* of the Is-
 ‘ chium; for this last supports the whole Body when
 sitting, and therefore *Deventer* called those Bones *Offa*
Sedentaria. And, as I observed before, the Top or
 Brim of the Pelvis, from the upper Part of the Sacrum
 inclines downwards and forwards till it comes to that
 Part of the Pubis over each Foramen Magnum; as
 is evident to any Person, who will examine a Skeleton,
 when erect, and look at the Pelvis, with his Eye upon
 the same Level, for then he will only see the End of
 the Coccyx, under the Union of the Os Pubis; but
 look at it Sideways, upon the same Level, and he will

see that the Coccyx is higher up than the lower Part of the Os Ischium; therefore the Head of the Child will reach the Coccyx before it can reach the *lower Part of the Ischium*; neither is there so great a Difference betwixt the lower Edge of the Os Pubis and the lower Part of the Ischium, as you seem to insinuate. You say (p) ' That as the Ischium is much lower than ' the Pubis, the Depth of (the first being four and the ' latter two Inches, (q) the Hind-head is forced below ' this last Bone, where there is least Resistance. The ' Fore-head then turns into the Hollow at the lower ' End of the Sacrum, and now again the narrow Part ' of the Head is turned to the narrow Part of the ' Pelvis.'

You likewise told us a little above (r) ' that the ' Width of the lower Part of the Pelvis is naturally the ' same in both Dimensions, until the Coccyx be pressed an Inch backwards and outwards by the Child's ' Head.' Therefore, how can you say, ' that now ' again the narrow Part of the Head is turned to the ' narrow Part of the Pelvis.' When at the same Time you allow the Dimensions are the same every Way, untill the Forehead of the Child enlarges one Diameter, by pressing out the Coccyx; long before which Time the Head must be turned, and the Vertex (according to your Account) must be got out of the Pudendum, as it projects the first.

In my humble Opinion, I think the turning of the Chin to one Side of the Brim of the Pelvis (when either the Passage is so strait, or the Child's Head so large, as not to pass easily) and the replacing it when within the Cavity, may be more rationally and mechanically accounted for in the following Manner.

Whoever will consider that the upper Part of the Sacrum is convex inwards, and projects nearer to the Pubis than that Part of it which is betwixt the Projection and the Ilium on each Side, and that the Fore-

(p) P. 87, 222. (q) P. 79. (r) P. 78.

head is somewhat round or circular; and at the same Time will remember when a Child presents regularly for the Birth, That the Apex and Back of its Head is towards the Pubis, and the Fore-head towards the Sacrum (its Chin being fixt on its Breast) and he will soon perceive that the Fore head and Top of the Sacrum will be in contact only in one Point like two Balls. If, therefore, the Head be not too large, nor the Pelvis too strait, the Fore-head will easily slip into the Pelvis in that Position. But should either of those vary, then the Apex, or rather Back of the Head, will be strongly pressed against the Pubis, and the projecting Part of the Sacrum will compress the round Part of the Fore-head; in which Case, let the Person also consider, that the pushing Force is apply'd immediately to that Part of the Head where the first Vertebra of the Neck joins it, and that the Center of Motion is there, and he will soon be convinced, what a very small Obliquity will make the round Part of the Fore-head slip from off the projected Convex Part of the Sacrum into one of its concave Sides (where there is no Resistance) especially if he considers the great Difficulty that is required to keep two round Bodies in the same Point of contact, when the Force is apply'd in the Manner as above, while there is no Resistance on each Side. This any Person may soon be satisfied of, if he will apply the Head of the Child that is large, to a strait Pelvis, and let the propelling Force be in the same Manner apply'd as while the Child is in the Womb. I must farther add, that that Part of the Child's Head which is compressed, either by the Pubis or Sacrum, will yield more considerably than the Back or under Part of the Head, and is more firm and hard, to which the propelling Force is applied. Thus, you see, here is no Occasion either to misplace the Child, or to allow it any Sagacity to account for this Alteration, since the Mechanical Laws of Motion, &c. are sufficient for the Purpose.

No more difficult is it, I think, to account for replacing the Chin, after having been thus forcibly turned to one Side, and kept in that State, till it has passed into a wider Part of the Cavity of the Pelvis, where there is Room sufficient (before the Head advances yet a little farther) for the Antagonist Muscles of the Neck to act and bring the Head into that Position which is least painful to the Child.

You have told us (s) * That there is one Objection
 * against the Foetus in utero receiving its Nourishment
 * by Absorption, which has never been fully answered,
 * namely, that if the Placenta adheres to the lower
 * Part of the Uterus, when the Os Internum begins
 * to be dilated, a Flooding immediately ensues, and
 * the same Symptom happens upon a partial or total Separation of the Placenta from any other Part of the
 * Womb, whereas no such Consequence follows a Separation of the Chorion.' You likewise, in another Place, (t) suppose ' The Chorion adheres to the inner
 * Surface of the Womb.'

If it be granted what I thought I had proved at large, (u) and this Objection does not in the least invalidate that Proof, viz. that the Communication betwixt the Mother and Child is carried on only thro' the Placenta and umbilical Vessels, then a Separation of any Part of the Placenta from the Womb is always attended with a Flooding; but no such Thing happens from what you call a Separation of the Chorion, which is only in contact with, but has no Adhesion *to, the Womb, being separated* by the Mucus, which Nature secretes for that Purpose; for did *it* adhere, as the Neck of the Uterus extends (which is not compleated in a natural Way till the last Month) the *Bag*, I say, if it adhered, would be torn, and the Waters would gush out; and likewise in Time of Labour, whenever any of the Membranes (while the Waters were contained therein) *were* propelled to the Os Externum,

(s) P. 139. (t) 209. (u) From P. 24 to 31 inclusive.

there *would* be an Hemorrhage, which, thence, alone, never attends it, unless the Placenta be separated in Part or wholly.

In one Place you told us (w) ‘ That at the fifth
‘ Month the Fundus Uteri rises to the Middle Space
‘ betwixt the upper Part of the Pubis and Navel.’
But in another Place, you say (x) ‘ That towards the
‘ Beginning of the fifth Month, the Uterus fills all
‘ the upper Part of the Pelvis, and then it *begins* to rise
‘ upwards into the Abdomen.’ Are these Instructions
so very clear and perspicuous?

You then proceed, and inform us, (y) that when
‘ The Uterus presses against all the Parts of the Pelvis,
‘ the Pressure sometimes produces an Obstruction of
‘ Urine, and Difficulty of going to Stool, which will
‘ be attended with a Degree of Inflammation in the Sub-
‘ stance of the Uterus, the Vagina, Mouth of the
‘ Bladder, and Rectum, from whence violent Pains
‘ and a Fever will ensue. In order to remove or alle-
‘ viate these Symptoms, Recourse must be had to
‘ Bleeding and Glysters, the Urine must be drawn off
‘ by the Catheter, Fomentations and warm Baths must
‘ be used, and this Method must be occasionally re-
‘ peated until the Complaints abate, and they com-
‘ monly vanish in consequence of the Womb’s rising
‘ higher, so as to be supported on the Brim of the
‘ Pelvis.’

As the Symptoms, you say, ‘ commonly vanish
‘ in consequence of the Womb’s rising higher above
‘ the Brim of the Pelvis,’ or, in other Words, when
the Compressure (which was the Cause) is removed,
certainly the Uterus should be raised up, as I directed
in a like Case; (z) for otherwise, as long as the Cause
not only remains, but rather increases, the Effect will
keep the same Proportion: And, therefore, altho’
Bleeding, Glysters, and drawing off the Urine may give
a Momentary Relief, they cannot perform the Cure;

(w) P. 118. (x) P. 143. (y) P. 145. (z) P. 156.

but as for *Fomentations and Warm Baths*, they are so far from being proper, that they are by all Means to be avoided, as they may occasion Abortions, by promoting an Impulse of Humours towards the Womb; wherefore they are often prescribed to promote the Discharge of the Menses, and consequently must be dangerous to a pregnant State, especially at a Time when so great a Compression of the Womb threatens an Abortion, as, in the Case abovementioned, it must do.

You tell us (a) ‘ That all the Complaints above described, namely œdematous and inflammatory Swellings of the Legs, Thighs, and Labia Pudendi, Pains in the Back, Loins, and Belly, with Dyspnœa and Vomiting are removed or palliated by the following Method. The Patient (if she can bear such Evacuations) is generally relieved by Bleeding at the Arm or Ankle, to the Amount of 8 or 10 Ounces.’

I must here observe, that inflammatory and œdematous Tumours do not proceed from an Obstruction of the same kind of Vessels, the first being caused by a Compressure or Obstruction of the Blood Vessels; the last by the Obstruction of the Lymphatics, some of which terminate in a large Gland, situated in the Bifurcation or Division of the Iliac Vessels, as *Astruc* (b) takes Notice of. How far Bleeding may be of Service in this Case, I cannot conceive; because to me it appears, that neither the Symptoms can be abated, nor the Cause be removed thereby; for if the Person be bled in the Arm, it may lessen the Quantity of the Mass of Blood in general, but it cannot ‘ relieve the lower Parts, because the œdematous Swellings there (you acknowledge) are occasioned by the Weight of, or rather upon, the Iliac external Veins,’ which is not in the least removed hereby; and while the Cause remains, the Effect will, *cæteris paribus*, remain the same. And bleeding in the Ankle (if it can be done) will endanger an Abortion, as well as a Mortification

(a) P. 149. (b) Of the Diseases of Women, Cap. 1. P. 12.

in the Part opened: But when the Swelling is considerable, how will the Surgeon find the Vein? especially as you tell us in the next Page, ‘ when it (the œdematous Swelling) extends in a great Degree up to the Thighs, Labia Pudenda, and lower Part of the Belly, in a Woman of a full Habit of Body, Venæsection is necessary, because the œdematous Swelling proceeds from a Compression of the returning Veins, and not from a Laxity, as in the Anasarca, and lencophlegmatic Constitutions.’

From what I shewed just above, it is evident, you confound these Things; for these two sorts of Tumours proceed from very different Causes, and the Laxity, in these Cases, is rather the Effect than the Cause of an Anasarca or Lencophlegmatic Constitutions; yet, I perceive, you prescribe the same Method as in those Complaints, viz. *puncturing (c) the Parts occasionally*, in which Case, nothing but a clear Lymph will come out, just the same as in an Anasarca.

In one Place, you say, (d) ‘ When a pregnant Woman is afflicted with Gravel in the Kidneys, you prescribe an Emplastrum Roborans to the Back;’ and, ‘ and when Pains are in the Loins and Belly, extending to the short Ribs, occasioned by the stretching of the Uterus, you order Emollient Unguents to be rubbed on the Parts.’ What Relief the Patient is to expect from these Things, you cannot easily make appear; for a Plaister can no more remove a Gravel in the first Case, than emollient Unguents can remove Pains in the Loins and Belly, since their Effects go little farther than the Skin, and therefore the Muscles can’t reap any Benefit therefrom.

You tell us, (e) ‘ The Child being dead, and the Circulating Secundines consequently being destroyed, the Uterus is no longer stretched.’ But I must observe, that as long as the Contents of the Womb remain within,

(c) P. 151. (d) P. 153. (e) P. 166.

it must continue to be stretched, whether the Child be living or dead.

You say, (f) ‘ A Flooding during Pregnancy will
‘ be more or less, as there is more or less of the Pla-
‘ centa separated from the Womb, and when this hap-
‘ pens in a very small Degree, the Discharge may,
‘ by right Management, be sometimes stopped, and
‘ every Thing will proceed to full Time.’

Whoever knows the true Fabric of the Womb, and of the Placenta, will be convinced, that whenever the Placenta, either wholly or partly, is separated from the Womb, that it never adheres again to it. That pregnant Women sometimes have a Discharge of Blood, which may be stopped, and both Mother and Child do well, is a known Fact; but then it does not appear that this Blood comes from that Part of the Womb, whence you suppose the Placenta to be separated; nay, it is evident it comes from other Parts, which is accounted for in my *Essay* (g), where I have given general Rules, whereby to know what Discharge of Blood, during Pregnancy, is dangerous, and what is not so; by which the Readers may know what Method to take accordingly, without injuring either the Woman or Child.

You tell us, (b) ‘ When the Head (of the Child in
‘ the Birth) is drawn (by the Navel-string, or by the
‘ Shoulders sticking) and the Delivery hath been re-
‘ tarded during several Pains, one or two Fingers be-
‘ ing introduced into the Rectum, before the Pains go
‘ off, ought to press upon the Forehead of the Child,
‘ at the Root of the Nose, great Care being taken to
‘ avoid the Eyes: This Pressure detains the Head, till
‘ the Return of another Pain, which will squeeze it
‘ farther down, while the Fingers pushing slowly and
‘ gradually turn the Forehead half round outwards
‘ and half round upwards.’

(f) P. 169. (g) P. 137. P. 284. (b) P. 212.

You have here recommended a Method of Practice that is far from being of any Benefit to either Mother or Child, but may do great Injury to both. For,

First, to introduce the Finger into the Anus, during the Pain, must be no very easy Matter; because then the Child's Head is pushed strongly down, and must thereby straiten the Entrance, by the Turgency of the Hæmorrhoidæ Vessels against which the Head is propelled more during the Pains, than in the Interval.

Secondly, the Pressure of the Finger requisite to confine or turn the Child's Head, must be very great, and consequently endanger the bringing on an Inflammation in the Parts compressed, as well as endanger the bursting of the Blood Vessels, whence a Fistula in Ano might ensue.

Thirdly, if the Fingers are to push the Forehead *half round outwards, and half round upwards*, they must at the same Time twist or force up that Part of the Rectum and Vagina which is betwixt them and the Child's Head, in the same Manner, which is not to be done, but with too much Violence, as is evident to any Person who knows the Structure of the Rectum and Vagina, and the Parts to which they are attached.

Fourthly, the Child may be greatly injured by a Pressure at the Root of the Nose, whose Bones are but slightly attached to those of the Forehead, and will yield to a Pressure, altho' not very great. And when there is the Thickness of the Rectum and Vagina betwixt the Finger and Child, the Operator cannot so easily judge what Part he compresses; and I must add, that the Pressure must be very strong to answer the Purpose; because it is to *hold the Head fast till that Part of the Child that stuck in the Os Uteri be advanced*, or in other Words, till the Uterus recedes upwards, and leaves the Child fixed as far as it had advanced.

Fifthly, the Bulk of the Fingers must take up a considerable Space betwixt the Coccyx and Child's Head, and in such Proportion must injure both Mother and Child; the first by extending and crushing the
the

the Parts more than necessary ; the last by compressing the Child's Head too much.

Before I proceed, It may not be improper in this Place to explain what is meant by Delivery ; when, therefore, the whole Child, or any Part of the Child is out of the Os Externum, and there is never any Occasion to return it again, it is said to be so far delivered.

You tell us, (*i*) that ‘ Over and above these Obstacles, the Head may be *actually delivered*, and the Body contained by the Contraction of the Os Externum round the Neck, even after the Face appears externally.’

I can't avoid taking Notice, that the Os Externum cannot contract round the Neck, but when the Face appears externally. Is not therefore this Observation, *prima facie*, very clear and very ingenious?

I must likewise add, that in every Child, that is proportionably made, the Circumference round the Head is the greatest of any Part, especially as the Scapulæ yield so much to a small Force ; and therefore, there is scarce a Possibility that the Os Externum should contract so as to delay the Birth, because where the Part that is largest has passed, the lesser will follow with very little Force. And should even the propelling Force abate, the Midwife can then very easily make up that Deficiency, by taking hold of, and pulling by the Child's Head ; so that an Accident of this kind is not likely to happen, but in your Imagination.

I must also remark, that it is no small Surprize to me, that you can say, ‘ In this Case it was generally alledged, that the Neck was closely embraced by the Os Internum.’ Had there been any Authors or Accoucheur who had asserted that the Child could be contained by the Contraction of the Os Internum, after the Head was delivered, and could be both seen and felt, you should then, for your own Credit sake, have mentioned them.

You then proceed thus, ‘ but this seldom happens
 ‘ when the Head is delivered, because then the Os In-
 ‘ ternum is kept dilated on the back Part and Sides,
 ‘ by the Breast and Arms of the Foetus, unless it be
 ‘ forced low down with or before the Head.’ But how
 will they prove that the Os Internum can closely con-
 tract round the Neck of the Child, when the Head,
 which you say, is actually delivered, forces the Os In-
 ternum low down, with or before the Head?

You say, (k) ‘ When the Os Uteri and Os Exter-
 ‘ num open with Difficulty, it will sometimes be found
 ‘ necessary to insinuate the Fingers with the Flat of the
 ‘ Hand between the Head and the Os Internum.’

If you mean that the Hand should be introduced, as
 directed when the Head is in the Os Uteri, then your
 Advice ought not to be followed; because, at that
 Time, the Introduction of the Hand between the Head
 and the Os Uteri is not only attended with Difficulty,
 especially during a Pain, but also with Danger; For,
 supposing the Hand to be thus introduced, it will add
 considerably to the Bulk of the Child’s Head, and
 will extend the Os Uteri more than necessary; whence
 a Laceration might happen: and the Hand thus push-
 ed up, must likewise hinder the Child’s Head from
 pressing against the Os Uteri outwards, which is the
 Method Nature takes to dilate it, and consequently is
 therefore the safest, and ought to be imitated as near as
 we can. Add to this that the Hand, being thus intro-
 duced, will exert its whole Force, chiefly on one Side,
 whereas Nature presses equally on all Sides.

You then proceed, ‘ For when this Precaution is
 ‘ not taken in Time, the Os Uteri is frequently pushed
 ‘ before the Head (especially that Part of the Pubis)
 ‘ even thro’ the Os Externum.’

Altho’ you say, ‘ The Os Uteri is *frequently*,
 ‘ pushed thro’ the Os Externum;’ yet I’ll appeal to
 all Practitioners, whether it does not *very rarely* hap-

pen, even in People who are subject to a Descent of the Womb, before they become pregnant. And I must observe, that in all Cases, where the Uterus descends, or is pushed forwards, as you have stated the Case, the Method directed in my Book is preferable to
 ‘ yours, (l) for I advise the Operator to introduce his
 ‘ Fingers into the Vagina, and when a Pain forces the
 ‘ Child down, let him either keep the Os Uteri, there-
 ‘ with, in its Place, or push upwards during every
 ‘ Pain ;’ for by this Method the Head of the Child presses the Os Uteri outwards, and extends it no more than the Bulk of the Head requires.

‘ You direct, (m) that when Labour happens to be
 ‘ lingering, tho’ every Thing be in a right Position,
 ‘ if the Patient be of a Plethoric Habit, with a quick,
 ‘ strong Pulse, the Woman must be blooded.’

But I must observe to you, That Venæsection is so far from increasing, that it will lessen the Pains, as is well known by every common Midwife, and therefore ought never to be put in Practice.

You tell us (n), ‘ If the Placenta comes away with
 ‘ the Child, and it has not breathed, and a Pulsation
 ‘ is felt in the Vessels, some People (*with good Reason*)
 ‘ order the Placenta, and as much as possible of the
 ‘ Navel-string to be thrown into a Basin of warm Wine,
 ‘ or Water, in order to promote the Circulation be-
 ‘ tween them and the Child : Others advise to lay the
 ‘ Placenta on the Child’s Belly, covered with a warm
 ‘ Cloth ; and a third Set orders it to be thrown upon
 ‘ hot Ashes ; but of these the warm Water seems to
 ‘ be the most innocent and effectual Expedient.’

I proved before, (Page 23, 24, 25, 26) that the best Method to preserve the Child to promote the Circulation through the Lungs, is to intercept that between the Child and Placenta ; wherefore the suffering the Umbilical Vessels to remain open, that the Blood

(l) Sect. 46, p. 114. (m) P. 224. (n) P. 226.

can circulate thro' them, while the Placenta lies in the Water, must be wrong.

The laying the Placenta indeed upon the Child's Belly, may be proper enough, as it may stop the Circulation, through the Umbilical Chord: But if the Person you copy from, has took this Hint from *Mercurius*, he then has misunderstood him; for he says (*o*),
 ' Item eandem secundinam cinerique aut calidis pannis
 ' calefacere oportet vel in Pelvim calidum imponere,
 ' donec sufficienter puerulus incalescat; ' so that I humbly conceive the Pelvis Calidus is meant, that of some Person, in order to warm the Child, and not on the Child's own Belly.

You then proceed (*p*), ' Nevertheless, if the Placenta is retained in the Uterus, and no dangerous Flooding ensues, it cannot be in a Place of more equal Warmth, while the Operator endeavours, by the Methods above described, *to bring the Child to Life.*'

You told us (*q*) before, ' That the Funiculus Umbilicalis is about four or five Hand-breadths in Length.' Now if the Placenta still adheres to the Uterus, at least two Hand-breadths (if not three) of the five, will be within the Pudenda, and only three, at the most, will be on the Outside, which will admit of very little Space *to warm, move, shake, and whip the poor Child in* (as you direct) during which Time the poor Woman must be exposed to Cold, &c. &c. when she ought certainly to lie at rest, and be kept warm after she has endured the Toil and Fatigue of perhaps a tedious and difficult Labour.

You direct (*r*), ' That if the Placenta is not immediately delivered by the Pains, and no Flooding obliges you to hasten the Extraction, the Woman may be allowed to rest a little, in order to recover from the Fatigue she has undergone, and the Child to recover.'

(*o*) See *Spachius*, p. 1060. (*p*) P. 227. (*q*) P. 133.
 (*r*) P. 229, 232.

I must here observe, that an Operator may be deceived, and imagine the Patient does not flood, if the Placenta should close up the Os Uteri; and may therefore wait till Faintings, and a feeble intermitting Pulse inform him of the Danger the Woman is in of dying, altho' no Blood appears externally, wherefore such Hazards ought not to be risked.

You then tell us (s), ' That Part of the Uterus to which the Placenta adheres is kept still distended, while all the rest of it is contracted.'

I must remark, That *all the rest of the Womb is not only contracted*, but even to such a Degree, as to embrace the Placenta very closely; whence it is a strong Argument for the Extraction of it immediately after the Birth of the Child; especially as you inform us, in the very next Page, ' That the Os Internum, and lower Parts of the Womb *are not stretched again without great Force*, after they have been contracted for any Length of Time, when so great Force may be required, as may endanger the tearing the Vagina from the Womb.' And I have shewn in my Essay (t), from the best Authorities, as well as from my own Observations, *that the Uterus will so contract in a very short Time*; which proves the absolute Necessity of extracting the Placenta *immediately*, after the Delivery of the Child.

When the Placenta is to be extracted, you direct the Person ' to take hold of the Navel-string with the left Hand, and pull gently from Side to Side, and desire the Woman to assist your Endeavour, by straining, as if she were at Stool, blowing forcibly into her Hand, or provoking herself to reach, by thrusting her Finger into her Throat; as Ould has directed in his Midwifery (u).'

Just above (w) you advised the Reader ' to let the Woman rest a little after the Child is born, in order

(s) P. 236. (t) Sect. 55, p. 131, Sect. 156, p. 132, and Sect. 157, p. 324. (u) P. 57, 58. (w) P. 229, 232.

‘ to recover from the Fatigue she has undergone, before
 ‘ any Attempt be made to extract the Placenta;’ and
 now when you come to extract it, you fatigue the Wo-
 man greatly to no Manner of Purpose: For is it not
 cruel to put a Person upon *straining, blowing, or boak-*
ening, when she has perhaps had too much of all these
 during her Labour? Moreover, by these Means a great-
 er Quantity of Blood must be forced upon the Womb;
 whence the chief Resistance is but just taken off;
 hence violent After-pains, attended with Floodings,
 Inflammations in the Womb, &c. may ensue. And
 add to all this, that these painful Efforts will not an-
 swer the End, if the Placenta adheres to the Womb.
 For then, as every Part of the Uterus contracts, which
 is not extended by the After-birth, as you before told us
 (x), the Womb becomes almost like a Ball; and al-
 tho’ by *coughing*, &c. it may be moved a little; yet
 as the Placenta is closely embraced by the Uterus, they
 move only as one solid Mass; and therefore these
 Means cannot hasten their Separation: Nor yet is the
 Womb so much moved by these Efforts, as you seem
 to insinuate: For as it contracts it descends into the Pel-
 vis again; and as the abdominal Muscles are then like
 a loose Bag, their Parietes (as you call them below)
 being very lax, by the Discharge of the Waters, and
 Birth of the Child, they cannot compress the Uterus
 very much, especially as the more it contracts the more
 it is out of the Influence of the Muscles.

If by these Methods you say (y), ‘ The Placenta
 ‘ cannot be brought away, introduce your Hand
 ‘ slowly into the Vagina, and feel for the Edge of
 ‘ the Cake, which, when you have found, pull it gra-
 ‘ dually along.’

Why was not this Method recommended at first,
 especially as so many Advantages arise from it, and no
 Inconvenience can be occasioned thereby? *Southwell* (z)

(x) P. 236. (y) P. 233. (z) Remarks upon Ould’s Midwifery,
 p. 42.

tells us, ‘ That when the Placenta does not *immediately* follow the Child, then it is *absolutely necessary* to introduce the Hand, and artificially to separate and extract it, which may be done with the greatest Ease to the Patient, and without the inhuman teasing a poor Woman already spent in Labour-pain, by compelling her *to press to go to Stool, and vomit.*’ And in my Essay (a) I have set forth at large the many Advantages that attend such Practice; and have fully answered all the Objections hitherto made against the immediate Introduction of the Hand into the Womb, after the Birth of the Child, and you tell us (in Page 375) when there are Twins, the Operator can *introduce* his Hand *with Ease*, as the Parts are fully opened by the first Delivery; and I must observe, that when there are Twins the Children are generally smaller than at single Births; in which last Case the Parts will be more open, and consequently the Hand might be immediately introduced with still more Ease.

You then say, ‘ If the Funis is attached to the Middle of the Placenta, and the Part presents to the Os Internum, or Externum, the whole Mass will be too bulky to come along in that Position; in this Case you must introduce two Fingers within the Os Externum, and bring that down with its Edge foremost.’

But I must observe, That if the Placenta be extracted immediately after the Birth of a Child at its proper Period for Delivery, it cannot be *too bulky to come along in any Position*; as is evident to every Person who is Master of its Composition, and therefore if it does not pass easily, it is owing to Neglect in not fetching it away before the Womb was too much contracted, and not to its *Bulk or Position*, altho’ the *Funis be attached to its Middle*. In the next Place, if the After-birth adheres in the Manner you inform us, and the *middle Part presents to the Os Internum*, how can the Opera-

(a) Sect. 52, 53, 54.

tor reach it by *only introducing two Fingers within the Os Externum, to bring it down with its Edge foremost,* which I must observe is at that Time nearest the Fundus Uteri.

You tell us (b), ‘ That while the Operator is about
 ‘ to extract the Placenta; and is employed in dilating
 ‘ the Os Internum, and inferior Part of the Uterus,
 ‘ let an Assistant press with both Hands on the Wo-
 ‘ man’s Belly ; or while he pushes with one Hand,
 ‘ press with the other, in order to keep down the Ute-
 ‘ rus, else it will rise up, and roll about like a large
 ‘ Ball, below the lax Parietes of the Abdomen ; so
 ‘ as to hinder you from effecting the necessary Dila-
 ‘ tation.’

In the first Place, this *Compressure on the Woman’s Belly* must be very considerable to keep down the *Uterus* ; and must consequently be very painful to the Woman, at a Time when the abdominal Muscles are so very sore and tender (especially after a tedious or difficult Labour) as scarce to be touched without giving Pain. And in the next Place it will not answer the End proposed ; for after the Hand is introduced, the Placenta ought to be separated by some of the Fingers, while the rest of the Hand is kept in the same Position, which hinders the *Womb* from rolling about. And, thirdly, when the Operator is endeavouring to introduce his Hand thro’ the Os Internum, he pushes gradually and gently upwards ; so that there is no Occasion to make this Pressure to prevent *the Vagina from being tore from the Womb*, as you seem to hint in the preceding Paragraph : For if so great Force be required as to endanger *the tearing the Vagina from the Womb*, there must be as great, if not greater Force, requisite to *keep down the Uterus*, which *n.c.* Woman can bear ; and if she could, what must be the Consequence to the Womb, after being thus compressed ? And I must further observe, that the greater the Pressure is on the Out-

side of the Uterus, the more difficult it will be to dilate it by the Force within, as is evident to every Person who understands the Laws of mechanical Powers, and applies them to these Things.

Hence you see *your Method of Practice in these Things is not so unexceptionable*, as the *Review* Writer informs us, *Number III.*

I am now to consider the various Methods of delivering a Woman of her Child, in all extraordinary Cases; by which I mean, when the Child must be turned to be extracted by the Feet, or be brought away by Instruments.

The principal Intentions in the Practice of Midwifery are, *first*, to deliver the Woman with the greater Ease, Safety, and Expedition; and, *2dly*, to preserve the Life and Limbs of the Infant. And as the Art of delivering a Woman of her Child and Secundines is entirely a mechanical Operation, whether it be done by turning the Child in the Womb, to extract it by the Feet, or by Assistance of Instruments; so the mechanical Laws or Rules are to be our general Guide. ‘ In which View you tell us (*c*), you began ‘ to consider the *Art of Midwifery*, and reduce the ‘ Extraction of the Child to the Rules of moving Bodies in different Directions;’ which your Eccho, the *Review* Writer, *Number III.* has repeated, and mistaken you to be the first Writer on this Subject that has gone upon such Principles.

As in extraordinary Cases the Child must either be turned and extracted by the Feet, or must be brought out by Instruments; I shall now first set forth the Advantages and Dangers that may happen to both Mother and Child in the former Case; whereby the Reader may know when to avoid, and when to use Instruments; and, *2dly*. As there are various Instruments used by us, I shall likewise mention the Advantages and Dangers that attend the Use of each particular In-

(*c*) P. 251, 252, 256.

strument, and the Manner of delivering a Woman therewith ; whence the Reader, at one View, may judge which is to be chosen for the Purpose ; and at the same time by knowing the Form of the Pelvis, the Shape of the Child's Head, and the Make and Manner of using each Instrument, and being Master of the Laws of Mechanics, &c. may easily determine whose Method of Practice has the Preference.

What I offer on my own account I shall give my Reasons for, or quote my Authority ; both which I shall, in part, extract from my own *Essay on Midwifery*, with several Additions thereunto. For whenever a Person takes upon himself to advance any Thing new, or to contradict received Opinions and Prejudices, it is expected he should bring valid Proof for what he advances.

What I mention on your Account shall be in your own Words, as I have hitherto done ; for I think to paint Things in worse Colours than they ought to be, is not candid ; altho' to raise every Objection that can be done is every Man's Duty, and he becomes a Friend to the Public. And I must add, that where absolute Certainty can't be had, the best Reasons are to determine : And when a certain, safe, and easy Method can answer the End proposed ; all other less certain, more tedious and dangerous Ways should be avoided.

Sect. I. The Injury that may be done to the Mother by turning a Child in the Womb, and extracting it by the Feet, is by bursting or tearing the Uterus, when it has been too long a Time, and too much contracted round the Child, occasioned either by too early a Discharge of the Waters, or too small a Quantity of them, while the Breech and Feet are at, or near the Fundus Uteri ; especially if the Child be of a great Length : For in this Case, supposing the Operator could get down a Foot, or both the Child's Feet, it might be very difficult, if practicable, to pull down the Breech, and push up the Head, especially if the Pains should be very strong, because the Body of the Child would
be

be nearly parallel to the Thighs and Feet, and therefore the Head would be jammed stronger against the Brim of the Pelvis, the more the Operator should pull; and if he should be able to turn the Child, the Force so exerted might burst the Womb: In this Situation of Affairs the Head must be brought out first by such Means as hereafter will be explained, An Instance of this Kind happened lately in this City (*York*).

During the whole Time of Pregnancy this Patient was in a very good State of Health; and the Child seemed to lie higher up in the Abdomen than is customary; and the Mother was remarkably big, especially towards the Approach of Labour, which was some Weeks later than was calculated. When Labour came on, and the Waters were discharged, the Female Midwife (a very eminent Woman) finding they could not exceed half a Pint; and also perceiving the Child did not advance after the Discharge, desired a Man Midwife might be sent for; accordingly one of the most eminent in this Place attended; and having brought one Foot with the greatest Difficulty, attempted to fetch the other; but after several fruitless Efforts, either to reach the other Foot, or to turn the Child, the Head being fast jammed against the Brim of the Pelvis, I was then called in; and finding the Child dead, with a very large Head; and the Mother's Pelvis not being of a due Proportion, I opened the Cranium with my Extractor, and delivered the Patient, who recovered very well, altho' the Child was about twenty-six Inches long, and was very broad over the Shoulders; the Circumference of the Child's Thorax alone being fifteen Inches.

The second Injury that the Mother may receive when the Child is turned; is by crushing the Parts that are betwixt the Child's Head (if too big) and the Bones of the Pelvis, whence Inflammations may ensue; and you acknowledge (*d*), ' That the Fibres and

‘ Vessels of the soft Parts in the Pelvis are bruised by
 ‘ the Child’s Head, and the Circulation of the Fluids
 ‘ obstructed ; so that a violent Inflammation, and
 ‘ sometimes a sudden Mortification ensues.’ And I
 must observe, that whatever adds to the Bulk of the
 Head, must crush the Parts yet more ; and it is evi-
 dent, that if the Child be dead, the Head should be
 lessened, for the Sake of the Mother, as hereafter will
 be shewn ; and in some unhappy Cases the same Ope-
 ration must be performed, altho’ the Child be living.

Thirdly, The Mother may suffer when the Head of
 the Child is so large, that it must be separated from the
 Body, and remain in the Uterus ; but this Danger is
 not so great as was formerly imagined, as I shall more
 fully make appear below.

Sect. 2. The Injuries that may happen to a Child by
 turning it, may arise from breaking its Limbs,—from
 compressing the Head too much, and from a Disloca-
 tion or Separation of the Vertebrae of the Neck.

The first rarely happens when a skilful Operator is
 employed, if the Mother lies quietly ; and provided
 it should, the Bones will soon unite again, when pro-
 perly fixed.

Secondly, That too great a Compressure upon the
 Child’s Head will occasion Convulsions, and even
 Death, is what every Person knows to be Fact ; and
 you acknowledge, (e), ‘ That when the Shape of the
 ‘ Head is præternaturally lengthened, the Brain is fre-
 ‘ quently so much compressed, that violent Convul-
 ‘ sions ensue before, or soon after the Delivery, to the
 ‘ Danger, and oft-times the Destruction of the Child.’
 In another Place you say (f), ‘ when we leave the
 ‘ Delivery to Nature, perhaps by strong Pressure upon
 ‘ the Head and Brain, the Child is dead when deliver-
 ‘ ed, and the Woman is so exhausted with tedious La-
 ‘ bour, that her Life is in imminent Danger.’ Again,
 you say, (g), ‘ Either the Child died soon after the

(e) P. 227. (f) P. 245. (g) P. 247.

‘ Delivery, or recovered with great Difficulty from the
 ‘ long and severe Compression of the Head, while the
 ‘ Life of the Mother was endangered from the same
 ‘ Cause as above described.’ Afterwards you tell us
 (b), ‘ If the Child descends slowly, or after it is low
 ‘ down, sticks for a considerable Time, the long Pres-
 ‘ sure on the Brain *frequently* destroys the Child, if not
 ‘ relieved in Time, by turning or extracting with the
 ‘ Forceps.’ And, *lastly*, (i), ‘ When the Face of
 ‘ the Child is come down, and sticks at the Os Exter-
 ‘ num, if not speedily delivered, the Child is *frequent-*
 ‘ *ly* lost by the Compression of the Brain.’ Whence
 it is very evident, that whatever Method of Delivery
 either increases the Compressure, or prolongs the Time
 of it, must be the most prejudicial, and therefore
 ought to be avoided, if possible. Wherefore the Me-
 thod, as you tell us, of either ‘ *placing the Head in its*
 ‘ *proper Situation, and waiting for the Mother’s Ef-*
 ‘ *forts to perform the Work, when the Head is too large,*
 ‘ *or the Pelvis too narrow;* as you recommend in one
 ‘ Place (k), or, of leaving the Head for some Time
 ‘ to slide gradually down into the Pelvis, when it is *too*
 ‘ *large* to be extracted with the Fillet or Forceps, (l),’
 must, I think, be very wrong: But the Head cannot
 be so long compressed, when the Child is turned,
 and extracted by the Feet; as when *left to Nature, af-*
ter placing the Head in its proper Situation for Birth; or
of leaving the Head to slide down into the Pelvis, when it
is too large to be extracted with the Fillet or Forceps;
 which proves that turning the Child must *always*, *cæte-*
ris paribus, be preferable, because then the Head can-
 not be so long compressed; and the Injury to the Mo-
 ther is at the same time less, as appears from Sect. I.

That this may be better understood, it is necessary
 to enquire into the State or Condition of a Child’s
 Head at the Time of its Birth; what Parts yield most,
 and on which Part the Compressure will do the greatest
 Injury.

(b) P. 279. (i) P. 281. (k) P. 280. (l) P. 255.

In my Essay on Midwifery (*m*) I mentioned, that the lax and pliable Texture of the Parts of the Child's Head, at Birth, greatly contributed to an easy Delivery, because the Bones of the Cranium have little or no Sutures at that Time, but are so thin and soft at the Edges, that they may slip over each other, to lessen the Diameter of the Head in its Passage into and through the Pelvis, to which the Opening at the Fontanel greatly contributes.' Hence the Head will be in various Shapes or Forms when the Part that presents comes as in a natural easy Labour, when in a tedious or difficult Labour — when it is squeez'd by the Forceps, and when the Child is turned and extracted by the Feet.

You tell us (*n*), ' When the Head is squeezed along with great Force, we find it pressed into a very oblong Form, the longest Axis of which extends from the Face to the Vertex. Sometimes indeed this lengthening is found at a little Distance from the Vertex, backward or forward, or on each Side, and sometimes (tho' very seldom) the Fontanel or Forehead presents; in which Case they protuberate, while the Vertex is pressed, and remains quite flat.' All these Things shew that the Head is, at this Time, capable of being moulded and pressed into different Shapes. And whoever understands the true Fabric of the Cranium, will find the Os Frontis, and each Os Bregmatis will yield more than the other Bones. For Nature has made the Occiput the strongest Parts, and consequently it yields the least, by which Contrivance the Cerebellum is guarded from being too much compressed, or otherwise Convulsions or immediate Death, must ensue. Hence we see that Providence has so formed the Bones of the Head, that each should give way a little, the better thereby to conform itself to the particular Shape of the Pelvis; and has also made those Bones to yield most, where the Contents of the

Head can be compressed with the greatest Safety, and those Parts which cannot bear any Compressure without Injury are the strongest defended, as the Occiput yields the least, if at all, and guards the Cerebellum. Hence we find that the Danger to the Child increases, as the Cerebellum is the more compressed; whence it is incumbent upon me, the more fully to explain the the Effects of each Operation as is abovementioned.

When, therefore, the Child's Head is so large as not to enter the Pelvis without the greatest Difficulty (whether the Apex presents regularly with the Child's Face towards the Sacrum, or to one Side of the Pelvis) let the Force of the Mother's Effort, that propells the Child, be ever so strong or weak, the Cerebellum will, in such Proportion, become pressed; because Action and Re-action are, in this Case, equal; whence it follows, that the more the Head is squeezed, or resisted by the Bones of the Pelvis, the more the Brain is forced towards the Cerebellum, and consequently, the Mischiefs abovementioned will ensue. Hence it is evident, that the more Liberty there is for the Brain to be squeezed from (instead of towards) the Cerebellum, the less this Danger is. This is the State, when the Head presents, but is too large, or the Pelvis is too strait for the Mother's Efforts alone to accomplish the Birth of the Child.

If therefore, the Head be so much compressed, when the Brim of the Pelvis is so strait, or the Child's Head so large, it must be yet more compressed when the Forceps is used; because, as you direct, the manner of using them in several cases, (o) while the Head is above the Pelvis, the Bulk of the Forceps is between the straitest Part of that Passage and the Child's Head, by which both these Parts are more squeezed, particularly the Child's Head, and as the Forceps chiefly press upon the Back Part of each Os Bregmatis, they must add considerably to the Compressure

(o) From P. 270 to 291 inclusive,

against the Cerebellum, which, I observed, was already too great, and as the Surface of the Forceps is narrower than that of the Bones of the Pelvis, and at the same Time a greater Force is applied, the Injury to the Child will also be increased in the same Proportion. But all these Inconveniences are in a great Measure avoided, by turning and extracting the Child by the Feet; because, in that Case, the Child's Head is only compressed by the Bones of the Pelvis, and that too in such a Manner, as to do the least Injury to the Cerebellum, for the Pressure then is from the lower Part of the Head, next to the Neck, towards the Os Bregmatis and Os Frontis, both which will yield and give Way; so that when the Head is squeezed on the Sides, the Cerebrum is pressed towards these Parts, and consequently does less Injury to the Cerebellum than when the Apex comes first; because in the last Case, those Bones are hindered in some Measure from yielding by the Counterpressure of the Brim of the Pelvis, whence some Heads will pass whole, when the Child is extracted by the Feet, that would require to be opened if the Apex presented; or however will pass with more Ease and Safety on all Accounts. And Providence seems to have intended this Method should be taken, whenever great Force was to be used, by making the Bones of the lower Part of the Cranium so strong as to defend the Cerebellum from Injuries, and as the back Part of the Head is largest in most Children, I have frequently, in this Case, thrust the Child's Chin upwards, by which the greatest Width of the Skull is thrust into the widest Part of the Pelvis, betwixt the convex Part of the Sacrum and Ilium, whereas, by the Method of pulling out the Chin, as you sometimes direct, the broadest Part of the Head will be rather brought into, than got out of the narrowest Part of the Pelvis.

The next Injury to the Child that may attend the turning and extracting it by the Feet, is a Dislocation or Separation of the Vertebrae of its Neck: But this

is a Case that can rarely happen to a skilful Operator, except when the Child's Head is so large that it cannot pass whole into the Pelvis; in which Case the Child must die before it can be born, because the Head must be lessened; so that the only Inconvenience is, that in the first Method, the Child will be put to a little more Pain by separating the Vertebrae than it would endure by an Instrument immediately struck into the Cerebellum; for I must here observe, that if the Instrument only penetrates the Cerebrum, the Child may live some Time in Misery, and suffer more than by the Dislocation of its Vertebrae, whereby it would die immediately. And should it so happen, that the Head be found too large to come out whole, after the Body is extracted, the Operator may separate it from the Body with a Knife, and then bring it out with my Extractor, with great Ease to himself, and Safety to the Woman, as I shall make appear in due Time.

§ 3. I shall, in the next Place, shew in what Cases the Child ought to be turned to be extracted by the Feet.

First, in all Cases, *cæteris paribus*, where the Child lies crossways in the Womb, or presents any other Part than the Head or Feet, and can be turned with Safety to the Mother.

Secondly, in all Cases, *cæteris paribus*, where the Head presents above the Brim of the Pelvis, or is only a little advanced therein, but in a wrong Position; except in such Cases where the Head only rests or is pressed a little obliquely on the Fore-part or Side of the Pelvis, and at the same Time is small enough to pass easily with the Mother's Efforts alone. In which Case the Head may be easily removed from that Part it is pressed against, either by the Finger of the Operator, or by introducing only one Blade of the Forceps, whereby it may be moved farther down, provided the Labour Pains are strong.

Thirdly, in all Cases, *cæteris paribus*, where the Mother's Throws are too weak, or where the Child's
Head

Head is so large, as cannot be forced into the Pelvis by the Labour Pains alone, but yet may be extracted by the added Strength of the Operator pulling at the Feet and Shoulders.

Hence it follows, that the Child's Head may justly be said to be too large in two Respects; first, when it is so large as not to be forced into the Pelvis by the sole Power of the Mother; and secondly when it is so large as to require to be opened in order to lessen its Bulk, not being (tho' *compressed like a Sugar Loaf*) small enough to pass whole into the Pelvis, and let the Difficulty to the Operator be ever so great, he ought to save the Child if possible, by turning it under the Restrictions abovementioned.

§ 4. This Distinction, § 3. you have omitted to give your Readers (notwithstanding your *Clearness and Perspicuity*, so much applauded by the Review Writer) as is evident from the following Passage, where you say (p) ' I own indeed, where the Woman has not Strength
' nor Pains sufficient to force along the Child, and
' the Difficulty does not proceed from a large Head,
' or narrow Pelvis, the Method will prove successful;
' but if, in the *other Extreme*, I appeal to all candid
' Practitioners, whether many Children are not lost,
' even when the Head does not present, and when the
' Body is first brought down, because the Fœtus cannot be delivered in another Manner.'

This naturally leads me to examine what you can mean by the Word *extreme*. If you mean by that Expression, that when the Head is too large to enter whole into the Pelvis, the Child ought not to be turned to be extracted by the Feet; you then, indeed, may, in some Measure, be said to be right; but to me 'tis evident this cannot be your Meaning; because you recommend, in such Case, the Use of the Forceps; and therefore the Word *Extreme* is very improper in this Place; because, if the Head be not so large as to re-

quire being opened, it cannot be said to be in the *other Extreme*; and if it requires to be opened, the Forceps is an improper Instrument for such a Purpose, other Methods being much safer and more expeditious; and if, in that Case, made use of, must injure the Woman greatly.

In the next Place, ‘ you appeal to all candid Practitioners, whether many Children are not lost; even when the Head does not present; and when the Body is first brought down, because the Fœtus cannot be delivered in another Manner.’

As a Practitioner (and I hope a candid one) I must declare, that in twenty two year’s Time I never met with any Instance, except one in *December* last (1751) supposing the Child to be living, when it was, or could be lost, by bringing the Feet foremost; and I have delivered many Women of living Children, whose Heads have been from 14 to 18 or 19 Inches in Circumference: some of whom had employ’d other Men Midwives, just before I was called in; but, nevertheless, would not permit ’em to use any Instruments, altho’ the Men had declared it was impossible to extract the Child without; because they said the Head was *too large*: and particularly one Case, where a Pupil of yours (an eminent Surgeon) was concerned. And I do declare it, as my sincere Belief, that no Child can be properly said to be lost by bringing by the Feet, that can be saved by any other Method, when under judicious Hands.

The abovementioned Case, where the Child, if alive, might have suffered, happened in this City of *York*. The Patient being pregnant of her tenth Child had gone nine Weeks above her Calculation (which, for particular Reasons, there was no Occasion to dispute the Truth of it) and the Child’s Bulk, when born, seemed like one of full that Age, after its regular Birth. Upon touching the Woman, I found the Uterus misplaced, and that I could only feel that Side of the Os Uteri, which was next to the Os Pubis, the other being high
up

up, the Child's Head at the same Time pressed Part of the Mouth of the Womb and Part of the Vagina, so low down in the Pelvis, forwards, that it interrupted a free Passage to the Child's Head, and hung down like a loose Bag: I turn'd the Child, and got both Feet out with Ease; but found no small Difficulty in getting the Breast and Shoulders to pass the Brim of the Pelvis; but that being accomplished, and those Parts having passed the Os Externum, the Head stuck at the Brim of the Pelvis, altho' I turned the Chin to one Side of that Opening, and tried to make it advance, sometimes with a Finger in the Child's Mouth, and sometimes by pushing up the Chin, to get the broadest part of the Cranium to one Side of the Pelvis, at the same time pulling at the Shoulders with no small Force, but all in vain. This Method I repeated two or three times with no better Success, wherefore I exerted my utmost Strength, when I found the Vertebrae of the Neck began to separate from those of the Back; and by continuing the same means, the Head and Body were soon parted: I then introduced my Left Hand into the Uterus, turned the Apex of the Head towards the Mouth of the Womb, and introduced my Extractor, and immediately extracted the Head in the Manner I have directed in my *Essay on Midwifery*. The Head was exceeding large, much ossified, and with only a small Opening at the Fontanelle. The Woman recovered as well this Time as ever she did of any of her other nine Children, without the least Inflammation in the Parts betwixt the Child's Head and Bones of the Pelvis, which was very strait, and had always occasioned a tedious and difficult Labour of all her other Children, several of whom died convulsed soon after their Birth, or in a few Days.

A certain Person who was present at the Labour run out of the Chamber frightened at the Consequences, when she found the Head of the Child left in the Womb; having before been present at two Labours, where the Head was left in the same Condition; and
altho'

although a Man-Midwife was sent for to each Woman; yet neither of 'em could extract the Head thus separated, and both the Women died: But this good Woman's Fears were soon over, when one, who attended the Operation, went and assured her, that the Patient was safely delivered both of the Head and After-Birth.

I must here observe, *First*, That had a Person attempted to deliver this Woman by opening the Head, with the Scissars, as you direct, the Woman must have suffered greatly, and perhaps have lost her Life.

Secondly, That the Consequences of leaving the Child's Head alone in the Uterus, are not so bad as was formerly apprehended, since it may soon be brought out by my Extractor: Whence it is evident, that in some Cases, hereafter to be mentioned, the taking off the Head, when the Body comes first, may be the safest and easiest Expedient for Delivery.

Thirdly, That as there was no hard Substance immediately pressing against the Parts betwixt the Child's Head and the Bones of the Pelvis, those Parts could not be so much crushed, both on Account of the Softness of the Integuments of the Child's Cranium; and as the Bones of the Head would conform to the Shape of the Pelvis; and because the whole Pressure was not confined to a narrow Surface, but each Part bore its Share. But to return,

Sect. 5. From what has been said in the Third and Fourth preceeding Sections, it is evident, that if the Child's Head be so large, as not to be extracted whole, it must be first opened to let out Part of its Contents, whether the Feet or Head presents; and this must be the Meaning of your Words, *other extreme*. But yet, in another Place you say (q) 'If the Head is large, or the Pelvis narrow, the Child is seldom saved, either by turning, or using the Forceps, until the Head shall be farther advanced.' Had you not told us (r), 'That your Treatise was Six

(q) P. 291. (r) Pref P. 4.

Years in cooking up; and that you have since revised and corrected it, I should have imagined, that this last Paragraph had inadvertently crept into it. *For if the Head be so large, or the Pelvis so narrow, that the Child is seldom saved, either by turning, or using the Forceps,* how is it possible for the Head to advance by the Mother's Efforts alone; when, according to you, it could not be saved, by the added Strength of the Operator? especially as you have argued all along, that the intended Use of the Forceps was *like a Pair of Hands to add Force to the Mother's Efforts.*

In another Place you say (*s*), 'If the Head is detained above the Brim of the Pelvis, or a small Portion of it, only farther advanced, and it appears, that the one being *too narrow*, or the *other too large*, the Woman cannot be delivered by the strongest Labour-Pains, in that Case, the Child cannot be saved, either by turning, or bringing it by the Feet, or delivered by the Application of Fillet or Forceps; but the Operator must unavoidably use the disagreeable Method of extracting it with the Crochet. Nevertheless, in all these Cases, the Forceps ought first to be tried, and sometimes they will succeed beyond Expectation, provided the Birth is retarded by the Weakness of the Woman, and the second, third, sixth or seventh Obstructions; but they cannot be depended upon, even when the Vertex presents, with the Forehead to the Side, or back Part of the Pelvis, and (though the Woman has had strong Pains for many Hours after the Membranes are broke,) the Head is not forced down into the Pelvis, or at least, but an inconsiderable Part of it, resembling the small End of a Sugar-Loaf. For from these Circumstances you may conclude, that the largest Part of it is still above the Brim; and that the Head is *too large*, or the Pelvis *too narrow*. Even in these Cases, indeed, the last Fillet, or a long Pair of Forceps may take such firm Hold, that with great Force, and the strong Purchase, the

‘ Head will be delivered; but such Violence is commonly fatal to the Woman, by causing such an Inflammation, and perhaps Laceration of the Parts, as is attended with a Mortification.’

I must observe, that only two Pages before (t) you told us, ‘ The Head will in Time slide gradually down into the Pelvis, even when it is *too large* to be extracted with the Fillet or Forceps:’ And in the abovementioned Paragraph, you say, *when the Head is too large*, (the same Expression as before) *the Child cannot be delivered by the strongest Labour Pains, nor be saved, either by turning or bringing by the Feet, or with the Fillet or Forceps, without the Crochet*; and yet you order the *Forceps to be first tried*: And then, after that, you tell us, they cannot be depended upon; but nevertheless, *the Fillet or great Forceps may take such firm hold, that with great Force and strong Purchase, the Head will be delivered*: And in another Place you say (u), ‘ We ought always to replace the Head where the Face presents, *more especially, when the Pelvis is too narrow, or the Head too large.*’

You told us also, that when the Fillet, or great Forceps were used, as mentioned, ‘ Such Violence is commonly fatal to the Woman, by causing such an Inflammation and perhaps Laceration of the Parts, as is attended with a Mortification.’ But I must observe, that, as you have stated the Case, every Thing is supposed to be prepared, by Nature, for the Birth; but that the *Straitness* or *Narrowness* of the Pelvis, or the *Largeness* of the Child’s Head, are all the Obstacles to an easy Delivery: Here then, are no Parts to be lacerated, except the Os Uteri, which is supposed to be wide enough, because you have not made that as an Obstruction to Delivery. And it is evident, that the Parts of the Woman, betwixt the Child’s Head, and the Bones of the Pelvis, are not so subject to Inflammations, as the Os Externum: Moreover, if the Head has passed into the Pelvis, which is the narrowest Part, no skilful Operator will,

(t) P. 255. (u) E. 279.

pull with such Violence, as you seem to hint, because the Case does not require it; especially, as the Os Externum, will easily expand, while the Brim of the Pelvis remains of the same Width: And you have told us (*w*), ‘ That when the Head has passed the Brim of the Pelvis, it is *seldom restrained in the lower Part*, unless the Patient is weak ;’ which shews, that there cannot be so much Danger of Laceration, as you would insinuate.

You say, *in all these Cases, the Forceps ought first to be tried, provided the Birth is retarded by the 2d, 3d, 6th or 7th Obstructions*: The 3d Obstruction, you say, P. 243, arises ‘ from the Rigidity of the Os Uteri, Vaginæ, and external Parts ; which may be owing to the Age of the Patient, to large Callosities ; or to Glands and Schirrous Tumors, that block up the Vaginæ.’

In all which Cases a prudent Person would never use the Forceps at all ; because that Instrument cannot soften either the Rigidity, or Callosity of the Os Uteri, nor remove the Schirrous Glands and Tumors ; but on the contrary, instead of lessening, will add to the Bulk and Hardness of the Child’s Head.

If the Child’s Head be so large as not to pass into the Pelvis, by the sole Efforts of the Mother ; we are to consider two Things: *First*, whether the Head of the Child alone can injure the Mother, more than when there is an additional Bulk made to it ; and that too, perhaps, with a Surface not very proper for sliding without much Friction.

Secondly, Whether the Child’s Head be more compressed by the Parts of the Mother, in passing into the Pelvis, with or without any additional Bulk.

In order to determine these Things ; it is incumbent upon me now to inquire into the various Methods heretofore or now used, to bring the Head of the Child whole into the Pelvis ; and to shew

the Dangers or Inconveniencies, which attend each Operation.

Sect. 6. In all Cases, when the Child's Head presents properly, and cannot be forced into the Pelvis by the sole Efforts of the Mother, and yet is not so large, but it may be extracted whole: The Method used to make it advance, was either by applying the Fillet or Forceps.

The Fillet is a Noose, made at the End of a Ribband, Garter, Inkle or the like; which being conveyed on the End of the Fingers, and slipped over the Fore and Hind-Head; or else is made in Form of a Sheath, in which is a Piece of slender Whalebone, about a Foot and half, or two Feet in Length. *Vid.* Tab. Fig. 1. One Hand being introduced along the Side of the Child's Head, the doubled Part of the Whalebone, is to be introduced along the Hand already in the Womb, betwixt it and the Side of the Child's Head; when one Side of the Fillet may be pushed over the Face, by the Thumb; while the other, is put on the opposite Part by the little Finger; where the Fillet must be kept, until the Whalebone be withdrawn: This being done, the Operator must pull that End of the Fillet [b], which runs through the Ring [c], that is fixed on the opposite Side, by which Means, the Noose is lessened, and more closely surrounds the Neck of the Child. And when the Operator thinks he has sufficient Hold of the Child; let him pull at the Fillet, with one Hand, while with the other, that is within the Vagina, he guides the Head into the Center of the Passage, in the most commodious Manner.

I find you advise(x) the Operator to tie the Ends of the Fillet together, after the Whalebone is withdrawn, by which Means the Noose will be so large, as easily to slip from off the Head, which it cannot so easily do, by the Improvement I have made; because it

may be drawn to what Degree of Closeness the Operator shall think proper, of which he may judge by the Fingers that are already in the Womb, so that it may be tight enough to take hold of the Chin and Back-part of the Child's Head; but yet not so tight about the Neck as to hinder the Return of the Blood to the Heart; and if the Operator should find the Fillet to be too tight, at any time he can slacken it, or take it quite off by only pulling at that End or Side of the Fillet, to which the Ring is fixed. Fig. I. Let. A.

You tell us (y), ' That the Disadvantage attending all Fillets, is the Difficulty in introducing and fixing them; and tho' this last is easier applied than the others, yet when the Vertex presents, the Child's Chin is so pressed to the Breast, that it is often impracticable to insinuate the Fillet between them; and if it be fixed on the Face and Hind-head, it frequently slips off in pulling: but granting it commodiously fixed, if we are obliged to pull with great Force, it will gall, and even cut the soft Parts to the Bone.' Thus far I agree with you, excepting in the last Part; for if the *Fillet cut the soft Parts to the Bone*, it must be owing either to the Ignorance of the Operator in chusing the Fillet, or in applying it in improper Cases; for the chief Intent of this Instrument is to add only a moderate Assistance to the Mother's Efforts, and ought never to be used when *very great Force* is requisite; notwithstanding that you just above have told us, *that even in these Cases the last Fillet may take such a firm Hold, that with great Force and strong Purchase, the Head will be delivered.*

You then proceed to tell us (z), ' That if the Child comes out of a sudden, in consequence of violent pulling, the external Parts of the Woman are in great Danger of sudden Laceration.' But I must observe, that this is not the Fault of the Fillet; for by the same Indiscretion the like will happen, when your

favourite Instrument, the Forceps, is used in the same manner, because as soon as the Head has passed into the Pelvis, it has gone through the narrowest Passage, which will not give way, and where the greatest Force is requisite; whereas less Force is necessary afterwards, and that too must be increased only by Gradation, because the Os Externum will yield.

You then go on: ‘ But if the Head is small, and
 ‘ comes along with a moderate Force, the Child may
 ‘ be delivered by this Contrivance (by the Fillet) with-
 ‘ out any bad Consequence: tho’ in this Case (*viz.*,
 ‘ when the Head is small) we find by Experience, that
 ‘ unless the Woman has some very dangerous Symp-
 ‘ tom, the Head will in time, slide gradually down into
 ‘ the Pelvis, even *when it is too large* to be extracted
 ‘ by the Fillet or Forceps, and the Child be safely
 ‘ delivered by the Labour-Pains.’ If you mean, by
 the last mentioned Part of this Paragraph, that this
 should be an Encouragement for Accoucheurs to wait
 and let the Head remain squeezed for so long a Time;
 then your Advice must be injurious, because the Dan-
 gers mentioned in Sect. 2. Numb. 2. may ensue, which
 ought to be avoided.

This whole Paragraph is copied from your new Edition, which you tell us you revised and corrected; and sure I am, I never met with so much Inaccuracy and Contradiction in one Period, in any Author, either ancient or modern, altho’ the *Review* Writer informs us, your Instructions are *so clear and perspicuous*.

Sect. 7. I come in the next Place to enquire into the Advantages and Dangers attending the Use of the Forceps; but in order to do you all the Justice I can, I shall first give your Declaration as to using Instruments at all.

You say, (a), ‘ It is not to be denied, that Mis-
 ‘ chief has been done by Instruments in the Hands of
 ‘ the Unskilful and Unwary; but I am perswaded,

(a) P. 241.

‘ that every judicious Practitioner will do every
 ‘ Thing for the Safety of his Patients before he has Re-
 ‘ course to any violent Method, either with the Hand or
 ‘ Instrument ; though Cases will occur in which gentle
 ‘ Methods will absolutely fail——For my own Part I
 ‘ always *avoided them* (Instruments) as far as I thought
 ‘ consistent with the Safety of my Patients, and strong-
 ‘ ly inculcated the same Maxim upon those who have
 ‘ submitted to my Instructions.’ In another Place
 (b), ‘ The Reader ought not to imagine, that I am
 ‘ more bigotted to any one Contrivance than to an-
 ‘ other.’

That all Kinds of Instruments ought to be avoided, if possible, is certainly right ; and I may add, that that Instrument which is the least pernicious ought always, *cæteris paribus*, to be preferred to any other.

Notwithstanding this Declaration, I believe it will appear, that you are so far from avoiding the Use of Instruments, that you direct the *Use of the Forceps* (c), or *to turn the Child*, as an indifferent Thing, which ever Method is followed ; whereas the Forceps ought never be made use of, when the Child can be turned, and extracted by the Feet, as is evident from what has been said, from Sect. 1st. 2d, and 3d ; and should it appear that you frequently use one particular Instrument, in many Cases, where the Delivery may be performed without any ; or even in Cases where other Sorts are less dangerous ; then I fancy the Reader will be convinced, that *you are bigotted to some one Contrivance more than another*.

Sect. 8. One Sort of Forceps we find mentioned by *Hippocrates* (d), but we don’t read of any so contrived as to preserve the Life of the Child, till *Avicenna* told us (e), that *habent Obstetrices quædam Tenacula quibus circumligant pannos ne lædant vel offendant Fœtum*,

(b) 256. (c) P. 257. (d) P. 618. (e) Mercurialis in Spachius, p. 236.

iisque educant : Of the first sort, I fancy, may be those Drawings in *Albucaſis*, in *Spachius* (f); which with some other ancient Instruments I have ordered to be engraved in the annexed Copper-plate, may be seen, Fig. 2 and 3.

I own I do not imagine the Instrument hinted at was any kind of Forceps that would preserve the Child, because *Avicenna* does not mention it as a Secret that he had, but speaks of it as a Thing well known; for he says, *Habent Obstetrices quædam Tenacula, &c.* and if it was such a Sort of Forceps, and so well known, it is surprising to me, that the other Sorts of Forceps should have been in use for so many Ages after his Time, and that no Mention should be made of this Sort by any Author; for according to your historical Account, such an Instrument never was since supposed to be known by any Person till the last Century, when you say (g) *Chamberlayn* used it: But had you read *Rueff* in *Spachius*, you might have seen a Drawing of a Pair of Forceps (altho' not so well adapted to the Head as some more modern Sorts) which were used in the preceding Century to preserve the Child. They are not indeed so curved as ours, but seem adapted for the same Purpose (h), as appears in the annexed Plate, Fig. 14.

You tell us (i), when you are about to use the Forceps, ' If the Bed is at a great Distance from the Fire, ' the Weather cold, and the Woman of a delicate ' Constitution, a chafing Dish with Charcoal, or a ' Vessel with warm Water, should be placed near or ' under the Bed, lest the Woman should catch Cold.'

In the first Place, if a chafing Dish of burning Charcoal (which is what, I suppose, you mean) be placed near or under the Bed, so as to warm the adjacent Parts, every Person near it would soon be suffocated; and the more delicate the Patient's Constitution is, the sooner will she suffer: And,

(f) P. 446. (g) P. 58. (h) *Rueff* in *Spachius*, Lib. iii. p. 179. (i) P. 266.

Secondly, *If a Vessel with warm Water be placed as directed*, the very Steam, altho' warm as it rises, will yet soon be so cold as to endanger the Life of the Patient, by the damping the Cloaths, &c. about her, and no prudent Person would advise a Lying-in Woman to be in the Condition, and Circumstance you have here placed your Patient. Is this Method of Practice, then, so unexceptionable as the *Review* Writer, Number III. informs us?

In the next Place you direct ' the Operator to place
' himself upon a low Chair, and having lubricated with
' Pomatum the Blades of the Forceps, and also his
' right Hand and Fingers, slide first the Hand gently
' into the Vaginæ, pushing it *along* in a flatten'd Form,
' between that and the Child's Head, until the Fin-
' gers have passed the Os Internum; then with the other
' Hand, let him take one of the Blades of the For-
' cepts, and introduce it betwixt his right Hand and the
' Head' (having its concave Surface towards the Child's
Head, you should have added), ' if the Point or Ex-
' tremity of it, should stick at the Ear, let it be slip-
' backward a little, and then guided forwards with a
' slow and delicate Motion; when it shall have placed *placed*
' the Os Uteri, let it be advanced still farther up, un-
' til the rest at which the Blades lock into each other be
' close to the lower Part of the Head, or at least with-
' in an Inch thereof.' This is the second Operation.

You then proceed, in the third Place, and say,
' Having in this Manner introduced one Blade, let him
' withdraw his right Hand, and insinuate his left in the
' same Direction along the other Side of the Head,
' until his Fingers shall have passed the Os Internum.'
But you have not given Directions to hold the Handle
of the first Side of the Forceps in its Place, while the
other Side is introduced.

Then in the fourth Place you say, ' The Operator
' taking the other Blade with the Hand that is disen-
' gaged, let it be applied to the other Side of the
' Child's

‘ Child’s Head, by the Means employed in introducing the first :’ Then, fifthly, the left Hand must be withdrawn, and the Head being embraced between the Blades ;’ and, lastly, ‘ Let them be locked in each other, and the Handles firmly fastened together, with a Fillet or Garter.’ This is the Method which you direct when the Head is within the Pelvis, and is the same that all other Operators take upon this Sort of Forceps in the like Case, except that they commonly lock the Blades together, before the Hand is withdrawn, lest any Part of the Woman should be crushed betwixt the Blades, which may happen in many Cases, especially as you order ‘ the Rests, at which the Blades lock into each other, to be close to the lower Part of the Head, or at least within an Inch thereof ;’ which is a very necessary Precaution to be given to your Readers, especially as you direct them to use the Forceps when the Head is above the Pelvis ; in which Case the Precaution is yet more necessary, as you direct in another Place.

Sect. 9. The Dangers that attend the Use of the Forceps may affect either the Mother or the Child. The first may be bruised by a Compressure of the Parts betwixt the Forceps and the Bones of the Pelvis ; which will do the greater Injury, *cæteris paribus*, the narrower the Surface of the compressing Body is, and it makes the Compressure greater, by adding to the Bulk of the Child’s Head ; which it may do in two Respects, as I shall shew presently.

The next Injury it may do the Mother, is by extending the external Parts more than the Size of the Child’s Head may require, which, as it adds to the Bulk of the Head, it must unavoidably do, and thereby may lacerate them ; especially in unexperienced, *unwary*, or unskilful Hands ; and this they are more liable to do as you now have them made ; first, because, as I shewed in my *Essay on Midwifery* (k), ‘ the Parts of all Women are not of the same Dimensions ,

(k) P. 211. Sect. 101.

' and the Children also vary in the Bulk of the Head;
 ' and Thickness of the Neck; yet these Instruments,
 ' being of a particular Size, cannot be made to yield,
 ' and must therefore be so large, in respect to the
 ' Make of some Women, that a Laceration of the
 ' Perinæum may ensue.' This may be demonstrated
 as plainly as any Proposition in *Euclid*: For as you
 have your Forceps made, the Ends which you place
 near the Child's Ear, will meet, or nearly so, if no
 intervening Body hinder them; and as each Blade may
 be said to be a Curve nearly elliptical, it is evident,
 that when these Ends are used, they must be extended
 at least two Inches, or more; and then it is as evident,
 that the Middle of the Bow-Part of the Blade must
 likewise be extended in Proportion; whence it is plain,
 that that Extension might be avoided, by making
 those Ends to approach nearer than two Inches; which
 will have sufficient Purchase, and yet not injure the
 Child, by squeezing and bruising the Parts so much.

It is likewise as evident, that the rougher the Sur-
 face of the Forceps is, *cæteris paribus*, the greater
 must be the Friction, and consequently the greater
 Force must be requisite to extract the Child, as by the
 Laws of Mechanics can be demonstrated; whence the
 Mucus of the Parts of the Woman must be abraded,
 which will inflame them the more. Hence it follows,
 that Leather wrapped round the Forceps, altho' well
 oiled or lubricated with Pomatum, will do greater In-
 jury than polished Steel, with the same Advantage,
 and wrap the Leather spirally, as carefully, and as
 smoothly as possible round the Curvature of the Blade;
 yet one Part will rise higher than the other in a very
 little Time, if not at the very first; and it is evident
 also, that the Leather in this Case, when once wet,
 will never be so soft and smooth as at first; and I may
 add, that the Blood and Waters sucked up by the
 Leather, or that gets betwixt it and the Steel-work,
 will corrupt and stink; and in some Cases, perhaps,
 may

may convey Infection ; to avoid which you say (*l*), the Blades of the Forceps ought to be new covered with Stripes of washed Leather, after they have been used ; so that every Operator must learn the Art of covering the Forceps to Perfection, because an Artist is not to be found in all Places.

Sect. 10. The Dangers to the Child from the Forceps are owing to the Compressure, by squeezing the Head more than the Parts of the Mother would do ; whence the Mischiefs related in Sect. 2, Numb. 2, may ensue, and therefore, if possible, ought to be avoided ; and as the Surface of the Forceps is so much narrower than the Surface of the Parts of the Pelvis, the Head must not only be more squeezed than without the Forceps, but also be in greater Danger of Inflammations, &c. as well as the Evils above-mentioned.

Sect. 11. Having now given an Account of the Use of your Forceps, I refer the Reader to a Description of that Sort I make use of in my *Essay* (*m*) ; and by comparing the Advantages and Inconveniencies of each, may judge for himself, which he thinks the more useful, and less prejudicial to the Woman or Child.

Supposing the Head of the Child to be in the Pelvis, I introduce the left Hand along the Side of the Child's Head, and with the other introduce my Forceps with the Ends, betwixt the Inside of my Hand and the Child's Head, with the great Skrew towards the left Hand, which the elliptical or oblong Form of the Pelvis, will easily permit me to do ; so that one Wing will be towards the Pubis, and the other towards the Perinæum, agreeable to the Shape of the Os Externum ; when the Ends have reached the Ear or Neck of the Child ; I then with my right Hand gently expand the Wings, or open the Forceps by pushing with the Palm of my right Hand against the Handle, which is done without moving any other Part of the Machine ; and then finding the Ear or Side of the

(*l*) P. 291. (*m*) Postscript, Sect. 6. p. 384.

Child's Head, I guide one Wing to be placed on one Side, betwixt the Pubes and Head, or betwixt the Sacrum and Head, as I find the most commodious, and then I place the Forceps right, by gently turning it with the Handle, while the Fingers of the left Hand place the End of the Wing against the Neck of the Child, below the Ear, when of course the other must be parallel to it always, taking care that nothing is betwixt the Child's Head and Forceps; then with my right Hand I draw the Wings, till I have sufficiently squeezed the Child's Head so as not to injure it; which being done, by pulling the Handle, and thrusting at the great Skrew, while the left Hand holds the Instrument fast, I can judge pretty well, by my Fingers that guide the Wings in the Pelvis, how far the Head may be squeezed with Safety. This done, I fix the great Skrew with my right Thumb, which holds the Instrument, so that pulling as strongly as I will, the Head can be no more squeezed thereby, neither can the Instrument so easily slip: I then withdraw my left Hand, and therewith assist my right in extracting the Head; and when sufficiently advanced, I loosen the Skrew with my right Thumb, and take away the Forceps.

From what has been said in Sect. 8, 9, 10, 11, it is evident, I think, that my Forceps is as good, if not better, than any yet continued: First, because the Instrument may be introduced at once, after the Fingers or Hand is within the Vaginæ; whereas with the other Forceps the Hand must be twice introduced at the least, and each Side of the Forceps must be introduced separately; so that the whole Operation, thus far, is double the Pain and Trouble to mine. Secondly, as the Wings are within the Pelvis, they can be expanded more or less, without putting the Mother to any Pain. Thirdly, the Hand or Fingers that are within the Vaginæ, will not only move less than when employed in fixing the other Sort of Forceps, but also will do it in less Time; both which must occasion less Uneasiness to the

the Woman. Fourthly, as the Joints of these Forceps are within the Pelvis, the Wings will be applied so as to fit any Child's Head; wherefore the Parts of the Woman will be less extended than with old Sorts of Forceps: And fifthly and lastly, this Instrument is less prejudicial to the Child's Head, because the Wings can be so fixed, at any determinate Degree of Expansion, as not to compress the Head more than necessary, whereby the Injuries mentioned in Sect. 2, must be in a great measure avoided; whereas with the other Forceps, the more you pull, the more you squeeze the Child's Head.

The chief Objection that ever I heard against my Forceps, was the Difficulty of introducing it on account of its Bulk, which surely will appear no Difficulty at all, because its Diameter is only three Inches; and if the Distance from the Pubes will not admit of a flat Body of that Diameter betwixt it and the Coccyx, or Perinæum, how will it permit a Child's Head of perhaps twelve or fifteen Inches in Circumference to pass? And therefore if there be not a Passage for the first, the last cannot come out whole, without tearing its Way. The Inconveniencies either of this or the other Forceps will be more apparent, as we mention the particular Cases, where Forceps ought to be used at all, which is the next Point to be settled.

Sect. 12. You tell us (n), 'When the Head is advanced into the Pelvis (altho' in a natural Direction, you might have added) and there sticks fast for a considerable Time, and cannot be delivered by the Labour-Pains, the Forceps may be introduced with great Ease and Safety, like a Pair of artificial Hands;' but I must observe, first, that the Head cannot stick, when *it is advanced* into the Pelvis, unless at the Os Externum, because in a natural made Pelvis the Brim is the straitest Part. And,

Secondly, That when the *Head is advanced into the*

Pelvis, the *stopping* of the Child is owing either to the Contraction of the Os Uteri round the Neck and Shoulders of the Child, to the Navel-string being twisted around the Child's Neck, to the Shoulders being misplaced, or to the Bulk of the Breast and Shoulders.

In the first Case, the Blunt-Hook being applied under one Axilla, betwixt an Arm of the Child and its Breast, will rarely fail of making the Child advance through the Os Uteri, and then Nature may do the rest. In the second Case, by cutting or breaking the Umbilical Chord, the Child will advance. In the next Place, if the Shoulders stick either upon the Sacrum or Os Pubis, the Forceps ought not to be used, because the Child may be safely replaced by the Operator's Fingers; and lastly, the Blunt-Hook applied as above, will bring those Parts into the Pelvis much safer than the Forceps, because the Child is thereby less injured; and there can no Danger happen to the Mother; for as soon as the Shoulders are advanced, the Hook must be withdrawn before the Bulk of the Child's Head be advanced to fill the Os Externum. This Method, in such a Case, will very rarely fail, and ought therefore to be attempted first, because the Dangers to the Mother, as mentioned in Sect. 9, and those to the Child, from compressing its Head too much, may all be avoided.

Sect. 14. In the next Place you say (*f*), ' When
' the Head presents, but remains very high, the
' Forehead being at or above the upper Part of the
' Sacrum; and on account of the Narrowness of the
' Pelvis at that Part, cannot be brought along at the
' first or second Effort, let the Operator turn the Fore-
' head a little to one Side; but if it is so fixed in the
' Pelvis, as not to be moved in that Manner, let him
' try to push the Head above the Brim with the For-
' ceps, and then turn it to one Side, in order to profit
' by the Width of the Basin, which in this Place is

‘ commonly about an Inch greater from Side to Side,
 ‘ than from the fore to the Back-part.’

If the Pelvis be so narrow as you here represent it, the Addition of the Bulk of the Forceps must yet increase the Danger to the Woman, not only by bruising the Parts betwixt them and the Bones of the Pelvis, but also may lacerate them, because as their Blades are covered with Leather, altho’ well oiled, they will yet not slip so easily as polished Steel. In the next Place the Child’s Head must likewise for the same Reason be more compressed in the same Proportion; whence Convulsions, if not immediate Death, may ensue. I should think it more prudent to try first to turn the Child’s Forehead to one Side of the Pelvis; and then if the Pains be strong, wait a little Time, to see if there be any Probability of the Head’s advancing as it ought; or (which is much preferable) endeavour to turn the Child, and bring it by the Feet; whence there will be no Addition to the Child’s Head to injure the Mother, nor yet to crush the Brain, so much as by your Method. And this may be easily done, because you suppose that the Head may be pushed up, and turned to one Side after it has been fixed in the Pelvis; and in that Case, if that can be accomplished by the Forceps, as you direct, it is much easier done by the Hand alone; and then at the same time the Operator might bring it by the Feet, whereby, *cæteris paribus*, less Injury will be done to both Mother and Child; whence it follows, that notwithstanding your Declaration mentioned in Sect. 7, you direct the Use of an Instrument, when (as you have stated the Case) the Woman, by an able Operator, might be delivered without any such Aid.

Sect. 15. You then proceed (g), ‘ When the Head
 ‘ is come low down, and cannot be brought farther,
 ‘ because one of the Shoulders rests above the Os
 ‘ Pubis, and the other upon the upper Part of the Sa-
 ‘ crum, let the Head be *strongly grasped* with the For-

‘ ceps, and pushed up as far as possible, moving from
 ‘ Blade to Blade, as you push up, that the Shoulders
 ‘ may be more easily moved to the Sides of the Pelvis,
 ‘ by turning the Face or Forehead a little towards one
 ‘ of them ; then the Forehead must be brought back
 ‘ again into the Höllow of the Sacrum, and another
 ‘ Effort made to deliver.’

If this Method fail, you then proceed to a second
 Operation, and order ‘ the Head to be pushed up
 ‘ again, and turned to the other Side, because it is un-
 ‘ certain which of the Shoulders rests on the Pubes or
 ‘ Sacrum : Suppose, for Example, the right Shoulder
 ‘ of the Child sticks above the Os Pubis, the Forehead
 ‘ being in the Hollow of the Sacrum ; in this Case, if
 ‘ if the Forehead be turned to the Right-hand Side of
 ‘ the Woman, the Shoulder will not move ; whereas
 ‘ if it be turned to the left, and the Head at the same
 ‘ time pushed a little pwards, so as to raise and disen-
 ‘ gage the Parts that are fixed, the right Shoulder
 ‘ being towards the Right-hand-side, and the other to the
 ‘ Left-side of the Brim of the Pelvis, when the Fore-
 ‘ head is turned again into the Hollow of the Sacrum,
 ‘ the Obstacle will be removed, and the Head be more
 ‘ easily delivered.’

I must here remark again, that you recommend a
 Method dangerous to the Mother, and in all Probabili-
 ty fatal to the Child ; altho’ you should obtain a
 Delivery, when a safer Method can be followed with-
 out Instruments.

For first, if the Head be in the Pelvis, as you sup-
 pose, and only the Shoulders are placed as described
 above, then the easiest and safest Method is to intro-
 duce the Hand flatways into the Pelvis, along-side of
 the Child’s Head, where there is sufficient Room ; and
 then the Operator with his Fingers may easily place the
 Shoulders right ; and the more so, if they can be
 raised up by the Method you advise ; because the Sa-
 crum is the highest and most convex Part of the Pelvis
 so that a very little Motion, even upon a Level,
 will

will soon force the Shoulder from off that Part; whence this Operation may be performed at once, as I have frequently done without any Instrument, while the Method with an Instrument may require two Operations at least, if practicable at all.

Secondly, if the Head must be *strongly grasped by the Forceps*, as you order, it may prove fatal to the Child, by so strongly compressing the Brain, as has been already taken notice of; and,

Thirdly, I much question your Method can avail in a Woman, altho' I own I have never tried it, having always succeeded by the above Means, as all I am acquainted with have informed me they have done.

I think your Method will not succeed; for altho' (in the Case stated) you should turn the Head of the Child almost quite round, yet that will not move the Shoulders, even when you thrust upwards; by which indeed you may thrust the Head nearer to the Shoulders, but I dare say you cannot thereby move them, especially without injuring the Child's Head, because, as the Uterus contracts and presses forwards, where ever any Part of the Child sticks, it will be in such Proportion fixed against the Part that obstructs it: And this in several Parts of your Book you take notice of; particularly you tell us (*b*), 'the Chin of the Child is so pressed to the Breast, that it is often impracticable to insinuate the Fillet between them.' Now, if the Difficulty of moving either the Child's Head any Way, or its Body upwards, so little a Way as to insinuate the Whalebone, on which the Fillet is put, how is it probable, that by the Means you mention the Shoulders should be moved up, and turned into their proper Place? Upon a Machine you may do such a Thing, but for many Reasons it cannot be effected on a human Body in Labour; the Difference betwixt these two being very great.

In one Place, Page 312, you tell us, ‘ That when
 ‘ the Feet come foremost, and the Child is advanced,
 ‘ the Head does not move round equal with the Body ;
 ‘ and therefore the last must be brought one Quarter
 ‘ farther than the Place at which the Head is to be
 ‘ fixed :’ But when the Body is above the Pelvis, and
 the Head is advanced, if the Shoulders are wrong
 placed, then you order the Operator to turn the Head
 a little towards one of the Shoulders, by which it may
 be removed ; but if the Head, which is not com-
 pressed by the Uterus, cannot be turned equally with
 the Body, how can you expect that the Body should
 be moved, by only *turning the Head a little to one
 Shoulder*, when the Womb is strongly contracted about
 it, and presses it against the Brim of the Pelvis? *Up-
 on a Machine this indeed may be done, but not on a
 Fœtus.*

For the same Reasons assigned in Sect 14, and this
 Section, the Forceps ought not to be used as you di-
 rect (i) in the third Case, mentioned by you, because
 the Head cannot be pushed up when above the Pelvis,
 unless the Body moves too ; in which case the Child
 might be turned, and brought by the Feet.

Sect. 16. In the next Case, you suppose (k), ‘ the
 ‘ Child’s Face to be turned to one Side of the Pelvis,
 ‘ when it will be difficult, if the Woman lies on her
 ‘ Back, to introduce the Forceps, so as to grasp the
 ‘ Head with the Blade over each Ear ; because the
 ‘ Head is so often pressed against the Bones, in this
 ‘ Position, that there is no Room to insinuate the
 ‘ Fingers between the Ear and the Os Pubis, so as to
 ‘ introduce the Blades safely, on the Inside of the Os
 ‘ Internum, or push one of them up between the
 ‘ Fingers and the Child’s Head. When Things are
 ‘ so situated, the best Posture for the Woman, is that
 ‘ of lying on one Side, as formerly directed, because
 ‘ the *Bones will yield a little*, and the Forceps, of con-
 ‘ sequence, may be more easily introduced.’

(i) P. 273, Numb. 3. (k) P. 275, Numb. 4.

I cannot help taking notice here, that when you meet with a Difficulty in making use of your favourite Instrument, you seem inclined to run any Length, rather than not have it; and therefore you are obliged to have the Woman laid on one Side (which on all Occasions in general is the best Posture, for the Reasons I have given at large in my *Essay on Midwifery* (1), altho', for the sake of differing from others, you in general order her to be laid on her Back) and to make your Forceps of Use, you'll make the Bones (of the Pelvis, I suppose you mean, altho' you have not told us, whether you mean them, or those of the Child's Head) to yield a little; which I absolutely deny can happen for several Reasons, too many here to be inserted; and because I have seen several opened, not only such as have died undelivered, after having had greater Strefs upon the Bones, than if she had been delivered in a natural Delay; but I have likewise seen those opened who have died after a very hard Labour, when a large headed Child has been born; yet after the nicest Scrutiny, we could never find the least Separation of the Bones, or any Thing like it. The same has been done by others, who yet could never perceive any Signs of it.

Now, let us see how you proceed, 'you suppose
' the Patient to lie on the left Side, and the Forehead
' of the Child turned to the same Side of the Pelvis,
' let the Fingers of the Operator's right Hand be introduced along the Ear, between the Head and the Os
' Pubis, until they pass the Os Internum: If the Head
' is *so unmoveably fixed in the Pelvis, that there is no*
' Passage between them, let his left Hand be pushed
' between the Sacrum and the Child's Head, *which being raised as high as possible, above the Brim* of the
' Pelvis, he will have Room sufficient for his Fingers
' and Forceps.' Then the next Operation is 'to slide
' up one of the Blades with the right Hand.' The

(1) P. 104, Sect. 2.

third is ‘ to withdraw the left Hand, with which he
 ‘ may hold the Handle of the Blade already intro-
 ‘ duced, while, in the fourth Place, he insinuates the
 ‘ Fingers of his right Hand at the Os Pubis, as be-
 ‘ fore directed, and pushes up the other Blade, &c.
 ‘ &c.’ And towards the Conclusion of this Opera-
 tion, ‘ if the Head, you say, will not easily come
 ‘ along, let the Woman be turned on her Back, after
 ‘ the Forceps have been fixed, &c.’

In the last Paragraph you have supposed there was
 no Room to insinuate the Fingers between the Ear and
 Os Pubis without the yielding of the Bones, which
 will scarce be allowed you.

Secondly, in this Paragraph you lay it down, ‘ that
 ‘ the Head *is so immoveably fixed in the Pelvis*, that
 ‘ there is no Passage between them; how must then the
 ‘ Operator’s left Hand be pushed up between the Sa-
 ‘ crum and the Child’s Head? Or how can it be raised
 ‘ high above the Pelvis?’ For my own Part, had I not
 known your Country, I should from this, and some
 other Parts of your Book, imagined you to have come
 rather West than North of *England*.

And, Thirdly, I must remark, as I before took no-
 tice, that when the Head can be pushed up, the
 Child may, *cæteris paribus*, be turned, and brought
 out by the Feet, instead of putting the poor Wo-
 man to so much Pain and Trouble, by so long and
 tedious an Operation.

Sect. 17. In the next Page you say (*m*), When
 ‘ the Face presents, resting on the upper Part of
 ‘ the Pelvis, the Head ought to be pushed up to the
 ‘ Fundus Uteri, the Child turned and brought by the
 ‘ Feet, because the Hind-head is turned back on the
 ‘ Shoulders, and unless very small, cannot be pulled
 ‘ along with the Forceps; but should it advance pret-
 ‘ ty fast in the Pelvis, it will sometimes be delivered
 ‘ alive, without any Assistance: But if it descends

‘ slowly, or after it is low down, sticks for a considerable Time, the long Pressure on the Brain frequently destroys the Child, if not relieved in Time, by turning or extracting with the Forceps.’

You certainly had no Occasion to say here, *that the Child must be turned, because the Hind-head is turned back on the Shoulders, and unless very small, cannot be pulled along with the Forceps* : For if it could be turned, as I observed before, Sect. 14, 15, 16, it should, *cæteris paribus*, always be brought by the Feet ; and the Forceps ought never to be thought on ; but instead of that you would have the Forceps here first used, as in Numb. 2, 3, and 4, &c. &c. And in such Cases wherein it cannot be used properly, then you would turn the Child as in this Case ; which contradicts your Declaration (n), where you say, ‘ *For my own Part, I have always avoided the Use of Instruments as far as I thought consistent with the Safety of my Patients, and strongly inculcated the same Maxim upon those who have submitted to my Instructions* :’ And it likewise is contrary to your Assertion in another Place (o), ‘ *That the Reader ought not to imagine, that I am more bigotted to any one Contrivance than to another*,’ I observed before, Sect. 7, you make it an indifferent Thing, whether an Operator turn the Child, or bring it with the Forceps : And in the Cases just above mentioned, you advise the Use of the Forceps, when the Child may be turned, and brought by the Feet, because you admit the Head to be above the Pelvis, or may be pushed up above it ; in all which Cases, *cæteris paribus*, the Child may be turned, as well as in this, wherein your beloved Forceps cannot be always used. And in other Places (p), you order the Forceps to be tried, even when the Head is *too large*, or the Pelvis too narrow, to turn the Child, and bring it by the Feet, because *in so doing you may give the Woman a great deal of Pain, and yourself much unnecessary Fatigue*, and yet, rather than not bring the For-

(o) P. 256.

(p) P. 247.

ceps into Use, you direct to try the Forceps, even when the Head is too large to be brought away by the Feet, without the Help of the Crochet ; by which Method (the Use of the Forceps) the Woman must undergo a great *deal of Pain*, and *much Fatigue*.

Sect. 18. The next Case you mention is the following, wherein you say (q), ‘ When the Head is detain’d very high up, and no Signs of its descending appear, and the Operator having stretched the Parts with a View to turn, discovers that the Pelvis is narrow, and the Head large, he must not proceed with turning, because after this hath been performed, perhaps with great Difficulty, the Head cannot be delivered without the Assistance of the Crochet.’

You ought to have given as full Directions as possible, how Readers know when the Head was too large, or the Pelvis too strait for the Cranium to be brought out whole.

The Diagnostics are to be taken from the Dimensions of the Brim of the Pelvis, and from the Bulk of the Child’s Head. I shewed in my *Essay* (r), that the general Distance betwixt the Os Sacrum, and the Inside of the Os Pubis, at the Top, was commonly about four Inches and a Quarter, which you also confirm (s) ; so that an Operator by introducing his Hand, or some of his Fingers across the Pelvis, with one Edge or Side of the Hand, touching the convex Part of the Sacrum, and with the other the Os Pubis, he may form a very good Guess at the Distance of those Bones. This Knowledge is to be obtained by a Person frequently introducing his Hand thus into the Pelvis of several Skeletons of different Sizes. The Operator having by these Means found whether the Passage be of its regular Size ; or if too small, can nearly guess the Diameter ; and then his next Business is to find out the Bulk of the Child’s Head.

I shewed in my *Essay* (t), That from one Side of a

(q) P. 279. (r) P. 287. (s) P. 78. (t) P. 281.

new-born Child's Head to the other is about three Inches and a half, in a general Way ; but be it more or less, the Operator, by measuring its Diameter cross-ways, either betwixt two Fingers, or betwixt a Finger and a Thumb, may guess tollerably near as to its Diameter ; or by withdrawing his Hand in that Position through the Pelvis betwixt the Sacrum and Pubes may be confirmed, how much it will be necessary for the Head to yield before it can pass into the Pelvis, whose Bones cannot yield at the Brim.

The next Thing is for the Operator to form a Judgment how far the Child's Head can conform with Safety to the Shape and Size of the Brim of the Pelvis, of which he must judge, *cæteris paribus*, by the Largeness or Smallness of the Fontanel, or opening at the Angles of each Os Bregmatis, and Os Frontis ; or the Sutures betwixt those Bones, and by the Hardness or Softness of the whole Cranium : For if the Bulk of the Head be too large in Proportion to the Entrance into the Pelvis ; and that the Opening of the Fontanel is very small, and at the same time, that the Bones of the Cranium are almost all fixed, and so firm as scarce to yield at all, then he may be certain the Head cannot pass through the Brim into the Pelvis. But, on the other Hand, if he finds the Openings, as before mentioned, large, the Bones not firmly united, nor any great Difficulty in making them yield, then there will be no great Doubt but the Head may pass through the Brim into the Pelvis, without letting out any Part of the Contents, altho' it may seem to one not very conversant in these Things, to be too large at first. In this Case therefore, the Child, *cæteris paribus*, ought to be turned, and extracted by the Feet.

SECT. 19. In the Remainder of the last Paragraph you put your Readers upon a very dangerous Method of Practice ; for you say, ' No doubt it would be a
' great Advantage *in all Cases* where the Face or Forehead
' presents, if we could raise the Head so as to alter the bad
' Position, and move it so with our Hand, as to bring
' the Crown of the Head to present ; and indeed this
' should

‘ *should always be tried*, and more especially when the
 ‘ Pelvis is *too narrow*, or the Head *too large* ; and
 ‘ when we are dubious of saving the Child by turn-
 ‘ ing.’

Whoever attends to what I have advanced in Sect. 1st, 2d, 4th, and 5th, will easily see that your Instructions here are quite wrong, and attended with many bad Consequences : And I have shewn in the last Section, that the Child may be saved by turning, altho’ the Head may be *so large*, or the Pelvis *so narrow*, that the Child cannot pass the Brim by the sole Efforts of the Mother, and even when the Vertex presented with the Forehead to the Side, or Back-part of the Pelvis, and when the Woman has had strong Pains for many Hours after the Membranes are broke, and the Head resembled the small End of a Sugar Loaf.

You then say, ‘ If you succeed, and the Woman is
 ‘ strong, go on as in natural Labour ; but if this fails,
 ‘ then it will be more advisable to wait with Patience
 ‘ for the Descent of the Head, so as that it may be de-
 ‘ livered with the Forceps, and consequently the Child
 ‘ may be saved.’

Here again you have directed a Method of Practice very pernicious to the Mother, and very dangerous to the Child, by keeping its Head longer compressed than necessary, because, if the Child’s Head (which is *too large*, and the Pelvis *too narrow*, as you have stated the Case) can be brought down into the Pelvis by the sole Efforts of the Mother, I will venture my Reputation as a Practitioner, that it might have been sooner delivered by turning the Child, and then consequently the Head would not be so long compressed, whence some of the Mischiefs before taken notice of, may be avoided, Sect. 2, Numb. 2. And, in the next Place, I am as certain, that if the Woman be *so strong*, (which you here suppose) *as to propel* the Head, as above mentioned, into the Pelvis, that then, *cæteris paribus*, the same Means will expel it out of the Pudendum, where there is less Resistance, and this you are con-
 vinced

vinced of, because you say, in another Place, ‘ The
 ‘ Difficulty, when the Head is high up, is from the
 ‘ *Restraint at the Brim*, and when it passes *that*, the
 ‘ Head is *seldom retained in the lower Part*, unless
 ‘ the Patient be weak.’ Why then do you advise the
 Head to be left in a compressed Condition in the former Case, and to wait with Patience for the Descent; and yet in the latter Case, where it cannot be so compressed, advise your Pupils to *deliver immediately*, when the Head is at the Os Externum, because you say, the Child is *frequently lost by the violent Compression of the Brain*? p. 245, 247.

I cannot leave this Paragraph without taking notice, that by your Words it seems as if the principal Intention of *waiting with Patience for the Descent of the Head*, was only to have the Child delivered by your beloved *Forceps*; or else why are you under such great Apprehensions at the bad Consequences of *a violent Compression of the Brain* (as you tell us in your next Page) *when the Face is at the Os Externum, that the Child must be speedily delivered*; and yet you can wait with so much *Patience for the Descent of the Head, so as that it may be delivered with the Forceps*, while it is more violently compressed by the *Restraint of the Brim of the Pelvis*, and whence the Injuries must be greater on all Sides. Nay, you acknowledge, ‘ That the chief Cause that prevents
 ‘ the Child’s Head from being delivered when low in
 ‘ the Pelvis, is by the *Uterus strongly contracting round*
 ‘ the Child’s Neck, even when the *Head is so loose in*
 ‘ *the Pelvis*, that we can sometimes push our Fingers
 ‘ all round it.’ Whence it is evident, the Brain cannot be greatly compressed there; nor yet can the Os Externum squeeze it so much as the Brim of the Pelvis.

You then add, ‘ When the Face of the Child is
 ‘ come, and sticks at the Os Externum, it seldom
 ‘ can be returned, on account of the Contraction of
 ‘ the Uterus:’ But I must observe, that in such a Case, when both Mother and Child are regularly made, that the Head can never be returned into the Womb, above the Pelvis.

Sect. 20. In the same Page you tell us, ‘ When
 ‘ the Chin is towards the Sacrum, the Hind-head
 ‘ pressed back betwixt the Shoulders, so that the Face
 ‘ is kept from rising up below the Os Pubis, the Head
 ‘ must be pushed up with the Hand to the Upper Part
 ‘ of the Pelvis, and the Forceps introduced, and fixed
 ‘ on the Ears, &c.’

Now, if the Uterus be so little contracted, that the Head may be pushed up with the Hand ; an able Operator might turn and extract the Child by the Feet, which, for the Reasons already assigned, is safer than to deliver with the Forceps : And for the same Reason, the Method recommended by you in your general Maxims for using the Forceps, must be wrong, because you say (*u*), ‘ Let the Parts be opened, and the Fingers
 ‘ pass the Os Internum ; in order to which, if it cannot be otherwise accomplished, let the Head be raised *two or three Inches*, that the Fingers may have more Room ; if the Head can be raised *above the Brim*, your Hand is not confined by the Bones.’ Now if the Head can be raised *two or three Inches*, I am certain the Child may be safely turned, and extracted by the Feet, because the Head is not so large, but it will pass the Brim of the Pelvis without too much Compressure.

Sect. 21. When the Child presents with its Head, and can neither be delivered when turned, nor be extracted whole, whether alive or dead, the Head must be opened, and its Bulk be lessened, for the Security of the Mother’s Life. Various Methods of performing this Operation have been contrived ; the chief of which I have set forth in my Essay (*w*), wherein I have fairly shewn most of the Advantages and Inconveniences attending each Instrument, and Manner of using it : I shall therefore only in this Place take notice of such as are preferable to those recommended by you ; by which I believe it will appear, that your Method is neither the *easiest, safest, nor so expeditious* as that recommended by me.’

(*u*) P. 284. (*w*) From Sect. 101, to 107, inclusive.

After speaking of several Instruments for Delivery you tell us (x), ' There are other later Contrivances ' used and recommended by different Gentlemen of ' the Profession, such as *Mauriceau's* Fire-Tête, *Simpson's* Scalp-Ring,' (which the Inventor calls a Ring Scalpel) ' and *Ould's* Terebra Occulta, with the Improvements made in it by Dr. *Burton* of *York*; all ' these Instruments may be used with Success, if cautiously managed, so as not to injure the Woman.'

I can't help taking notice, that in your Introduction, Page 67, you say, ' *Ould* prefers his Terebra Occulta ' to the Scissars, *probably* because he did not know the ' proper Dimensions of this last Instrument.' But had you read his Book, and attended to what he says, you would have found he urged very strong and sufficient Reasons to justify him for his preferring the Terebra Occulta to the naked Scissars, (which you use) be their Dimensions what they will; for he says, Page 165, ' That the ' opening the Head with the Scissars is but a poor Contrivance; which put me upon considering, whether ' a cutting Instrument might be contrived so as to be ' introduced into the Womb, without endangering either it or the Vagina; wherefore I considered, that ' the last presses almost undiquaque, on every Thing ' that passes through it, how small soever; and therefore, that nothing could defend it from the Mischiefs ' of a cutting Instrument, but something *in the Nature of a Sheath*, wherein the Knife must be hid till it ' can be conducted to the Part whereon it is to act-' Whence I must remark, that it is not very candid to attempt to insinuate, that a Person's Ignorance might be the Motive for his Actions, when he has given sufficient Reasons for his Practice; and had you thought them defective, you ought to have shewn wherein that Defect lay.

You say in the next Page, ' That the following ' Method, if exactly followed according to the Cir-

‘ circumstance of the Case, seems, of all others hitherto
 ‘ invented, the easiest, safest, and most certain, *espe-*
 ‘ *cially when it requires great Force to extract the Head.*’
 But I must observe, that the Force necessary to ex-
 tract the Head, lessens as the Head diminishes in Bulk;
 so that where the Size thereof was the only Obstacle to
 its Expulsion, the Cause being removed, the Effect
 must cease; but I cannot help saying, that your using
 the Expression of *great Force to extract the Head*,
 seems to be with a View of having your Forceps, or,
 (the next to it) the double Crotchet used, because
great Force is required.

You then tell us, ‘ The Operator must be provided
 ‘ with a Pair of curved Crotchets, a Pair of Scissars
 ‘ about nine Inches long, with Rests near the Middle
 ‘ of the Blades, and the Blunt-hook.’

When the Head presents as above-mentioned, you
 add (y), ‘ If it be not held down pretty firm, by the
 ‘ strong Contraction of the Uterus, let it be kept
 ‘ steady by the Hand of an Assistant, pressing upon
 ‘ the Belly of the Woman.’

You have here recommended a Method of Practice
 very injurious to the Patient, even supposing it could
 effectually answer your End (which it will not do) be-
 cause at this Time the Muscles, &c. of the Abdomen
 are so stretched, and so sore, that the Patient cannot
 bear any Pressure that can be of the least Service to
 keep the Head at, or within the Brim of the Pelvis,
 so fixed, that it cannot slip when the Scissars are ap-
 plied to it, as hereafter you direct. Why then should
 the poor Woman be put to more Pain than necessary,
 especially as the Head may be kept fast by the Hand,
 which you direct to be introduced? For you say,
 ‘ While the Woman’s Belly is pressed, first let the
 ‘ Operator introduce his Hand, and press two Fingers
 ‘ against one of the Sutures of the Cranium;’ then,
 Secondly, ‘ take his Scissars, and guiding them by

‘ the Hand and Fingers, till they reach the hairy
 ‘ Scalp, push them gradually into it, until their Pro-
 ‘ gress is stopped by the Rests. Their Points ought
 ‘ to be so sharp as to penetrate the Bones with a mode-
 ‘ rate Force ; but not so keen as to cut the Operator’s
 ‘ Fingers, or the Vagina, in introducing them.

‘ If the Head slips aside in such a Manner, as that
 ‘ they cannot be pushed into the Skull at the Suture,
 ‘ they will make their Way through the solid Bones,
 ‘ if they are moved in a semicircular Turn, like the
 ‘ Motion of boring, and this Method continued till
 ‘ you find the Point firmly fixed ; for, if this is not
 ‘ observed, the Points slide along the Bones.’

Here again you put your Readers upon another un-
 necessary Operation, which may prove a dangerous
 one too ; for if the *Head slips aside* in such a Manner,
 as that the Scissars Points cannot be *pushed into the Skull,*
at the Suture, what must hold the Skull steady, while
 the Scissars *make their Way through the solid Bones* ? For
 less Force would hold the Head firm, while the Points
 were pushed through the Integuments to the Brain,
 betwixt the Bones of the Cranium, than is neces-
 sary, while you are boring through the Bones.
 But supposing this Operation to be finished, and the
 Scissars thus (z) forced into the Brain, as far as the Rests
 at the Middle of the Blades, where they are to be kept
 firm ; then, in the third Place, ‘ The Hand that was
 ‘ within the Vagina is to be withdrawn :’ And fourthly,
 ‘ The Operator must take hold of the Handles with
 ‘ each Hand, and pull them asunder, that the Blades
 ‘ may dilate, and make a large Opening in the Skull ;
 ‘ then, Fifthly, they must be shut, turned, and again
 ‘ pulled asunder, so as to make the Incision (or rather
 ‘ tearing) crucial ; by which Means the Opening will
 ‘ be enlarged, and sufficient Room made for the Intro-
 ‘ duction of the Fingers.’ The sixth Operation, ‘ is
 ‘ to close the Scissars again, and let them be introduced

‘ even beyond the Rests ; when, in the seventh place,
 ‘ they must again be opened, and turned half round
 ‘ from Side to Side, until the Structure of the Brain
 ‘ is so effectually destroyed, that it can be evacuated
 ‘ with Ease. This Operation being performed, let
 ‘ the Scissars, in the eighth Place, be shut and with-
 ‘ drawn ; but, if this Instrument will not answer the
 ‘ Purpose, the Business may be done by introducing
 ‘ the Crochet within the Opening of the Skull. The
 ‘ Brain being thus destroyed, and the Instrument
 ‘ withdrawn, let him introduce his Right-hand into
 ‘ the Vagina, and two Fingers into the Opening which
 ‘ hath been made, that if any sharp Splinters of the
 ‘ Bones remain, they may be broken off, and taken
 ‘ out, lest they should injure the Woman’s Vagina,
 ‘ or the Operator’s Fingers.’ This compleats your
 ninth Operation.

The Dangers and Inconveniences attending this whole
 Operation arise, first, from the Introduction of a naked
 sharp-pointed Instrument into the Uterus, or Va-
 gina : Secondly, from the Points of the Scissars slip-
 ping off the Bones : Thirdly, from the opening and
 shutting the Scissars while they remain within the
 Woman : And, Fourthly, when an Opening is made
 in the Head, the Operator cannot always introduce a
 Crotchet, or any other Instrument into the Orifice.

First, as I shewed in my Essay (a), ‘ That although
 ‘ the Head of the Child be within two or three Inches
 ‘ of the external Orifice of the Pudenda, without any
 ‘ additional Aggravations of swelling, &c. there was
 ‘ great Danger of wounding the Mother, by intro-
 ‘ ducing a sharp naked Instrument ; how much more
 ‘ then must the Danger be increased, when the Head
 ‘ is at a greater Distance, or inclosed in a swelled part ?
 ‘ Add to all this the Patient’s Motion of her Posteriors,
 ‘ from her Pain, &c. the least Alteration of which

(a) Sect. 104. p. 222.

‘ might be of the worst Consequence, while this naked
 ‘ Instrument is within the Vagina, or Womb.’

The second danger may arise from the Points of the Scissars slipping from off the Bones in attempting to bore through the Cranium; and this may easily happen, even supposing the Head to be fixed, as is evident to any Person who will consider that the Skull is in part convex, whereby the least Motion of the Woman may occasion the Points of the Scissars to slip; or if the Operator should vary his Hand that holds the Scissars in an oblique manner, the Points would again slip: But if *the Head moves sideways* in such a manner *as that the Scissars cannot be pushed into the Skull at the Suture*; the Danger, in this Case, will be increased, because the Bones are harder and tougher, as I observed above, than the Integuments betwixt the Sutures.

Thirdly, Dangers also arise from the opening and shutting of the Scissars, while they are in part or chiefly within the Woman.

In one Place you say, (b) ‘ in lingering Labour, when
 ‘ the whole Hand is within the Vagina, it will some-
 ‘ times be found necessary to insinuate the Fingers with
 ‘ the Flat of the Hand between the Head and Os In-
 ‘ ternum; for when this Precaution is not taken in
 ‘ time, the Os Uteri is frequently pushed before the
 ‘ Head (especially that Part of it next the Os Pubis)
 ‘ even through the Os Externum.’ And I must add, that a large Hand will not pass this Orifice so easily as a smaller; and that the more oblique the Uterus is, the more will these Parts be liable to be protruded, as happened in the Case above-mentioned, Sect. 4. when one Side of the Vagina will also hang like a Bag betwixt the Os Externum and Internum; which you also acknowledged by the Directions you give in another Place (c): For you say, ‘ When the Head is high, the
 ‘ Forceps may be locked in the Middle of the Pelvis;
 ‘ but, in that Case, *great Care must be taken in feeling*

(b) P. 223.

(c) P. 258.

‘ with the Fingers all around, that no Part of the Vagina be included in the locking.’

You have here acknowledged that the Woman may be injured by the locking of the Forceps, *if great Care be not taken in feeling with the Fingers all around*; whereby the Parts of the Woman could only be *crushed*. But what is to guard those very Parts, in the like Case, while you are opening and shutting the Scissars so often, when both Hands are to be on the Outside of the Os Externum, especially as the Patient may not only be bruised, but may be in Danger also of having Pieces cut out betwixt the Axis and Rests of the Scissars? Then why are these Hazards to be run, when safer Methods may be taken, especially as you acknowledge the Parts next the Os Pubis are more liable than others to hang down, or be protruded forwards?

Fourthly, when the Cranium is opened, the Operator can't always (nay very rarely can) introduce a Crochet, or any other Instrument, into the Opening; especially when the sole Obstacle to the Child's advancing is owing to the Bulk of its Head. For, as I observed in my Essay (d), *‘ After the Incision is made, and the Structure of the Brain is in part broken, and the Scissars withdrawn, the very Pressure of the Womb, &c. will squeeze the Edge of one Os Bregmatis in such a manner, as to make it lap over the other, which will render it difficult in all cases, and in some impossible to introduce the Crochet to break the Structure of the Brain as you direct it.’* And when the Brain is broken, the Contents of the Cranium will, at every Pain, be more squeezed out, and then one Edge of the Bones will be compressed over the other so much more, and thereby render the Introduction of an Instrument into the Incision, or even of a Finger, the more difficult.

You seem to doubt the Scissars will not sufficiently *answer the Purpose*, and then say the Fingers are easier introduced than an Instrument, as you direct in your

ninth and last Operation, before the Extraction of the Foetus, because they *can be bent* while they are within the Uterus or Vagina. Although in this Case you have not told us how the Child is to be delivered, whether to be left to the sole Efforts of the Mother, or to be assisted by the Operator's Fingers when within the Skull; yet I fancy you mean the latter, because, in the very next Case, you say (*e*), 'If the Case be an
' Hydrocephalus, let him fix his Fingers on the Inside
' and his Thumb on the Outside of the Opening, and
' endeavour to pull along the Skull in time of a Pain;
' but, if Labour is weak, he must desire the Woman
' to assist his Endeavours by forcing down; and thus
' the Child is frequently delivered, because, the Water being evacuated, the Head collapses of course.' This is the tenth and last Operation.

Sect. 22. You have here put your Readers upon a very dangerous and tedious Operation, especially as you acknowledge it does not require very great Force to extract the Child, after the Head is opened, and the Structure of the Brain is broken. The Dangers of your Method I have set forth, and now I shall shew a much *safer, easier, and expeditious one*, which is chiefly taken from my Treatise on the Theory and Practice of Midwifery; and I shall likewise set forth the pretended Inconveniences thereof in their full Light, and answer such Objections as have hitherto come to my Knowledge.

I will now suppose a Patient in the same Condition as stated by you in the last Section, in which case, 'I have directed (*f*) the Fingers, or one Hand if requisite, the Left suppose) to be introduced into the Vagina, to reach the Child's Head, by which the Operator may find the Situation of the Head; and, if it be not fixed, can therewith hold it, while, with a Thumb or Finger, he find the Sutura Sagittalis, and Lambdoidal Suture; into the first of which the

(*e*) P. 301. new Edit. Numb. 3. (*f*) P. 233. Sect. 107.

‘ Instrument is to be introduced, or as near as possible
 ‘ to the Apex; then with the other Hand the Operator
 ‘ must take my Extractor, holding his Fore-finger
 ‘ against the End of the Capsula next to the Handle,
 ‘ to keep it firm, with that Side of the Capsula in
 ‘ which the Skrew is fixed toward the Hand that is in-
 ‘ troduced, and gently slide the other End of the Cap-
 ‘ sula along the Hand or Fingers that are within the
 ‘ Vagina, till it reaches the Child’s Head, whereby
 ‘ the Upper-end of the Capsula will be guided to the
 ‘ Suture into which the Piercer is to be forced, while
 ‘ the Child’s Head is kept fixed by the Fingers or Hand
 ‘ that is in the Womb.’

Thus far both our Methods are nearly alike; except-
 ing that by mine the Patient is no way tormented by
 any of the Assistants compressing her Abdomen, in-
 vainly attempting to hold the Head fast; and that she
 cannot be injured even if she was to move her Buttocks
 very much, because my Instrument is guarded by the
 Capsula from hurting her in every Respect, while yours
 is quite naked.

The next thing to be done to the Child is to break
 the Fabric of the Brain, which ‘ I do by expanding the
 ‘ Wings of my Extractor, that are already within the
 ‘ Cranium, which is done by applying the Thumb of
 ‘ the Right-hand to the Screw or Bottom that is in
 ‘ the Handle of the Instrument, and thrusting it up;
 ‘ and then turning the Instrument half round once,
 ‘ twice, or thrice, will sufficiently destroy the Struc-
 ‘ ture of the Brain; that, whenever the Head is squeezed,
 ‘ the Contents will easily be discharged; especially as
 ‘ those Parts nearest the Orifice are most broken, and
 ‘ as that Part of the Skull is to yield the most.’ Add to
 this, that, during this Operation, the Woman is not
 the least sensible of any Motion, because the Instru-
 ment is only moved half round and returned again
 within the Hand that is introduced. But, instead of
 this easy Motion, *you are obliged first to withdraw your*
Hand, from within the Vagina. Secondly, with both
Hands

Hands to expand the Handles of the Scissars to dilate the Skull. Thirdly, to shut, turn, and again expand the Handles. Fourthly, to shut the Scissars, and introduce them farther. Fifthly, they are to be expanded again, and turned half round from Side to Side, to break the Brain. And Sixthly, the Scissars are again to be shut and withdrawn. But, in case this Method does not effectually destroy the Structure of the Brain, of which you have given no certain Rules to know by; then the Crochet is to be introduced within the Opening of the Skull to perform the Work; the Difficulty of doing which is already explained, Sect. 21. No. 4.

Sect. 23. After breaking the Structure of the Brain, the next thing is to have the Patient delivered, whether by the Efforts of the Woman alone, or by other Assistance from the Operator. If the sole Obstruction to the Birth of the Child has been owing to the Size of the Head being a little too bulky, then by removing the Cause the Mother can bring forth the Child without any other Assistance; which may be forwarded a little by the Operator, who may either squeeze the Bones of the Head almost close, and extract them with his Hand; or may introduce a Finger or two into the Opening of the Child's Skull, and therewith assist the Mother's Efforts.

But you say (g), 'When the Pelvis is *narrow*, the Head requires much greater Force to be brought along, unless the Labour-pains are strong enough to press it down and diminish it, by squeezing out the Cerebrum; in this Case, let the Operator withdraw his Fingers from the Opening;' (which I observed, Sect. 21. was your tenth Operation) 'and slide them along the Head, past the Os Uteri;' (whence I must remark that all the other Operations have been performed by you, while the Head was above the Os Uteri, and within the Uterus; hence the Dangers to the Mother are greater; 'then, in the twelfth Place,

‘ with his Left hand taking one of the Crochets, intro-
 ‘ duce it along his Right-hand, with the Point towards
 ‘ the Child’s Head, and fix it above the Chin, in the
 ‘ Mouth, back Part of the Neck, or above the Ears,
 ‘ or in any Place where it would take firm Hold. Hav-
 ‘ ing fixed the Instrument, let him, in the thirteenth
 ‘ Place, withdraw his Right-hand, and with it take
 ‘ hold on the End or Handle of the Crochet; then,
 ‘ fourteenthly, introduce his Left-hand to seize the
 ‘ Bones at the Opening of the Skull (as above directed)
 ‘ that the Head may be kept steady, and pull along
 ‘ with both Hands.’

All these painful Operations of *introducing the Hand*
along the Child’s Head, betwixt it and the Uterus—of in-
roducing and fixing the Crochet with, at best, an uncertain
Hold—of withdrawing one Hand, and introducing the
other, may be avoided: For my Extractor being in-
 troduced, the Wings expanded, as mentioned in Sect. 22.
 and ‘ one of each Wings being fixed against the Centre
 ‘ or strongest Part of each Os Bregmatis, as directed
 ‘ in my Treatise (b), which is done in course, when
 ‘ the End of the Capsula is across the Suture, as may
 ‘ be felt by the Finger that is within the Vagina or
 ‘ Uterus; then the Operator must keep the End of one
 ‘ Finger on the Outside of each of the Os Bregmatis,
 ‘ so that the Bones may be firmly held betwixt the
 ‘ Wings and Ends of the Fingers; by this means the
 ‘ Operator will find if the Bones and Integuments give
 ‘ way when great Force is applied, which, if the Child
 ‘ has been long dead, or if there be an Hydrocephalus,
 ‘ they sometimes will do.’ But then in that State,
 when the sole Obstacle to Delivery has been the Bulk
 of the Head, *sublatâ causa tollitus effectus*, and so the
 Child will be brought out with very little Force, if any
 Assistance should be wanting to be added to the Mother’s
 Efforts, in which Case the above Hold will be suffi-
 cient.

(b) Sect. 107. p. 234.

‘ The Instrument and Fingers being fixed as above directed, the Operator must extract the Child, pulling with both Hands, one having hold of the Instrument within the Vagina, with the Fingers against the Skull, and the other having hold of the Handle of the Extractor. Hence the following Advantages are evident: For, first, this Instrument being fixed in the Vertex, guides it directly in the Centre of the Passages.’

Secondly, ‘ By pulling that Part it makes the Head more oblong, and consequently of a lesser Diameter, which you allow (i) to be an Advantage.’

Thirdly, ‘ If there be Occasion to pull one Side of the Head more than the other, so as to get it from under, either the projecting Part of the Sacrum, or Os Pubis, it is easily performed by drawing the Handle, in the first Case, towards the Os Pubis; in the last, towards the Perinæum.’

Fourthly, ‘ The Structure of the Brain being broken, the Cerebrum is easily squeezed out through the Opening made with the Piercer, as the Bones are compressed, and are at the same time prevented from collapsing by the Extractor; for the more they lap over, the more they hinder the Exit of the Brain.’

Fifthly, ‘ The Wings of the Instrument being fixed against the strongest Part of each Os Bregmatis, the greatest Force may be exerted with less Danger, cæteris paribus, than by any other Instrument; because nothing can yield, but the Operator may feel it with his Fingers; and the Force is applied to a greater Surface; for the Wings do not pull with their Ends, but with their flat Sides, against the Bones, whence the Extractor will not so easily slip as the Crochet, as used by you in the Case above-mentioned.’

Sixthly, ‘ The Danger of wounding the Patient, as with the Scissars, Crochet, or other naked Instrument, is avoided.’

(i) P. 261.

Seventhly, ' It is evidently fixed with more Ease
' and Safety to both the Woman and the Operator.'
All which Advantages are apparent to the weakest of
Capacities. And, eighthly, that Instrument may be
withdrawn at any Time with Safety; for by pulling
with the Thumb at the Screw or Button of the Handle
of the Extractor, the Wings are brought parallel to
the Sides of the Staff; and by pushing with the Fore-
finger of the same Hand against the End of the Cap-
sula next to it; or by holding that Tube by the Hand
that is within the Vagina, the Piercer is brought into
the Hollow of the Capsula, and the Woman is again
secured from being injured by its Point or Edge.

Sect. 24. In the last-mentioned Case, wherein *much*
greater Force was requisite than in the preceding, if
one Crochet and one Hand cannot perform the Ope-
ration, then you say (k), ' If the Head is still detained
' by the *uncommon narrowness* of the Pelvis, let him
' introduce his Left-hand along the opposite Side, in
' order to guide the other Crochet, which is the four-
' teenth or fifteenth Operation; then, in the sixteenth
' place, guide and lock it with its Fellow, in the
' manner of the Forceps; and, in the last Place, pull
' as directed with them.'

I must observe, that your Instructions in this Case are
not *so clear and perspicuous* as they should be, because
there is a great deal of Difference between a Child's be-
ing hindered from advancing by the Throws alone, from
its Head being too bulky, with a natural proportionable
Pelvis, and when it is obstructed by one that is too
narrow. In the first Case, barely lessening the Head
by discharging some of its Contents, will *cæteris pari-*
bus answer the End; or however with a moderate ad-
ditional Force, as mentioned in Sect. 22, 23. But, in
the latter Case, although the Head be ever so much les-
sened, yet it can be advanced no farther than into the
Pelvis, because the Shoulders and Thorax of the

Child will yet stick above, or in the Brim, by *the uncommon Narrowness of the Bones composing that Opening*; which you say, in the next Page, *seldom occurs*, and yet, in a few Lines after, you say, *it most commonly is the Case*.

In Sect. 18. I gave some general Rules to find out the Diameter of the Brim of the Pelvis, and if the Operator finds the Sacrum and Os Pubis too near each other, after having lessened the Head sufficiently, if the Child do not advance with a reasonable Force, another Method ought to be taken than to pull at the Head, whose Bones are, in that Case, soon separated; the Method of doing which I shall speak to presently, after having made my Remarks on your next Operation.

Sect. 25. ‘ Sometimes in these Cases, Sect. 22, 23, 24, you say (l), ‘ When I find that I cannot succeed by ‘ pulling at the Opening with my Fingers; and if the ‘ Woman has not had strong Pains, I introduce the ‘ small End of the blunt Hook into the Opening, ‘ (which is the seventeenth Operation) and placing my ‘ Fingers against the Point on the Outside of the Skull, ‘ pull with *greater and greater* Force, (which is the ‘ eighteenth) but as we can seldom take a firm Hold in ‘ this manner, if it doesnot soon answer the Purpose, I, ‘ in the nineteenth Place, introduce my Fingers, as ‘ above, farther, and slide the Point up along the ‘ Outside above the under Jaw; and have succeeded ‘ several times with this Instrument, except when the ‘ Pelvis was so narrow as to require a greater Force, then ‘ we must use the others. No doubt it is better first to ‘ try the blunt Hook, because the managing the Point ‘ gives less Trouble, and it can be easier introduced ‘ with the Point to one Side. When the Instrument ‘ is far advanced, this Point may be turned to the ‘ Head; and as a *very narrow Pelvis seldom occurs*, ‘ the blunt Hook will commonly succeed.’

I must remark here, that first you lay it down *that the blunt Hook will commonly succeed, because a narrow Pelvis seldom occurs*: Secondly, *that it is easier introduced*, and the Management of the Point gives less Trouble.

As you have given these Reasons for first using the blunt Hook, after your dangerous and tedious Methods of opening the Head, and breaking the Structure of the Brain, as directed by you in Sect. 21. I hope you will allow me to use the same Arguments that you have brought; for certainly they are full as strong in my Hands as in yours. And if you allow these to be sufficient for preferring the Use of the blunt Hook to that of the Fingers or Crochet, will not the same Parity of Reasoning hold good in other Cases? Is it not partly for these Reasons that my Extractor must be preferable to your Scissars, &c? Are not the Wings of my Extractor, which are already introduced into the Cranium easier expanded and fixed there, and with less Pain to the Woman, than to introduce your Hand into the Vagina or Uterus, and then afterwards to introduce and fix the blunt Hook into the Head, as you direct? And if, by placing your Fingers against the Point of the blunt Hook on the Outside of the Skull, you can *pull with greater and greater Force*, when you have only hold of one Os Bregmatis, or only one Bone of the Skull, with how much greater Force may a Person pull, when my Instrument is fixed to both Sides, whereby the Hold is yet firmer, and consequently greater Strength may be exerted? And when the Hook has only Hold on one Side, it must guide the Head the same Way, and at the same time will pull only an Edge of the Bone into the Centre of the Passage, because the Hook takes hold so near the Edge, which is the weakest Part of the Bone; whereas each Wing of my Extractor reaches nearer to the Centre of each Os Bregmatis, where the strongest Parts of Ossification are. For which Reason, unless the Bones of the Brim of the Pelvis were to give way, they could not bring those

those Bones of the Cranium edgeways, especially while the Fingers are pressed on the Outside of the Skull, on each Side of the Extractor against the expanded Wings, by which a Person may take a very firm Hold, if my Directions be pursued.

You then say, ' If the Method of introducing the Hook into the Opening of the Skull does not answer the Purpose you, in the twentieth Place, introduce your Fingers as above farther, and slide the Point up along the Outside above the under Jaw.'

Every Person who will consider the Consequence of fixing and pulling at a Hook fastened *above the under Jaw*, will find, first, that the under Jaw will not bear so much Force as may be applied by my Extractor, as is evident to any Man who knows the slender Union of the Sides of the under Jaw; and if the Child has been so long time dead, that the Bones of the Cranium are become so loose, as not to bear pulling at, will not the Fastenings of the under Jaw be equally corrupted, and be also sooner separated?

Secondly, It is evident to every one, who knows the Shape of the Head, that any Force applied above the Chin (as you advise) will turn the Apex directly to one Side of the Passage; and at the same time, as the Head has been opened, the Edges of the Bones of the Cranium may wound the Uterus or Vagina, both which should be avoided.

Sect. 26. In the next Place you add (*m*), ' If, when the Head is delivered in this manner, the Body cannot be extracted, on account of its being swelled of a monstrous Size, or (which is most commonly the Case) the Narrowness of the Pelvis, let him (the Operator) desist from pulling, lest the Head should be separated from the Body, and introducing (which is the twenty-first Operation) one Hand, so as to reach with his Fingers to the Shoulder-blades, or Breast.' (In the twenty-second Place)

‘ to conduct along it one of the Crochets, with the Point
 ‘ towards the Fœtus, and fix it with a firm Applica-
 ‘ tion; then (in the twenty-third Place) withdrawing
 ‘ his Hand, employ it in pulling the Crochet, while
 ‘ the other is exerted in the same manner upon the
 ‘ Head and Neck of the Child. If the Instrument
 ‘ begin to lose its Hold, he must (in the 24th Place)
 ‘ push it farther up, and fixing it again, repeat his Ef-
 ‘ forts, applying it still higher and higher, until the
 ‘ Body is extracted.’

I must observe, that but six Lines above this Part of the Paragraph you told us, a very *narrow Pelvis seldom occurs*; and now you say the Body of the Child cannot be extracted on account of the *Narrowness of the Pelvis*, which is *most commonly the Case*.

In the next Place, here are four different Operations to be performed: First, the Person is to introduce one Hand, so as to reach the Shoulder-blades, or Breast; and this I must observe you order to be done while the Head, or however the Neck of the Child is in the Os Externum (or else the Head cannot be said *to be delivered*) in which Case it is evident, that the farther the Hand is pushed up, while either of the above Parts are in the Os Externum, the Woman must be put, not only to more Pain, but must be also in Danger of having the Perinæum torn, since both the Child’s Head or Neck and the Operator’s Hand, and perhaps his Arm (if there be Occasion to push it high up) are in the Os Externum at the same Time.

For the first Operation, you order *the Fingers to be introduced to reach the Shoulder-blades or Breast of the Child*. You have so stated the Case, that the Advancement of the Child is prevented by some or more of these three Articles, viz. To its *being much swelled, being of a monstrous Size*, or (which is *most commonly the Case*) to the *Narrowness of the Pelvis*, and not to its being misplaced either in or above the Brim of the Pelvis. Wherefore, in the two first Cases, from what Cause
 foever

soever they spring, if the Parts be so large as not to be extracted by the Force already mentioned, the Operator will find a very great Difficulty in introducing his Hand as far as the *Shoulder-blades or Breast of the Child*, because he must then force his Fingers betwixt the Os Pubis or Sacrum and those Parts of the Child, *so far as to guide the Crochet to take a firm Hold*. And if those Parts be so large, as to stick therein, notwithstanding the Force above-mentioned, this Operation cannot be easily accomplished but with the greatest Violence; and the Parts of the Woman, that lie betwixt the Child and Bones of the Pelvis must be greatly crushed both by the Hand and Crochet; or else the Shoulders must be pushed up higher, to make room for them, in which Case, the Head (which you suppose to be delivered) must likewise re-enter the Vagina, as will be pretty clear to any Person who remembers the particular Dimensions of the Pelvis which you gave us, and knows the general Length of a Child's Neck. Moreover, the Crochet (which is not made to yield) must add to the Bulk of the Child, already too large: You ought to have directed what sort of a Crochet should here be used; for the crooked sort will, in this Case, distend the Parts more than the strait one, and will be more difficult to be introduced and fixed.

Your second Operation is to introduce and fix the Crochet with a *firm Application*, which, as you direct, must be either on the *Shoulder-blades or Breast*.

I shewed, in my Essay on Midwifery (n), 'That the Articulations of the Limbs of new-born Children are very flexible, their Ligaments being extraordinary long, and the Epiphyses and Apophyses of the Bones being composed of the softest Cartilages.' Whence it is evident they will yield considerably several ways; it therefore is proper to examine which way the Parts in question will yield most.

(n) Sect. 48. p. 113.

Whoever considers the Motion of the Thorax in the Action of Inspiration and Expiration of the Air, will find, that the Motion of the Ribs is upwards towards the Head, and that the Breast is more in Circumference in that State than before; and therefore, whatever brings either all, or part of the Ribs towards the Head, must in such Proportion increase the Diameter of the Thorax. Let him likewise remember that the ribs are made to yield greatly downwards without Injury; but cannot move upwards with the same Ease or Safety. From all which it is evident, that that Method which can answer the same End, without any (or however much less) Approach or Rising of the Ribs towards the Head, must, *cæteris paribus*, be in such Proportion a better and safer Method of Delivery.

Much the same may be said in regard to the Shoulders; for whoever will be at the Trouble of examining, will find, that, when the Shoulders are pressed downwards from the Head, the lower they descend, the less the Circumference round the Child will be; and vice versa: Whence, after the Head is advanced, the fixing the Crochet upon or into the Shoulder-blades, and pulling thereby, must increase the Bulk of the Child more than by the same Force drawing the Shoulders towards the Hips. Whence likewise it is very apparent, that that Method which will press down the Shoulders as last mentioned, must, *cæteris paribus*, be best.

After you have fixed the Crochet, your third Operation is, *to withdraw your Hand, and with it to pull the Crochet, while the other is exerted in the same manner upon the Head and Neck of the Child.* But would it not be better for the Operator to grasp the Crochet also with the same Hand that takes hold of the Neck of the Child, because then, in case the Head and Neck should advance, he can the better judge whether the Parts to which the Crochet is fixed do the same?

Your fourth Operation you say is, *If the Instrument begin to lose its Hold, the Operator must push it farther up, and fixing it again, repeat his Efforts, applying it still higher and higher, until the Body is extracted.* But I must observe, that the higher the Instrument is pushed, *cæteris paribus*, the more difficult is the Operation; and the nearer it approaches to the Child's Abdomen, the less firm will be the Hold, and consequently that Method cannot answer the End.

Having now made my Remarks upon this tedious and dangerous Operation, as well as having taken Notice of some of your Omissions, I shall now demonstrate a more expeditious Method, easier to both Patient and Operator, and less dangerous to the Mother.

Sect. 27. In Sect. 22, I shewed my Method of penetrating the Skull, and breaking the Structure of the Brain; and in Sect. 23. how my Extractor was to be fixed, with the superior Advantage it has to your Method, as well as in extracting the Head. Sect. 25. And should it so happen that the Bones of the Head will not bear sufficient Force to extract the Shoulders and Breast, the Operator may draw the Wings on each Side down again parallel to the Staff as I directed above, Sect. 23. which being done, let him direct the Upper-end of the Capsula, which was against the Cranium, to the Opening at the upper Part of the Sternum, where the Thymus Gland lies, being guided and held there by the Fingers, which were placed on the Outside of the Skull, and then he must push the Piercer into that Part, and expand the Wings, which will not only have a firmer Fastness, as they take hold of a larger Surface than the Crochet; but also are applied to the strongest Part of the Breast, and will draw the Child more in the Center of the Passage than when a Crochet is fixed only on the Outside of the Thorax. Here also it is evident, for the Reasons just mentioned, Sect. 26. that the Parts of the Woman will not be so much extended by this Method.

Sect. 28. In the next Place you fall foul on some of your Brethren (*o*), for telling us, ‘ That the Head ‘ comes down sometimes in a broad flatten’d Form :’ But then you say, ‘ Their *Ideas of these Things are imperfect and confused* ; for if this were the Case, the ‘ same would happen when the Head is forced ‘ down behind with Labour-Pains, into a narrow Pelvis, because the Pressure in both Cases acts in the ‘ same direction ; whereas *we always* find, both in one ‘ and the other, that the Vertex is protruded in a narrow Point, and the whole Head is squeezed into a ‘ longish Form.’

Let the Reader here determine *whose Ideas are most confused* : For in one Place (*p*) you tell us, ‘ The Extent of the Brim of the Pelvis, from Side to Side, is ‘ one Inch more than from the Back to the Forepart.’ In another Place you say (*q*), ‘ The Vertex is sometimes prest, and remains *quite flat*.’ And in another Part you inform us, (*r*), ‘ That the Child’s Head is ‘ *often* long confined, and so compressed in the Pelvis, ‘ that the Bones of the upper part of the Cranium are ‘ *squeezed together, and ride over one another, in different manners*, according as the Head presented : When ‘ the Fontanelle presents, and is pushed down, the Form ‘ of the Head is raised up in *the Shape of a Hog’s Back*.’ And again you tell us (*s*), The Head is liable to be ‘ *squeezed into various Shapes*.’ And consequently if the Pelvis be narrow, *cæteris paribus*, the Head in some Cases must be in a *flatten’d Form*.—But I must observe, that, in the Paragraph above-mentioned (*t*), you are so far from being *clear and perspicuous*, that you have confounded Things, and have not made a proper Distinction betwixt compressing a Child’s Head unopened and when the Contents are evacuated. In the first case, whether the Head be compressed by a narrow Pelvis or by the Forceps, the Brain will in part

(*o*) P. 305. (*p*) P. 78. (*q*) P. 86. (*r*) P. 90, 436.
 (*s*) P. 85. (*t*) P. 305.

be protruded towards the Apex; where, you tell us (*u*), there is least Resistance, because the Occiput and Forepart of the Bottom of the Skull will not so easily give way; whereby the Vertex will be lengthen'd: But in the latter Case, after most of the Brain is discharged out of the Skull, the compressing Force as above, will make the Bones of the Cranium collapse, without *always protruding the Vertex in a narrow Point*, as there is no Resistance from the Contents within.

In your next Paragraph (*w*) you have not shewn that *Candour and Moderation* which the Review Writer, N^o III. commends you for; nor yet are you so free from *vain Exaggerations* as he informs us. For you say, ' Altho' many People exclaim'd against the ' Crochets as dangerous Instruments, from *Ignorance*, ' *want of Experience*, or a *worse Principle*; yet I can ' assure the Reader, that I *never* either tore or hurt ' the Parts of a Woman with that Instrument. I have, ' indeed, several Times hurt my Hand by their giving ' way; till I had Recourse to the curve Kind, which ' in many Respects have the Advantage of the streight; ' and I am persuaded, if managed as above directed, ' will never injure the Patient.'

Notwithstanding your Reflection upon some of the Faculty, without any other Cause than that they differ from your Opinion, yet, you see, I have ventured to attempt (and I hope with Success) to prove that the Use of the Crochet is attended with great Danger; and have demonstrated, that there is a much *safer*, *easier*, and *more expeditious* Method, both for the Patient and Operator, than with that *dangerous* and almost *useless Instrument*. You seem in part to be convinced and to acknowledge, that there are Dangers attending the Use of the Crochets; because you own, (*x*) ' that you *several Times* have hurt the Inside of ' your Hand by their giving way: Wherefore they ought to be avoided. You likewise say, ' Indeed

(*u*) P. 89.(*w*) P. 305.(*x*) P. 306.

‘ young Practitioners, till they are better informed by
 ‘ Custom and Practice, may, after the Head is opened,
 ‘ try to extract it with the small or large Forceps.’
 If they may take this last Method, then why have you
 hitherto been instructing your Pupils (for whose sake
 your Book was chiefly intended) to use those dangerous
 Instruments as well as the Scissars, when so many
 Mischiefs may attend them both ?

Having, I hope, demonstrated the Superiority of
 my Method of delivering Women with my Extractor,
 in the Cases mentioned, both for Ease, Safety and
 Expedition, I shall, as I promised, take notice of such
 Objections to its Use, that I have ever met with, and
 shall shew their Invalidity.

SECT. 29. First, says one, if the Instrument should
 slip, then what is to become of the Woman ? This
 wise Objection holds equally good against every other
 Instrument that slips ; but I have shewn that it never
 can slip, as the Crochet may : And if the Child
 has been so long dead, that the Bones of the Cranium
 are so loose as not to bear any great Force ; the other
 Parts of the Child must also be corrupted in the same
 Proportion. And if the Delivery has been obstructed
 only by the Bulk of the Head, that Part is easier
 opened, and the Structure of the Brain is also broken
 with more Ease, Safety and Expedition, than by your
 Method. But I must add, that if the Extractor be
 applied as directed, it can never slip to hurt any Thing ;
 because if the Bones give way, the Instrument may be
 withdrawn.

The 2d Objection was, *That the Instrument was not
 strong enough for the Force requisite to extract a Child.*
 But this wise Objector did not consider the Difference
 betwixt pulling in a streight Line (by which a small
 Wire will draw a great Weight) and a Body that is
 used like a Lever or Gave-Lock. And as Weight and
 Force are the same Thing in this Case, he may be
 soon convinced, that his Objection is invalid, by hang-
 ing a considerable Weight to the Instrument, when
 fixed

fixed in the same manner as when introduced in the Child's Head.

The 3d Objection I heard of, was made by yourself in your Lectures; wherein you endeavoured to make your Pupils believe it was an useless (tho' you said an ingenious) Contrivance, and could not be used when the Head is above the Brim of the Pelvis: Which is not fact; and some of your Hearers knew to the contrary, having seen me demonstrate its Use in those very Cases, as well as by reading my Book on *Midwifery*: And the higher the Head is, the more this Instrument has the Preference.

The 4th Objection you have likewise made is in your own Treatise, (y) where you say, 'Some recommend
' an Instrument to perforate the Skull, with double
' Points curved and joined together; which, when
' pushed into the Foramen, are separated, and take
' hold on the Inside; but as the opening with the
' Scissars, and introducing the blunt Hook, as above,
' will answer the same End, it is *needless to multiply*
' *Instruments.*'

If you here, by an Instrument, &c. mean my Extractor (as I suppose you do, because I have never heard or read of any Instrument made with moveable Joints except my own) then you have not fairly represented my Extractor, for the Wings are streight and not *curved*. The double Crochet of *Albucasis*, as may be seen in the annexed Plate, Fig. 7. has indeed curved Wings, but then they are fixed and cannot be *separated* or extended.

In the next Place; if we are to regard the Number of Instruments sooner than their Usefulness, then your Argument may be retorted very justly against yourself: And as my Extractor will do the Office of two, nay of three Instruments, it, according to your own way of reasoning, ought to be preferred: For, first, you recommend the Scissars (z) to open the Skull, then,

(y) P. 363. (z) P. 299.

secondly, if they do not sufficiently break the Structure of the Brain, the Crotchet is to be used : And, thirdly, you advise the Use of the blunt Hook to extract the Head ; all which will be easier, safer, and more expeditiously performed by my Extractor alone, as I have already proved, to the Satisfaction of every Person, *whose Ideas of these Things are not imperfect and confused.*

Sect. 30. In your next Chapter you treat of what you call *preternatural Labours*, in defining of which you endeavour to make your Readers believe, that your Definition will *embarrass* and *confound* young Beginners less than that of others : But I herein differ from your Opinion.

You say, (a) ‘ when the Forehead is hindered from
 ‘ coming down into the lower Part of the Sacrum, by
 ‘ an uncommon Shape of the Head or Pelvis, (when
 ‘ the Feet come first) and we can’t extract it by bringing
 ‘ it out with a half-round Turn at the Pubis, we must
 ‘ try to make this turn in a contrary Direction ; and
 ‘ instead of introducing our Fingers into the Child’s
 ‘ Mouth, let the Breast of it rest on the Palm of your
 ‘ Left-hand (the Woman being on her Back) and
 ‘ placing the Right on its Shoulders, with the Fingers
 ‘ on each Side of the Neck, press it downwards to
 ‘ the Perinæum. In consequence of this Pressure, the
 ‘ Face and Chin being within the Perinæum, will
 ‘ move more upwards, and the Head come out with
 ‘ a half round Turn from below the Os Pubis : For
 ‘ the Center of Motion is now where the Fore-part of
 ‘ the Neck presses at the Perinæum ; whereas in the
 ‘ other Method, the Back-part of the Neck is against
 ‘ the lower Part of the Pubes on which the Head
 ‘ turns.

‘ If the Forehead is not turned to one Side, but
 ‘ sticks at the upper Part of the Sacrum, especially
 ‘ when the Pelvis is narrow, let the Operator endea-

‘ your with his Finger in the Mouth, to turn it to one
 ‘ Side of the Jetting-in of the Sacrum.’

In another Place (*b*) you say, ‘ When the Hind-head
 ‘ rests at the Os Pubis, and the Forehead at the up-
 ‘ per Part of the Sacrum, the Head can seldom be
 ‘ brought down until the Operator, by introducing a
 ‘ Finger into the Mouth, moves the same to the Side,
 ‘ brings the Chin to the Breast, and the Forehead into
 ‘ the Hollow of the Sacrum. And in pulling *half the*
 ‘ *Force is only applied to the Neck, the other half be-*
 ‘ *ing exerted upon the Head by the Finger which is fixed*
 ‘ *in the Mouth.* When the Operator, with his Fingers
 ‘ in the Child’s Mouth, *cannot pull down the Fore-*
 ‘ *head into the Hollow of the Sacrum, let him push*
 ‘ *the Fore-finger of his Left-hand betwixt the Neck and*
 ‘ *Os Pubis, in order to raise the Hindhead upwards;*
 ‘ *which being done, the Forehead will come down with*
 ‘ *less Difficulty, especially if he pushes up and pulls down*
 ‘ *at the same Time, or alternately.*’

Whoever will consider the tender Union of the two
 Sides of the lower Jaw at the Fore-angle, (as I men-
 tioned in my *Essay* (*c*) will soon be sensible of the
 great Danger there is of separating them, especially
when half of the Force in pulling, as you direct, is exerted
by the Finger in the Mouth, while only the other half is
applied to the Neck, which would bear a much greater
 Force than the Jaw, without Injury: And though the
 Jaw should not be quite separated, yet Children fre-
 quently receive great Mischiefs, and sometimes can’t
 suck; as you acknowledge in Pag. 435.

To avoid these Dangers, I have directed in my
Treatise, that the Operator, in your first mentioned
 Case, should apply his Finger on the Outside of the
 Child’s Jaw, and turn the Chin on one Side; by
 which no Injury can ensue. And in the latter Case, I
 advise, ‘ As soon as the Child’s Shoulders have passed
 ‘ the external Orifice of the Vagina, with its Face to

(*b*) P. 319. (*c*) Sect. 56. p. 136.

‘ the Mother’s Back, that the Operator should slide
 ‘ his Hand, with the Back to the Child’s Breast, and
 ‘ introduce a Finger to the Side of the Neck, ob-
 ‘ liquely upwards, till the End thereof reaches to the
 ‘ Back of the Child’s Head ; then by thrusting with
 ‘ the Finger the Chin will be pressed towards the
 ‘ Child’s Breast, or towards the Shoulder if necessary,
 ‘ while with the Fingers of the other Hand, placed
 ‘ on each Side the Neck, I extract the Child. Whence
 ‘ several Mischiefs may be avoided.’ For, first, nei-
 ‘ ther the Jaw nor Mouth of the Child can this way be
 injured.

Secondly, The Danger of tearing the Perinæum, or putting the Woman to greater Pain by introducing the Hand into the Vagina, in order to get the Fingers so high up as the Child’s Mouth, are likewise avoided.

Thirdly, The Introduction of the Finger on the Side of the Child’s Neck, as I direct, gives less Pain to the Woman, than when it is forced betwixt the Os Pubis and Neck ; by which the Operator’s Finger would be more compressed, whence greater Force would be required from him.

Fourthly, Because my Method of applying the Finger to the Back of the Child’s Head, brings the Forehead down *with less Difficulty*, as you acknowledge ; and is so much easier, and more safely performed ; whereby the Danger of *exerting half the Force at the Chin* may be avoided : Therefore why do you direct your Pupils to try the other less certain Method ? I am also as much at a Loss to know why you advisethem to push up and pull down at the same Time, or *alternately*. What Business the word *alternately* has in this Place I can’t tell: because unless the Operator pull with one Hand at the same time that he thrusts with the other, the Child’s Head may return to its former Situation.

Sect. 31. You tell us (*d*), ‘ When before the Mem-
 ‘ branes are broke the Child is felt through them,

(*d*) P. 329.

‘ pre-

‘ presenting wrong, and at the same Time the Pains
 ‘ push them down, so as to dilate the Os Internum
 ‘ more or less. The Membranes being broke, and
 ‘ the Operator’s Hand being betwixt the Inside of
 ‘ the Membranes and the Child’s Body (*e*), let him
 ‘ turn the Child with its Head and Shoulders up to the
 ‘ Fundus, the Breech down to the lower Part of the
 ‘ Uterus, and the fore Parts towards the Back.’

You have here put your Pupils upon a very need-
 less and troublesome Operation; because, as you state
 the Case, if the Operator attempts to turn the Child’s
 Head and Shoulders up to the Fundus, as soon as he
 withdraws his Hand, the Pains will force them down
 again; wherefore, instead of this fruitless Operation,
 the Person should take hold and extract the Feet, and
 as they advance, the Child turns to the Fundus with
 great Ease; for as the Buttocks descend, the Head
 and Shoulders ascend; because the Uterus does not
 closely embrace the Child, as it is turned so soon after
 the breaking of the Membranes; neither is the Head
 any way compressed against the Brim of the Pelvis.

Sect. 32. You tell us (*f*), ‘ If a Woman is attacked
 ‘ with a violent Flooding, occasioned by a Separa-
 ‘ tion of all or any Part of the Placenta from the
 ‘ Uterus, during the last four Months of Pregnancy,
 ‘ and every Method has been in vain tried to restrain
 ‘ the Discharge, according to our present Directions
 ‘ in Book ii. Cap. 3. Sect. 3.

‘ First then, you say (*g*), When the Mouth of the
 ‘ Womb is opened, if the Head presents, and the Pains
 ‘ are strong, by breaking the Membranes the Flood-
 ‘ ing will be diminished; but if she floods to such a
 ‘ Degree as to be in Danger of her Life, she must be
 ‘ delivered in the following Manner.

‘ Secondly, the greatest Danger, you tell us (*b*), in
 ‘ this Case, frequently proceeds from the sudden emp-

(*e*) P. 330.
 (*b*) P. 334. n. Ed.

(*f*) P. 331. n. Ed.

(*g*) P. 333. n. Ed.

' tying of the Uterus and Belly: For when Labour
 ' comes on of itself, or is brought on in a regular
 ' Manner, and the Membranes are broke, the Flood-
 ' ing is gradually diminished, and first the Child, then
 ' the Placenta, is delivered by the Pains; so that
 ' the Pressure or Resistance is not all at once removed
 ' from the Belly and Uterus of the Woman, which
 ' have time to contract by Degrees; consequently,
 ' those fainting Fits and Convulsions are prevented,
 ' which often proceed from a sudden Removal of that
 ' Compression, under which the Circulation was per-
 ' formed.'

' In order to anticipate these fatal Symptoms, I have
 ' (sometimes successfully) ordered an Assistant to press
 ' upon the Woman's Belly, while the Uterus was
 ' emptying; or after having broke the Membranes,
 ' turned up the Head to the Fundus, and brought
 ' down the Legs and Breech, I withdraw my Arm a
 ' little, to let the Waters come off, though I keep my
 ' hand in the Uterus for a few Minutes, and do not
 ' extract the Legs until I feel the Womb close con-
 ' tracted to the Child; nay, if the Flooding is stop-
 ' ped, or even diminished, let the Child remain in
 ' the Uterus perhaps ten or fifteen Minutes longer,
 ' then deliver; and if the Hæmorrhage is stay'd,
 ' leave the Placenta to be expelled by Nature. In all
 ' these Stages, however, when the Flooding is violent,
 ' we must deliver without Loss of Time, remembering
 ' still the Pressure upon the Abdomen; for the Wo-
 ' man is frequently so very weak, that although La-
 ' bour could be brought on, she would not have
 ' Strength sufficient to undergo it.'

' ——— Immediately after Delivery, the Uterus con-
 ' tracts, the Mouths of the Vessels are shut up; so
 ' that the Flooding ceases.' ———

You then say (i), ' If in Time of flooding, the La-
 ' bour-Pains push down either the Membranes or Head

‘ of the Child, and opens the Os Internum, the Mem-
 ‘ branes ought to be broke ; so that some of the Wa-
 ‘ ters being discharged, the Uterus may contract and
 ‘ squeeze down the Fœtus.—If notwithstanding this
 ‘ Expedient, the Flooding still continues, and the
 ‘ Child is not like to be soon delivered, it must be
 ‘ turned immediately ; or if the Head is in the Pelvis,
 ‘ delivered with the Forceps ; But if neither of these
 ‘ two Methods will succeed, on account of the nar-
 ‘ rowness of the Pelvis, or the bigness of the Head,
 ‘ this last must be opened and delivered with a
 ‘ Crochet.’

I before took notice (from Pag. 44 to 51) of the dangerous Practice of suffering the Woman to remain undelivered after a Flooding once begins ; I likewise shewed the Inconveniences that attend too early a Discharge of the Waters, whence the Practice of breaking the Membranes before every Thing be ready for immediate Delivery, must be bad.

You impute ‘ the Faintings and Convulsions to be
 ‘ owing to the sudden Removal of the Compressure
 ‘ or Resistance of the Flux of Blood downwards,
 ‘ when a Woman is delivered of the Child and Pla-
 ‘ centa, the one immediately after the other ;’ which is sometimes certainly the Case : To prevent which Inconvenience, you advise to deliver the Woman *gradatim* ; that is, to break the Membranes, that by the Discharge of the Waters the Womb may be less extended ; and in this Condition you leave Things, you say, *for a few Minutes ; and if the Flooding is stopped, or even diminished, you let the Child remain in the Uterus perhaps ten or fifteen Minutes longer, and then deliver the Woman of the Child ; and if the Hæmorrhage be stay’d, leave the Placenta to be expelled by Nature.*

Whoever understands the true Fabric of the Uterus and Placenta, and their Use, both from the best Authorities in my *Treatise* or *Midwifery* (k), will soon be

(*) Sect. 6, 7, 8, 9, 10, 11, 12, 17, 18, 19, 24, to 33, inclusive.

convinced, that when once there is a Separation of the Placenta from the Uterus, the Flooding will never stop until the whole Contents of the Uterus are discharged; and be more or less, *cæteris paribus*, in Proportion to the Quantity of the Surface of the Placenta so separated; and will sometimes continue even after the Placenta is expelled; especially if the Womb be too much weakened; and the less the contractile Force of the Womb is, *cæteris paribus*, the more the Woman will flood: All which is confirmed by daily Experience. And you tell us, ‘That Floodings after Delivery are
 ‘ occasioned by every Thing that hinders the emptied
 ‘ Uterus from contracting, such as great Weakness
 ‘ and Lassitude, in Consequence of *repeated Floodings*
 ‘ before Delivery; the sudden evacuation of the Ute-
 ‘ rus; sometimes, tho’ seldom, from *Part of the Pla-
 ‘ centa’s* being left in the Womb.’ Whence it is very evident, that the Woman in such a Case should be delivered as soon as possible she can with Safety; without any waiting for an imaginary Stoppage of the Hæmmorrhage, which can never happen till some time after the Woman has been delivered of both Child and Placenta. The bad Consequences of a large Uterine Discharge of Blood, or of leaving either the After-birth or any Part thereof, I have set forth at large in my *Essay (m)*. Whence it is very evident, that, first, The Woman by your Method must lose more Blood than if she was delivered immediately after you had turned the Child; by which she must be more enfeebled; and the weaker State she is reduced to, before Delivery, the longer, *cæteris paribus*, the Uterus will be in contracting to its proper Size, and the longer that is performing, *cæteris paribus*, the more Blood she loses; whence the Foundation of several Disorders may take their Rise, which may require a long Time, if ever, to be totally removed.

Secondly, After the Woman has undergone the Operation of having the Child turned in the Womb,

(m) On Midwifery, Sect. 151, 155, 156, 157, 158.

it must be easier and less painful to her to be delivered immediately, than for the Operator *to wait a few Minutes with his Hand in the Uterus*; or to withdraw his Hand and *stay perhaps ten or fifteen Minutes longer*, and then to introduce his Hand again to finish what he had left undone: And if he was to continue his Hand in the Uterus, it would be greatly compressed and cramped, which might delay the Operation, as well as put the Woman to more Pain by the Operator being obliged to change Hands.

Sect. 33. All these Dangers you advise your Readers to bring the Woman into, *in order to avoid bringing on Faintings and Convulsions, to anticipate which fatal Symptoms*, you direct a Method to be taken, which if put in Practice, will be ineffectual, or however not so sufficient as another Method; and in the next Place is so very painful, that the Woman can't bear it; as I before remarked.

For whoever will consider, that the inferior Parts of the Woman are supplied with Blood that passes thro' the descending Aorta; and knows the Part of the Woman along which that Artery runs, and where it divides, will easily see that the Method of an Assistant's pressing upon the Belly cannot hinder the Descent of the Blood, because that Force is applied to only a Part of the Abdomen; where the Patient can't bear such a Pressure as is necessary to hinder the Descent of Blood, especially before she is delivered; and the Uterus may be so crushed betwixt the Child and Assistant's Hands, where great Force is used (supposing the Woman could bear it) that there would be no small Danger of an Inflammation of the Womb after Delivery, which may prove fatal to her.

Whoever likewise considers, that it is the Resisting of the Blood in the descending Aorta, which is abated by delivering the Woman, that is the Cause of these Faintings, as mentioned in my *Essay* (n), and that the Pressure of an extended Uterus is near equal in Circumference around the Inside of the Woman, will soon

be convinced, that an equal-contracting-external Application, will come the nearest to that of Nature, and will be less painful to the Patient; and consequently will be most effectual; and that is done by a Bandage or Girdle, as I have recommended in my *Essay*; which is confirmed by *La Motte* (o), who says, ‘ That the
 ‘ Midwife, in order to preserve or regain a fine Shape
 ‘ after Lying-in, had made a tight Bandage about the
 ‘ Patient; whose Lochia stopt almost entirely; but
 ‘ the Bandage being removed, the Fever abated considerably in a very little Time, and the Lochia came
 ‘ down better, and she got well in a few Days.’ Whence the Reader may judge of the Effect of such a Girdle, that makes an equal Pressure on the Outside of the Abdomen; and by contracting the internal Cavity, makes the Pressure more equal amongst the Viscera, by which too quick a Descent of the Blood thro’ the Aorta Descendens, is prevented in the same Manner as when a Person is tapped for an Ascites. These Girdles I order to be made with Straps, so that they may be made to draw closer, as the Resistance from within abates; whence a due Equilibrium is kept up betwixt the Vessels above and below the Heart. By which means the *great Danger from the sudden emptying of the Uterus and Belly*, are guarded against more effectually and with less Pain and Danger to the Patient, than by your Method.

In the next Place you say after all this, *If the Hæmorrhage be stayed, you leave the Placenta to be expelled by Nature*; which I must observe is such a Method of Practice, as no judicious Operator would ever be guilty of: For, as you have stated the Case, the Placenta must have either wholly or mostly be separated from the Uterus; wherefore the Discharge of Blood must continue as long as the Placenta remains in the Womb; by which the Patient must grow weaker and weaker, and the Hæmorrhage will still

(o) Cap. 2. Obs. 382.

be increased by the Pains which must remain, or return in order to expel the After-birth. So that the Woman must suffer every way more than if the Operator had extracted that Substance immediately after the Birth of the Child; which in this Case is the more requisite, as the Woman must have been weakened before. Hence again it is evident, your Method of Practice is not so unexceptionable as your Eccho, the *Review* Writer, informs us, Numb. 3.

I come now to your third Class of præternatural Labours, in which you give Directions how the Child in the Uterus is to be turned.

Sect. 34. You say (*p*), ‘The Hand of the Operator
‘ being introduced into the Uterus, if he finds the
‘ Breech to be higher than the upper Part of the Child,
‘ or equal with them, he must try to turn the Head
‘ and Shoulders to the Fundus, and the Breech down-
‘ wards, by pushing up the first and pulling down the
‘ last.’

You told us (*q*), *That as the Waters are discharging, the Uterus contracts and squeezes down the Fœtus.* So that whenever an Operator attempts to push up the Head and Shoulders, the contractile Force of the Womb will repel or press down the Head and Shoulders again as the Operator withdraws his Hand; which you also acknowledge (*r*) in several Places. And this will be done with the greater Force, the less Quantity of Waters there were, and the longer, cæteris paribus, they have been discharged: Wherefore this Method of *pushing up the Head and Shoulders* is not only very often a fruitless Attempt, but is constantly a painful Operation to the Patient, and more fatiguing to the Accoucheur. For in this Case, not only the Child’s Head and Shoulders are to be pushed up, but also the Operator’s Hand must go up to the Fundus Uteri, whereby the Womb will be extended much more than the Bulk of the Child will

(*p*) P. 341. (*q*) P. 337. (*r*) P. 341, 352.

require;

require; whence the Woman not only endures more Pain, but is in Danger of having the Womb burst; because it will not easily be re-extended, as any Person may soon be convinced of, if he knows the true Mechanism of the human Uterus, as far as has already been discovered; and considers how it is distended during Pregnancy. For then he will find that it is not extended as a Bladder, or any other such membranous Substance, by Wind, Water, or other Matter propelling or pressing outwards from within the Cavity; but is partly extended by the Growth of the Child, &c. and partly by the Blood distending the Vessels and Sinuses in the Substance of the Womb, as the extending Force within is gradually increased; whence they bear a sort of Proportion betwixt each other, which cannot happen when the Womb is suddenly distended (as it may be properly said to be, when extended by an Operator's Hand, in Comparison to the slow Progress of Nature during Pregnancy) wherefore there is the greater Danger of bursting the Womb: A Misfortune, I fear, that more frequently happens than some are aware of. Whence it is very evident, that the re-extension of the Womb by an Operator should be avoided, as much as possible; and if attempted, should be done in the most cautious Manner: And when he does extend it, or turn the Child in the Womb, he should do it towards one Side of the Woman, and not towards the fore or back Part; because these last are more rigid than the Sides of the Womb, whence they will not yield so easily, and will be sooner burst; for we find the Uterus returns to its former Shape, which is flat and not round; but it would be of the last Form if it was equally rigid every way. This necessary Caution I never remember to have met with in any Author.

Sect. 35. This Method of *pushing up the Head and Shoulders of the Child* to the Fundus Uteri, as recommended by you, not only extends the Womb, by the Addition of the Operator's Hand and Arm, but also
by

by turning the Child, in such a Manner, as to take up a greater Space, and consequently distends the Womb more, than when it is in a rounder Form; whence the Child cannot be so easily turned as when only pulled by the Feet. This is evident to any Person who knows that the Vertebrae of the Neck, Back, and Loins of a Child, are so formed by Nature, that they can't be bent backwards, without the Hazard of breaking off their Spines, and doing great Injury to the Child; whereas they may be bent so far forwards, as almost to form a Semicircle from the Crown of the Head to the Breech, without any Prejudice to the Child at all.

Let him also consider, that when the Breech is below, or equal with the Head and Shoulders, or even higher, unless the Head presents and the Breech be quite at the Fundus Uteri, that then the Child is in a roundish Form, as you observed (s), having the Chin *strongly pressed against its Breast*; and therefore when the Operator pulls at the Feet, it is easier moved about in that Form, without extending the Womb any way materially. But the very Reverse is the Case, when you attempt to *push up the Head and Shoulders to the Fundus*; for then you lengthen the Spine from the Neck to the Sacrum, by which the Child's Head and Breech are at a greater Distance, whence not only the Womb is more extended than by the other Method, but the Operator must consequently use greater Force; and the Child must also suffer by having an Application made to it contrary to what Nature intended, by bending the Vertebrae more backwards. Wherefore there is no Occasion for the Operator ever to push his Hand higher into the Womb, than to fetch the Feet when the Child is to be turned, or to torment the Woman by *pushing up* the Head, except in that Case which will be mentioned presently, Sect. 36.

By your Method the Os Externum must be overstretched, if not lacerated, for you say, (t), 'That

(s) P. 338. (t) P. 342.

* the Operator must continue this Method of *pushing*
 * *up and pulling down*, until the Head and Shoulders
 * are raised to the Fundus Uteri; for should he leave
 * off too soon, and withdraw his Hand, altho the
 * Child is extracted *as far as the Breech, &c.* From
 whence it is evident, that if the Hand be so high up
 in the Uterus *as to push up the Head and Shoulders of*
the Child to the Fundus Uteri, while the Child is ex-
tracted as far as the Breech, then both this last Part
 and the Operator's Arm must be in the Os Externum
 at the same Time, whereby that Part must be over-
 stretched, and in great Danger of a Laceration; while
 at the same Time, the Arm must render the Descent
 of the Child more difficult.

In the next Place you say, ' Although the Child is
 * extracted *as far as the Breech*, the Head is sometimes
 * so pressed down and *engaged with the Body in the*
 * *Passage*, that it can't be brought farther down with-
 * out being tore along with the Crochet.'

Whoever understands the Mechanism and Bulk of
 of a Child, the Size and Shape of the Pelvis, and the
 Laws of Mechanics, will easily see that this Case *can*
never happen. For suppose the *Child be extracted as*
far as the Breech (as you have stated the Case) the
 Distance betwixt the lower and upper Part of the Os
 Pubis being, as you tell us (u), only *two Inches*, if
the Head be pressed down and engaged with the Body in
the Passage, it must be advanced within two Inches,
 at most, of the Breech, and consequently must be
 within the Pelvis at the same Time the Body is
 there. And how far a Child is capable of being
 so bent double, or how such Means of doing it are to
 be found in the Uterus, I leave you to prove, for to
 me it seems impossible, as I believe it must to every
 Person, who knows the Dimensions of the Pelvis,
 the Size of the Child's Head, and the Bulk of its Body
 and Hips, as related by yourself: The widest Part of

the first you make to be only five Inches and a Quarter (*w*): How then can the Head be engaged with the Body in so small a Passage?

You have directed that the Operator should *push up and pull down*, before he applies a Noose on one or both of the Child's Feet; but that is no easy Matter to do with only one Hand introduced into the Womb; for when he removes his Hand from the Part pushed up, the Uterus will force it down again, before he can take hold of the Part to be pulled at; whence the poor Patient will be tormented very much to no manner of Purpose.

Sect. 36. Whenever the Child's Thighs, Legs and Feet, either come down parallel to its Body and Head, or are brought so by the Operator, then indeed was he to pull only by the Feet, he would jam the Head faster against the Brim of the Pelvis, to the Destruction or great Prejudice of the Child: But in such a Case the Operator having fixed a Noose round the Legs, can pull with one Hand while with the other *he pushes up the Head and Shoulders to bring down the Breech*; but then he should push up with one Hand and at the same Time pull down with the other; *by which double Purchase*, you say (*x*), the Child may be turned even in *the most difficult Cases*.

I think you have not sufficiently directed the Method how the Head is to be pushed up; for the Operator is not to attempt to push up the Head and Shoulders in a straight Line towards the Fundus, by which several Mischiefs might ensue; but should do it in such a Manner as to keep the Child in as round a Form as possible: Which (if it can be done, as generally it may) is to be perform'd by pressing the Child's Chin very strongly against its Breast, to keep it as near the proper Form as possible; and at the same Time to thrust up against the Fore-part of the Shoulders, and gradually move them towards one Side of the Woman,

until the Fore-part of the Child be towards the Brim of the Pelvis, while with the other, the Operator pulls at the Feet or Fillet that is about them, by which Means the Child will then be easily turned, without pushing any higher. This is evident to any Person, ever so little conversant in Mechanics; *the Consideration of which, you say (y), is in no Case more useful than when the Child must be turned and delivered by the Feet; because there we are principally to regard the Contraction of the Uterus, the Position of the Child, and the Method of moving a Body confined in such a manner; which indeed may be as clearly demonstrated as any Proposition in Euclid, and therefore in all the Cases, where you have advised to push up the Head and Shoulders to the Fundus Uteri, you must be wrong.*

In the next Place you take up some Time (z) in giving Directions how the Fillet is to be fixed about the Legs, whereas it may be very easily done by a Whalebone, as I before directed in fixing the Fillet about the Neck of the Child, as I have improved it.

Sect. 37. You say (a), ‘ If the Shoulder (when the Arm is out) is forced into the Vagina, and Part of it appears on the Outside of the Os Externum, a vast Force is required to return it into the Uterus; because in this Case, the Shoulder, Part of the Ribs, Breast and Side, are already pulled out of the Uterus, which must be extended so, as not only to receive them again, but also to admit the Hand and Arm of the Accoucheur.’

I must observe, that as the Child lies near, if not quite across the Womb, there is not so much Difficulty in returning the Shoulder into the Uterus, as when the Body of the Child is more parallel to that of its Mother’s; and that, in this Case, the Operator has seldom Occasion to introduce his Arm into the Womb, because the Child’s Feet may generally be got to by only introducing the Hand,

(y) P. 252.

(z) P. 347, 348, 349.

(a) P. 354.

You then proceed, ' If this Distention cannot possibly be effected, he must slide his Fingers to the Neck of the Child, and with the Scissars divide the Head from the Body; then deliver first the separated Head, or bring along the Body by pulling at the Arm; or if need be, with the Assistance of the Crochet: After the Body is delivered, the Head must be extracted according to the Rules that will be laid down in Sect. 5. p. 365.

If the *Shoulder appears on the Outside of the Os Externum*, and if *Part of the Ribs, Breast and Side of the Child are already pulled out of the Uterus, and cannot be returned*, the upper Part of the Shoulder will be pressed with such Force against one Part of the Pelvis, in which likewise are Part of the Ribs, Breast, and Side of the Child, that the Operator cannot slide his Fingers to its Neck, to guide and prevent that dangerous Instrument, the Scissars, from injuring the Mother; especially as they must be several Times opened and shut while they are strongly pressed betwixt the Mother and the Child; and you suppose the last so fixed as not to be forced up again; and after all, the Scissars will not easily separate the Vertebrae of the Neck.

In the next Place, after the Head is separated, you order it to be first delivered, but you have not told us by what Means: For my own Part, I am at no small Loss to find which way it is possible to be done, especially according to your Method of delivering the Head when separated from the Body, as directed in Sect. 5. of your Book, and in Sect 21. and 41. of this Letter. Because in the first Place, you can't get to hold the Head fast, without introducing the Hand, and, perhaps, Part of your Arm also into the Womb; which can't be done after, when it could not be done before the Head was separated from the Body: For the Womb still closely embraces the Child; and the *Separation of the Head can't remove the Shoulder, Part of the Ribs, Breast, &c. and Side of the Child, which were already pulled out of the Uterus.* Hence your Instruc-

tions are not only very deficient in this Point, but very wrong.

Sect. 38. You say (b), 'No Doubt, if the Pelvis is *very narrow*, or the Head *too large* to turn,' (that is, to bring the Child away by the Feet) 'when the Funis descends with it, we ought to try if we can possibly raise the Head so as to reduce the Funis above it, and after that let the Labour go on.'

If the Head be so large; or the Pelvis so narrow, that the Child can't be extracted by the Operator's Strength added to that of the Mother, how must her Efforts alone bring it away; and that too, perhaps, after the Child's Brain has been so long compressed, that it is either born dead, or dies soon after in Convulsions?

In the next Page you say, 'Were it practicable at all Times to bring the Head into the right Position (when misplaced) a great deal of Fatigue would be saved to the Operator, much Pain to the Woman, and imminent Danger to the Child.'

In this small Paragraph you have laid down three Positions, which I believe no experienced Practitioner will ever allow you.

First, the Operator, instead of *saving a great deal of Fatigue*, would generally occasion a great deal more; by being obliged to turn the Child, long after the Waters are discharged, and the Uterus is contracted closely in an oblong manner, to the Child; which offers, as as you acknowledge (c) *in the worst manner to be turned when the Vertex presents*. Besides, when the Operator's Hand is introduced to replace the Head, as you advise, is it less Fatigue to turn the Child then, than it would be to introduce the Hand again (perhaps some Hours after) to turn the Child when the Uterus must be more strongly contracted round it?

But supposing, after the Operator has replaced the Head, and should wait in vain for the Birth of the

(b) P. 356.

(c) P. 358.

Child, would it be less fatiguing to the Patient to deliver with your beloved Forceps added to what she had already undergone in replacing the Head, than if the Operator had turned the Child, while he had his Hand within the Uterus? But how much more must his Fatigue be increased; if he, after all, must be obliged to open the Head according to your Directions, and extract the Child with the Crochet?

The second Position is, I think, no better founded than the first: Because I have not only had it from a considerable Number of my own Patients, but also from many other Women, who always declared they endured less Pain when a Man-Midwife had turned the Child and brought it away by the Feet, than by waiting for, and enduring the repeated Efforts to bring forth the Child by the Pains alone; which must always be for a considerable Time; especially in such Cases as you particularly recommend it, as *when the Head is too large, or the Pelvis is too strait.*

Thirdly, The Danger is not so great to the Child as you would insinuate, as I have fully demonstrated (*d*); for the Head will be less compressed by the Bones of the Pelvis when the Child is turned, than with the Forceps betwixt them and the Head; and likewise the imminent Danger of a long and great Compressure upon the Brain is hereby avoided.

You before endeavoured to prevail upon your Readers to use the Forceps, in Cases that were proper for other Methods; and here you endeavour to make Cases for their more frequent Use: Which your Affectation for differing from other People, and your Bigottry for introducing your favourite Forceps, has drawn you into.

In the same Page you say, ‘When the Head is in the Uterus, if the Child is not large, nor the Pelvis narrow, it were Pity to desist from the turning the Child and bringing it by the Feet; because in that Case he may be pretty certain of saving it.’

(*d*) Sect. 2, 3, 4.

Will not a Child have a better Chance to be born solely by the Efforts of the Mother, when the Head is replaced, if it *be neither large nor the Pelvis narrow*, than when the first is *too large* and the last *too narrow*? And if it fatigues the Woman so much, in the Case above-mentioned, to undergo the Operation of turning the Child, will not the same Operation, *cæteris paribus*, occasion the same Pain, in either Case? If the replacing the Head be so much less Fatigue than turning the Child, why do you recommend the latter, when the Head is neither *large* nor the Pelvis *narrow*? in which State a few Efforts of the Mother alone will expel it? But you acknowledge afterwards (e), ‘ That we cannot promise Success after the Head is brought in; and when once the Operator’s Hand is in the Uterus, he ought not to run such Risks; especially as *after all he might turn the Child with less Advantage*; or have Recourse to opening the Child’s Head and extracting with the Crochet.’ So that you take a great deal of Pains to prevail upon your Readers to follow one Method; and then, soon after, advise them not to run such Risks; which is a great Proof of the *Clearness and Perspicuity of your Instructions*.

Sect. 39. You direct (f), ‘ When the Legs or Breech of the Child are brought down, and if it is detained by the Size of the Belly, let the Belly be opened, by forcing into it the Points of the Scissars; or the Operator may tear it open with the sharp Crochet.’

To perform this Operation, either *Ould’s Terebra Occulta*, or my Extractor, are much safer, and consequently more proper Instruments than either the *naked Scissars* or *sharp Crochet*, for the Introduction of either of those last, betwixt the Os Externum and Child, when its Breech is brought down into that Orifice, is not so safe, because their Points are not guarded by any Canula or Capsula, but are quite bare.

(e) P. 360. (f) P. 362.

You then say, ‘ If the Body and Arms of the Child
 ‘ are extracted, and the Head is detained by being
 ‘ naturally too large, over ossified, or dropfical, or
 ‘ from the Narrowness and Distortion of the Pelvis;
 ‘ if the Child be alive the Forceps ought to be tried;
 ‘ but if it be impracticable to deliver the Head, so as
 ‘ to save the Life of the Child, he must, according to
 ‘ some, force the Points of the Scissars thro’ the Fo-
 ‘ ramen Magnum; then dilate the Blades, so as to
 ‘ enlarge the Opening, and introduce the blunt or
 ‘ sharp Hook. Some recommend an Instrument to
 ‘ perforate the Skull, with double Points curved and
 ‘ joined together; which, when pushed into the Fo-
 ‘ ramen, are separated and take hold on the Inside;
 ‘ but as the opening with the Scissars and introducing
 ‘ the blunt Hook, as above, will answer the same
 ‘ End, it is needless to multiply Instruments, espe-
 ‘ cially as this Method is not so certain as the follow-
 ‘ ing.’

In my Remarks upon this Paragraph I shall shew
 the Difficulty, nay, I may say, the Impossibility of
 putting your Directions, as above, into Practice. For
 whoever will consider the Connection betwixt the Head
 and Vertebrae of the Neck, will find it is no easy Mat-
 ter to make an Orifice large enough thro’ the Skin and
 Muscles of the Back of the Neck to let out the Con-
 tents of the Cranium, so as to lessen the Bulk of the
 Head, by only the Points of the Scissars. And if he
 considers also the Hardness of the occipital Bone, he
 will find all the Strength of the Operator applied to the
 End of the Scissars cannot possibly dilate the Foramen
 Magnum, after they have been introduced therein,
 especially *if the Head be over ossified*; for this Bone will
 bear the same Proportion of Hardness as the rest.
 Nature has made this Bone the strongest and to move
 the least of any of the Cranium that have Sutures, that
 the Cerebellum might be the more secure from any
 external Compressure. But supposing this Opening
 to be made, here is yet another Instrument to be in-

roduced into the Skull after the Scissars are withdrawn, which it will be no easy Matter to accomplish, as is evident to any Person who knows the Size and Form of your Blunt Hook. And in the next Place, supposing it also introduced, yet as the Hook will be applied only to one Side of the Orifice, the Head must, in advancing, be drawn more to one Side than the other. Whereas the Piercer of my Extractor, having a sharp Edge on each Side, cuts a free Passage thro' the Skin and Muscles of the Neck to the Foramen Magnum, and when introduced therein, draws the Head in the Center of the Passage, or in such Manner as the Operator pleases, because it has firm Hold on both Sides of the Opening; and my Instrument is at the same Time introduced at once. Above you have given your Reasons why my Extractor should not be used: First, *Because it is needless to multiply Instruments*: Secondly, *Because another Method is more certain*.

The First I have already shewn, what you offered, Sect. 29. n. 3. to be a very weak Argument, and would have held equally good against the Use of your favourite Instrument, the Forceps; supposing it to be true in Fact. But I proved there, that my Extractor did the Use of two, if not of three, of your Instruments; as it does of two of the same sort, in this last mentioned Case, and that also with more Ease and Safety to all Parties. I come therefore in the next Place to examine into the other Method which you say is *more certain than mine*; but shall first observe, that in the Case above-mentioned, you direct that *if the Child's Belly was not opened, and it is found alive, the Forceps ought to be tried*; altho' the Head is *too large, over ossified or dropical*, or the Pelvis *too narrow or distorted*, to all which I have fully spoken already.

You say (g), 'If, notwithstanding these Endeavours, the Head cannot be extracted, then the Ope-

‘rator is first to introduce his Hand along the Head,
 ‘and his Fingers thro’ the Os Uteri.’ But if I can
 understand your Book, the Child’s Head must have
 been in the Vagina, and consequently must have passed
 the Os Uteri; because, when these Methods have
 failed, and you are obliged to separate the Child’s Head
 and Body, you say (b), the Operator *must push up the
 Head into the Uterus*; which, I humbly presume, im-
 plies that you suppose it to have been extracted before;
 and in that Case, your Method of introducing *your
 Fingers thro’ the Os Uteri is needless*, on one Hand;
 and if the Child be not in the Uterus, your Instructions
to push it into the Uterus again are wrong: But to re-
 turn—

Your second Operation is, ‘To slide up one of the
 ‘curved Crotchets along the Ear betwixt the Hand
 ‘and the Child’s Head, upon the upper Part of which
 ‘it must be fixed.’

If the Child’s Head be above the Pelvis (as is stated)
 and the Instrument be to be *slided betwixt it and the
 Operator’s Hand*, then the Wrist or Part of his Arm
 must be in the Os Externum at the same Time that
 the Neck of the Child is in that Place; and what
 Injury may thereby be done to the poor Woman, I’ll
 leave the judicious Reader to determine.

Your third Operation is, ‘To withdraw the Hand,
 ‘take Hold of the Instrument with one Hand, turn-
 ‘ing the Curve of it over the Forehead; and lastly,
 ‘with the other, you grasp the Neck and Shoulders,
 ‘and pull along.’ By which, in some Cases, you
 imagine the Head may be extracted; because, you
 say, ‘The Crotchet being thus fixed on the upper
 ‘Part, where the Bones are thin and yielding, makes
 ‘a large Opening thro’ which the Contents of the
 ‘Skull are emptied, the Head collapsing is with more
 ‘Certainty extracted, and the Instrument hath a firm
 ‘Hold to the last, at the Forehead, Os Petrosum,

‘ and Basis of the Skull.’ But I must observe to you, *That as the Forehead is a Piece of the upper Part of the Head where the Bones are thin and yielding,* the Crochet cannot *have a firm Hold to the last at that Part :* And how it can get *a firm Hold at the Os Petrosum and Basis of the Skull,* without injuring the Woman, is to me not very clear ; since it was *fixed at the upper Part of the Head.* So that the Bones and Integuments of one Side of the Cranium must give way before the End of the Crochet can get such Hold in the last Part mentioned ; and as there is not a Hand to defend the Edges of the Bones from cutting the Woman, she may thence receive an incurable Wound. Moreover, if any Hold be to be taken on the Os Petrosum or Basis of the Skull, which must not be far from the Os Externum ; as the Shoulders are on the Outside of that Orifice, the streight Crochet is better than the crooked sort ; because the more it is curved the more it must overstretch the Pudenda : For the Use of the Curvature is intended to answer to the Shape of the Head, while the Bow-Part lies close to the Sides thereof. Besides, you have not cleared up how this Hold at the Os Petrosum and Basis of the Skull is to be obtained ; and if it was so fixed, it will turn the Head from the Center of the Passage to one Side.

Sect. 40. After these four Operations have failed of Success, you then say (i), ‘ If one Crochet be found
 ‘ insufficient ; in the fifth Place, let the Operator introduce his Hand as before ; and sixthly, put up
 ‘ and fix the other along the opposite Side ; then,
 ‘ seventhly, he must withdraw his Hand and Lock
 ‘ and join the Crochets ; and, lastly, he must pull
 ‘ along, moving and turning the Head, so as to humour the Shape of the Pelvis.’

I observed before in my *Essay*, That as you have these Crochets made, they cannot yield at all, and therefore must prevent the Bones of the Head from

collapsing and moulding themselves conformable to the Shape of the Pelvis. And I must also add, that it is not the upper Part of the Head that hinders the Extraction of it, but the Basis and Occiput which are the firmest Parts, and to the Bulk of which the Crochets make no small Addition.

Sect. 41. You then tell us (k), ' That if all the eight preceding Operations should fail, by reason of the extraordinary Ossification or Size of the Head, or the Narrowness and Distortion of the Pelvis, after having used the Crochet without Success, the Operator must separate the Body from the Head with a Bistoury or Pair of Scissars ;' which may be called the ninth Operation ; ' then, tenthly, *Pushing up the Head into the Uterus,*' (which, as I observed, Sect 39. shews it must have once been out of it) ' turn the Face to the Fundus, and the Vertex down to the Os Internum and Brim of the Pelvis ; then, in the eleventh Place, direct an Assistant to press upon the Woman's Belly with both Hands, in order to keep the Uterus and Head firm in that Position ; then open the Skull with the Scissars, destroy the Structure of the Brain,' which is the 12th Operation, and 13thly, ' He must extract with the Crochets, as directed in Chap. iii. Sect. 5.' Pag. 297.

As you have here ordered *the Child's Skull to be opened with the Scissars, the Structure of the Brain to be destroyed, and the Head to be extracted, as in Chap. iii. Sect. 5.* it is not only proper, but absolutely necessary, to look a little into Sect 21, wherein I have made some Remarks upon that Part of your Practice, to which I refer, to avoid Repetitions ; and then the Reader will be sensible, first, that an Assistant pressing upon the Belly, as above directed, or as is hereafter mentioned by you (l), cannot answer the End proposed ; because the Head cannot possibly be held firm enough till *the Ends of the Scissars can be pushed, either thro' the Sutures, or*

(k) P. 366. (l) P. 369.

till they make their Way thro' the solid Bones by boring (m); because the Head will move round upon the least oblique Application, by thrusting against it; and what is there to keep the Head steady while the Orifice is dilated by the Scissars?

Secondly, *The Manner of destroying the Structure of the Brain*, by opening and turning the Scissars and shutting their Handles with each Hand, would also turn the Head round at the same Time.

Thirdly, The Introduction of the Crochet into the Orifice made by the Scissars, will be more Difficult than while the Head was fixed to the Child's Body.

Sect. 42. You say (n), 'That when the Child hath been dead for many Days, and the Body much mortified, an expert Accoucheur *may leave the Head behind*, even though he has used all the necessary Precautions. In such a Case, provided the Head is *not very large*, nor the Pelvis *narrow*, and the Forehead is towards the Sacrum, let him slide up his Hand along the Back-part of the Pelvis, and introducing two Fingers into the Mouth, with the Thumb below the Chin, try to pull the Forehead into the Hollow of the Sacrum.—If the Head is small it will come along; if any Fragment of the Neck remains, or any Part of the loose Skin, he may lay hold of it, and assist Delivery, by pulling at it with his other Hand: If the Head is low down, it may be extracted with the Forceps.'

In the first Place, I think, an *expert Accoucheur* will never leave the Head behind, when that Part is *not very large*, nor the Pelvis *narrow*, as you have stated the Case; for certainly if the Child *has been dead for many Days*, such an Operator as you mention would easier extract the Head while it adhered to the Body by all the Articulations of the Vertebrae, Muscles and Skin of the Neck, *especially as a skilful Artist*, if he found the least Obstacle to its easy Exit, would intro-

duce a Finger into the Mouth of the dead Child, to assist the other Hand in drawing it forwards. And, secondly, if these Parts are *so much mortified*, as to leave the Head behind, *after all the necessary Precautions have been used when the Head was small*, why then should you put your Pupils upon a vain Attempt to deliver the Woman, since she may suffer so much Pain and Misery by such a fruitless Method of Practice? For when the Strength of the Vertebrae, Muscles, Skin of the Neck, and the Operator's Finger in the Child's Mouth cannot prevent the Separation of the Head from the Body, how can the single Articulation of the lower Jaw alone, or *even when assisted by any Fragments of the Neck or Parts of loose Skin*, bear a sufficient Force to bring out the Head, since it could not be delivered by the Means above-mentioned, when so much greater Force might be applied? And if those Parts first mentioned were *so much mortified by the Child's being dead many Days*, must not the Chin, any Fragment of the Neck, or Part of the loose Skin, bear the same Degree of Corruption? But in following these Directions, here is a Difficulty you don't seem to clear up; for as you have put the Case, the Head is at or *above the Brim of the Pelvis*, or else it *can't stick at the Jetting-in of the Sacrum*; in which Case, while one Hand is employed in taking hold of the Chin, how must the Operator lay hold of any Fragment of the Neck or loose Skin with the other? For such Fragment will be, at nearest, in the Vagina; so that, to perform this Operation, the Person must have one Hand in the Pelvis, and all or the chief Part of the other there also; which must give a great deal of unnecessary Pain to the Woman, and will endanger a Laceration of the Perinæum.

In the next Place you say, *If the Head is low down, it may be extracted by the Forceps*. I can't proceed without observing, that you still are for using your beloved Forceps upon all possible Occasions, whether it be the properest Method or not. Your Pretence before

fore for using that Instrument (*o*), was *to preserve the Life of the Child*; which Reason can have no Force here; therefore, as the Patient may be injured thereby, as is proved in Sect. 9. why are those Risks to be run, when other safer Methods can be taken, as will presently appear?

After the Operator has introduced one Hand into the Pelvis, (nay, perhaps both) and made the fruitless Attempt, above-mentioned, and also used the Forceps in vain, which are to be introduced in the same Manner as before directed; then you order the Operator (*p*),
 ‘ To push up his Hand along the Side of the Head,
 ‘ until it shall have passed the Os Internum;’ which at least may be said to be fourth Operation: Then, fifthly, ‘ With the other Hand let him introduce one
 ‘ of the curved Crochets, and fix it upon the upper
 ‘ Part of the Head; and, sixthly, Withdrawing the
 ‘ Hand which was introduced, take hold on the Instrument; and, Seventhly, Sliding the Fingers of the
 ‘ other Hand into the Mouth, he must, in the last
 ‘ Place, pull down with both, as above directed, by
 ‘ which it may be brought along, even in a *narrow Pelvis*.’

Whoever knows the Fabric of a Child's Head, and how the respective Parts can yield, will soon be convinced that bringing the Basis of the Head first, will do more Injury to the Mother than when the Apex is placed as Nature directs in a regular Birth; and as the Child here is dead, the Reasons for bringing the Basis first, as mentioned before, Sect. 2. N^o 3. do no longer subsist, wherefore the Operator having a Hand in the Uterus, should rather turn the Apex to bring the Head out in the easiest Manner: In which it might be greatly assisted by the Firm Hold of the crooked Crochet at the Basis of the Skull, keeping the Apex steady by the Fingers of one Hand.

(*o*) P 248.(*p*) P. 367.

You then proceed (r), ‘ But if it cannot be moved, even by this Expedient, The Operator must,’ in the ninth Place, ‘ introduce the other Crochet along the other Side of the Head, and fixing it upon the Skull, lock them together ; and, tenthly, withdraw the Hand that was introduced, and, lastly, extract it as when delivering with a Forceps.’

If one Side of the Crochet, assisted by one Hand, can extract the Head, *even in a narrow Pelvis*, you must suppose, in this last Case, either that the Head must be *very large, much ossified*, or the *Pelvis must be very narrow indeed* ; in all which Cases, the Injuries to be done to the Woman by the Forceps or Crochets will be increased ; of which you seem to be convinced, when you say (s), ‘ If none of these Methods will succeed, on account of the *Largeness of the Head, or the Narrowness of the Pelvis*, then the Head must be opened.’

Here again your Instructions are very deficient ; for you should have given your Pupils Directions how to know when the Head is *too large* and the *Pelvis too narrow* ; which, in this Case, might be easily found out, because when the Hand is introduced into the Womb, the Operator, by following the Directions I have already given above (t), may easily know whether the Pelvis be *too narrow* or the *Head be too large or too much ossified*, in all which Cases the Head must be opened ; whereby all the above-mentioned painful and dangerous Operations may be avoided. But even supposing the Knowledge of the Proportions of the Head and Pelvis could not be obtained, as the opening the Child’s Head and extracting it when diminished, is so much safer, more expeditious, and less painful to the Mother, *when properly done* ; especially as it is, in the most difficult Cases, your *dernier Resort*, why did you not direct your Readers to follow the last Method ?

When the Head is left alone in the Womb and cannot be extracted by any of the above-mentioned Methods, and must be opened, you direct the Operator (*u*),
 ‘ to push up the Head, and turning the upper Part
 ‘ downwards, order an Assistant to press the Patient’s
 ‘ Belly with both Hands, moving them from Side to
 ‘ Side, and squeezing in such a Direction, as will force
 ‘ the Head towards the Os Internum, and retain it
 ‘ firmly in that Position; then it must be opened and
 ‘ extracted, according to the Directions given in
 ‘ Chap. iii. Sect. 7. Numb. 2. Pag. 299.’

It is absolutely impossible for a Patient to bear such Pressure without the greatest Misery and Pain; as I before took notice, Section 21. notwithstanding you have recommended this Method of Practice in several Places (*w*). For after such a tedious and bad Labour as above-mentioned, she’ll not be able to bear, even the least Pressure without Pain; and if she could, the Method you propose will neither answer the End so certainly, nor be so safe as by the Operator’s holding *the Head fast in the proper Position*, by the Hand that is already introduced into the Womb, *to push it up and turn it right*, as you direct, as I shall demonstrate presently.

In the next Place, after a poor Patient has been tormented by seven or eight different Operations, after the Body and Head of the Child were separated, you put the Accoucheur upon torturing her with at least nine other Operations in opening and extracting the Head, as you direct in Chap. iii. Sect. 7. Numb. 2. Pag. 299. The Objections to which may be seen by looking back to Sect. 21. All these may be avoided by following the Directions with my Extractor, as given in my *Essay* (*x*). For when the Child’s Head is left alone in the Womb, whether the Head be large or small, or the Pelvis narrow or wide, or the Child

(*u*) P. 369. (*w*) P. 237, 299, 366. (*x*) Sect. 107, P. 233.

has been a long or short Time dead, the Operator must introduce his Hand, and perform the Business, as directed before, Sect. 22, 23, 25. whence the Advantages of my Method are very apparent; whereby the Patient is delivered with more *Ease, Safety* and *Expedition*, than by any other Method hitherto made public.

Sect. 43. In the next Place (y) you say, ‘ As great
 ‘ Difficulties may occur from Inflammations of the
 ‘ Pudenda, Contraction of the Uterus, Slipperiness or
 ‘ Largeness of the Head, and the Narrowness of the
 ‘ Pelvis, it will not be improper to inform the Reader of other Methods that appear to me useful, particularly when the Parts are much contracted and swelled. Let the Hand be introduced into the Vagina, and if it cannot be admitted within the Uterus, the Fingers being insinuated, may move the Head so as to raise the Face and Chin to the Fundus, the Vertex being turned to the Os Internum, and the Forehead towards the Side of the Sacrum. This being effected, let the Operator slide up along one Ear a Blade of the long Forceps, which are curved to the Side; then, in the third Place, he must withdraw the Hand; and, fourthly, introduce the other; and, fifthly, send up the other Blade along the opposite Ear; when they are to be locked; and, in the next Place, the Hand is withdrawn, and the Handles secured with a Fillet; he must, in the seventh Place, pull the Head as low as it will come; then, putting the Forceps into the Hands of an Assistant, who will keep them in that Position, let him make a large Opening with the Scissars, squeeze the Head with great Force, and extract slowly and by Degrees.’

Whoever knows the Difficulty of introducing and fixing the Forceps as here directed, when the *Parts are much contracted and swelled*, and at the same Time

is acquainted with your Method of *making a large Opening in the Head with the Scissars*, will see that it is scarce practicable, as you have here directed: For, if the *Parts are much contracted and swelled*, and the Forceps are fixed as above-mentioned, how are the Scissars to be introduced? and when introduced, how must the Operator open and shut them so as *to make a large Opening*, especially when the Head is so closely squeezed by the Forceps? Because, in your Method of opening with the Scissars, the Orifice is enlarged by the Expansion of the Scissar Points, that then tears the Integuments or Bones outwards; which by the Forceps are prevented from yielding. Moreover, the *greater the Contraction and Swelling of the Part is*, the more Danger there is of cutting and bruising the Woman by the Scissars, whereby the Inflammation will be still encreased, as well as by the repeated Introduction of the Hand, Fingers and Instruments; the chief of which may be avoided without any great Danger, by my Extractor, as is evident to every Person who duly considers what I have said above.

Señt. 44. Lastly, you tell us (z), ‘ You have rendered *Leveret’s Tire-Tête* more simple, convenient, and less expensive. And, in the last mentioned Case, you first introduce along the Hand and turn down the Vertex, as above directed, then this Instrument, with the three Sides joined together, must be introduced along your Hand to the upper Part of the Head; then let the Sides or Blades be opened with the other Hand, so as to inclose the Head, moving them circularly and length-ways in a light and easy manner, that they may pass over the Inequalities of the Scalp, and avoid the Resistance of the Head and Uterus. When they are exactly placed at equal Distances from one another, let him join the Handles, withdraw his Hand, and tying

‘ them together with a Fillet, pull down, open, and
‘ extract as directed above.’

I must observe, that all the Objections in the last Section are much stronger against the Method here proposed; because the Forceps has only two Sides and may be applied to the narrowest Part of the Head; whereas this Instrument extends the Parts in a more circular Form, and consequently more in some Places than the Bulk of the Head will require. For their Sides cannot yield, being of one determinate Diameter when opened; and therefore it is a very improper Instrument to be used where the *Parts are much contracted*. Add to this, that it hinders the opening of the Head with the Scissars more than the Forceps does.

Having now finished my Remarks upon your Method of Practice in the various Sorts of Deliveries, I shall yet detain the Reader a little longer by making some few Observations on your Practice in some of the Disorders subsequent to Delivery.

Sect. 45. In Floodings after the Child is brought forth, you say (a), ‘ As there is no Time to be lost,
‘ and internal Medicines cannot act so suddenly as to
‘ answer the Purpose, we must have immediate Re-
‘ course to external Application. If the Disorder be
‘ owing to Weakness, by which the Uterus is dis-
‘ abled from contracting itself, so that the Mouths of
‘ the Vessels are left open; or, though contracted a
‘ little, yet not enough to restrain the Hæmorrhage
‘ of the thin Blood: Or if, in separating the Placenta,
‘ the Accoucheur has searched or tore the inner Sur-
‘ face or Membrane of the Womb; in these Cases,
‘ such Things must be used as will assist the contractile
‘ Power of the Uterus, and hinder the Blood from
‘ flowing so fast into it and the neighbouring Vessels:
‘ For this Purpose, Cloths dipped in any cold re-
‘ stringent Fluid, such as Oxycrate, or red Port Wine,
‘ may be applied to the Back or Belly.’

I shew'd in my Account of the Composition of the Uterus, that there is no such Membrane in the inner Surface of the Womb, that could, in any Condition, occasion a Flooding, as every Person conversant in Anatomy can tell. And any Man, even Practitioners of the lowest Class, can tell you, *that Restringtons applied to the Back and Belly*, cannot influence the Uterus; because their Effects rarely go deeper than the Cutis: How then can such an Application to the Places mentioned affect a Part thro' so many Muscles and Bones that are no way contiguous to, nor has any Communication with the Womb, but in common with the rest of the Body? And cold external Applications to almost any Part will often stop Perspiration and cause a total Suppression of the Lochia, whereby the Life of the Patient must be in imminent Danger. And you acknowledge (b), 'That the Symptoms are more dangerous when the Discharge is too small or hath ceased altogether, than when it is too great.' Therefore no Method should be taken that could exchange a less Evil for a greater.

You then proceed (c), 'Some prescribe Venæsection in the Arm, to the Amount of five or six Ounces, with a View of making a Revulsion: If the Pulse is strong, this may be proper; otherwise, it will do more Harm than Good: Others order Ligatures, for compressing the returning Veins at the Hams, Arms and Neck, to retain as much Blood as possible in the Extremities and Head. Besides these Applications, the Vagina may be filled with Tow or Linnen Rags, dipped in the above-mentioned Liquids, in which a little Allum or Sacchar-Saturni hath been dissolved: Nay, some Practitioners inject Proof-Spirits warmed, or soaking them up in a Rag or Sponge, introduce and squeeze them in the Uterus, in order to constringe the Vessels.'

If you mention these various Methods as Instructions to be followed, you are greatly misleading your Readers, and that the first is your Intention is evident, because you give some Restrictions in regard to the Venæsection; and say, *the Vagina may be filled*, &c. Which shews that to be a Method you approve of; and as you make no Objections to the other ways of Practice, it is a tacit Approbation of them; for, had you thought them wrong, you should either not have mentioned them amongst what you thought to be right, or should have marked them out as so many Rocks to be avoided.

I am surpris'd to hear it mentioned, that the ridiculous Old-wives Notions, of *Ligatures about the Hams, Arms, &c.* can prevent a Flooding; since most of the Sisterhood have been convinced by fatal Experience, that it will never do any Service. For to preserve Life, the Circulation of the Blood must be continued; and the Heart cannot propel or drive that Blood forwards, which never comes to it; and it is as evident, that such Ligatures cannot restringe the Vessels of the Womb, which you suppose to be too much opened; and therefore let the Quantity of Blood be great or small, as long as it is a Fluid it will go *quâ datâ Portâ*.

The Introduction of *Tow or Linnen-Rags into the Vagina, dipped as mentioned*, will coagulate all the animal Fluids as far as their Effect can go; and therefore supposing it even to reach to the Fundus Uteri, it would coagulate all the Blood in the Sinuses of the very Substance of the Womb, which it must do before it could reach the Arteries that fills them with Blood. And as the Orifices of those Sinuses that open into the Cavity of the Uterus are much smaller than the Sinuses themselves, the Blood so coagulated therein must be confined; and altho', by that means, the Hæmorrhage may be stopped or lessened; yet a greater Misfortune, and, in the End, as fatal, will ensue. This is evident to every Man who knows the true Fabric of the Womb, as above described in the former Part of this Letter,

which is even capable of ocular Demonstration. Moreover, the plugging up the Vagina may stop and coagulate the Blood that gets thither ; but will not reach the Fundus Uteri, whence the greatest Quantity of that Fluid flows, and as Restringents are not volatile, their Effluvia cannot rise up higher than they are placed.

The same Objection holds good both as to the *injecting of Proof-Spirits, or introducing a Rag or Sponge soaked therein into the Uterus* ; which, if accomplished, might indeed sooner do the Mischief : But the Introduction of a Sponge full of any Liquid into the Uterus will be no easy Matter for the Operator, and a very painful Operation to the Patient, who must suffer a great deal more than she could do by introducing a Hand to fetch the Placenta immediately after the Delivery of the Child ; both because the Os Uteri must here be more contracted, and because the Operator's Hand must be more extended while it contains a Sponge soaked as above. Why are these Hazards to be run, if what you say in another Place be true (d) ? For you tell us, *that the Lochia seldom flow so violently as to destroy the Patient of a sudden* : But this Method, in many Cases, must be certain Death ; and you acknowledge, that when the Discharge is too small, or hath ceased altogether, the Symptoms are more dangerous. Hence it appears that your Method is not so *unexceptionable* as the *Review Writer*, Numb. 3. would make the World believe it is.

Sect 45. You tell us (e), That After-Pains commonly happen when the fibrous Part of the Blood is retained in the Uterus or Vagina, and formed into large Clots.' Is not, therefore, every Thing to be avoided which might increase the Bulk or Number of these Clots ? both which will be aggravated by your Method recommended in the last Section ; whence the After-Pains will also be stronger ; and, *cæteris paribus*,

(d) 413. (e) P. 406.

the stronger they are, the more will the Blood be pressed out of the Substance of the Womb; and you own (f) *the squeezing the After-Pains make, provokes the Evacuation of the Lochia.*

From what you direct, the unexperienced Reader might be apt to be misled, by imagining that After-Pains may proceed from *large Clots which are detained by the sudden Contraction of the Os Externum after the Placenta is delivered.* Which I must observe to you can never occasion them; because the Clots are then near their Exit, and the Seat of the After-Pains is in the Substance of the Womb. For it is well known to every experienced and intelligent Accoucheur, that when the After-Pains have been very violent, upon the Introduction of his Hand there has been no Clots of Blood found in the Cavity of the Womb. But they are frequently caused by *grumous Blood lodged within the Sinuses in the Substance of the Womb*, as I have proved in my *Essay on the Theory and Practice of Midwifery* (g). For I shew'd, ' That these Sinuses, in the ninth Month of ' Gravitation, are so large as to admit the End of ' the biggest Finger; and that their Orifices that open ' into the Cavity of the Womb, will at the same Time ' admit the End of the little Finger.—Whence the ' anatomical Reader will easily conceive how the Ar- ' terial Blood, which is always more fibrous than that ' of the venal, may compose harder Clots than the ' venal Blood.—He can also easily see, that upon ' the Expulsion of the Child and Placenta, the Orifices ' opening into the Cavity of the Uterus must contract; ' whence he will soon perceive how this grumous ' Blood may be detained in the Sinuses, especially as ' they are always full while the Uterus is extended and ' the Placenta still adheres to it. Hence the Use ' and Benefit of the After-Pains is evident, which by ' stimulating or compressing the Vessels and muscular ' Fibres, make them exert their Force to squeeze out

‘ this grumous Blood, which otherways might remain
 ‘ there and occasion Inflammations, &c.’ Wherefore
 every Method ought to be avoided that might coagu-
 late the Blood in those Sinuses, as I mentioned in the
 last Section. Hence we are naturally led to a Method
 of preventing or relieving these Complaints, by keep-
 ing the Uterus a little while from contracting too fast,
 in such People who have been subject to violent After-
 Pains in former Labours, which may be done by letting
 the Hand, that is within the Womb, remain a little
 Time there after the Child and Placenta are delivered,
 Which Method I found out accidentally, as is men-
 tioned in my 27th and 28th Observation (*b*), being
 what I had never remembered to have met with nor
 heard of before in any Author. For by keeping the
 Womb from contracting too fast, the Blood in the
 Sinuses is more easily discharged or squeezed out thro’
 the Orifices, which in this Case cannot contract so
 closely, nor so soon, as if the Uterus was quite empty.
 and the Uterus will be more easily extended a little in
 this Case, and with less Danger, than when almost
 upon full Stretch while the Child was contained there-
 in. The Operator, by following that Method, and
 moving his Fist a little with a circular or rotatory Mo-
 tion, will frequently perceive the Blood coming out
 of the Orifices of the Sinuses in the Form of Strings or
 small Clots, which are distinguishable betwixt his Fin-
 gers and his Hand even after it is withdrawn from the
 Uterus; and sometimes as they come out he will feel
 them warmer upon the Hand than the Contents within
 the Cavity of the Womb. This Method has been
 followed with Success by many, since the Publication of
 my *Essay*, and by several others before that Time, upon
 my Recommendation; especially where Patients were
 delivered of dead Children. Hence also may be ac-
 counted why Women in general, as you observe (*i*),
seldom have After-Pains of their first Child, or, however,

(*b*) P. 343, 344. (*i*) P. 406.

so much as afterwards; because in the first Case the Sinuses may not be so much extended, and consequently not have so much Blood therein as in future Pregnancies.

Having now examined your Methods of Practice in many Cases, and having, I hope demonstrated to the Reader's Satisfaction, that there are others much preferable to those followed by you; I here beg leave to recapitulate in a summary way, such Cases in particular, wherein I make use of the Extractor invented by myself; and compare my Method of Practice with yours in the same Cases, that the Reader may, at one View, see which is the easiest, safest, and most expeditious, both for the patient and Operator. The Reasons at large, pro and con, may be seen according to the Parts in this Book referred to.

First Case. When the Child presents with its Head, and can neither be delivered when turned, nor extracted whole, whether alive or dead, its Head must be open'd, and the Bulk thereof lessened, for the Security of the Mother's Life and Welfare. In this Case you order as follows, Sect. 21.

1st. That an Assistant press upon the Belly of the Patient, to keep the Child's Head steady.

2dly, You direct the Operator to introduce his Hand and press two Fingers against one of the Sutures of the Cranium.

3dly, To take his Scissars, and guiding them by the Hand and Fingers till they reach the hairy Scalp of the Child, push them into it. But if the Head slips aside, in such a man-

In the same Case, Sect. 22.

1st, I introduce one Hand (suppose the Left) to reach the Child's Head, which I grasp therein, and with a Thumb or Finger search for the sagittal Suture, which I hold in the Center of the Passage.

2dly, With the other Hand I take my Extractor and gently slide the upper End of the Capsula along the Hand that is within the Vagina, till it reaches the above-named Suture

ner

into

ner as they cannot be pushed into the Skull at the Suture, bore a Hole thro' the solid Bones, till the Scissars can be forced into the Head as far as the Rests. Then,

4thly, The Operator must withdraw the Hand that was within the Vagina.

5thly, He must take hold of the Handles of the Scissars, with each Hand, and pull them asunder, that the Blades may dilate and make a large Opening in the Skull ;

6thly, They must be shut, turned, and again pulled asunder, so as to make the Incision (or rather Tearing) crucial. Then,

7thly, The Scissars are again to be closed, and the Operator must introduce them even beyond the Rests : When,

8thly, They must again be opened and turned half round from Side to Side, to break the Structure of the Brain ; which being done, in the

9th Place, The Scissars are again to be shut and withdrawn (a). Then,

10thly,

into which it is pushed.

3dly, I expand the Wings, and break the Structure of the Brain therewith, by turning the Instrument twice or thrice half round, of which Motion the Woman is not the least sensible.

4thly, I then withdraw the Left-hand that held the Head, placing the Ends of the Fingers thereof on the Outside of the Cranium against the Wing of the Extractor ; and then,

5thly, I pull at the Instrument and deliver the Woman ; which will be easily done if the sole Obstacle to its Delivery was only owing to the Bulk thereof.

The

(a) But if the Scissars do not answer the End, *Smellie* introduces a Crotchet to destroy the Structure of the Brain, which is another Operation, not very easy to be performed.

10thly, The Operator must introduce his Right-hand into the Vagina and two Fingers into the Opening, which being fixed on the Inside, with the Thumb on the Outside of the Opening, then,

11thly, Pull and deliver the Woman, if the Head will advance; but if it requires more Force, then,

12thly, Introduce the small End of the Blunt Hook [Sect. 25.] into the Opening of the Skull, and placing the End of the Fingers against the Point on the Outside of the Skull, pull with *greater and greater Force*: If this fails, then,

13thly, Withdraw the Fingers, and slide them along the Head past the Os Uteri; and,

14thly, Withdraw the Point of the Hook from the Opening, and slide it along the Outside, above the under Jaw, and then pull; but if that will not answer, in the

15th Place, Withdraw the Hand, and sliding the Fingers along the Head past the Os Uteri, in the

16th

16th Place, Introduce one Side of the Crotchet [Sect. 23.] and fix it above the Chin, in the Mouth, back Part of the Neck, or above the Ears, or in any Part where it will take firm Hold: Then,

17thly, Withdraw the Right-hand from within the Womb, and with it take hold of the End or Handle of the Crotchet, and,

18thly, Introduce the Left-hand to seize the Bones at the Opening, and,

19thly, Pull along with both Hands to finish the Delivery.

The Head being delivered in this Manner, if the Body can't be extracted, without the Danger of separating the Head from the Body, then you direct in the

20th Place, That the Operator shall introduce one Hand so far as to reach the Shoulder-blades or Breasts with his Fingers; then,

21st, With the other Hand conduct along it one of the Crotchets and fix it firmly: After which,

22dly, Withdraw the Hand from within the Vagina, and employ it in pulling the Crochet, while the other is exerted in the same

In this Case, Sect. 27.

6thly, I only introduce a Finger to the Opening on the upper Part of the Sternum where the Thymus Gland lies; and then,

7thly, Introduce my Extractor along the Finger that is at the Sternum, penetrate the Thorax there, and expand the Wings; then,

8thly, I pull at the Instrument and Head and so deliver the Patient.

Hence

same Manner, upon the Head and Neck of the Child; and if the Instrument gives way,

23dly, Push it farther up, and fixing it again, repeat the Efforts, applying still higher and higher, till the Body is extracted.

Objections to these Methods see in Sect. 26. (b)

Hence it is evident, that my Method only requires eight Operations, while yours can't be performed without twenty-three, and many of those too are very painful to the Woman.

Second Case. When the Legs or Breech of the Child are brought down, and it is detained by the Size of the Belly, Sect. 39.

You order the Belly to be open'd, by forcing in the Points of the Scissars; or else the Operator may tear it open with the sharp Crochet; both which are naked Instruments.

I perform the same Operation with my Extractor, or with Ould's Terebra Occulta, which are each within its Capsula, and thereby perfectly defended from injuring the Woman.

Third Case, When the Body and Arms of the Child are extracted and the Head is detained, and if it be impracticable to deliver it so as to save the Life of the Child, you order the Operator, Sect. 40.

1st, To introduce his Hand along the Head and his Fingers thro' the Os Uteri.

In this Case, if I find the Head does not come with that Ease that the Safety of the Patient requires, af-

2dly

ter

(b) N. B. In these last Operations the Accoucheur's Hand, the Crochet, and the Neck or Shoulders of the Child, are in the Os Externum at the same Time.

2dly, To slide up one of the curved Crochets along the Ear betwixt his Hand and the Child's Head, upon the upper Part of which it must be fixed,

3dly, He must withdraw his Hand; and,

4thly, Taking hold of the Instrument with one Hand, and with the other grasping the Neck and Shoulders, pull along; and if the Head does not then advance, you order in the

5th Place, That he introduce his Hand as before, and

6thly, To push up and fix the other curved Crochet, along the opposite Side; and

7thly, Withdrawing his Hand he must join and lock the Crochets; and then,

8thly, Pull away, &c. but if that will not do, then he must in the

9th Place, Withdraw the Instrument, and then

10thly, Separate the Head from the Body, and

11thly, Introduce his Hand push up the Head into the Uterus, turn the Face to the Fundus and the Vertex down to the Os

ter searching with a Finger to avoid tearing the Perinaeum; I would advise,

1st, To separate the Head from the Body.

2dly, To introduce one Hand, suppose the Left, and turn the Head with the Apex to the Os Uteri and Os Externum, and therewith holding it fast, I

3dly, Introduce my Extractor, as in the first Case here mentioned; and

4thly, Having broke the Structure of the Brain, I

5thly, Extract the Head holding the Fingers as in the forementioned Case I have directed.

Os Internum and Brim of the Pelvis ; then,

12thly, Order an Assistant to press upon the Woman's Belly with both Hands, to keep the Head and Uterus firm in that Position ; then,

13thly, The Operator must open the Skull with the Scissars ; and

14thly, Destroy the Structure of the Brain, as described in the first Case here mentioned ; then

15thly, Withdraw the Scissars, and

16thly, Introduce and fix the Crochet (which requires at least two Operations) and then,

17thly, Extract it.
The Objections to these Methods may be seen in Sect. 41.

Fourth Case. When the Head has been separated and left in the Womb, Sect. 42. you direct the Operator,

1st, To push up his Hand into the Uterus and to introduce two Fingers into the Child's Mouth, with a Thumb below the Chin ; and if he can't extract it thus, then

2dly, If the Head be low down use the Forceps,

But I advise the Operator,

1st, To introduce one Hand, by which he can turn the Apex of the Child's Head to the Center of the Passage, and hold it there ; and

2dly, Introduce my Extractor

ceps, but if this also fail, then

3dly, Push up a Hand along the Side of the Head till it shall pass the Os Internum, and

4thly, With the other Hand introduce the Side of the curved Crochet and fix it upon the Head: Then,

5thly, Withdrawing the Hand that was introduced, take hold of the Instrument; and then,

6thly, Sliding the Fingers of the other Hand into the Child's Mouth, he must,

7thly, Pull down with both Hands; and if that fails, then

8thly, He must introduce the other Crochet along the opposite Side of the Head, and fixing it upon the Skull, lock them together, and

9thly, Pull and try to deliver; but if that can't be done, then

10thly, The Operator must push up the Child's Head and turn the upper Side downwards, and

11thly, Order an Assistant to press the Patient's Belly with both Hands, moving them from Side to Side, and squeezing them in

tractor into the proper Suture, as before directed; then,

3dly, Break the Structure of the Brain, &c. and

Lastly, Extract the Head in the Method before described.

in such a Direction as will force the Head towards the Os Internum and retain it in that Position; and then it must be opened and extracted according to the Directions given in your Book, Chap. iii. Sect. 7. n. 2. whereby nine other Operations, at least, are to be performed; which makes up the Number to twenty.

Fifth Case. When the Parts of the Woman are much contracted and swelled while the Child's Head is left in the Uterus, you then order the Operator,

1st, To introduce one Hand into the Vagina, and if it can't be admitted within the Uterus, introduce the Fingers, and turn the Vertex of the Child's Head to the Os Internum, &c. then

2dly, With the other Hand introduce one Blade of the long Forceps along one Ear; then

3dly, Withdraw the Hand out of the Vagina, and

4thly, Introduce the other; and

5thly, Send up the other Blade of the Forceps along the opposite Ear, and lock the two Blades; and then,

6thly,

But I direct the same Method to be followed as in the last Case, as nearly as can be; which will only make four Operations.

Q

Hence

6thly, Withdraw that Hand ; and

7thly, Pulling the Head as low as it will come, an Assistant must hold the Forceps ; while, in the

8th Place, the Operator makes a large Opening with his Scissars ; then

9thly, Let him squeeze the Head with great Force and extract slowly.

Hence it is very evident to every judicious and impartial Reader, that your Method of Practice is neither so safe, easy, or expeditious as mine : And I have likewise convinced others (some of whom were your own Pupils) of its superior Advantage by performing Deliveries, after they had tried in vain to extract the Head by following your Directions : And I can very justly declare, that I never yet fail'd in delivering Women with my Extractor, in the Cases above-mentioned.

You say (a), ‘ If the Child is seized with Convulsions soon after Delivery, in Consequence of too great a Compression of the Head during Labour, and the Vessels of the Navel-String have not been allowed to bleed, the Jugular Vein ought immediately to be opened, and from one to two Ounces of Blood taken away ; *an Operation easily performed in young Children ; the Urine and Meconium must be discharged, and a small Blister applied between the Scapulae.*’

First, the Opening of the Jugular in new-born Children is rarely practicable, especially in the Case you here mention, because where Children are so large as to be long confined in the Birth, and so greatly compressed (as you have told us) it is then scarce possible to find and open a Vein in either the Neck, Arm, or

Foot ; the Membrana Adiposa being filled with Fat to such a Thickness, that a Vein cannot be felt underneath it. And, in the next Place, you suppose the Convulsions to arise from the too great and long Compression upon the Child's Head in Labour, whence Obstructions of the smaller Vessels, attended with Inflammations, are caused ; and whatever increases the Velocity and Strength of the Circulation, must, instead of lessening, greatly increase the Complaint ; wherefore a Blister between the Scapulæ ought, in this Case, never to be applied.

You tell us (*b*), That the Meconium in new-born
 ‘ Infants ought to be purged off as soon as possible,
 ‘ to empty the Bowels, and to make a Revulsion from
 ‘ the surcharged and compressed Brain. This may be
 ‘ effected by Suppositories, Glysters, repeated Doses
 ‘ of Ol. Amygd. D. mixed with Pulv. Rhabarbari ;
 ‘ or de Althæa, or Syr. de Cichoreo cum Rheo.’

This Method of Practice, especially where the Child is either weakly or born before the usual Time of Birth, is what I cannot approve of, altho’ countenanced by too common Usage : For my own Reason, confirmed by daily Experience, convinces me, that this Method of Practice ought to give way to the following ; whether we consider the Child to be born at, or before the customary Time for Labour.

I mentioned in my *Essay on Midwifery* (*c*), ‘ That
 ‘ there is a viscid Substance always in the Stomach
 ‘ and small Guts of new-born Infants, which becomes
 ‘ thicker and darker coloured as it descends into the
 ‘ greater Guts, and is there called the Meconium ;
 ‘ which is no other than the grosser Parts of the Liquors secreted in the alimentary Tube, and of the
 ‘ Bile and Pancreatic Juice. These Humours, being
 ‘ so thick and viscid, while the digestive Powers of a
 ‘ Child are very weak at Birth, may be of bad Consequence, by sticking to the Guts, obstructing the
 ‘ Lacteals, &c.’ Hence we see, that to prevent these

(*b*) P. 437.(*c*) Sect. 35, 176.

Injuries, the first and principal Indication is to dilute, and the second is to discharge the Contents of the Intestines by Stool.

In order to answer the first Intention, the Child should frequently swallow some thin diluting Fluid, and the best that I find for this Purpose is pure Whey made from Milk newly taken from the Cow; for, the Collostrum or thickest Part being taken out, the Remainder becomes a thin, nutritious, relaxing Fluid, easy to digest, and that will readily mix and circulate with the other animal Fluids, having already passed the small Vessels of the Cow. This Liquid, when warm, is so grateful to the Palate, that the new-born Infant will take as great or a greater Quantity than of any other, and very often more, than even of the Mother's Milk; which last will be better or worse according to the State of Health the Woman enjoys, and to the Easiness or Difficulty of her Labour. The more the Child takes of this Fluid, the thinner will be the Meconium, and consequently the easier it will be expelled. If necessary, a little Manna may be dissolved in the Whey to render it more loosening. Hence it is very evident, that whatever either makes the Child take a less Quantity of this diluting Fluid, or increases the Quantity of viscid Humors in the Stomach and Bowels, must be prejudicial.

A new-born Child, even at the regular Time of Birth, and in full Health and Vigour, seldom takes any great Quantity of Liquid at first; because the Stomach and Bowels are already over-loaded by the viscid Matter and Meconium: But when that Part of it which is in the Rectum is discharged, it gives Room for the Descent of what was above it, and so by Degrees the viscid Humors in the Stomach descend into the Intestines: thro' which it is protruded by the peristaltic Motion, which either begins, or however is greatly increased, when the Child begins to breath; and as these Humors descend, *cæteris paribus*, the Child's Appetite increases.

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Whatever is given to the Child which is disagreeable to its Palate, makes it refrain from endeavouring to take, even what, before, it seemed to be eager after, and consequently it will not drink such a sufficient Quantity as Nature requires; and if what is thus given it, should, at the same Time clog and nauseate the Stomach, its Appetite will still be lessened, while its Aversion to take any Thing will be increased. Hence giving it *Ol. Amygd. D.* mixed with *Pulv. Rhabarbari*, *Syr. Cichorei cum Rheo*, &c. are very improper Things; and especially as some old Wives and Nurses give them, they are often of very bad Consequence; for these too frequently give such Things without any Mixture of a thinner Liquid, whereby the Child is almost choaked and often thrown into Fits. Hence it follows that the weaker or more sickly the Child is, the less desirous it is of Nutriment, and consequently none of those clogging, disagreeable Things above-mentioned, should be given to it. This Reason is yet stronger in relation to Children born a Month, six Weeks, or two Months before their regular Time, Because they rarely want to take any Nutriment, and even then only in small Quantities at once; and yet if the Meconium be not regularly discharged, they suffer greatly and frequently die, from the repeated Attempts made to give them Oils and Syrups, &c. Whereas by proper Management they may be often preserved, and the Meconium may be evacuated without those clogging and nauseous Medicines.

For the better understanding of what follows, the Reader must consider what Parts are chiefly employ'd in propelling and discharging the Fæces.

First then, The Lungs are very materially concerned in this Action, into which the Air must be drawn, and therein confined, while the Patient is thrusting with any Force to expel a viscid Substance.

2dly, That the expulsive Power, *cæteris paribus*, is stronger or weaker, according to the Degree of Strength in the abdominal Muscles.

3dly, He must remember that Nature is regular in all her Proceedings, and prepares all the animal Organs to be ready for their respective Uses, against the Time they are to be employ'd; which may be proved by many Instances. Thus against the proper Time for Birth, the Lungs and Vessels therein contained are proper to bear this Straining; but those of premature Births must consequently be defective, more or less, according to the longer or shorter Time the Child wanted of being nine Months in the Womb. The same holds good also in regard to the Strength of the abdominal Muscles, which consequently must, *cæteris paribus*, be weaker the longer Time the Child wanted of the full Expiration of the usual Term for Labour.

The same kind of Deficiency must also be in the Intestines, whose peristaltic Motion will not be so strong to propel or protrude their Contents, as if the Child was born at its usual Time. Hence it is evident, first, That, as Children, whether born before the usual Term for Labour, or if weakly, tho' born at the regular Time, in these Cases will take but very little Nourishment, &c. at the Mouth, and so whatever is given to it, at first, ought to be of such a Nature as will dilute, sit easy upon the Stomach, and be palatable. And, secondly, As their Organs are weak or defective, they can't propel and discharge the Fæces, especially if the Stools be hard and viscid: Moreover, every Thing that should strain the Child ought to be avoided.

In these Cases, the following Method I have found to succeed the best: For I order that the Child shall have nothing given to it but either Woman's Milk, or Whey as above-mentioned, and, if the Case require it, sometimes sweeten it with a little Manna. Then, when the Child is dressed, I order it a Glyster, made with two Parts of Barley-Water, or warm Water, and one of Oil of Olives, to be injected into the Rectum by a Syringe with a small Tube at its End. By these Means that Part of the Meconium which lies therein,
being

being generally the hardest and most viscid, is soon diluted and discharged: And a Vacancy being made in the Rectum, such Parts of the Meconium as lay immediately above the other are the easier protruded; and so are all the rest of the Contents of the Intestines quite up to the Stomach, all which are likewise diluted by what is swallowed down, of which the Child will take a greater Quantity, the less its Stomach is cloged with Oils and Syrups. By the same Method I have recovered Children, after they have had frequent returns of Fits.—In both Cases I order'd these Clysters to be repeated every third, fourth, or fifth Hour, or at longer Intervals, as the Urgency of the Case may require. By which Means the Child will take Nourishment often, will be less griped or sick, and will part with more Fæces in any given Time, than by following the other Method, which, I am sorry to say, has been too frequently observed, to the Destruction of many Lives.

By the *Advertisement* at the End of your Book, you have published Proposals to print twenty-six Copper-Plates of anatomical Figures and some Instruments; which your Eccho, the *Review* Writer, mentioned in the Beginning of this Book, Numb. 4. informs us, *In Point of Design and anatomical Exactness, he ventures to pronounce as superior to any Figures of the Kind hitherto made public.* How far that Writer understands the Subject, or has seen Women open'd, who have died undelivered in the different Stages of Pregnancy, or at their full Time for Labour, whereby to enable him to make such a Declaration, does not appear; neither can I pretend to judge: But I fancy he has not seen *Albinus's* Tables, &c. of the Uterus of a Woman who died undelivered, at her full Time for Birth, and was opened by that most accurate Anatomist; who caused Drawings to be taken immediately from Nature, and that too by an able Artist, unalter'd by lying in Spirits or any other Fluid, which would soon make a different Appearance from what is really natural: This Per-

formance I had an Opportunity of comparing with a Case of the like Kind ; and find them exactly agreeing, as to all material Points. And as, the *Review* Writer insinuates, you have had such Opportunities of having *Designs taken with such an anatomical Exactness*, it is Matter of Amazement to me, that your (pretended anatomical) Description of the Uterus, &c. in your Book should be so contradictory to that of Nature ; especially as you lay it down for a Rule (*d*), *That every Man-Midwife ought first to be Master of Anatomy*: Whence an indifferent Reader will be apt to conclude, either that you have never seen the Cases mentioned, never accurately observed them, or have taken your Descriptions from very ignorant People. For my own Part, I heartily wish, for the Good of the Public, that what the above-mentioned Writer says may prove true : But I fear he judges only from a general Knowledge of Things, and from the Beauty of the Drawing ; which, indeed may, perhaps, be possibly *superior to any Thing of the Kind hitherto made public* ; but that alone will not be sufficient. For, as I observed before (*e*), ‘ It is not the beautiful Drawings ‘ of an able Artist, but the exact Imitation of Nature ‘ (altho’ by a worse Hand) that is to be regarded.’ Besides you have made the Tables more expensive than necessary ; for you propose to have *four Copper-Plates, each of about 18 Inches by 12*, to represent Drawings of a few Instruments, which might all be sufficiently shewn and described in one Copper-Plate of a less Size than yours.

Your *Advertisement* concludes with a *N. B.* ‘ That ‘ you intend to publish a Volume of Cases hereafter ;’ which you tell us (*f*), *Will consist of the most useful Cases and Observations, partly culled from the most approved Authors.* But to avoid misleading People, I must recommend it to you, in *culling* from those Authors, that you will be more particularly careful to re-

(*d*) P. 446. (*e*) P. 75. (*f*) *Preface*, p. 4.

present their true Meaning, than you have done in regard to the Authors you have quoted in your Book ; the Sense of whose Words are frequently diametrically opposite to what you have given as a Guide *whereby your Pupils were to regulate their Practice* Or if you have employed one Person to make those pretended Extracts (which however by Adoption you have made as your own) as you did another to draw up your *Treatise*, either discard him, or lay an Injunction upon him to be more cautious for the future, or else you may innocently become instrumental in the Destruction of many People. For, as you read Lectures in order to instruct New-beginners, your Errors are thereby propagated ; which shews that it is absolutely incumbent upon you to correct them ; or whatever fatal Consequences may ensue, must lay a heavy Burden upon your Conscience in your latter Days. For whoever reads and understands this *Letter*, must be convinced, if any Lives are lost by following Methods of Practice laid down in your Book, that you will prove the Author thereof, by propagating them, &c. On the other hand, if I have mistook either the Authors from whom you pretend to give Extracts, or your own Meaning, it is a Duty owing to the Public, either to lay them open to the World, or to prove them to be so to me, and upon Conviction, I promise to publish the Corrections to prevent any Person from being misled thereby : But at present I am quite convinced of the Rectitude of all that I have herein laid down. By these Means I hope to reap the Delight and Benefit of finding my Judgment either confirmed or else be set right and improved ; which will be no small Satisfaction to

S I R,

Your humble Servant,

York,

J. BURTON.

EXPLANATION of the FIGURES in the TABLE.

FIG. I. Represents the Fillet on the Whalebone; *a*, one End thereof, with a Noose to distinguish it from the other End *c*, that is introduced through the Ring *b*; *d d*, the Ends of the Whalebone upon which the Fillet is put.

Fig. II. Is the Form of the *Almisdach* of *Albucafis*, with which he crushed and extracted large Heads. *N. B.* The *Misdach* was of the same Shape, but not so large.

Fig. III. Is the *Forfex Albucafis*, with Teeth to crush the Child's Head.

Fig. IV. *Vertigo Albucafis*, with which he opened the Matrix.

Fig. V. Represents the *Impellens Albucafis*, to push up the Foetus in the Womb.

Fig. VI. Is the *Forma Uncini Albucafis*, with only one Hook.

Fig. VII. Represents the Form of another of *Albucafis*, with two Hooks.

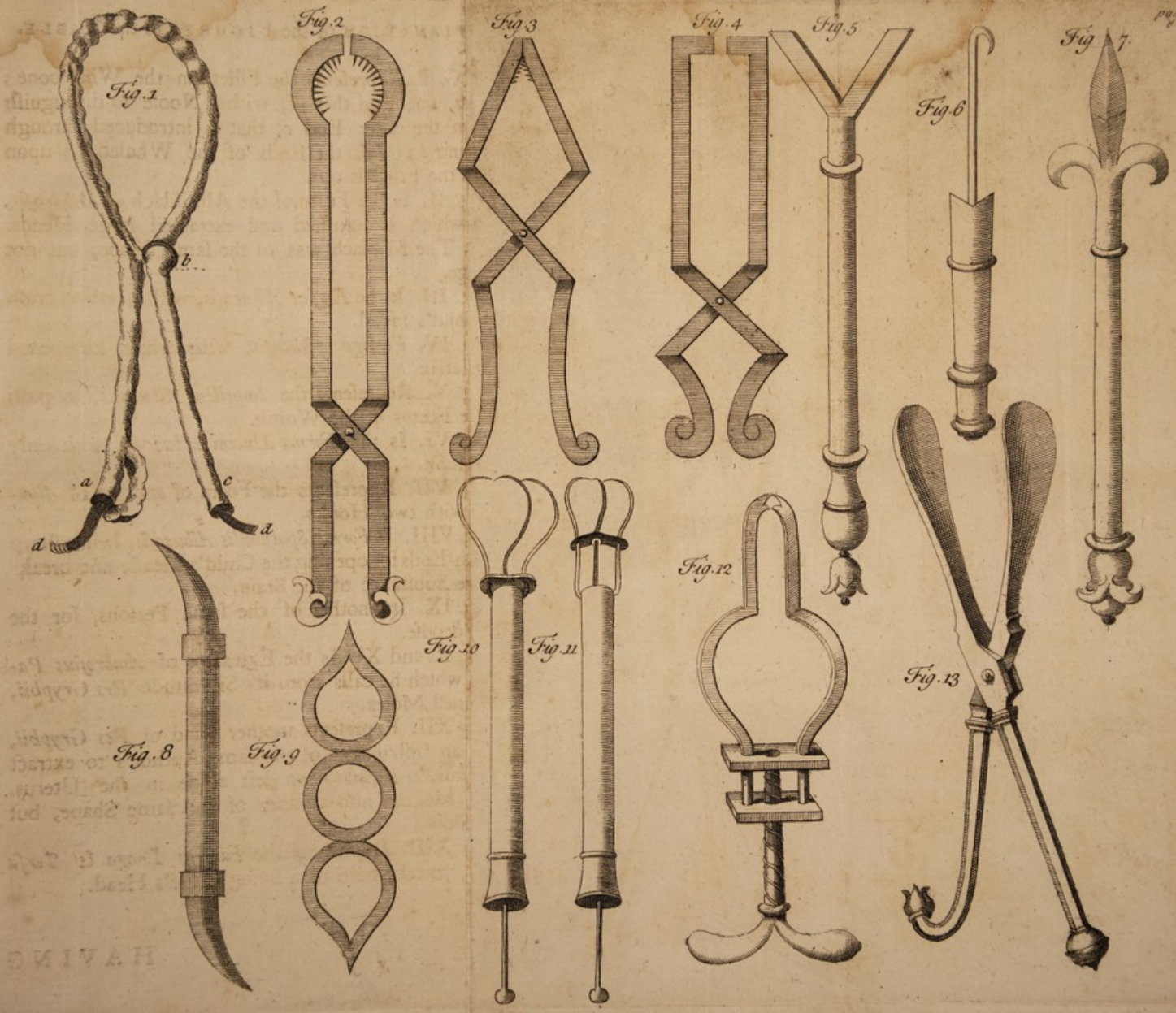
Fig. VIII. Is *Forma Spatumilis Albucafis*, being sharp at both Ends for opening the Child's Head, and breaking the Substance of the Brain.

Fig. IX. Is another of the same Persons, for the like Purpose.

Fig. X. and XI. Is the Extractor of *Ambrosius Paræus*, which he calls from its Similitude *Pes Gryphii*, to extract Moles.

Fig. XII. Represents another Kind of *Pes Gryphii*, being an Instrument of the same Author's to extract the Child's Head when left alone in the Uterus. *N. B.* He has also another of the same Shape, but four Sides.

Fig. XIII. Represents the *Forceps Longa & Tersa Paræi*, to take hold of a living Child's Head.



HAVING this Opportunity I could not, in Justice both to the Public and myself, omit taking some notice of the Cavillings and Misrepresentations wrote against my *Essay on Midwifery*, by one *Kirkpatrick* an *Irishman*, and published in (a) the monthly *Review* for *September*, 1751, Artic. 33. Which otherways are too inconsiderable to have any such Regard paid to them.

At the first Publication of the *Monthly Review* the Proprietors thereof pretended to give the Reader a *very faithful, candid and impartial Account* of the Contents of all new Books and Pamphlets that should be published: And where any thing new appeared therein, to give the Public some Abstracts or Extracts from them, without wresting or altering the true Meaning of the Author, thro' any partial or sinister Prejudice. But as they depend upon others to write for them, they, as well as the Public, may often be deceived. One Instance, I think, has been already given in the preceding *Letter*, in regard to the 61st Article in the *Review* for *December* 1751, and in my following Remarks upon the other Article above-mentioned, I believe I shall fully demonstrate the Writer thereof to have been greatly deficient in Candour at least. But I must first premise, that these two Articles, tho' both upon the same Subject, were not wrote by the same Person; as an attentive Reader may soon be convinced of by comparing the Style of the one with the other: For *Kirkpatrick* having retired into the Country for the Recovery of his Health, another Person on that Occasion, which I have from sufficient Authority, was employ'd to write the Article in *December* 1751.

How far this *Kirkpatrick* may be a Judge of the Subject of my *Essay*, I can't take upon me to determine; for after the strictest Enquiry, I don't find that

(a) The Writer then lodged near the new Church in the *Strand*; but has since removed to some other Place.

he either was educated in, or follows the Practice of Midwifery; without which it is impossible to be Master of the very Elements of the Science, which are the sure Foundation whereon the whole depends: And as an eminent Writer says (*b*), ‘ It is in Criticism, as
 ‘ in all other Sciences and Speculations, one who brings
 ‘ with him any implicit Notions and Observations
 ‘ which he has made in his reading the Authors, will
 ‘ find his own Reflexions methodized and explained,
 ‘ and perhaps several little Hints that had passed in
 ‘ his Mind, perfected and improved in the Works of
 ‘ a good Critic; whereas one who has not these previous Lights is very often an utter Stranger to what
 ‘ he reads, and apt to put a wrong Interpretation
 ‘ upon it.’

Pope (*c*) gives very good Advice on the like Occasion, for he says,

*Be sure yourself and your own Reach to know,
 How far your Genius, Taste, and Learning go.—
 Each might his several Province well command
 Would all but stoop to what they understand.—
 Without all these before your Eyes,
 Cavil you may, but never criticise.*

But this Objection, tho’ true, I shall yet wave and proceed to shew *Kirkpatric’s Partiality* and want of *Candor*; first observing, that had there been any material Objection either to the Theory or Practice recommended in my *Essay*, we may reasonably presume, that Writer would have display’d it with all his Rhetoric, without omitting the least Circumstance to prejudice the Reader against it; since he has endeavoured to wrest my Meaning very different from what it manifestly appears to be, and has given *false* and partial Quotations to support his Attempts, as will be very apparent in the Sequel.

(*b*) In the *Inspect.* Numb. 291.

(*c*) *Essay on Criticism*, Lines 48, 49, 66, 67, 123, 124.

In the *Review* for Octob. 1752, p. 286. *Kirkpatrick* has laid it down, That we are to judge by that excellent Rule quoted by *us* from Mr. *Pope* (*d*), ‘ In ev’ry Work, regard the Writer’s End.’ By which Rule I will endeavour to judge of that Writer’s End.

In the Preface to my *Essay* (*e*) I tell the Reader, ‘ That I mention my new Improvements in the manner of delivering Women with more Safety, Ease, and Expedition, in the very worst Cases, than by any other Method; *some* of which were sent to *several of the most* eminent in their Profession; whose Approbation induced me to lay them before the Royal Society in *London*, and the medical Society at *Edinburgh*. This Method I took to publish them thro’ those Channels, in some measure to *stop the Mouths of the ill-natured and stupid Part of Mankind*; the first finding fault with any Thing new, altho’ ever so beneficial to their Fellow-creatures, if not invented by themselves; and the latter sort are displeased, altho’ they neither can apprehend the Reasoning, nor understand how to follow the Practice.’ In my Dedication, I said, ‘ This Method will be a Means of depriving those who abound *with Ill-nature, Envy and Detraction*, of their most poignant Pleasure; and, at the same Time, will *silence, or stop the Mouths of the most ignorant* Part of Mankind, who will always find fault with what they do not understand; when the only Defect is in their own Brains.’—In my Preface I likewise say, ‘ Besides the Improvements which I laid before these learned Bodies, there are in this *Essay* a great many Remarks and Methods of Practice entirely new, that are founded upon Reason and Experience, which is the surest Foundation in the Practice of all Branches of Physic.—In a thing of this Nature, where the Lives of so many Persons are daily concerned, an Author ought to be particularly cautious not to mis-

• lead People into an Error ; therefore whatever I have
 • read of, or heard from others, which I thought use-
 • ful, I have mentioned ; and wherever I deviate, ei-
 • ther in Sentiments or Practice, from any Writer or
 • Practitioner, *I humbly offer my Reasons for so doing*
 • *to the Consideration of better Judges, being always de-*
 • *sirous to be convinced, if I should err, and shall think*
 • *myself obliged to those, who will give themselves the*
 • Trouble to do it properly, and shall say with *Horace*,

———*Si quid novisti rectius istis,*

Candidus imperti ; si non, his utere mecum,

—I then conclude, by informing the Reader, that,
 • To save Lives, and to avoid many Dangers, is the
 • chief View of my publishing these Things, amongst
 • which I am sensible there are yet many Defects.'

Hence, I dare say, the impartial Reader, first, will look upon it rather as a Mark of Modesty than Arrogance, to communicate what I thought Improvements in Midwifery, to those, whom I looked upon as of superior Skill, and undoubted Judges in this Case, before I made them more public.

2dly, That so far from endeavouring to deter any proper Judge from criticising upon my Performance, I desire such a Person to point out my Errors, and *candidus imperti*, for the sake of coming at the Truth.

3dly, That it is only proposed to stop the Mouths of those, who have no other Motive to find Fault than their *Ill-nature, Envy, Detraction, or Ignorance*. And,

4thly, That I am so far from being arrogant, that I acknowledge there are Defects.

Had I, indeed, boasted of my *great Reading of both Antients and Moderns, and of the Thousands of Deliveries, &c.* attested only by my own *ipse dixi*, then that Person might have had some Plea to say, I was arrogant and abounded with vain Exagerations, which his Brother Review-Writer commends *Smellie's Book* for being free from (f).

(f) *Vide p. 3 and 4, of this Letter hereto prefixed.*

But

But *Kirkpatrick* says (g), ‘ This Method of forestalling, or even arrogating the Approbation of the Public, in consequence of the Author’s averring the previous Approbation of these learned Societies, might possibly be intended to deter all medical and obstetrical Critics from the least Censure of a Performance dignified with such a considerable Sanction ; and naturally reminds a Reader of *Bay’s* Epilogue by Thunder and Lightning.’

Can any candid Reader say, from my Words above-mentioned, that I *might possibly intend to deter all medical and obstetrical Critics from the least Censure of my Performance*, when I have expressly desired it to be done where any Errors were found? and said with *Horace*, *Si quid novisti rectius istis, &c.* Nay, this is farther explained, by my specifying what sort of People it might deter, viz. such as had *no other Motive but Ill-nature, Envy and Detraction, or Ignorance*: Hence I think it is no Difficulty to judge of this *Writer’s End*. He has endeavoured to prepossess the Reader that what I have said above is as a Prologue to arrogate the Approbation of the Public ; and then lugs in *Bay’s* Epilogue which always follows a Work, as something similar ; this alone, I think, does not shew him to be above the fourth Class of those who call themselves Critics, supposing it to have been wrote by himself ; but I own, I rather impute it to the Attempt of one to be witty, who has been upon the Stage endeavouring to be a Player, and confessed that he copied all or Part of that Article for the Press : But tho’ Prologues may be intended to prepossess the Reader or Audience, Epilogues can’t do it.

In my *Essay* I said (h), ‘ Having now described the component Parts of the Ovum, the Manner of carrying on the Circulation betwixt the Mother and Fœtus, and the Manner of the Child’s being nourished in Utero ; I hope I may be allowed a small

(g) *Monthly Review*, vol. 5. Sept. 1751. Art. 33. p. 287.
(h) P. 18. Sect. 36.

‘ *Digression* ; in order to prove, that the Fœtus was
 ‘ always in the Ovum, and never was an Animalcule
 ‘ in Semine Musculino, as *Lewenboeck*, &c. have
 ‘ vainly imagined.’

Hence an impartial Reader will observe, that what I have said is only by way of a *small Digression* ; and that I only mention this Argument (which I had never observed in any Author) as what occurred to me in my other Enquiries ; and will likewise see, that I am not about to give a regular System or History of the Semen Musculinum ; or to enlarge my Book with vain Hypotheses.

I then proceed with my Relation and say, that,
 ‘ In order to set this in as clear a Light as I could, I
 ‘ have been the more particular in my Description of
 ‘ the Ovum, Placenta, Chorion, Amnios, and Umbilical Vessels ; by which we find, first, That the
 ‘ Ovum is composed of two Instruments, which afterwards prove to be the Chorion and Amnios. Secondly, On one Side of these Instruments, are a
 ‘ Number of small Vessels, which are demonstrated
 ‘ to form the Placenta. And, thirdly, It is evident,
 ‘ that these Parts of the Ovum are Productions of
 ‘ Parts of the Fœtus ; all which were united before
 ‘ Copulation, while the Ovum was yet in the Ovarium.

‘ Now according to *Lewenboeck*’s System, the Animalcules in Semine Musculino are the Embryo’s :
 ‘ How then will he unite the Vessels of the Child with
 ‘ those of the Placenta, &c. and with those of the
 ‘ Chorion and Amnios, which seem Productions of
 ‘ the Cutis and Cuticula of the Fœtus ?

‘ Let us also consider, that the Circulation in the
 ‘ Animal cannot be performed without a Secretion of
 ‘ what is supposed to be, or is commonly called, the
 ‘ animal Spirits ; and that there cannot be this Secretion, without the Circulation, is also evident. May
 ‘ there not, then, be something in Semine Masculino,
 ‘ whose Use is to begin these necessary Motions in the
 Embryo

‘ Embryo already placed in the Ovum, until it can
 ‘ have this Sine-qua-non secreted ; and also to nourish
 ‘ and support it, until the Placenta shall adhere to
 ‘ the Womb ? *But this Point I shall leave to be discussed*
 ‘ *by some abler Hand*, and return to the Progress of the
 ‘ Embryo in Ovo, whose Placenta had just begun to
 ‘ adhere to the Fundus Uteri ; first observing, that,
 ‘ was *Leuenboeck’s* System true, it would contradict the
 ‘ well known Maxim that *Deus nil frustra creavit.*’

Hereupon this *Review* Writer says (i), ‘ We leave it
 ‘ to the philosophical Reader to determine for himself’
 (a great Condescension indeed) ‘ whether these Sug-
 ‘ gestions sufficiently disprove the Hypothesis of the
 ‘ Animalcula, or Homunculi in Semine Masculino.
 ‘ Tho’ we (still in the Royal Style) can imagine some
 ‘ stronger Arguments than our Author’s might have
 ‘ been enforced against it ; *and indeed he seems conscious*
 ‘ *of his own being a kind of defective Birth*, as he says
 ‘ he shall leave the Use of the Semen Masculinum to
 ‘ be discussed by some abler Hand.’

First, Every philosophical Reader must be greatly
 obliged to this *Kirkpatrick*, that he will give him the
 Liberty to determine for himself, whether my Argument
 be sufficient or not.

2dly, Supposing, *disputandi gratiâ*, that a Thousand
 stronger Arguments than mine can be produced, do
 they invalidate or lessen what I have advanced ? But
 I should be glad to know from that Writer (who in-
 sinuates as if he knows more than the rest of Mankind)
 what stronger Arguments he can produce than ocular
 Demonstration ? By which it is evident, that the Fœtus
 is always in the Ovum.

3dly, He says, ‘ Indeed that I am conscious of my
 ‘ own being a Kind of defective Birth, because I say
 ‘ I shall leave the Use of the Semen Masculinum to
 ‘ be discussed by some abler Hand.’ This may be
 a strong Argument with him, but will have no Weight

(i) *Ibid.* p. 239.

with any Person of Candour who has but a small Capacity. For where is the Conclusion that mine is a defective Birth, because I leave the Use of the Semen Masculinum (which is here a Thing merely speculative) to be discussed by some abler Hand?

But I must observe, in a former Paragraph *Kirkpatric* endeavours to represent me as capable of Arrogance, when I would not publish my Improvements and Discoveries without first communicating them *to several of the most eminent of the Profession, who first approved thereof*: And now he insinuates that I am conscious of my Argument being a sort of *defective Birth*; because I leave the Use of the Semen Masculinum to be discussed by some *abler Hand*; whereas I make no Mention of such an useless Speculation, except only in a *small Digression*.

In the next Place this Writer says, ‘ I affirm that
‘ I have laid my Improvements and Discoveries before the Royal and medical Societies, and *the most*
‘ eminent Men-Midwives in *Dublin*, who have greatly
‘ approved, and highly applauded them; but which
‘ we do not find, upon Enquiry, have been so universally admired by the Gentlemen of that Profession
‘ in *London*.’

This Paragraph is an equal Proof of *Kirkpatric*’s Good-breeding and Modesty, as well as of his Candour in sily making a false Quotation in order to prejudice his Reader.

For, in the first Place, I said in my Dedication (*k*),
‘ That my Improvements had been perused by *many*
‘ of the most eminent in their Profession.’ And in the Preface (*l*) I said, ‘ They had been sent *to several*
‘ of the most eminent in their Profession in both Kingdoms, whose Approbation induced me to lay them
‘ before those Societies.’ As their Letters, most of which I have yet by me, sufficiently justify. True, indeed, I did not consult this learned Writer of the

(*k*) P. 4.(*l*) P. 12.

Review, altho' he mentions himself in the Royal Style, in the plural Number ; neither did I communicate the Improvements to ALL the most eminent of their Profession, which that *candid* Person would insinuate by leaving the Words *many* and *several* out of the Quotation, both in the above mentioned Paragraph and in the first of that Article in the *Review* ; which no doubt was done with a Design to make his Reader believe I had told a Falſity.

2dly, What ſort of Persons *Kirkpatrick* pretends to have made *his Enquiry of*, I can't tell ; but I dety him to mention any one eminent Man, or even one of leſs Note, who had then followed my Method in the Manner laid down and in the Caſes mentioned, but what muſt have had the like Succeſs ; the Benefit of which I am the more convinced of, by many Caſes which have occur'd ſince the Publication of my *Eſſay*, near two Years ago : During which Interval I have been ſeveral Times called in, to aſſiſt at Labours, where ſome of *Smellie's* Pupils could not perform the Delivery by the Methods laid down by him ; which by mine has been ſoon accompliſhed to the entire Conviction of thoſe Operators, as well as of others ; and ſo far to their Satisfaction that they now purſue my Directions in all ſuch Caſes, with the deſired Succeſs.

3dly, I think it a ſtrong Preſumption that thoſe Persons (of whom he ſays he enquired) had never ſeen or peruſed my Inſtruments ; becauſe ſome Time after the Publication of *Smellie's* Book (and ſeveral Months after the *Review* for *September* 1751, was publiſhed) that Author wrote to me, to deſire my Inſtrument-maker would work for him ; he not being able to have them made, as they ſhould be, by any Workman he could meet with ; and, I dare ſay, Mr. *Smellie* would apply to as able Hands as any that *Kirkpatrick's* Acquaintance employ'd : And certainly more Accuracy is required in making them right, than every Workman is either capable of, or perhaps attends to.

The next Thing this Writer cavils at, is the Copper-plates, which he finds great Fault with; not because they are wrong and insufficient, but because they are not so beautifully finished as his superior Taste would have had them. Could he indeed have proved the different Situations of the Child in the Womb, &c. attempted to be shewn, were not thence to be learnt, he might then have had some Reason to inform the Public thereof.

In the next Place *Kirkpatric* seems to be offended at my Style, which I hope he'll allow to be *English* and may be understood by *Englishmen*; and then he repeats the last Paragraph of my *Essay*. Part of which is as follows, where I tell my Reader that 'I have rather studied the Weight of Matter than elegance of Style; and Usefulness rather than Ornaments, &c.' And I can assure him, I should much sooner prefer the Saying of a more eminent Author than he is, who lays it down as a Rule, 'That a Man ought never to study what he has to say, but always to write as he talks to his Friend,' than follow any contrary Method recommended by that Writer.

Kirkpatric then proceeds to give the following pretended Quotation from my Book, with his judicious Remarks, where he informs the Reader that I say, 'I own I have not compleated the Treatise so fully as it should be; but yet, I hope, it may be a Means of spurring up some abler Head to finish what I have begun; as *Horace* says upon another Occasion,

———*Fungar vice cotis, acutum*
Reddere quæ ferrum valet exsors sibi secandi.

He, in his usual Style, says, 'We should, if there had been the least Probability for it, have supposed *sibi* to have been a typographical Error for *ipsa*; but the moral *Impossibility* of a Compositor's lighting upon another *Disyllable*, which happens to be a *Latin*

‘*tin* Word, makes it evident, the Author quoted
 ‘*Horace* by Memory, and has made him utter a Line
 ‘that is neither Sense, Grammar, nor Profody.’

In this Paragraph the Remarker lays it down as a *moral Impossibility* for a Compositor to light upon another *Diffyllable*, which happens to be a *Latin Word*: But I would advise this Writer to consult any School-Boy, no farther learned than the Grammar, and he will inform him of a great Number of *Diffyllables* amongst the *Latin Words*, that might have been lighted upon, as well as *sibi*: This therefore comes with a worse Grace from him who sets up for a Judge of Sense, Grammar and Profody.

Secondly, He says, ‘It is evident the Author quoted ‘*Horace* by Memory:’ But I would be glad to know whence it is *so evident*? (it does not appear so from my own Quotation at the Conclusion of my *Essay*, for there I have shewn I did not *quote by Memory only*, for after the Word *secandi* I have mentioned the Place I took it from in that Author, by adding, *Art. Poet. Ver. 304.* but this Part of the Quotation the *Review* Writer omitted, because that would not answer his *End*; neither could he then with the least Shew of Justness have pretended to shew his Wit or Sense, and inform the Reader that he understood Grammar and Profody. Had I even omitted to mention the Number of the Verse in *Horace*, a candid Reader would have concluded the Error to be merely typographical; especially when he found *Horace’s* Meaning properly applied; which I could not be supposed to do, had I not understood the Words and their Purport; and whether they were Sense, Grammar, or Profody. This Writer may have an Opportunity, in his *Review* of the preceding *Letter* (m), with equal Candour, as here, to shew his Sense and Learning, in a Line quoted by me out of *Persius*; where the Com-

positor, by omitting a single Letter, has divided the Word *infusa* into *in usa*.

Kirkpatric then says, ‘ This escapes with a worse
 ‘ Grace from a Gentleman, who has often hinted their
 ‘ want of Education to his Brethren ; in our Notion
 ‘ of which, we generally include some scholastic or
 ‘ classical Literature.’

Here again this Writer, *to obtain his End*, has evidently misapplied the Sense or Meaning of my Words; for I don’t in any one Part of my Book, or in the Preface, give the least Hint or find Fault with those, he calls my Brethren, for want of scholastic or classical Learning ; but regret that People (*n*) ‘ without any
 ‘ other Education and Capacity, imagine nothing more
 ‘ is required but to hear a few Lectures, and to know
 ‘ the Use (or perhaps Abuse) of a few Instruments,
 ‘ with a Copy of Old-wives Receipts, with which
 ‘ they think themselves qualified to practise as well as
 ‘ others of the Profession.—These sort of Men consider Midwifery rather as an Art only than a Science;
 ‘ whereas it may properly be said to be composed of
 ‘ both : Of the first, as to the Manner of Operation ;
 ‘ of the last, as the Mothers are subject to so many
 ‘ Disorders and Complaints, that frequently attend
 ‘ their Pregnancy and Lying-in, which call out for
 ‘ medical Skill rather than manual Operation.’

Hence I think the candid Reader will soon perceive, that it is their want of Education (in those whom the Remarker calls my Brethren) as to medical Skill that I regret, because they attempt to practise without any other Foundation than *having heard a few Lectures and having a few old-wives Receipts in their Possession*. And it is very evident, that this medical Skill will never be obtained if they were to read the Classics all their Lives ; and therefore it cannot be that Branch which I could mean to find fault with their want of.

(*n*) Pref, p. 10.

This Writer then proceeds and says, ‘ However, we shall not chuse to infer from this heedless Citation, that our Author may not have the requisite Use of his Hands, and be a passable Operator, as he appears to have been an assiduous Practitioner, and has taken great Pains in compiling and composing a Performance, which we cannot think will greatly illuminate or entertain any Adepts in Midwifery; some cautionary Parts of which, however, and some of the Cases, may be worth the Perusal of Beginners.’

In the first Place, I can’t but observe that I am much obliged to the Moderation of this Person, who is so obliging as not to *chuse to infer from* (what he is pleased here to call) *an heedless Quotation of Horace, that I may not have the requisite Use of my Hands, and be a passable Operator*: Because had he made such an Inference, it would have redounded more to his Discredit than mine; but yet it is very plain that he has done this only with an Innuendo to make the inattentive or the injudicious Reader believe he could have made such an Inference, but that he did not indeed *chuse* to do it.

2dly, I am certainly no less obliged to that Writer for his Candour in allowing that *I may be a passable Operator*, notwithstanding the heedless Quotation above-mentioned; but had there been any Connexion betwixt the Practice of Midwifery and *Horace’s Works*, no doubt he would have been glad to have inferred, that I could not be Master of one without understanding the other.

3dly, That the Reader may the better judge of the Partiality or Justness of this Reflexion, I must be obliged to repeat here what I have said relating thereto.

In my Preface (o) I said, That ‘ I intended to publish my Improvements by only laying them before

(o) P. 12.

' the Royal and Medical Societies ; till I was informed
 ' that another Person was about to publish my Im-
 ' provements with some other Works of his own ;
 ' this put me upon publishing them myself, especially
 ' as I had drawn up the Heads of the following
 ' *Essay* for the Instruction of the Son of a Friend and
 ' Acquaintance of mine, who was desirous of being
 ' Master of every Branch of Midwifery.'

Hence the candid Reader will conclude that all the
 rest of the Book, above the Improvements and Dis-
 coveries that I had made, were intended for the *In-*
struction of Beginners only ; who ought certainly to be
 Masters of that Part of Anatomy in Women requisite
 for the Propagation of our Species ; and of the regular
 Progress of each Stage of Pregnancy to the Time of
 Delivery, in a regular, natural Way. The Know-
 ledge of all these is the Foundation upon which their
 future Practice must depend ; and that they might
 obtain this End, I have given as full a Description of all
 those Parts from the most accurate Anatomists as I could,
 as well as from my own Observations ; and also of the
 Progress of the Fœtus to the Time of Delivery in a
 natural common Labour ; in which I have omitted no-
 thing that I thought necessary for a Beginner to know,
 nor have added any Thing that I judged to be useless,
 in order to make the Account as perfect and yet in as
 little Compass as possible. And in order to complete
 the System, I then tell the Method of delivering Wo-
 men in all preternatural and difficult Cases ; among
 which are the Improvements and Discoveries which I
 had made and were never before published ; which,
 supposing them just, have an equal Reference to Adept
 in Midwifery as well as to others ; of which the Rea-
 der at one View may see a Specimen in the foregoing
Letter ; where, in the Summary, Page 217 to 226,
 I have set down, in some of the Cases, both *Smellie's*
 and my Method of Practice : Whence alone, the
 candid Reader may judge, whether even Adept may
 not

not meet with something (as *Kirkpatrick* terms it) *to illuminate and entertain them?* And there are in my *Essay* other Methods in some Cases not taken notice of in the preceding *Letter*. Moreover therein are the Discoveries which I had made to prevent or mitigate, some Inflammations of the Womb and After-pains, in a very safe Manner, with few or no internal Medicines, that were entirely new; and, if true, must equally *illuminate and entertain* the *Adepts* as well as Beginners. And sure I am, that whoever follows the Method I have laid down in the same kind of Cases mentioned, will be convinced of the Truth and Justness thereof; of which I have had repeated Instances since the Publication of my *Essay*, near two Years ago; which not only confirm my Sentiments, but have also convinced all the others who were present. Yet some People there are in the World, who are too tenacious of their Prejudices, as well as opinionated of their own Skill, to try new Methods; or if perchance they should be prevail'd upon to make the Experiments, they do it in such a Manner as to render the whole ineffectual, either by not following the Method exactly prescribed, or by applying it in improper Cases: So averse are some People against being convinced they are in the wrong, as if it was a Crime to acknowledge they were wiser than before. From what I have said, I think, every impartial Judge will be convinced that *Kirkpatrick's* Remarks are absolutely contrary to Matter of Fact, and may be deemed a false Representation of my Book. To raise every just Objection that can be done, is becoming a Friend to the Public; but to paint Things in false or worse Colours than they ought to be, is not very candid; and he should, at the same Time, remember, that absolute Perfection is not to be expected from any Work whatever; and that Candour will make Allowances for human Frailties, and overlook any small Errors, which have escaped the Vigilance of an Author. This, perhaps, *Kirkpatrick* will endeavour

vour to pervert into a Kind of Request, that he would not criticise upon my Work ; but so far from such an Intention, I here publicly call upon him to shew, either in my *Essay on Midwifery*, or in the *Letter* hereto prefixed, or in this Performance, all the material Faults he can with Candour find out ; always giving his Reasons or Authority for so doing ; that I may either as publicly vindicate what I have said, or acknowledge my Error ; which I shall more readily do upon Conviction, than perhaps he imagines : Likewise at the same Time I call upon him, to point out to me any obstetrical Writer down to this Time, whose Treatise is more regularly drawn up for instructing others, that has fewer Faults, or wherein more proper Rules of Practice are laid down, than what are to be found in my *Essay*. This indeed I shall not expect to be impartially done, for since he could, without any personal or real Provocation, attempt to stab me in the Dark in so uncandid a Manner as above-mentioned, I now must expect all the Engines, &c. to be play'd against me, that, to speak in the mildest Term, *the Want of Candour can suggest*. But however, it is to be hoped that what I have said may be no Hindrance to either any Reply, or future Production of that Writer ; who will do well to reflect, that to criticise justly, though, very commendable, is one Thing ; but to cavil, make unjust Inferences, and pervert an Author's Meaning, is another.

I ought, before I conclude, to ask Pardon of the Reader for detaining him thus long, in answering this *Review Writer* in so serious a Manner ; when, from the Face of his Remarks, he shews his Prejudice and Partiality in so strong a Light, as to deserve rather Contempt than any particular Reply.

ERRATA.

PAge 5, Line 24, for *Phyiic* read *Physic*. P. 11, l. 32, *in usa* read *infusā*. L. 35, *were* read *are*. P. 17. l. 12, *Manuscripts* read *Manuscript*. P. 27, l. 26. *Imitation* read *Intimation*. P. 35, l. 34, *Pubis* read *Pubes*. L. 39, read *sect*. P. 39. l. 39, *Patient* read *Patients*. L. 23, *dele not*. P. 42, l. 36, *Scrobiculum* read *Scrobiculus*. P. 45, l. 31, *amere* read *arriere*. P. 47, l. 3, *ou* read *on*. L. 16, *Guilemene* read *Guilemau*. P. 78, l. the last, *in* read *into*. P. 106, l. 29, *a* read *the*. P. 112, l. 11, after *of* add *the*. P. 146, l. 18, *pwards* read *upwards*. P. 148, l. 6, *fix'd* read *placed*. P. 149, l. 15, after *several* add *Women*. P. 18, *delay*, read *Way*. P. 151, before *to* add *not*. P. 152, l. 16. *how Readers know* read *how Readers may know*. Ibid. *was* read *is*. P. 153, l. 16. after *or* read *by*. P. 156, l. 20, *i* read *is*. P. 166, l. 33, *tollitus* read *tollitur*. P. 185, l. the last, *or* read *on*.

