

A lecture introductory to the theory and practice of midwifery: including the history ... of that science ... delivered the 4th of October 1773 / [John Leake].

Contributors

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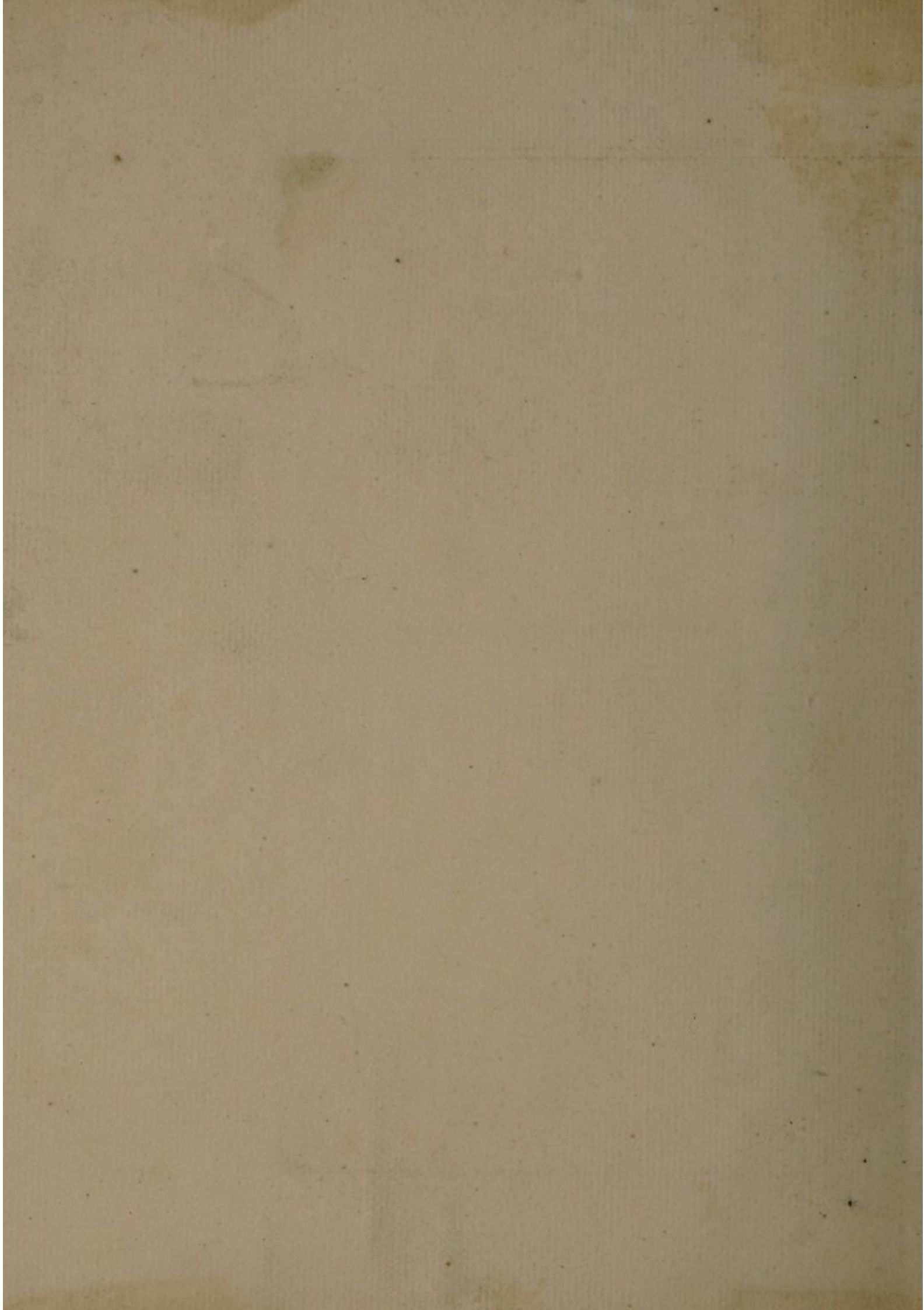
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L E C T U R E
INTRODUCTORY TO THE
THEORY and PRACTICE
O F
M I D W I F E R Y:

Including the History, Nature, and Tendency of that Science; with a View of its several Branches, and the proper Means of attaining a perfect Knowledge of the Whole. Together with Animadversions on the Qualification and Deportment of an ACCOUCHEUR: Publicly delivered the 4th of *October*, 1773.

By J O H N L E A K E, M. D.

Member of the Royal College of Physicians, *London*;
And Physician to the WESTMINSTER LYING-IN HOSPITAL.



Parce precor gravidis, facilis Lucina, puellis,
Maturumque utero molliter aufer onus!

OVID.

The THIRD EDITION corrected, with ADDITIONS.

LONDON: Printed for R. BALDWIN, in *Pater-noster Row*.

Lately were published, the third Edition corrected, with Additions and a general Index, Price 5s. in Boards,
PRACTICAL OBSERVATIONS on the acute Diseases incident to Women,
under the following heads.

Observations on the CHILD-BED FEVER; deduced from the Symptoms of that Disease taken from the living Body, and from an Examination of its morbid Appearances after Death; together with the Methods most conducive to the Cure; illustrated with Cases, and *Forms of Medicine* adapted to each.

On the *Prophylactic Method*, or Means which contribute to prevent the Disease.

On the Nature and Treatment of *Uterine Hemorrhages*, or Floodings.

On the Cause and Cure of *Convulsions*, and the Diseases most fatal to Women during the State of Pregnancy.

By JOHN LEAKE, M. D.

Printed for R. BALDWIN, *Pater-noster Row, London.*

By the following Letter, with which the Author was lately honoured, it appears, that the above Work is translated into French, and will soon be published in that Language.

Monfieur Monfieur John Leake, docteur en medecine, membre du collége royal des medecins de Londres, &c.

MAXIMÂ cum voluptate et non sine fructû, Vir illustriffime et ornatiffime, tuum legi et relegi librum, cui titulus est: *Practical Observations on the Child-bed Fever, printed London 1772.* In illo enim reperi animadverfiones curiosas et plane novas de affectibus omenti, difquifitiones nitidas et fagaces de curatione febris puerperium inſequentis, dubitationes quas dictarunt prudentia et moderatio contra ſyſtema noſtri Celeberrimi *Levet*, cogitationes accuratas de hæmorrhagiis ante et poſt partum. Quid magis? in toto judicium et ſcientia veri boni que medici refulget. his itaque perpenſis, ſeu ægrorum ſalutem, ſeu artis medicæ incrementum proſpiciam, tuum librum cunctis gratiffimum duxi; qua propter ut melius innotefcat, hunc in idioma gallicum converto, jam ferme abſoluta eſt interpretatio; et paucos intra menſes, ſi tibi libet, prelo publico poterit in Franciâ committi.

Mihi familiaris et colendus amicus habet nunc ſub prelo tractatum idiomate Gallico ſcriptum de hæmorrhagiis uterinis. Plurimis abhinc menſibus auctori communicaveram verſionem tuæ ſectionis *Væ. Of the nature and cauſe of uterine hæmorrhages, and their treatment, &c.* in hoc novo tractatu mei amici, multa ſunt de te excerpta cum laude tui in eni et tui operis.

Auctor novi tractatûs, poſt expoſitionem variarum methodorum contra hæmorrhagias uteri, nil efficacius invenit quam obturatio vaginæ cum linteolis vel ſiccis, vel imbutis aceto, ſed profunde immiſſis. Hæc methodus olim vetuſtiſſimis nota, in oblivione quodam modo jacebat; ſed nunc reſurgit longâ et felici experienciâ ſtabilita; et enim introductio linteorum in vaginâ, dum ſiſtit ſanguinis fluxum, juvat quoque formationem coaguli; interim uterus novas acquirit vires; ſeſe conglomerat et conſtringit, contractionibusque propellet coagulatum ſanguinem et linteola immiſſa; ſed ut obturamentum vaginæ ſit ſemper ſauſtum, plurimæ ſunt adhibendæ cautiones: ſcilicet, mollis compreſſio uteri cum manû, applicatio ſupra pubem linteorum aquâ frigidâ, aut forſan melius aceto madidorum, uſus aeris frigidi, et, ut uno dicam verbo, quidquid poteſt juvare uteri contractiones et vaſorum ſanguinem fundentium clauſuram.

Celeberrimus *Hoffman*, *Cornelius Tricen*, multique alii jam indicarant obturamentum vaginæ contra hæmorrhagias uteri; hæc methodus tibi, Vir clariffime non erat ignota; altamen in praxi vix erat explorata. In curriculo menſis proximi, ut opinor, novus tractatus mei amici evulgabitur; et in illo videre poteris ferme omnia quæ ſcripſi de opio, medicamentis aſtrigentibus, venæ ſectione, &c.

Vale, Vir clariffime; et quanquam ſim extraneus, et nullo modo tibi notus, non dedigneris, quæſo, meam ſinceram admirationem.

Datum Divione die 21. 7bris. 1775.

FRANCISCUS CHAUSSIER,

Chirurgiæ magiſter in urbe Divionenſi apud Burgundos, acad. reg. chirurgiæ Pariſienſis correfpondens, &c.

P. S. Si velis mihi reſponſum dare, ſubjungo inſcriptionem epiſtolæ in idiomate gallico:

A Monſieur Monſieur Chauſſier, Maître en Chirurgie, &c. à Dyon.

A
L E C T U R E
INTRODUCTORY TO THE
THEORY and PRACTICE
O F
M I D W I F E R Y.

THE subject of this LECTURE relates to a branch of medical science, in which we are all interested; not only as men appointed to discharge the important duties of their profession, but also as members of society, who ought to look on the exercise of it as a relative obligation, tending to the preservation of that amiable part of the creation, woman, from whom we derive our being and our greatest happiness.

A previous knowledge of the nature and tendency of any art before we begin to study it, is both satisfactory and necessary; what I have therefore, gentlemen, to lay before you, on the present occasion, may be considered as an introduction to a COURSE OF LECTURES on the Theory and Practice of Midwifery.

The earliest accounts we are able to obtain, inform us, that Midwifery, like other branches of science, took its beginning from necessity ; and consequently, is so extremely ancient, that it seems to have sprung up with the first race of mankind ; for notwithstanding the human body, in its original state, came perfectly formed from the hand of the Creator, with all its parts wonderfully adapted to perform their several functions ; and altho' its strength and vigour was then unimpaired by intemperance and disease ; yet Nature, in the production of our species, not being always able to support and maintain her own laws ; the difficulties to women in travail were nearly the same in the first ages as at present, and consequently, stood in need of the like assistance ; although, from the imperfection of the art, it could not then be had.

That which principally enobles any science, is the dignity of its object, and the public utility arising from it ; consequently, if we may rate the value of Midwifery by the advantage it procures to the human race, it will be found superior to all others ; inasmuch as most of them are only subservient to the conveniences of life, but on the due exercise of this art immediately depends the preservation of life itself, even in a double capacity. Hence the poetical invocation of the ancients :

“ Phœbe fave ; laus magna tibi tribuetur, in uno

“ Corpore servato, restituisse duos.”

TIBULL.

Mid-

Midwifery has indeed often been degraded by the ignorance and unworthiness of many who practised it; and sometimes has been made a subject of levity by the licentious vulgar. Some of the medical profession there are, who, with more vanity than solid sense, think it below their dignity to exercise a manual art, or endeavour to save the life of their fellow creature by any other means than that of directing medicines or feeling the pulse;—means too often vague and ineffectual, without the interposition and assistance of nature herself. But let it be remembered, that learned men in all ages have not only studied this art themselves, but also recommended it to the attention of others, as a *curious branch of natural philosophy*, which will afford the highest entertainment to a contemplative mind, and as a thing of the utmost importance to the community. It is not, indeed, necessary that a physician should practise Midwifery; but if he is utterly unacquainted with that science, he is less entitled to the name, which implies a general and extensive knowledge of the healing art.

Among the ancients, that venerable parent of physic, *Hippocrates*, not less illustrious for social virtue than his profound knowledge of philosophy, wrote several books professedly on Midwifery, and the diseases incident to women; and *Aristotle*, who was Tutor to *Alexander* the Great, and by his order am-

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ply supplied with whatever the known world could afford relative to natural history and the generation of animals, did not disdain to write on the same subject ; as did also *Avicenna*, who was a physician and an Arabian Prince.

Of the moderns, the celebrated *Harvey*, physician to king Charles, who discovered the circulation of the blood, also discourses largely on generation and the birth of the human Fœtus ; and *Ruyfch*, that laborious investigator and promoter of anatomical knowledge, not only practised midwifery, but was appointed Professor of that art, by the states of Holland. The learned *Astruc*, royal Professor of physic at Paris, and physician to the French king, gave public lectures on Midwifery ; and also *Albinus*, an illustrious Professor of anatomy and surgery in the university of Leiden.

Daily experience affords ample testimony of the great utility of Midwifery, whether it regards the preservation of individuals in pregnant women, or extends its influence to the good of society in general. In preternatural cases, or profuse uterine hæmorrhages, where nothing but speedy delivery can save the patient's life ; the timely and judicious assistance of an *Accoucheur*, snatches her, as it were, from the brink of the grave, and often preserves her infant also ; he restores to the despairing husband
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the tender partner of his bosom, and gives consolation to all those who are united to her by the ties of blood and natural affection.

The art of Midwifery also principally constitutes and illustrates the *Medicina forensis*, or that part of medicine which contributes to the public administration of justice, in what relates to virginity, pregnancy, and the natural period of uterine gestation; also to the forming a judgment whether unlawful means have been used to occasion abortion. It likewise directs us to the most proper methods of discovering whether an Infant was still-born or destroyed after the birth. Besides those cases, in which the decision of the *Accoucheur* has no inconsiderable share, there are many other important points which could not be satisfactorily cleared up, or properly determined without his interposition; and therefore, the verdict of juries, respecting the legitimacy of children, indictments for rapes, or actions to obtain divorce, are chiefly guided by his report.

We are told, that when women under sentence of death plead their belly, execution is ordered to be delayed; and that this matter is generally determined by a jury of matrons; but, did not the law of the land expressly thus command it;

those judges, who would admit of such juries, ought to be deemed matrons as well as they.

To err on the charitable side, is certainly excusable; and did the evil rest here, it might be passed over in silence; but those who have not put off all sense of feeling and humanity, must hear with horror and regret, that many children have, from thence, fallen victims to punishment, who were not sharers in guilt, and have been entombed alive within their mothers' womb. *Dionis* mentions a case of this kind, where a midwife of the Chatelet at *Paris* having examined a servant under sentence of death, and who pleaded her belly, positively declared she was not pregnant; in consequence of which she was immediately executed; but when the body was publicly opened, a child was found in her womb; the midwife was therefore obliged to pay a fine, and forbid to practise ever after.

How often have young women brought forth children, who a few hours before had been declared pure virgins? Indeed, men of knowledge and skill in their profession are not always free from error, and that is always most excusable in those who have sufficient resolution and candor to confess it, for the benefit of others; but if such as have judgment are sometimes mistaken, surely it ought to be a lesson of humility and caution

tion to those who either have very little or none at all. In a word, if it is of consequence to prove the legitimacy of children, and to prevent a spurious issue from inheriting the property of the lawful heir; if it is of importance to acquit the innocent and punish the guilty, in the most horrid and unnatural of all crimes, that of child-murder; the public utility, and private advantage of that science, on which such determinations chiefly depend, will then become sufficiently evident.

The wisdom of the Creator is not more conspicuous in the great and original work of creation itself, than in the means by which succeeding generations spring up and people the world; and if the inanimate bodies of shells, fossils, and other concretes, or the more beautiful and organized parts of matter in the vegetable system, so often engage the attention of the curious; surely, the *Obstetric Art* would afford them entertainment much more rational and interesting. As it comprehends, in degree, the natural history and physiology of the human body, and gives us an idea of the order and original disposition of its several parts; so it likewise tends to illustrate and explain the faculties of the mind resulting from them; the organs of sense being the first inlets to all our mental perceptions, which vary in their degrees of perfection, according to the perfect modification of those parts, and the due per-

performance of their several functions. It would, indeed, be impossible to discover, by the nicest anatomical researches, that exquisite peculiarity of structure in the brain, which constitutes the difference between the wise man and natural fool ; yet, as every effect implies an existing cause, such an identical difference may be reasonably inferred ; for it would be unphilosophical to suppose any essential difference in the nature of the intellect or soul itself.

No science leads us so immediately to a survey of our own origin as this ; it presents to our view the rudiments of the foetus, and shews how they gradually unfold themselves in magnitude and figure, from conception to the time of birth : Thus we may observe,

“ *How the dim speck of entity began,*

“ *T’ extend its recent form and stretch to man.*”

GARTH.

Here it may also be remarked, how the causes of things remain inactive, till they are excited into motion by other subordinate causes ; for the *primordia* of the human body, like the stamina of plants in their seed, lie dormant and concealed in miniature, in the female ovum, till they are supplied with a vital principle, and rendered prolific by the subtile *aura genitalis* of the male. The philosopher and physiologist may then trace with wonder, the revolutions of matter in the human embryo,

embryo, divesting itself by degrees of its inert qualities, till by a certain new modification of parts, it becomes an organized body, and *vegetates into life*: 'Tis now supplied ~~with~~ with pipes and strainers fit to convey its juices, but having yet only circulation without sensation, it resembles the growth of vegetables, and, like a parasite plant, germinates and strikes root in the womb.

The solids of a foetus, and all its component parts, even the bones themselves, were once in a *fluid state*, and void of all sensation; being derived from the common elements of matter taken into the body for nourishment; and it appears highly probable, at least to me, that the extraordinary property residing in matter, called *Irritability*, is the first instrument which Nature employs towards the production of *animal life*. 'Tis owing to this, that the *sensitive plant* shrinks from the touch, and that the flesh of slaughtered animals palpitates and trembles after death, on being rudely touched.

Hence then, the *flamina vitæ* of the embryo may be considered as an organized body which advances to maturity by slow and insensible degrees: At first it admits the circulation of a fluid through its delicate vascular system; as soon as it becomes *Irritable*; the *punctum sanguineum saliens*, the *primum vivens* and *ultimum moriens*, so beautifully described by the

immortal *Harvey*, sets the animal machine a going; and in process of time, the diminutive being is endowed with life, motion and sensation; and at last, when arrived at its utmost period of perfection in the adult, it becomes possessed of those sublime faculties which do honour to human nature. Such once were *Newton* and *Descartes*, and of such humble materials may other *Alexanders* and *Cæsars* be made, under the forming hand of the Almighty Architect.

Thus by a real transubstantiation, we begin to “*exist on many thousand grains that issue out of dust*;” but how and when the mystical union of intellect with matter is effected, must ever remain a secret, and is only known to the Divine Author of our being.

’Tis presumed there can be no beginning in an animal body without the agency of an immaterial principle; but it must be observed, that the concurrence of material physical causes are also necessary; for the vital principle in the ova of animals would lie dormant for ever, was it not excited into motion by the application and energy of heat*. It may also be

* *Natura in animali omnino animal est. Ipsa fabricat Calces, Dentes, Cornua, ad vitam tuendam; itaque ijs et utitur, & scit quo sit utendum modo, sine objecto aut Phantasia ulla.* J. C. Scallig. Exer. 307. Sect. 29.

be remarked, how the faculties of the mind increase with the body, from infancy to manhood, and then gradually decline as it tends to decay.

During this tedious progress of animal life, from the first dawning of a living principle to the last extreme of old age; physiologists have supposed there must have been an entire transmutation or total change of the whole body, so as to destroy every idea of *personal identity*; and therefore the celebrated Mr. *Lock* places it in *consciousness* only. But altho' the adventitious substance of the body, derived from the aliment taken in for its nourishment, should be many times changed, its *original stamina* must remain identically the same.

The ways of providence are past finding out; yet these very perplexities with which we meet in the pursuit of knowledge may afford us some advantage. They will abate the extravagance of enthusiasm and correct that vanity and self-sufficiency so natural to the mind of man. On the contrary, they will teach him diffidence and humility, by shewing him many things of which he is either doubtful or totally ignorant.

The learned Dr. *Bentley*, in his confutation of atheism, has clearly shewn, that the force of gravity, however it may influence

fluence the larger masses of matter, is utterly insufficient to account for the formation of animal bodies. The science under consideration has not been less eminently serviceable to the cause of religion, by demonstrating the wisdom of the Creator in the structure of their several organical parts, as well as in affording experimental facts which refute the doctrine of *equivocal generation*, that great barrier and subterfuge of the atheistical sect of philosophers; who concluded, according to their principles, that if *Crocodiles* and other animals were produced by putrefaction, in the banks of the river Nile; that men also, like so many animal plants, might originally spring up by chance from the prolific mud of their mother earth; to the total exclusion of all divine agency.

This pernicious notion which prevailed for many centuries, was at last opposed by *Redi*, a celebrated naturalist of Florence; who by several curious experiments incontestably proved, that the concurrence of both sexes is essentially necessary towards the production of the smallest animals as well as the largest; and that those putrid substances, supposed to have generated insects, only afford them a proper nidus or hatching-place, but never produce them by spontaneous formation.

It must, indeed, be confessed that some particular animals are produced in a manner very singular and anomalous; for a

Polypus

Polypus cut into several parts will generate so many distinct *Polypi*, with all the faculties belonging to that which before was uniformly such. How strangely different then may be the effect of the same cause, in animals of a different species? since the division which would destroy a human body, tends to generate and multiply that of a *Polypus*.

This extraordinary creature, I think, may be considered as an intermediate link, connecting the two different orders of animal and vegetable bodies; for the sensitive and generative faculty of the first, may be perceived to descend gradually in the scale of animal beings, till it dwindles into the inanimate growth of plants. As nature insensibly drops the animal process, she begins to play the mimic, and transgresses her own laws: Thus *snails* and *earth-worms*, according to *Swammerdam*, are all of the hermaphrodite kind, and whilst they impregnate are each reciprocally impregnated; and that uncommon reptile the *Surinam toad* does not produce its young from the interior parts of its body, like other animals, but from certain cups or sockets placed upon its back.

Lesser in his *Testaceo-theologia* asserts, that the *balani marini*, *rock muscles* and *oysters* are not only hermaphrodites, but such as without any manner of concurrence with each other, have within themselves a power to generate and bring

forth their kind*. An impregnated female *Aphis*, or *plant-louse*, can communicate to her offspring the extraordinary power of producing others in succession even to the fifth progeny, without any fresh impregnation; and what is equally astonishing, the same species of *Aphis*, which in summer was *viviparous*, becomes *oviparous* in autumn. It is also wonderful, that the *Coccus* and *Oniscus* no sooner bring forth their young, than they are devoured by them. And lastly, if we descend to vegetables, however strange it may appear, it is certain that the *farina* or seed of the male flower impregnates that of the female, otherwise no fruit would be produced; for *Linnaeus* observes that the savin tree was fruitful in the upsal garden, where the male plant grew near it, but in the clifford garden, where the male was wanting, there was no fruit at all.

As the rudiments of the fœtus have already been considered, it is now necessary to remark, that the œconomy of Nature, in perfecting what she had begun, is no less extraordinary; whether it regards the vital functions of the womb in nourishing the child, or the amazing expulsive force by which it is brought forth. After puberty, the female organs are so disposed as to prepare a larger quantity of blood than is necessary for
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* No *Hermaphrodites*, among the insect tribe, have as yet been discovered.

the nourishment and immediate supply of the woman's body ; and therefore, when she is not with child it is periodically carried off once a month, lest it should overfil the vessels and incommode her constitution ; but as soon as she becomes pregnant, it is sent to the womb for the nourishment of the *fœtus* ; consequently, during nine months' gestation, the menses are naturally wanting. When the infant arrives at its utmost bulk, the uterus can then no longer contain it without danger of bursting ; the violent distention of its fibres now creates pain, which puts the whole uterine system into a state of re-action, and from thence the birth is at last effected ; so that what are called labour-pains are only the effect of that *nîsus in contractionem*, or powerful endeavour of the womb to expel its contents.

From the vascular contexture and peculiar fabric of the uterus, its cavity, which in the unimpregnated state was not more capacious than that of a large filbert, at last becomes sufficient to contain a child weighing seven or eight pounds ; and what is still more extraordinary, it does not, like a mass of wax or other ductile substance, become thinner in proportion as it is extended, but uniformly preserves its natural thickness from conception to the time of birth ; had it been otherwise, Nature would have run counter to her own designs, and instead of bringing the *fœtus* to maturity, the womb must
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have burst, and the purposes of conception would have been totally defeated.

As soon as the child is born, the circulation changes, and less blood being wanted at the uterus, a certain quantity of chyle, which before had nourished the foetus, is now sent to the breasts, to supply the new-born infant with that balsamic fluid called milk. Hence it may be observed, how admirably this organ is adapted to answer the important purposes of generation; namely, to allow of vast extension without bursting; secondly to contract with amazing force in labour, for the exclusion of the child; and lastly, by means of the same power, gradually to return to its former state.

Immediately after the infant's birth, its lungs which had remained inactive during nine months' gestation, are blown up with air; and it is scarcely to be imagined, that the cause of what so naturally then happens to every living animal, should in itself be so obscure, that the ablest physiologists have attempted to account for it in vain; so that it still remains a question, in what manner the act of *respiration* commences in animals newly brought forth.

Borelli and *Boerhaave* ascribe the beginning of respiration in the foetus, to an increased motion of all its muscles in
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the time of labour; and among the rest, those of the intercostals and diaphragm, which are the principal instruments of breathing. But that incomparable philosopher Mr. *Boyle*, as well as *Vesalius*, has experimentally shewn, that puppies cut out of the womb begin to breathe, when exposed to air, in the same manner as if they had been naturally brought forth. Besides, we shall shew in the following Lectures, that the foetus does not usually struggle in the birth, as generally thought, but is a mere passive body, which acts as it is acted upon by the vital impulse of the uterus, and in itself utterly destitute of all power to facilitate its own exit.

Pitcairn supposes, that the air, by its gravity, rushes into the lungs of the infant as into a vacuum; but if this was true, it would also find entrance into the lungs of a still-born child; and that machine which we call a pair of bellows, would be blown up by the same atmospherical pressure, which we know is not the case.

Baron *Haller* supposes, that respiration commences from the child's endeavour to cry, in consequence of the pain it suffers during labour; but this is by no means an adequate reason, and very unlike what has usually been advanced by that learned and ingenious author; for, notwithstanding all

living animals naturally begin to breathe as soon as brought forth, they do not all make a noise similar to that of crying in the human species; and further, the act of crying being subsequent to breathing, the first is manifestly owing to the last; for it would be palpably absurd to say, that a child could either cry, or even endeavour to do so without the power of breathing.

The late celebrated Dr. *Whytt* will not allow, that respiration arises from causes merely mechanical; and therefore recurs to a sentient principle, which puts certain muscles in motion at particular periods; hence the infant is born with a natural propensity or appetite for breathing, similar to a want of meat or drink in the adult. He supposes, that in consequence of a child's struggles in the birth, a larger quantity of blood will be sent to the lungs, which stimulates them into a respiratory motion; but this, like every other reason hitherto advanced, is insufficient to solve the question at first proposed; since it may easily be proved, that the cause of breathing is not originally impressed on the lungs themselves, but on the organs of respiration; for since air by its gravity cannot press into a pair of bellows, 'till their sides are pulled asunder, neither can the lungs of a new-born infant be inflated and begin to play, 'till they are freed from all pressure by the action of the intercostal muscles and diaphragm,

phragm, which raises the sternum and enlarges the cavity of the breast.

To proceed ; when we come to examine the parts peculiar to the fœtus, there the immediate finger and *flat* of the Creator still discovers itself in a more conspicuous manner ; for, the *canalis arteriosus* and *foramen ovale* are manifestly designed as *diverticula* to carry off the blood from the heart, and hinder it from rushing upon the impervious vessels of the lungs, which being as yet uninflated and compressed, could not allow it to pass that way ; and had it not been for this curious and cunning device of Nature, since the whole mass could not circulate through the pulmonary artery, as in the adult, it would necessarily have regurgitated on the heart and produced a mortal suffocation.

As soon as the child has inspired air, the devious passages already remarked, being useless, are shut up and obliterated ; except in *amphibious animals*, where it is necessary they should still remain open ; for, whilst they dive under water, their lungs must cease to play, and the blood cannot then force its way through them ; so that such creatures, though deprived of air, will still sustain life, and in the same manner as they did in utero. This probably may be the reason, why young animals survive longer in the exhausted receiver of the air-pump

pump, than old ones of the same species; and also why drowned persons, and those who were executed, have sometimes been surprizingly restored to life. Hence also the whimsical attempt to render puppies or other young animals *amphibious*, by alternately putting their heads under water and into the common air; for, in the first case, it is presumed the *canalis arteriosus* remains open to the course of the blood; and in the last, that it will circulate through the lungs.

The great Dr. *Harvey*, in a latin epistle to *Riolanus*, proposed the two following questions:

“*Cur fœtus in utero, non respirans aërem usque ad mensem decimum, ob defectum respirationis non suffocatur?*”

“*Quare in utero existens, vel adhuc intra secundinas, nondum exitum adeptus, vitam sine respiratione retinere poterit, quam primum vero aëri semel expositus, nisi respiraverit, vitam retinere non possit?*”

Op. Harv. a colleg. med. Lond. edit. p. 132.

Both the above questions will be answered when we come to the Lecture on the fœtus; it is here only necessary to remark, that as animals in utero do not exercise the faculty of breathing, respiration, under certain circumstances,
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is not essential to life. Indeed, might we trust our reason or attend to our own feelings, it would be as difficult to conceive that any animal could live without respiration, as without circulation itself; which shews that the Author of nature can easily find expedients to accomplish his designs, when human invention is utterly at a loss and put to confusion.

Several of the preceding phenomena may be rationally accounted for, as we shall endeavour to shew in the *subsequent Lectures*; whilst others are involved in obscurity and too remote for human inquiry. It would be difficult, for instance, to comprehend, how the resistance of the strong, elastic uterine fibres, is overcome by the gradual influx of juices into the tender stamina of the embryo, after conception; and how the same cause exerts itself, in the last months of pregnancy, with such amazing power, as not only to become superior to the action of the uterus, but also to the additional pressure of the abdominal parietes in which it is contained.

Here it might be also asked, what determines the growth of animals and puts a *ne plus ultra* to their further enlargement, or, why they do not continue to grow during life? Why are some plants and animals only the short-lived beings of a day, whilst others subsist more than an hundred years*? and

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why

* The *Creeping Ceres* blossoms at night and dies in the morning, and the *Ephemeris Fly*, although two or three years in hatching under water, when brought forth, scarcely survives

why are the sensations in some animals so acute as almost to occasion pain, and in others so dull and torpid as scarcely to produce feeling equal to that of the unconscious *sensitive plant*?

The utility and extent of Midwifery may still be further shewn, by applying it to a knowledge of particular diseases. If the *pathology* of those maladies derived from the parent are ever to be more perfectly understood, probably that might be expected from the assistance of this art. Those things premised, it may be proper to enquire, whether long protracted *chronical diseases* do not at last become *hereditary*; and also, whether the placentary vessels are adapted, by their peculiar structure, to absorb from the parent, the matter or efficient cause of one disease, and to exclude that of another; as may be observed, by analogy, in the nutrition of plants, which, by an inherent, or elective power, imbibe juices of very different qualities from the same soil; and what is still more remarkable, the flower, fruit and bark of the same shrub, all vary in smell, strength and taste, according as they are influenced by the vessels of those particular parts.

In some of those diseases manifestly hereditary, as the *scrophula*, gout, and *lues venerea*; might not the *materies morbi* be

survives a single day. The Forest Oak is said to grow one hundred years, and the Stag is supposed to be an animal of extraordinary longevity.

be subdued and totally extinguished in the human embryo, by enjoining the mother a medicated regimen during the time of pregnancy? From some late observations, I have reason to believe it may be effected; and this circumstance deserves the greater attention, as the morbid matter in a more advanced age, might be so intimately mixed and diffused through the system, as never to be exterminated and totally taken away; though at particular periods of life, such diseases may either lie dormant or appear with less violence. Hence the propriety of the following lines:

"The young disease that must subdue at length,

"Grows with our growth, and strengthens with our strength."

POPE.

Such therefore is the miserable state of man, that he not only inherits some diseases before he sees the light or enjoys the privilege of breathing; but is also afterwards subject to many more, which alternately afflict him from the cradle to the grave.

The application of variolous matter to pregnant women, who have had the small pox, would determine whether the virus was of such a nature as to be absorbed by the vessels of the fœtus; and if so, whether this new mode of practice would not afterwards effectually secure the infant from the influence:

fluence of that destructive disease. Should such a method be adopted, it would be the most proper in the last months of gestation, where the vestiges of the disease would be seen on the skin of the new-born infant; or should no such marks appear; the event of the experiment might be certainly known, by inoculating the child and attending to the subsequent effects. A case mentioned in the Philosophical Transactions, where the variolous matter applied to a child which had previously received the infection in utero, was not sufficient to reproduce the disease, suggested to me the propriety of this practice; as well as a short but ingenious essay on the subject by a gentleman of Glasgow, which accidentally fell into my hands. Hence also it might be necessary to enquire, whether those adults who are said totally to escape the small pox, have not thus been previously affected with it in the time of uterine gestation.

It does not appear that this experiment would be attended with any degree of danger; for the mother's habit would not be affected by it; and it has repeatedly been observed, that infants escape the danger of this disease in proportion to their tender age; which probably might have introduced the practice of inoculating them at the breast, when only three weeks or a month old: However, gentlemen, I desire it may be remembered, that this hint is rather proposed for the consideration

sideration of the curious, than as a circumstance as yet sufficiently supported by practical facts.

Strange things have been imputed to the *Mother's Imagination* in marking or mutilating her child in the womb. This extraordinary opinion is as ancient as the book of Genesis, and has even been transferred from the human species to the brute creation; for, we are told in the thirtieth chapter, that streaked rods were placed before the breeding cattle, to make the young ones speckled. However unphilosophical and absurd such ideas may appear, they have been adopted by many, even in the present enlightened age, who too readily take things for granted on tradition and hearsay, instead of trusting to the testimony of their senses. Thus vulgar errors, like the distempered offspring of which we are speaking, have been propagated and delivered down from one generation to another. The ignorant and superstitious, in particular, refuse to be convinced, and are offended with such as disturb their extravagant belief; but are wonderfully entertained by those who feed their sickly fancies, with strange examples of marks, monsters, and mutilated forms; to whom they listen with as much avidity, as *Shakespeare's blacksmith* "with open mouth swallowing a
"tailor's news."

It is much to be regretted that the generality of women are inclined to an opinion so unfavourable for themselves;

which not only tends to disturb their repose and fill their minds with horror and dreadful apprehensions, but is also contrary to experience, sound reason, and the state of the animal œconomy. To suppose that Nature in the production of the fœtus should thus transgress her own laws, and be put out of her due and regular course by trifling accidental causes, is not only cruelty and disaffection to themselves, but an affront to the wisdom and goodness of the Creator. A woman's mind, from the delicacy of her bodily frame, and the prevalence of her passions, is liable to so many excesses and inordinate motions that had such causes been productive of marks or monsters, they would certainly have been much more frequent. Besides, it ought to be remarked, that conception does not depend upon the will of the mother, but results from the nature and disposition of the several animal functions, and therefore happens whether her imagination be for or against it: Surely then it would be extremely irrational to suppose its influence over the fœtus greater than that which prevailed over her own body.

By the most accurate examination of the parts connecting the child to the womb, there does not appear any communication of vessels between the one and the other; for the umbilical vein and arteries proceeding from the first, terminate at the exterior surface of the placenta; and those vessels which

are derived from the uterus, without any communication with the former, enter the cellular substance of the same placentary mass, and go no further.

Besides, no anatomist has ever yet been able to demonstrate the existence of nerves in the umbilical cord, which is the medium of all intercourse between the mother and child. How then can the imagination of the first operate or extend its influence to the last, without the mediation of nerves, which are the organs of all sensation? With as much reason it might be supposed, that an impression made on the mother might be transferred to the infant sucking at her breast. It has indeed been asserted with reason, that several parts of the body are endowed with sensibility, where not the least vestige of nerves is to be seen; but granting that the funis was nervous; the placentary vessels continued from it, are not supposed at first to adhere to the uterus, when the tender stamina of the embryo would be most susceptible of violence or change; and even when an attachment commences, that is only effected by a superficial contiguity of parts, and not by any continuation of vessels from the one to the other, as already observed. In a word; the navel-string, or umbilical cord, is plainly intended for the purposes of circulation, and not of sensation; and as it springs from the foetus, most probably

probably is destitute of nerves, least the Infant should have suffered pain when this part is divided immediately after its birth.

Thus may anatomical knowledge clearly convince us, that the foetus in utero has a body perfectly distinct from that of the mother, and is not at all affected by her sensations, which are entirely confined to her own system; agreeable to this supposition, many instances might be brought to prove that the one sleeps whilst the other is awake; the one is affected with pain, when the other is at ease; and that each has a circulation of blood peculiar to itself. It therefore appears, that the imagination of the mother can have no power to alter the stamina of the foetus, or to change the mode of its existence, either by giving it supernumerary parts, or taking away those already formed. This reasoning is still further confirmed by the following circumstances; first, because infants have often had marks, where there was no preceding disturbance in the mother's imagination; and secondly, because her imagination has often been violently affected where the child was free from any such marks or deformities: For instance, history informs us that *Rizzio*, secretary to *Mary* Queen of Scots, was stabbed in her presence whilst she was pregnant; but notwithstanding the horror impressed upon her mind by such a sight, she was delivered of a child, afterwards *James* the first,

first, who had not the least appearance of blood-coloured marks or stigmata.

But seeing that marks and monsters do sometimes happen, how are they to be accounted for, or from what causes do they arise? Perhaps from some accidental violence, disturbing the tender embryo, as yet in a gelatinous state; or else from a diseased stamina, where its very rudiments are monstrous and deformed. Sudden frights are observed to occasion abortion, by what *Hoffman* calls convulsio uteri; and it is probable that the same preternatural pressure, by producing a constriction of the uterus, may forcibly act on the embryo, and by obstructing the juices in its legs or arms, occasion those parts to wither and drop off for want of circulation.

Eller supposes, that flesh-marks in the child arise from a fault in the position of the womb, which, by pressing on the surface of the skin and obstructing the arteries, may throw their blood upon the lymphatic branches, and convert them into blood vessels; which being spread on the surface of the skin, will tinge it with a red colour. We are seriously told, that marks resembling red currants, cherries, &c. become more red and vivid when those fruits are ripe; to which, if any reply is necessary, it might be answered; that the paleness or florid colour of the skin depends on the quantity of

blood passing through the capillary vessels on its surface; the last of which will therefore always be greatest in warm weather, when such fruits are in season. But if the imagination has power to produce colours, as some would weakly suggest, why should not children be marked with grapes, or green gooseberries, as well as with cherries or red currants, since it may be presumed the mother may as often have longings for the one as the other?

Before we quit this subject, it may be necessary to remark, that monstrous foetuses are also common in brute animals; although our selfishness and pride will not allow them the exercise of those rational faculties which are supposed the cause of such deformities in the human species. To conclude; a *lusus naturæ*, or preternatural conformation of parts, is also frequently known to prevail in plants as well as animals; which shews, that such uncommon appearances in the last arise from mere corporeal agency, or the perverted laws of motion, and have nothing to do with imagination or the operations of the mind.

As by chemistry the texture of natural bodies is unfolded, and their several qualities disclosed; so the elements of human bodies, as well as the diseases to which they are subject, are illustrated and explained by the Science of Midwifery; for
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it brings us to an intimate acquaintance with the state and condition of man, even from the first stamp of his existence; and therefore, if we may say with a celebrated poet, that

“ *The proper study of mankind is man,*” and that

“ *All our knowledge is ourselves to know;*” then surely, this must be deemed true knowledge.

It will not be improper to conclude this part of our subject, by subjoining the following queries; most of which belong to the Obstetric Science, and therefore will hereafter be duly considered.

An locus certus conceptui propius assignari queat?

An vitium figuræ contrahatur in utero, propter materiem peccantem?

An, ab origine, monstra sunt, vel causis accidentalibus sic fiunt; & quænam sunt eorum causæ?

An, et qua ratione seminis potestas parentum, affectiones ingenitas, mores, robur, formæ similitudinem, staturam et reliquos characteres una traducat?

An, et quomodo semen maris, fœminam virtualiter contineat,

et

et semen feminae virtualiter marem? & quænam est causa sexuum differentia?

An foetus omnia viscera, vasa, artus simul habeat; an verò plane mutet formam, primò pisciculo, deindè amphibio, postea respiranti proximam?

Quibus experimentis precipuè indagari valeant fœcunditas et sterilitas mulierum?

An superfœtatio fieri potest?

An alatur foetus per os, an per umbilicum, an per utrumque?

Quid de legitimo tempore partûs humani statuendum sit?

An variolarum causa nobis ingeneretur a sanguine materno?

In quibus morbis mulierum concubitus prodest?

We come now to trace the progress of Midwifery, and to remark the advances which it made among the ancients and moderns, 'till it arrived at its present state. It is not however my design to give an historical account of the several authors on this subject, in exact chronological order; for as
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their writings are almost innumerable, such an undertaking would not come within the narrow limits of an INTRODUCTORY LECTURE: I shall therefore only mention those of the greatest note, and lay before you a general view of their opinions and practice.

In the first ages, women in labour were attended by their own sex, who gave their assistance without method, being rather directed by necessity than skill or choice; hence, the progress and improvement of this art must have been exceedingly slow. In difficult cases, compassion naturally inclined them to enquire into the cause of such difficulties, by touching the patient in the time of her labour-pains; and in this manner they began to improve their slender knowledge, and made some observations that were of service in their future practice. For example, they could not help remarking, that in most labours where the infant's head presented, the patient was speedily delivered by the simple effect of the labour-pains; therefore they concluded that this was natural.

On the contrary, when the arm, or any other part but the head presented, the pains were insufficient to effect the birth; and as they were ignorant of the proper methods of assisting, the mother died undelivered; consequently, they had great reason to suppose that all such cases were dangerous and pre-

ternatural. Hence sprung the division of labours, which they distinguished into natural and preternatural.

Midwifery at this time being chiefly exercised by women, it frequently fell into abuse. To remedy this evil, we are told that a law was made at *Athens*, excluding them from practice, and appointing men only, to take upon them the province of delivering women, and directing medicines for the several diseases to which they were subject ; but such was the effect of custom, that the legislative power was incessantly importuned, and at last prevailed upon to revoke this edict, and to restore women to their former privilege of practising this art.

I think there does not appear sufficient reason for setting female practitioners aside ; provided that they are properly instructed, and not only able to distinguish when there is danger, but conscientiously endeavour to avoid it, by sending for further assistance in time, which is too frequently neglected. This is so far from a disparagement to them, that it makes a necessary part of their duty, for which they ought to be commended ; and therefore, when men of the profession are called in, they should not brow-beat and suggest hints to their disadvantage, but treat them with becoming civility, and, if possible, protect them from blame ; as
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an injury to their reputation would be followed by the loss of business, and of bread.

Cleopatra and *Aspasia* were the two female proficient in this art, who by their practice and writings were most distinguished and made known to posterity; an account of the first may be found in the *Harmonia Gynæciorum*, and the last is particularly mentioned by *Ætius*, who has transcribed several chapters from her works, relative to the management and delivery of women.

The progress and improvement of Midwifery may be dated from the time of *Hippocrates*, who practised in Greece four hundred and sixty years before the birth of Christ. He wrote several books professedly on the diseases of women under the following titles: *de Morbis mulierum*; *de Superfoetatione*; *de Foetus in utero mortui extractione*; *de Virginibus, et de Sterilibus*. Some of these tracts are accounted spurious, and the rather, as it was five hundred years after his death, before his works were collected into a body by *Artimidorus* and *Diascorides*, two physicians of Alexandria, in which some contradictions are to be found.

Erocion took great pains to point out the true works of *Hippocrates*; but makes no mention of the book *de Virginibus*,

nibus, nor that *de Natura Muliebri*. *Mercurialis* also has placed the books *de Natura Muliebri*, *de Morbis Mulierum*, and that *de Sterilibus*, in the third class, as writings in which *Hippocrates* had no share.

The medicines recommended by this author are odd and indelicate, and his theory extremely erroneous. For instance, in the hysteric passion, he asserts that the womb changes its place, and that it rises to the stomach and heart; so that one would be apt to conclude, he had never seen the situation of the uterus, in the dissection of a human body; otherwise, he could not have omitted to remark its connection to the surrounding parts. His doctrine of conception was adopted by authors of the first rank, and adhered to, even till the last century; but his method of practice deserves no attention, for it appears by a survey of his works, as well as those of the antients in general, how imperfectly the Obstetric Art was known; so that if we compare *Hippocrates* discoursing on this subject, with the same *Hippocrates* speaking on the nature of diseases, pointing out their distinctions, and prognosticating their several events, *nil fuit unquam tam dispar sibi*; in the first, he is a stranger to the structure and functions of the parts appropriated to generation and parturition; but in the last, is wonderfully sagacious, accurate and just; and therefore, as a nice observer of Nature and a faithful recorder
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of her operations, he has stood the test of all ages, and justly continues admired and esteemed to the present time.

Aristotle also wrote on the subject of Midwifery, particularly on the generation of animals; and though his rules for practice are few and scarcely to be regarded, yet in his seventh book on this subject are to be found several observations worthy of remark, under the following heads: Of the signs of puberty in men and women; of the menses; the signs of conception, and the symptoms which happen from thence to the time of labour; also of the situation of the foetus in utero, the child's birth; and of the placenta and funis. He observes that the constitution, both of the male and female, undergoes a considerable change at the time of puberty, and that women who have not the periodical flux are generally barren, although some have been known to conceive, who never had the discharge at all. He asserts, that women suffer more than quadrupeds in the time of parturition; that the foetus is nourished by the funis, and naturally presents with the head; that the period of gestation is various in the human species, but that animals bring forth at a stated time, and with their bones perfectly formed; though it is found to be otherwise, in that part of the infant's head called the fontanel. But the most extraordinary of all his positions is, that blind and lame children, are generated of blind and lame parents; from which

it is plain he had adopted the doctrine of *Hippocrates*, who asserted, that the semen is a combination of organical particles, derived from the several parts of the body ; and that, being associated, they form a *genitura* or the rudiments of the embryo.

Cornelius Celsus, who might justly be called The Latin Hippocrates, is the next author of note ; he lived in the reign of *Tiberius*, A. D. 35, and wrote a treatise on medicine in the Latin tongue, much admired for its elegance of style ; but whether he was really a physician, or a man of uncommon understanding, whose natural genius led him to the study of that science, is not certainly known ; for he wrote on war and agriculture as well as physic. In his seventh book he treats of the diseases of women, and the method of extracting a dead foetus ; but what he lays down is chiefly borrowed from the Greek physicians, particularly *Hippocrates* ; so that he is rather consulted as the standard of elegance and true purity of style, than for any thing remarkably instructive on this subject.

Galen of Pergamus, a celebrated Greek physician, was born A. D. 132, and lived in the reign of *Adrian*, about six hundred years after the time of Hippocrates ; he travailed through several provinces of the Roman empire, and afterwards resided at Alexandria in Egypt, which was then the most celebrated school of medicine in the world ; but at last returned to his

his native country, where he died. He appears to have been a man of great learning, and of a subtle discerning genius; but he was assuming and vain-glorious, arrogating to himself the highest honours, and at the same time attempting to depreciate and lessen the authority of other physicians. He is allowed to be the best commentator on the works of *Hippocrates*, though in his relation of things he is circumlocutory and diffuse. He wrote several books on the subject of Midwifery; namely, one *de Semine*; *de Formatione Fœtus*; *et de Uteri dissectione*, where he lays claim to the discovery of those tubes belonging to it, which were afterwards said to be found out by *Fallopian*.

To enumerate the several ancient authors who have written on the present subject, would be tedious and unnecessary; and therefore, from *Galen* down to the time of *Paræus*, it will be sufficient only to mention those of principal note.

Ætius, who lived A. D. 380, left a system of physic in Greek, which was translated into Latin by *Cornarius*, and printed at Basil under the title of “*Contracta ex Veteribus Medicina*,” the last book of which treats fully and judiciously on the diseases of women. He describes the situation, magnitude and figure of the uterus, and gives a circumstantial account of difficult births; he likewise takes notice, that deli-
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very may be retarded by the too early rupture, or by the preternatural rigidity of the membranes containing the child, and directs what is necessary to be done on those occasions. His cautions against violence, when the os uteri is closed by inflammation, are rational and well adapted to the disposition of the parts; in short, though he is little more than a compiler from *Galen*, *Soranus*, and others, he seems an author of exceeding merit and candour, always naming the originals from whence his quotations are taken, which in general are judiciously chosen and well applied.

This was the state of the *Obstetric Art* among the Greeks and Romans; but when the western empire was invaded and ravaged by the Goths and Vandals, who were a barbarous people and enemies to the polite arts; the several sciences, for want of patronage, began to languish and at last were neglected and forgot. The fate of learning in the east was much the same soon after; for the *Saracens* subdued Egypt, and destroyed the famous library at Alexandria, which was then the most celebrated school of medicine in the world; the books being dispersed by the Calif's order, and burnt at the several Bagnios. But in proportion as learning declined among the Greeks, it began to flourish among the Arabians, who extended their empire over Asia, Africa and Europe, under the Calif *Almamon Abdalla*, who reigned A. D. 813, and caused

caused the Greek authors to be translated into the Syriac and Arabic tongues ; for several of them were fortunately preserved, although the public library was destroyed.

Avicenna, a Mahometan physician, was born in Persia, and lived A. D. 1000. He wrote a book called *Canon Medicinæ*, divided into five sections ; in the third he speaks of conception, pregnancy and delivery, and also of the disorders peculiar to women. Though the forceps is supposed a modern invention, he mentions that instrument, and such as was manifestly intended to save the child.

Albucasis, an Arabian, is supposed to have lived A. D. 1085, and likewise treats on the diseases of women: He is remarkable for delineating and describing the several instruments then in use ; and among the rest gives a figure of the forceps, and also of an instrument called *Impellens*.

From this period to the year 1200, the Europeans, by their commerce with the Saracens, became acquainted with the sciences ; hence, the art of physic was cultivated ; and at last gave rise to two of the most ancient colleges of medicine in Europe ; namely, those of *Salerno* and *Montpelier*, where the doctrines of the Arabian physicians were principally taught, till the taking of *Constantinople* by the Turks, in the year

1453; for at this time the several learned men fled from thence, and took refuge in different parts of Europe, particularly in Italy and France, where they carried the sciences; and as learning revived, men of genius now began to study *Hippocrates* and the other Greek physicians; and the works of *Avicenna* and *Rhazes*, whose authorities had long prevailed, were now justly rejected. Thus was the Grecian art of medicine restored, and by degrees a solid system of physic established, by which the causes and cure of diseases were more rationally considered, and more accurately distinguished.

From this period down to the time of *Paræus*, the great promoter of *Obstetric knowledge*, the general practice of the ancients was as follows: If the infant did not present naturally, they shook the woman and altered her position; a practice so irrational, that it could answer no purpose but that of tormenting the patient. The operator also attempted to bring the head to a right presentation, and, if he failed, he then endeavoured to deliver by the feet; if none of these methods succeeded, it was treated as a dead child, and extracted with crotchets; but if it was too large to pass whole, they dismembered and extracted it piece-meal.

In the year 1575, *Paræus*, a French author, in his twenty-fourth book, where he treats on generation and the delivery
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of women, entirely rejecting those irrational proceedings of the ancients, in all preternatural cases, expressly directs the child to be turned and delivered by the feet, which was a noble endeavour towards the advancement of the art; for by this judicious method many women were saved, who otherwise must have died undelivered.

From this time the improvements in Midwifery were many and great, both by manual operation and in the invention of new instruments. *Guillemeau*, who was a scholar of *Parès*, also wrote expressly on the same subject, and improves much on the rules laid down by his predecessor: In profuse floodings, he orders the membranes to be broke and the patient to be speedily delivered; he also takes notice of the ruptured uterus, some instances of which had fallen under his own observation.

From the time of *Guillemeau*, till that of *Mauriceau* (being upwards of half a century) several useful tracts were published. *Severinus* published a book on pregnancy and delivery; and in the year 1628, *G. Nymmanus* printed his dissertation *de vita Fœtus in utero*; wherein he proves that the infant may survive a considerable time after the mother's death; and therefore admonishes magistrates, and those who have the direction of public affairs, to permit the opening of such women as die undelivered, in order to preserve the child.

The works of *Sennertus*, a celebrated professor of physic at Wittemberg, were published in the year 1640; in which is to be found a valuable practical treatise on the diseases of women and children; where the description of the symptoms appears accurate, and the intention of cure is laid down with clearness and profound skill.

A. D. 1668, *Mauriceau*, after much experience at the Hotel Dieu, published a book on Midwifery, which came nearer to a complete system, in what regards the practice, than any thing which went before it; But his doctrine of conception is false and erroneous, and his theory vague and irrational; though his practical aphorisms are judicious and excellently deduced.

Various now were the authors on Midwifery; for *Dionis*, *Peu*, and *Portal* published their several works; and not long after, *Saviard*, who had practised at the Hotel Dieu, also published several observations on the diseases of women, and the method of assisting in difficult labours. *Daventer*, a Dutch physician, printed his book on the art of Midwifery in the year 1701, and became eminent by remarking, that the most common cause of difficult labours arises from an oblique situation of the uterus; the fallacy of which opinion will be shewn in the subsequent lectures. Besides, though this passed for a discovery

covery of Daventer's, it was observed by *De Graaf* long before; *Winckler* likewise takes notice of the same thing, and says it was observed of old. Those points of doctrines for which *Daventer* most deserves commendation, are to be found in his observations on touching; from which many useful indications may be taken concerning the event of the labour.

From this time several detached pieces were published, tho' nothing very considerable, till *Lamotte's* book appeared; in which are to be found many judicious observations, candidly and circumstantially laid down, and therefore worthy of remark; but this author, though a modern, probably knew not the use of the *Forceps*; for in laborious cases, where the difficulty is great, he directs the child to be turned and brought by the feet.

About the year 1721, several curious and uncommon cases were published by the celebrated *Ruyfch*, and also his tract *de Musculo in fundo uteri observato*. Soon after, *Vaterus* printed his *dissertatio pathologica de utero gravido*; and *Puzos*, in the memoirs of the Royal Academy of Surgery at Paris, attempts to shew a more safe and gentle method of proceeding in floodings than had before been practised on such occasions; which will hereafter be duly considered.

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In the year 1743, *Noortwyk*, a Dutch physician, published at Leiden his accurate anatomical history of the gravid uterus, which merits the perusal of all those who purpose to study Midwifery. *Levret*, a celebrated professor of Midwifery at Paris, has also from time to time published three volumes on the subject of Midwifery: In the first he treats on that art, as demonstrated on mechanical principles; the second comprehends his observations, with the description and figure of the different forceps in use. The third volume treats on the polypus, and describes the figure of his instruments for tying polypose tumours of the uterus, in a manner more safe and easy than hitherto known.

Rodererus, professor of Midwifery in the university of Göttingen, in the year 1759 printed the second edition of his *Elementa Artis Obstetricariæ*, in which the practice of Midwifery is concisely laid down; but as a public teacher, whose doctrine may have considerable influence on those who attended his lectures, it is much to be regretted, that he shews an uncommon propensity to the use of instruments, even those of the destructive kind. He also published his anatomical tables of the gravid uterus, where some of the parts are finely delineated; but, it is presumed, those intended for speedy publication by Dr. *Hunter* will far exceed them, both in the number of plates, and elegance of their execution.

About

About the same time *H. Crantz*, professor of Midwifery at Vienna, printed a tract *de rupto utero in tempore partus*, and also his *dissertatio de re instrumentaria*, in which he gives a full historical account of the different instruments used in Midwifery. He asserts, that the use of the crotchet is never required, although they have often been applied; and thinks it ought to be deemed homicide, where the head of a living child is opened, even though the life of the mother should be in danger; and therefore censures *Rodereus*, with uncommon severity, for inculcating such practice. The author shews a humane attention to the life of the infant; and it would have been not less commendable, had he also been more merciful to the reputation of his brother professor.

This naturally leads us to consider the use and abuse of Instruments, which the passion for novelty has multiplied to an extravagant number. Some of them, indeed, particularly the *Forceps*, are found to be safe and effectual, in preserving both the life of the mother and child; but wherever the delivery can be brought about by the simple force of the labour-pains, all instruments are unnecessary and improper; for it would be injudicious and absurd to substitute art, for the performance of that which might be much better and more safely accomplished by the powers of nature only.

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Those who are not sufficiently conversant in practice, from motives of fear, which always magnify the danger and suggest the worst, are often led to a more precipitate application of instruments than is necessary, or consistent with the patient's safety. On the other hand, there are some who exclaim against all instruments whatever, pretending that they are dangerous and unnecessary; but it may with reason be asked, whether this does not arise from artifice in such declaimers, and an endeavour to recommend themselves to the good opinion of timorous and weak-minded women; who are alarmed at the very name of an instrument, and had almost rather die, than call in the assistance of those who are said to make use of them? for all such as have candour and skill must allow, that instruments, particularly the *Forceps*, are sometimes so absolutely necessary towards the preservation of both the mother and child, that he who either wants dexterity or resolution to apply them, would be deficient in the duties of his office.

I did intend, in this place to have been more particular on the use of instruments; but as it is first of all necessary to know the structure of the parts concerned in parturition, before we can have a just idea of their proper use, I shall defer what is further to be said on the subject, till we come to the Lectures on laborious cases; where the different Instru-
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ments will be examined, by taking a comparative view of their several advantages and defects.

Moubray, Chapman, and Ould; Giffard, Smellie, Burton and Pugh, are the principal English writers on the subject of Midwifery. Besides a due attention to many of the authors already mentioned, I shall hereafter occasionally remark such new observations and capital improvements, as have been laid down from time to time by the most eminent *modern Professors* of Midwifery in different parts of Europe.

Whoever teaches a science ought to lay before those intending to study it, a clear and comprehensive view of all its branches, and also the means most conducive to a perfect knowledge of the whole. Midwifery, respecting its operative part, may be called an art; but as it comprehends the nature and treatment of diseases, it ought also to be considered as a science. It is divided into Theory and Practice: Theory consists in a competent knowledge of the anatomy and physiology of the human body, particularly in what relates to generation and the menstrual flux; the œconomy of the gravid uterus; the nature of parturition; and the doctrine of the several diseases incident to women and children. The method of assisting with dexterity and skill in laborious and preternatural labours; and of acting with judgment in all cases of danger or

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difficulty, constitutes the practical part. Without a previous and distinct knowledge of all these, no one deserves the name of an *Accoucheur* ; for if he ventures to give advice or assistance, which is not founded on rational theory and the established rules of his profession, he will act like a bungling mechanic, who attempts to repair a complex machine, without being acquainted with the several wheels and springs which compose it, or the principles upon which its motion depends.

From a regard to the safety of women, and the public good, as well as the credit of the profession, it is much to be wished, that none were permitted to practise Midwifery, till they had given sufficient testimony of their skill, by *due Examination* before gentlemen appointed, by authority, for that purpose, as is usual in other branches of physic and surgery. We should not then find the town and country overrun with ignorant and half-instructed pretenders of both sexes ; who impose on the credulous, and supply their want of knowledge by arrogance and vain-boasting, or by a slavish submission to the obstinacy or avarice of nurses and old women.

Whatever knowledge a man may possess, or however respectable he may appear in his profession, it is right he should regulate his conduct by the rules of true policy and a prudent attention to his own interest ; but this is not to be done by a
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timorous and time-serving deportment ; not by chiming in with the prejudice of the vulgar ; by being in league with nurses or ladies' women, or paying compliments to the wealthy and great at the expence of truth ; not by imposing on the ignorant with pompous and pedantic jargon, or astonishing them with miraculous and pretended cures ; but by principles directly opposed to all these. If such artifices degrade the lowest of mankind, surely they are unworthy of men who profess a liberal science ; whom no Interest should prompt to those base and ignoble proceedings, even could they be supposed to escape detection and contempt.

The safety of the patient more immediately depends on the operator's skill in this, than any other branch of physic or surgery ; and therefore it is the indispensable duty of every one who engages in it, to render himself duly qualified. He is not to suppose, that a course or two of lectures is sufficient for this purpose, and that he may then set out in practice, as if women had neither life nor health which might suffer by his want of judgment ; but on the contrary, after obtaining a rational theory, he should then have *frequent opportunities of extensive practice*, without which he will never acquire dexterity of hand, or that resolution and steadiness so necessary in cases of danger or difficulty. Instead of this, his behaviour will be timorous and confused ; and no one can reasonably

sonably expect to engage the confidence of others, who thus apparently distrusts himself: such conduct will always subject him to censure, and where another of the profession is sent for, and performs what he is unable to do himself, it will injure his reputation, and hinder his advancement in life.

The force of habit is so remarkable in the difficult operations of Midwifery, that it may be truly said, it is practice which makes perfect; for the hand gains strength and dexterity in proportion to its use; and the mind being familiar with danger, becomes more circumspect and deliberate than before; whereas, fear enervates the hand, destroys recollection, and puts the thoughts into confusion.

The privilege of attending a public Lying-in Hospital has long been wanting in this great metropolis, to perfect students in the true practical knowledge of Midwifery; and it affords me some pleasure, that I have been able to obtain this singular advantage for my pupils at the WESTMINSTER NEW LYING-IN HOSPITAL; where near *twelve hundred* women have already been delivered under my direction; and where an additional number of patients will now be admitted, by order of the Governors, in consequence of many new subscribers, benefactions, and a second legacy received in the year 1773.

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The utility of permitting students, when duly qualified and under proper regulations, to attend *Public Hospitals*, is so obvious, that this custom was adopted in France many years ago, and is now allowed in other parts of Europe. Such privileges manifestly tend to the improvement of Midwifery, and therefore will be productive of universal good, by extending the benefits of that art to different parts of the kingdom, where those students may hereafter chance to reside ; and who, from such previous advantages, will be better qualified in dangerous cases to give their assistance with judgment and dexterity. Hence, many women, the rich as well as the poor, will be preserved, who otherwise might have fallen victims to the ignorance or insufficiency of unskilful practitioners.

It was owing to the wise and early institution of Lying-in Hospitals in Paris, and to the peculiar advantages and improvements arising from them, that students in Midwifery formerly resorted thither from other nations ; but though this Art is now where more rationally now taught, or more judiciously practised than in London ; it must be confessed that we were at first indebted to the French for many of its most capital improvements.

Nothing will more redound to the good of the community, than a humane attention to the health and well-being of the

industrious poor. A man of this profession by his advice and timely assistance, often has it in his power to administer relief and comfort to the afflicted, and even to preserve life itself. To those who are blessed with sympathy and benevolence of heart, this will afford the most exalted pleasure; especially where such assistance is given to women, who are to be considered as the weaker sex, and unable to help each other.

At such times, none, who are worthy to be called men, will desert even the poorest of them; their nerves are strung to the same sensations of pleasure and pain as those of the rich; they are formed of the same materials, and ordained to the same end; And if we look back to our own origin, we shall find that once we were in reality parts of themselves; for we sprung from their bodies, we were nourished by their blood, and should have perished in the very commencement of our being, had we not been sustained, nursed up, and cherished on their tender bosoms, and protected by their unwearied care.

It would be cruel to rob those of fees who suffer from the extremes of poverty, especially in country places, where no Hospitals are open for their reception; even a trifle, scarcely of benefit to the receiver, would be more than they could spare, who earn their daily bread with the sweat of their brows,
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and are often unable to supply their needy families with the common necessaries of life.

The office of an *Accoucheur*, which is attended with great fatigue of body and anxiety of mind, is next to be considered. His patience will be put to many severe trials by the obstinacy and caprice of those under his care; by the petulance and self-sufficiency of ignorant nurses, or the malignant whispers of malice or envy. The life of the patient and his own reputation are depending, and where the event is fatal, he will often meet with undeserved censure and the most illiberal treatment; especially among the lower class of people, who, being swayed by prejudice and vulgar errors, judge without reason, and condemn without mercy. This will render the time of his attendance irksome and tedious; but as long as human nature continues what it is, he must expect sometimes to meet with such unwelcome behaviour. The tongue of slander is as much at liberty as the tongue of truth, and since it is not in his power to prevent the first from proclaiming injurious falsehood; his principal happiness will be to act in such a manner as not to deserve it; and being thus conscious of having done his duty, that will afford him consolation which nothing can take away.

Besides these qualifications, there are others no less necessary for the *Accoucheur*, in common with the rest of his profession,

feſſion. Every one is a judge of his appearance and deportment, though not of his ſkill; and therefore the method of pleaſing, as far as it is ſtrictly conformable to the principles of honour and the rules of good breeding, ought to make no inconfiderable part of his character: Of this the celebrated *Hoffman* was ſo ſenſible, that he publiſhed his *Medicus politicus*; and *Bobnius* alſo wrote *de officio medico*; but what has been laid down on that ſubject by the late Dr. *Gregory*, is preferable to all the reſt; having delivered his ſentiments with becoming freedom, and the zeal of a phyſician honeſtly ſollicitous for the credit of his profeſſion, and the advancement of true medical knowledge.

Whoever praſtiſes Midwifery, ought to be ſober, patient, and diſcrete; polite and eaſy in his addreſs, and of a modeſt and humane diſpoſition; yet poſſeſſed of ſo much reſolution as not to be alarmed or diſconcerted in caſes of the greateſt danger. At all ſuch times, he ſhould duly conſider and deliberately attend to the ſeveral ſymptoms and circumſtances before him, taking care to proceed with the diſtinct exerciſe of his judgment and reaſon; as a few grains of error, or proper diſcernment, in extreme danger, will ſometimes turn the ſcale for life or death. When the patient's ſituation is truly alarming, and the event is likely to be fatal, her relations and friends ſhould be apprized of it; and where the operator finds
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the case singularly perplexing, the advice of another, eminent for his candour and skill, ought to be called in ; but, whether in consultation with those of his profession, or in speaking to others, he should deliver his opinion with clearness and prudent caution ; avoiding all such pedantic phrases and mysterious terms of art, as are fitter for conjurors than men of science. He should avail himself of no illiberal methods, or attempt to filch a good name at the expence of another's reputation ; but in all things, as becomes a man of honour and true benevolence, endeavour to promote the good of society without ostentation ; to support the credit of his profession without pride ; and to practise condescension without artifice or meanness.

Whatever assistance women may require in the hour of their distress, should be regarded with the utmost delicacy and a modest indifference ; their situation at that time being only such, as it has ever been from the beginning of the world, and as it will still continue, according to the stated laws of Nature. But, to inculcate that which must be obvious to all men possessed of a sense of their duty, or the common principles of humanity, would be an unnecessary waste of time. Should one in a thousand be found of a different character, surely it would be inconsiderate and unjust to censure the whole profession, for the delinquency of so small a part. It

is not sufficient to say, that those who practise Midwifery have frequent opportunities of acting dishonourably ; for if the means of violating their faith and honour could be proved the cause of their doing so ; all mutual confidence would then totally cease, and mankind in general, as well as they, would of course be immoral and base ; since there is no station or department in life which does not daily afford opportunities of becoming vicious.

The Plan which I propose to follow, in the ensuing COURSE of LECTURES, is exactly conformable to the order of the particulars laid down in my SYLLABUS, which I have therefore here annexed, as a SPECIMEN of the whole.

It will from thence appear, that I mean, not only to lay before you, the *Theory and Practice of Midwifery*, according to the Doctrines of the most eminent *modern Professors of that Art*, but also to expatiate largely on the Nature and Treatment of the several *Diseases incident to Women and Children*, whether acute or chronical, being a branch of medical science highly important, yet of all others the most imperfectly known to those who are young in the profession. I shall likewise lay down some general Reflections on what is called *clinical Practice*, and shew the great utility and advantage resulting from it, in the cure of diseases.

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In short, I shall pay the utmost regard to whatever is most useful in practice, and endeavour to preserve such a regular succession of circumstances, as tends to render the following COURSE OF LECTURES as clear and instructive as my abilities and the nature of the subject will allow: And here I must request, that those gentlemen who do me the honour to attend as *Pupils*, will take down their *Notes* with such attention and care, as neither to discredit themselves or misrepresent me, especially in *Points of Doctrine*.

The early reading of Books, during their attendance at lectures, does not seem eligible; as it often misleads the student, and gives a false bias to his judgment: It will first be requisite to acquire the *true Principles of the Science*, with a competent share of *practical Knowledge*; and with such guides to direct him he will be less liable to error, in adopting many things as right, which ought to have been rejected, as exceptionable.

To conclude; the great importance of the *Science of Midwifery*, whether considered in a moral or political view, is sufficiently evident; and was its utility only confined to the preservation of women and their offspring; that alone would effectually recommend it to all who are tenderly solicitous for their safety; but, by a review of its several advantages, it appears a necessary *Branch of Philosophy* as well as *Physic*; the
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public Administration of Justice, under certain circumstances, calls for its assistance ; and even the *Cause of Religion* itself has been promoted by its extensive influence. It may, therefore, be truly said, that it contributes to the good of society and the general interest of mankind, in a manner superior to all other sciences.

I shall now, gentlemen, trespass no longer on your time ; as it must evidently appear, from what has already been said, that all those who propose to study Midwifery, and to become deservedly eminent in their profession, ought principally to avail themselves of *practical Knowledge*, founded on a previous *rational Theory* ; and not indolently content themselves with that superficial and imperfect method of being instructed, which has hitherto so long prevailed ; to the danger of the patient, the discredit of the science, and the injury of their own reputation.

T H E E N D.

