Retrospect
of
Some Doctrines
in
Obstetrics

by
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Introduction

In presenting this Essay to the Medical Faculty, it will perhaps be necessary to make a few observations with regard to any choice of a subject. Out of the very wide and varied field of Medical science it has been my desire to seek a subject, which should prove beneficial in its study and useful in its results. The matter contained in the following pages has been the result of some thoughts, which occurred to me during my perusal of some works on Midwifery by the writers of the last century. The rapid advances and mighty improvements, which the particular branch of the Medical act has made, and undergone during
the last century are not excelled, if ever equalled, by any other of the same science. No one casting but a hurried glance at the obstetric works of the older authors, can fail to be interested with the quaint and curious remarks contained in them. But their personal affords far greater and more useful results than the mere interest excited by them. For no one can deny that some of the greatest modern improvements in midwifery practice have been the result of mere modifications of the practice common one hundred years ago. By comparing the views held by writers of the last century and earlier, on certain doctrine, with those entertained at the present day, we are able to deduce certain important practical conclusions. It is only by this method that we can fully comprehend the great advance which midwifery has made. The doctrines, which I have especially chosen for consideration in this present essay, are those of the greatest interest both in a practical and theoretical point of view, and some of which remain as yet unexplained. I have endeavored to give the sentiments of the old writers referred to in the course of the essay, in as clear a manner as possible, and have not hesitated in some parts to give my own views on the subject treated of.
To lay down in clear terms the opinions of the older writers on midwifery, on the few doctrines treated of in this essay; to give their theories and practice at length, and then to discuss them, indicating the advantages of our own in the present day; and thereby to estimate our advance and improvement in this department of medicine—are the objects of this essay; if these results have been attained, then its end is accomplished, and this essay is submitted with the strong hope, that it may find kind indulgence in its criticism.
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Texture of Vagina

No fact more surprising in Midwifery is so startling and yet so true as the wonderful power, possessed by the Vagina and external part of, in an instant, dilating themselves from their usual small and rigid state, to allow of the passage of the child's head through them into the external world. Though this circumstance is of every day occurrence, though palpable to the eyes of everyone, this practice the Obstetric art - yet, whether it be from its very frequency of occurrence, or perhaps and what indeed is more probable, from its great difficulty of explanation, from its very sudden appearance and as sudden disappearance, and other obscurity, which attends it, it certainly has never received the attention of writers on midwifery, which it amply deserves. It cannot be that this wonderful power of distension in nature self accommodation is beneath the notice of accouchers. For alas! how much danger and anxiety for both mother and child, how much difficulty and how much grief its absence brings with it.
Besides all these numbers of children are yearly lost through
the uncertainty of the smallest increase of peace at the critical
moment of birth, might have been saved; but more, how
much suffering to the mother, though this now is happily
alleviated by the aid of chloroform, is produced by a contract
and rigid vagina. Of all the causes of tedious labors, this
is the most annoying as well as being one of the most danger-
ous. A great amount has been written upon its treatment
but very little, if any, has been done in investigating the
Mechanisms by which the dilatation of the parts is effected.

In the careful study of this phenomenon depends of course
its proper treatment, and, when we consider its vital impor-
tance, it is clear it has been improperly said by D. Syme,
that "if we could but relax by any means these ligatures a
little more, in cases requiring the least degree more of ease,
we could in one century save thousands of lives." We
have found and ideas of the great good to be derived from study
of this important question. Nor is it, as has been proved
by statistics, that, of mothers giving birth to boys, two die
in every one who gives birth to a girl. And why then? Simply
became the boys head is larger by the thickness of a towel
than the girls, and this eighth part of an inch costs many
boys their lives. Surely a question of such vital importance
will well repay our attentive consideration, and perhaps pre-
Treatise on Midwifery by Sir Fielding Ould
may be permitted to lay down in this essay our own opinion
on the subject; but before we doing let us see what the accouchers
of the last century knew about the structure and dilatability
of the Vagina and external Joints.
In the books of writers on Obstetrics of the last century, the
structure of the Vagina is very slightly described, indeed they
seem to have been quite contented with the simple explanation
and although they frequently remark of its distensibility still
almost the whole of their number abstain from attempting any explanation
of the mechanism by which it is effected. Thus we find Golds
in his work on Midwifery published in 1742 giving a conce-
ceptual confiding description of its structure. Of course it must be
borne in mind that he had not the great advantage of the
microscope, but had nearly his eye to guide his hand in his researching
and consequently its structure would appear to him very complex
and its texture. He finds him calling it a Musculo Membranous
Canal but its further intimate structure seems to have perplexed
him. He throws out the hint that as the structure is very loose
and can admit of enormous distension, it must be of some
peculiar construction, something like that of a loose fits
stocking. Doubtless as they would appear to the naked eyes
of the observer with their fibers some longitudinal, and others
transverse, interweaving with each other, and connected one to
another by their cellular tissue giving a pretty good idea of a

(2) Principles of Midwifery 1824.

(3) Theory & Practice of Midwifery
loosely knitted stocking. He seemed from this to infer that it was this peculiar loose structure which was instrumental in allowing of relaxation to occur in the vaginal walls, as suddenly, and to such a great extent. But why the great quantity of mucus which Fielding Hulke describes it as consisting of, and its substance made up of two coats, the internal membranous and much wrinkled; the external muscular, consisting of longitudinal fibres intermingled with bloodvessels. This is the opinion of the writers of the last century. They have clung to advanced, and maintaining chiefly that the reapproximation of the internal or mucous membrane of the vagina was the principal cause of the dilatation.

By late years and in our own day, various opinions have been held chiefly as regards the structure of the vagina. Some writers, as Burns, with the idea of Hulke before them, describe it as consisting of an spongy cellular substance, endowed with some elasticity and having as admixture of unstriped muscular fibres. This spongy elastic structure must exceed the pleasure of bloodvessels, especially those of veins, which are so plentiful in the region, with their connecting tissue binding them together. This kind of tissue apparently helps the elastic property in a high degree. The description of the structure of the Vagina, as given by Dr. Churchill, in his work on Dehisency, Stoppes, naturally from that of Burns. He says, "the tissues is clever, and of a finely white colour in fact resembling those of the Throat."
lining membrane of the canal being disposed of in the
form of low folds, a nauce, and thus is arranged as to permit
of great dilatation of the canal; besides a gently increased
discharge taking place in the commencement of a natural
labour, lead me to think that it is not in connection with
this lining membrane so much, as some think, that the
mechanism of the dilatation of the passage depends. But
it is not to be thought that important change in this mucous
membrane, immediately before the time of labour, as has been
clearly shown by Kraft and Gooden, and which results accord-
ingly to some in the rapid formation of cells from the free surface
of the cervix uteri, have little to do with the dilatation of the
passage; for it is very clear that, at the same time dilatation
is taking place, this membrane changes its character also,
but it is more justifiable that the real agents employed in the
mechanism of dilatation are extracted externally to this.
The muscular fibres must of necessity relax, but I do not think
that they are the primary agents in the enlargement of the
canal. Having said this much let me now in as few words as
possible give an account of what I consider the true
mechanism of the process, with the agents concerned in it.
To understand rightly with what we have to do, we will
in the first place, glance as briefly as possible at the structure
of the vagina and its wall; and first of the Vaginum.
This is a membranous dilatate tube, connected loosely by granular tissue to the neck of the bladder, rectum, and levator ani muscles. The posterior aspect of its upper part receives a covering from the peritoneum. The tube itself in structure consists of two layers. The internal mucous layer has ridges extending along its anterior and posterior walls - columns of vagina - and from these columns denatured crosswise ridges are raised at right angles to them. The external layer is a dense, thickened, highly dilatable, and vascular granular tissue, adhering closely above to the surface of the cervix, and round the tube we find a layer of loose erectile tissue, which is most marked at the lower part. At the lower end muscular fibers occur forming the sphincter vaginae annulus. Of the general anatomy of the velum I will say nothing, but only consider the structure of the parts more immediately connected with urination. On inspecting the external parts we are astonished to find such a large amount of visibility which is shown by the very numerous supply of blood vessels, venousplexuses and erectile tissue. Thus we find two large, leaf-shaped masses, a perfect network of veins pierced in a glistening membrane, lying immediately below the symphysis pubis, surrounding the opening of the canal, pointing at their upper extremity rounded below. These so called "bulbi vesicales" are suspended to the curve of the clitoris, and seric
of the pubic, and are covered externally by the fibers of the constrictor vaginae and internally lined by mucous membrane. Besides this, the layers of loose erectile tissue surrounding the vagina is continuous with these "bulbi vestibuli" by means of large veins, and in fact the tube with its outlet is completely surrounded by a layer of erectile tissue formed of these ovaries sinneses. All these erectile tissues receive branches from the internal pudenda artery. The veins of the "bulbi vestibuli" pass back and these vessels surround the vagina and communicates with the uterine veins. The labia themselves consist of fat, vessels, nerves and glands, with involuntary muscular tissue. Thus we see that the vagina and vulva are completely surrounded by erectile tissue, and the dilatation or contraction of the tube must be modified by its presence. Now, what is the function of this so-called erectile tissue? Seeing it is composed principally of bloodvessels, intimately interwoven with nervous filaments; that it is in its ordinary state soft, flaccid and spongy, but under a stimulus either directly applied to fact, or acting through the medium of the corporeum, it admits a greater quantity of blood into it, than is necessary for its nutrition, entering at the same time into a state of turgescence, becoming when it is in quantity as in myphales perfectly rigid, we must come to the conclusion that this particular variety of tissue,
confined as it is to certain regions of the body, must have some particular function to perform. Be this as it may, it is very evident that the great influx of blood into this tissue, producing the highest state of turgescence, must at the same time produce a great change in the relative parts among which it lies. Let us take the corpora cavernosa penis for example; when this structure becomes turgid with blood, by the resisting force of the investing fascia a state of absolute rigidity is produced. So likewise may be the case with the large masses of erectile tissue, which form the greater part of the labia; when blood is thrown into them, they must undergo some change in their size and position. Being crescent-shaped, they, whenever any stimulus is applied to them, render them more turgid, become more bent—that is the extremities of the crescent approaching each other—producing a state of comparative rigidity in fact. Hence in these venous fillers, exercise so great an influence in the relative positions of the neighboring structure, we think that structure of this nature surrounding a canal must exercise considerable power over its enlargement or diminution in diameter. If well engorged with blood under any stimulus, then, by the increase in size, which these structures undergo in these circumstances, from the full distension of the elastic constituents of their coverings, they must reduce the diameter of the tube. Now
let us return to the Vagina and External part. Here is a canal, surrounded, as we have already seen, at its outer extremity by a layer of circular muscle, and along the whole of its course, by a layer of the same structure, and this tissue in the usual quiescent state of the part, only containing within it sufficient blood for its nutrition, it must be evident that, if under any circumstance this tissue could be deprived of that blood also, by its collapsing and consequent yielding in space, it must in that act retreat, along with it, the two muscular fibres and the still more lax mucous membrane, and enlarge the diameter of the tube, as well as at the same moment rendering it flaccid. As it is convincing to anyone who will give his attention for one moment to this subject that, if by some force these tissues be deprived of their blood or contents, and consequently occupying less space, they must, in their change of position, drag, as it were, or carry along with them, the tissues with which they are intimately connected. And what do they drag? Necessarily the most movable and relaxed of all the mucous membrane. Consequently, by this decrease in size and consequent retraction, as also by the absence of the circular fibres, the structure which forms the resisting wall (for what could found a more resisting structure than this same erectile tissue, thoroughly engagd with blood), to the
mucous membrane, in the quiet unexcited state of parts, advantage is taken of the condition of the mucous mem-
brane produced at that time by the increased formation
of cells on its juxta, and which has been so well delineated
by Prof. Goodwin, its tongue are extended, the whole canal
is greatly increased in diameter and is at the same time
rendered moist. But then it may be justly asked, how
can the blood be at one time as it were determined to the
mucous tissues, and at another, these same tissues be
derived of the small amount of blood sufficient for their
nutrition? Well, it must be confessed that, up to a
very recent period, we were very much in the dark as
regards the powers which preside over blood vessels, and the
distribution of their contents. Why, should you fall on
hearing some dreadful news while on the other hand
his chicks should be engulfed with a very flush, then his
sense of emporw has been doubted, events generally the
work of an instant, are circumstances altogether inexp-
licable till within a very recent period. It is true
that these phenomena were vaguely attributed to con-
ductions of the Nervous system but further than that
we are not able to go. But of late years the numerous
experiments of Brown, Segard, Bernard, Dupuy,
Metit and Reine, with a host of others have gone far
to settle forever the point, for their experiments have proved that we have to regard the Sympathetic System of Nerves as the great agent, which presides over the bloodvessels and the distribution of their contents, in reference to nutrition. Though these experiments were undertaken to discover the agent which governed the contraction and dilatation of the capillaries especially, almost all of these experimenters hint that probably the function supposed by the Sympathetic system in regulating the amount of blood to any part of the economy extends to these erectile tissues. Such being the case, can we detect the presence of sympathetic filaments distributed over these tissues? We can and not only do these filaments exist but the directions of the best anatomists of the day have led them to believe that they are distributed in unusually great quantity to these tissues, and hence, naturally, we may infer, it must play an important part in connection with the nutrition and function of the organs of which the tissue forms a part. It is probable then that the same effects produced by the Sympathetic in other parts of the body, in relation to the fullness or total emptiness of the bloodvessels of the part, are repeated in these large vessels surrounding the vagina. That while galvanism acts like stimuli's
produced paleness of the face from the abstraction of its blood by means of the vasomotor nerves, distributed in it: that, a like stimulating, whatever that may be, stimulates the presence of the child's head in the upper extremity of the canal or what is still more probable the force caused by the child's head, as it lies in the cavity of the pelvis at the end of the first stage of labor, pressing on the great hypogastric plexus from which the nerves distributed to these plexuses proceed, acts on the sympathetic, that an influence is generated and distributed by the branches of that trunk, which are distributed to those particular plexuses depriving them of their contained blood and by their consequent collapse accompanied by that of the muscular tissue, and very much relaxed or smooth mucous membrane and so accomplishing the dilatation of this canal, so necessary for the safe transit of the child. True it is, that the sympathetic, as previously stated, can regulate the quantity of blood in a part and it seems more probable than ever that the same function is exercised here. For we cannot for one moment entertain the idea, that Nature could have left the safe transit of the infant, to be ensured by the mere dilatation of the passages by means of its head alone, efficient though that be, she has taken the
wise precaution of embalming this most ingenious piece of mechanism and by this means she, at this
most critical period of human existence, prepares the
way for the entrance into this wide, wide world of a
statesman (perhaps), or it may be, a warrior or poet.
If by any means, such art and skill has yet to
divise, if by any medicine still unknown, we be
ever able to produce this action in those unfortunate
cases where it is absent, the good we will be able to afford
to the community at large, and the lives we will
summedly save will fully compensate for any little
brought it may have entailed on our part. These must
be the result of experience and to speculate in the least
degree upon them here would be premature and would
only interfere with work, which could be accomplished
we are certain in a much more satisfactory manner
by hands, much more skilled than ours. Let what
we have above stated be taken to express our views
upon this important subject, and as we have already
occupied a greater part of this essay with it, then we
originally intended, let us without further preface
proceed to the second question, which I propose
to discuss and which is: —
The Uterus.

I. The Glands at its Neck. Various surmises were prevalent among the older accouchers, as to the probable use or function of these glands, which are present in great numbers on the surface of the cervix uteri. The most remarkable of these theories concerning their function, and which are found repeated again and again by subsequent writers, is that advanced by Fielding Ould, who rejected the opinion previously expressed by that these glands by their secretion sealed up the orifice of the mater. We find him arguing the following reasons, which to him appear conclusive, that this cannot be their function and 1st That no moist a liquid was moist a fluid could not be consistent enough to effect a closure. 2d That the shape of the orifice was small at the entrance that the cavity does not require a plug. 3d That these glands are placed here because this is the only place for them, as the bottom of the womb is taken up by the placenta. Now in considering these objections let us first ask ourselves is it a fact that these glands do excrete as this and secrete fluid as they are here alleged to do. It is true, that in the uninfected state of the womb,
their secretion is watery to a great extent, and sometimes very profuse indeed, but it is now well known that, whenever impregnation takes place, the "os internum" is immediately sealed up, as it were, by a firm plug of mucous exerted by these same glands, which must obviously be for stopping up completely the communication between the uterus and external parts. And further, we know that, when parturition is about to occur, one of the first symptoms of its approach is the discharge of this plug which, with the altered, hypertrophied, mucous membrane of the uterus or as it is called "decidua vera," completely blocks up the entrance to the cavity of the uterus, and is familiar to nurses as the "show." As we shall see afterwards, however, another and quite different junction has by some modern writers been assigned to the plug of mucous, but whatever further functions it among fetuses we already know, that by its presence the cavity of the uterus is shut up during the nine months of uterine gestation. Though the "osteurae" is of small size and peculiar shape, and though its lips may be pretty closely approximated, still it appears impossible that this closure can be complete and the addition of the plug makes the closure more certain. Besides being placed here, these glands might have occupied the lower part
ο Medico Chirurgical Transactions Vol. XXXV
of the body of the uterus, but then this would have interfered with the immediate function of the organ, and doublets their true position at the cervix. He had to the idea that the uterus is to close the "as" during interrogations and to lubricate the fillages in time of labor. He also assigns several function to these glands. He hints that the secretion may be for the cervix to acquire in a very plausible theory but exceedingly improbable. That it can in any way promote the growth of the rots (villi of chorion) which are to incinate themselves into the mouths of the uterine blood-cells is altogether out of these question, as the concealed reaction is in the great majority of cases removed from the placenta, and secondly as it contains so nutriment material whatever. His contemporary Newton held much the same views. In our own day Dr. Smith, who has made several investigations into the structure of the mucous membrane of the cervix, calculates that in a virgin cervix in three this time can be no less than 10,000 follicles in just another gland. The presence of such a number means that they perform an important function whatever that may be. It is to be observed that Dr. Taylor Smith assigns to them another function viz. that their reaction is for
the purpose of affording a suitable medium for the passage of the spermatogen into the uterine cavity. It is very probable that this is its primary function.

II Mode of Dilatation of Uterus in Pregnancy.

As in the last few years as a hundred years ago, great discussions were occupying the minds of accoucheurs as to the manner in which the womb enlarged during pregnancy. The extraordinary development that the womb undergoes in the short space of nine months caused the ancient writers to regard it as the most extraordinary part of the human frame.

Let us now consider the theory advanced by the writers of the last century to account for the universal dilatation of the uterus. Repeat of the theory as only one, as far as I am aware of, ever brought to light, was so thoroughly defended as this particular one was. It was first advanced by that great promulgator of doctrine, Fielding Ould, in his work on Midwifery. Upon the consideration that the unimpregnated uterus is compact of a whitish colour but, when enlarging, it becomes more spongy, also redder; that the blood-vessels circulate in the veins have no values; that the menses being obstructed during the time of uttermost,
the arteries cannot require such a large amount of blood, and lastly, from the circumstance of the uterus collapsing after parturition from loss of blood he frames his theory concerning the dilatation of the uterus. It is this: That the womb is made up of infinite convolutions of small vessels, which contain a most subtle lymph, forced into them by the arteries, just enough to preserve their cavities open and that, when conception occurs, instead of breaking forth in the usual monthly discharge, the blood menstruates itself into these vessels, inflating them and unravelling their convolutions, from being curved to perfectly straight vessels and so enlarging the capacity of the uterus without diminishing the thickness of its substance.

When we look at the uterus after conception has occurred, we observe great congestion of the bloodvessels, the vessels enlarging their calibers and becoming of great size. Instead of forming almost straight lines, from their great increase in size, they present the appearance of an intricate network on the surface of the organ and in the substance of its walls. It is stated, that the coats of the vessels become thickened at this period, and hence we find them large and tortuous in women who have borne many children. We find
* Harnbrooks Obstetric Medicine

† Cases in Midwifery p. 80
it stated in one work on midwifery that the minute
vessels of the uterus, which can scarcely take in the finest
injection in the uninfected state, suddenly take
upon themselves a mode of growth when conception
occurs. Smellie in his work published in 1779 states
that, when the uterus stretches in time of gestation,
the vessels are proportionately dilated by the increase of
the fluid they contain, so that at the time of delivery
one of them is capacious enough to admit the end
of the little finger. The fluid, when the uterus con-
continues to enlarge, that the fibers loosen and separate
from each other, leaving spaces to be filled by the en-
largest bloodvessels, especially the veins which at this
time are commensurate, and which separation of fibers al-
though it accounts for the certain amount of engorg-
eness which the organ presents, and may permit of dis-
tension to accommodate the growing fetus, fails to
account for the uniform thickness increased throughout
its dilatation. So that, whilst we allow that the sud-
dden congestion produced in the vessels of the uterus
by a so-called determination of blood to the organ,
and which is caused by the sudden jet of growth in
the first stage to some extent increases it in bulk, we
may safely infer that the enlargement of the uterus
is not due to the distension & straightening of the bloodvessels, but that certain changes in the tissue of the organ are the immediate and proper causes of its uniform enlargement. Some indeed have argued that new matter somehow is added to the walls of the organ during gestation and becomes absorbed as is by some means removed after parturition. The proof adduced by the supporters of this doctrine is the very great difference in weight between the virgin uterus and the same organ after parturition. That the uterus after firm contraction at the time of delivery, should then weigh more than the virgin uterus, is, I think, fully accounted for by the following and we are inclined to believe true explanations of the increased size of the impregnated uterus. It is that first communicated to the Professor by Mr. Haines. He thinks that the increase in volume of the fibriform acelated fibers, which, according to him, takes place in pregnancy is quite sufficient to account for the amount of enlargement which the organ then undergoes. He thinks that the unimpregnated uterus consists of an abundance of embryonic acelated fibers inactive and which remain as united until they receive the stimuli imparted to them by the sound, when immediately they
are developed, so that, when the foetus is perfectly developed, they are also perfect to effect its expulsion. This very sudden development of these fibres and consequent sudden increase in size of the organ which they compose, is quite peculiar to the uterus. Harvey comp
dares it to the sudden swelling of a foot, stung by an insect, but it is slower and yet much greater in fact quite peculiar to the uterus. It is also well known now that these fibres inversely undergo a species of absorption called fatty degeneration, after parturition. Prof. Netter has chiefly described this.

But in connection with this change, which takes place in the uterine walls, a more important and practical question arises, do the walls of the organ become thicker or thinner? This question has been variously answered by different writers. Some said that they were thicker, but probably they had examined the uteri of women newly delivered and when the uteri were as yet in full contraction. Others among whom we find Macricon, who had made their observations on the uteri of women who had died of hemor-

hage, found the walls very thin, and were consequently led into the belief that this was always the case. But from the careful examinations and depositions
Of Meckel we now have abundant evidence to show that, during the first three months the walls become thicker; that after this period, it gradually becomes thinner in proportion and at the eighth month they are about as thin as those of the original uterus. Although the walls may be generally said to be uniformly thickened still at some places they are more markedly thinner than at others—for instance, in the promontory of the second and at the cervix, while at the fundus they are slightly thicker. The consistence of the wall varies in different persons. We find it more solid at fundus up to the third month—in fact it is said that the increase in the size of the uterus commences in the fundus, and this has been explained by Dr. McGeough of America as being occasioned by the placentas causing an increased development in the fat, which end, near which it is attached, until the increasing thickness spreads over the whole organ—it then gets more and more consistent and acquires the feeling of a fine casuichine bag, a little.

Thus, then, seeing that it is the change in the muscular tissue of the organ that is the true cause of the development yet during gestation, the rather ingenious, and it must be confessed, suitable theory of Cullen...
must fall to the ground. It is only one of those beautiful, mechanical, theories, which is ever ready to be formed by an inventive mind, which engage attention for a little and are then cast aside to make room for one of a more modern stamp.

One thing before finishing the consideration of this thing I wish to notice and which is that he states that the fluid which forms the usual monthly discharge, instead of as appearing during pregnancy dilates the minute interspaces of the uterus, and so increases its capacity.

In his mind and those of his contemporaries the catamenial discharge was thought to be occasioned by the simple infiltration of blood from the interior of the uterus into its cavity. This being the case it was very easy to suppose that, should the cavity of the uterus be occupied, the blood would insinuate itself between the tissues of the walls of the organ, and, by some means, reaching the minute arteries, would as he expressed it "so inflate them and from curved make them straight and so enlarge the capacity of the uterus." However the disappearance of the masses during conception admits of a very different explanation. We now know that this discharge is in fact a secretion from the lining membrane of the uterus and that this secretion...
has in view the object, as it were, of preparing the uterine for impregnation. Where impregnation does occur the uterus from being a resting organ takes on a series of very different functions indeed viz: the nutrition, protection, and expulsion of the foetus. Sometimes however we know that Menstruation does continue during pregnancy, but this must be considered as a morbid symptom; very frequently the discharge from the glands at the cervix has been mistaken for it especially in those cases where that discharge has become very profuse.

From the considerations of this subject let us pass to that of one no less interesting both in a historical and practical point of view viz:—

The Attitude of Foetus in Utero.

Of the posture assumed during the period of intergestation by the foetus, nothing definite until a very recent period indeed was known. Towards the end of the sixteenth and commenent of seventeenth century Microceces gave it out as his opinion that in the latter months of pregnancy the head of the foetus was the lowest part. Bauleboque stated it as his opinion that the head was the lowest part of the foetus in utero from the very first month of intergestation. In
just, since the true mechanism of labor was unknown to them, their conclusions with regard to anything in connection with it were very vague and generally erroneous. Most of the older authors believed that the head of the child was the lowest part, if not for the whole period, during the greater part of inter-gestation. That gravitations had the principal power in effecting this position they very naturally inferred. But not satisfied with the alleged position and cause for its adoption, which had been offered by previous writers, Ould, in the work before referred to, started a new theory as to the attitude of the foetus in utero and the mechanism of its motion, quite original. To describe it in his own words he says: "the head of the child hangs down with its face on the knees, which are as high as the nipple of the breast, and its heels close to the buttock and the two arms embracing its legs, and having its face toward the mother's belly." Thus he supposed that the foetus sat with head upmost and face directed forward probably on the promontory of the sacrum. No doubt he had the further idea in view, that, since the promontory of the sacrum served as a seat, the curst of the skull rested on its elbows, and the croup and seat for its feet. For assuming this posture, Ould must have had
some reasons for so doing, and still we must con-
jecture we are at a loss to suspect any intention. How such
unidea entered his mind it is impossible to conceive,
for even a very superficial examination of the abdom-
en of a pregnant female might have convinced him
that this could not be the actual position. The charac-
teristic globular contents would have been greatly dimin-
ished; and however comatose the patient might have
been for the foetus, there would, most certainly have
resulted a greater mortality to the mother. Besides,
as we shall see in a little, he tells us that the child does not
move out of this position until labour sets in, and con-
sequently any examination immediately before labour
commenced would fail to detect the head, a result which
his practical experience must have convinced him was
far from being the actual state of matters. But then
we must bear in mind that the mechanical structure
was comparatively unknown; in fact the idea which we
find conveyed in the writings of accouchers of the last
century was to this effect, that the foetal head entered
the basin of the pelvis as it cleared the outlet, viz, in the
conjugate, or anterior diameter, and the action
of the thory arms under consideration was undoubtedly
the first to differ from this view. Of course in those days
unlefs the child's head was well down in the pelvis and could be reached with the finger, they were unable to say how, or in what diameter, it was presenting and consequently they could not ascertained what diameter it presented at the time and had great difficulty in altering and rectifying malpositions; when the head was well down in the pelvis, than they would have experienced head its position at the time been known.

Hence the great value of our stethoscopes by means of which combined with internal examination, we can tell almost to uncertainty the exact position taken up by the head at the chin and correct it if necessary. One circumstance I think should have convinced him of his error and that in the comparative rarity of breech presentations, a circumstance which could never have occurred had the picture which he assigns to the foetus been the true one for what could have been more probable as likely to occur, than that the uterus, instead of turning the child, a process necessary as we shall hereafter see, for the safe expulsion of the child, should leave, by its strong contractions, rest the breech down first and that the child would have in the great majority of cases presented. However let us continue the mechanism of parturition according to his view. He next observed a change in the position.
of the foetus does not happen until after the first labour pains and then the first and greatest (? ) efforts for the ex-pulsion of the child are in the bottom of the womb, which presses directly on the back of its head and must immedi-ately turn it downwards, with its head towards the vagina and face towards the mother's back." Thus in fact the foetus to use the happy expression of Dr. Simpson performs a "somersault". It will now be observed that Old accounts for the head being lowest without the aid of gravity. In fact he denies that gravity can have any effect at all because every considering person must be convinced that the head is really larger in a double insunction with regard to the body, at its first formation that at the last month. Let us consider this argument against gravity let us look into what we now know to be the present state of affairs. At full term the foetus, flexed on itself, is of an avoid form fitting exactly into the uterus, which presents the same form. But during the first three or four months of utero gestation when the uterus has not commenced to take on its triangular shape the foetus can assume any attitude, moves freely about, generally lying when it is best protected from injury. But whenever the uterus becomes of an avoid form the foetus assumes it likewise and its longitudinal axis fits into the corresponding one of uterus. This generally
takes place about the eighth month and from that time to the end of intrauterine life, the foetus could "suffer appaenon." We must remember that the old authors thought that the child was suspended by the cord, that gravity then came into play and the head slept lowest. So that Balse's argument that gravity can have little to do with the posture of the child, because it does not take effect during the first two or three months, goes for nothing, as we now know, that it matters little what position the child assumes during that time and that it is only when the uterus has assumed its foetal form that the child should be in the best position. But of course in this position, which Balse arrives to, the child gravity would have little effect and besides, as he remarks, the movements of the womb contracting just would push the head down very effectively over the cord. But he was decidedly at fault in saying that gravity had little to do with the placing of the child. Fakell, some of our modern accoucheurs believe that it is nothing; cause why the head presents in 96 out of every 100 cases. But though gravity has been held to be an important agent, we must not think it is the primary cause. For, independently of gravity altogether, we can see at least one reason why the head should be lowest, and that is for its safety.
become when it is expelled then one pain will envelop
the rest of the body without danger to the cord: and
besides, Dubois has assigned many reasons for gravity
not being the primary cause. The first reason that the
writer objects is, that the mother's body is not always vertical
as to bring gravity into effect. Some mothers afflicted
with diseased states decline during the child term of their
pregnancy, still in these cases we have the head presenting
in the usual position. He also pointed out that the foetus
was not suspended by cord, and that it is not attached to
the uterus. Dubois also showed that in hydrocephalic
children the head generally presents, a statement which
at first sight seems to coincide with Wald's view, but it must
be remembered, that here the head increases suddenly in
bulk and cannot accommodate itself to the uterus after-
wards, changing its form therefrom, through the head in
the healthy child may be larger in the posterior during
the first three or four months, to the body then it is
subsequently still the uterus at that time as a fore-
said is round and the head can turn.

But then comes the question how by what mechanism
does the foetus take up its position in uterus? And
just in considering this question, we must premise
that the attitude assumed is intimately connected with...
Dubois, Mémoires de l'Académie Royale de Medicine.

* Ramsbothum
the life of the child. Lying as it does in the amniotic fluid, the slightest movement must cause a change in its attitude; hence some authors have attributed the particular position assumed to slight muscular action in its parts. But if this is the case, then comes the question: does animal exist in the fetus? This question has been frequently disputed and we have some authors asserting that it has mind for the other purposes and some stating that it has sensation in utero as if this in extra uterine life. But, I think, we may conclude that although the act be vital itself it requires much additional proof to confirm the statement, that it is voluntary. We may here remark, that one modern author declares that once the child is placed by nature, and once it is the rule that the head comes first, and not the feet, that therefore we ought not to injure into it. Few can approve of this remark for every one knows that if we can determine the position, which the child has assumed before labour, the good we can do perhaps in one case only, altering it is in another excluding premature labour is remarkably great. In short, our ability to diagnose the child's position before labour by means of the stethoscope, constitutes one of the greatest advancements, which this wiley has of late years made.
(1) Prof. Simpson (Lect. 1861-2.)
That the foetus takes up its position by means of
existing stimuli in reflex actions and movements entirely
independent of mind, is now generally admitted. The
stimuli existing these reflex movements are mostly
if not all cutaneous. Supposing its foot comes in con-
tact with the uterus, will then the reflex action take
place? the foot is drawn up & the attitude changed.

Cesarean the projecting joints of child are those most sus-
ceptible of receiving stimuli. It depends essentially on
cutaneous irritation as muscular will not produce it.

This is the true explanation of those movements.

Let us again take up his description (Quide) of patte-
tion. The foetus has its face towards the back of mother
but he disagrees at this point with all previous authors
instead described the child with its face to zucchini 2
that when she lies on the back, it seems to creep into
the world on its hands & feet. He maintains we have
the heart and not the face on the zucchini and that
the face is turned to either side, as to haves the chin
on one of the shoulders. He is the first of authors to
point out this important fact, for as I have previously
stated, they believed the head to enter and left the
pelvis in the anterior fontun diameter, a diameter in
which in the great majority of cases it would be im-

...possible from want of space, to enter, and it would invariably slip into time or either side of it, which and larger longer than it. Mammceus in one descriptions it as entering in the anteroposterior diameter. We are inclined to believe that the position of the anteroposterior being the usual presenting part had something to do with the idea that the anteroposterior diameter was the one in which the head entered. The proof which he adduces to prove that the face is turned to either side as to have the chin directly on one of the shoulders appears conclusive. First he says the head from the frontal to the occipital line is longer across the body citing that oblong diameter of the head that the pelvis is elliptical transversely. From these facts he infers that if the child presented with face to ascend, the void of the head would cause that if the pelvis and if the pelvis would permit its exit then it (the pelvis) would require to assume another form to allow the shoulders to pass. But if the child is on one shoulder, then head and shoulders are in a parallel line and fit the diameter of pelvis. This observation, probably the result of practical experience, is singular in a manner and follows the very extraordinary advantage ascribed to the present. It has only been proved to be perfectly correct by later examinations. It is needless to say that from this point.
has wrought out the beautiful mechanism of parturition. But it must not be supposed that Cullis was always correct in his description of this part of parturition. For he imagines that the head consequently entered the brain in the transverse diameter. What led him to this conclusion was probably a superficial examination of the bony pelvis, in which undoubtedly that diameter is the longest. But then he should have remembered that, in the natural state of affairs, large muscles greatly diminish the extent of this diameter and render it impracticable for the head to enter, except indeed in a few cases, where, from disease of the bones of the pelvis, or the conjugate diameter is unusually long; this condition ensues in cases without disease. Cullis in his discovery's description of the posture of the child was followed closely by subsequent writers, although Somneller attributes the head being the lowest point, to the fact "that the head drops down lowest when it falls into uterus," and says that this is the cause of the position; still however he was chiefly followed and especially by Burton, who wrote a few years after him. His author not content with accurate follow-
ing Cullis's description of the posture has actually figured the position and its change, by two diazisms in his work--the first shewing the foetus in a sitting attitude, before commencing the perilous journey allotted to him by
Sitting in this comfortable posture, with head slightly dropping, feet raised up, as if resting on a stool, his arms resting on his raised thighs, he seems, at this interval before death, to forebode that rare condition, which will be renewed in a few years before his death, when, with perhaps fewer hairs on his head, and these grey of a silvery hue, with a stool, he an old man, shall sit in his old arm chair by his own fireside. But glancing at the second drawing, we see that a great change has taken place; the flabby, fuddled, corporeal form seems ready to have commenced those changes which are to be more extensively indulged in during the first georgian year of his life. For he has performed the alleged summation and now awaits the effects of nature, to carry him into a new world. ... Through Canton agreed with Beld in the manner by which the foetus changed its position at the commencement of labour, till he differed as to the diameter in which it enters. He alleges that the head being placed at first firmly on the chest at commencement by any means turn so as to be over one shoulder, declaring that the uterus cannot do it. He also states that he has observed that when the head enters with the face turned to either side (to either of the suprines) the labour was always dangerous. But he evidently here
a) Cases in Midwifery

b) Suite des Accouchements

c) Snedecor's Systems of Midwifery (revised)
refers to the portion of the head at the outlet, and not at the spine as he afterwards observes that as the diameter of the head is longer than that of shoulder the dilatation made by the head will be more than sufficient to give passage to the shoulders. Pomella in 1752 rebutted Oudel's argument, that the neck was twisted into a channel with the spine as to the diameter in which the head entered the brain. Several writers in France and Germany agreed with Fielding Ould and among those of the first named countries were Delenapre in 1776 and of the latter Schmidt and Mancke. But as early as 1759 a writer named Berger stated it to be his opinion that the head entered the brain in one of the so-called oblique diameters. The year following that in which Delenapre wrote (1776) Saxthtpe of Copenhagen and Huyres de Plenhoude of Montpellier reintroduced Berger's opinion and in their opinion Baudelsyeur confirmed. However it remained for Naegle of the present century to describe in his essay On the Mechanism of Parturition published in 1818 the true force of mechanism of parturition. Whatever indium we in these days may be inclined to attach to the force described by Ould, should, we think, be greatly diminished by our consideration of the imperfect means of diagnosis, under which he laboured, the mistakes existing
of his day, and the extreme difficulty attending such investigations. She has in one point affected the art, a science of midwifery, if, by his great observation, he has in any way improved on his predecessors, he is assuredly worthy of our thanks.

For it is only on a clear knowledge of the proper mechanism of natural labour, by knowing the different axes of the pelvic bone, cavity, and outlet and the adaptation of the different diameters of the child's head to them, that we can ever attempt to be of service in difficult cases, when something out of the ordinary course of the labour has happened. The imperfect knowledge of the process, indeed the utter ignorance of it altogether, fully accounts for the many kinds and instances of needless interference, to which the older accoucheurs had recourse. All the improvements of the present day in the treatment of difficult cases of labour, can be safely ascribed to our better knowledge of the mechanism by which it is effected.

And now we have arrived at the last part of this essay, the most important of all in some points, and in which I propose discussing chiefly the subject of Pedalil Version.
Podalic Version

For what cases should this operation be had recourse to? This is a question, which has at various times excited attention and discussion among writers on the obstetric art. Nothing strikes one reading the earlier works on midwifery more forcibly than the very prevalent adoption of this operation in these lines. The slightest complication, the slightest difficulty or obstruction and the slightest delay, circumstances, which at the present time would not certainly call for active interference, then seemed to justify them in performing this operation. For one or two days its substitution for more grave and destructive operations has made quite a revolution in our practice. The causing of pain and danger to mother, and of life to a very great number of children has been the result of its more general adoption.

And let us in the first place consider the cases, in which the older authors recommended and practised turning of the child. With some indeed it was the
System of Midwifery
favourite operation in almost every case; with others it had a more limited application. Let us take Chapman as an example of the former class. The instructions which he lays down are very short, in fact recommending its adoption in every case. Thus he says turning onset he had recourse to 1st. If the face of the child is towards the feebles. 2d. Whatever way the face lies, if the head does not fully descend by the pains, but presses upon any seat. 3d. If the face looks any other way than towards the vacuum. 4th. If the labour be from any cause tedious, even though the head be in the vagina. It being, as he remarks, better to do this, than just the labour on the foot of nature, being more easy and eligible than having a hard and tedious labour, with the hazard of having at last to have recourse to this proceeding. He concludes his observations on this head with the following remark: "Thus, I say, a child presenting with its head is often to be turned and delivered with its feet first, and always turned except when it presents with the feet and Nature has saved the artist the trouble and the further the pain."

Again, we find Ould recommending its adoption at presentations of the face, occiput, breech births,
breach presentations, presentations of head with
jams, of the knees and in cases requiring Caesarean.
He also, like Chapman, recommends its practice
in head presentations; but, that prodalic version should
be had recourse to in true head cases, especially where
the head is well down (as is recommended by Chap-
man) is a proceeding as dangerous in its consequences
as it is unnecessary. For in true head cases nature's
the round form of the head dilates perhaps more
slowly, but much more efficiently the passage, for
when it (head) has been expelled a single pain will
expel the body without any danger to the child from
compression of the cord or any other complications.
But it is otherwise in foot presentations, where the
dilatation goes gradually on the iliac raphes, the
cord gets compressed against the thorax, then the
shoulders stick and lastly the head and, if the cord
be not at its side, it runs a great risk of compression
and consequent death to the child. Thus it is that
so many children presenting with the feet die 1-3.
But if the head is far down near the outlet and
obstructed by the rigidity of the vagina and external
parts, when it cannot of itself grasp, is it feasible to
introduce the hand and search for the feet?
Lachapelle. Pratique des Accouchemens 1825
The safest and in fact the only method of procedure in such a state of matters would be to wait for and assist the dilatation of the parts, observing whether it depended on congestion or on simple indelatability of the parts, or on their original malformation etc., and employ the treatment proper to each condition. Besides it would amount almost to an impossibility to push up the head against a uterus firmly contracted, and then to turn the child with the uterus strongly grasping it. The child by such a procedure would be placed in great danger, while the risk to the mother would be more than doubled.

In regard to face presentations, in which this operation is recommended to be performed by the old writers, let us first consider the mechanism of a case in which the face presents either at brain or outlet. The head is to be simply thus instead of the head being perfectly fixed on the chest, it has become extended, and bent back, and consequently by the side of the face presents at brain, or the face may only leave the chest during the progress of the labour and present at outlet. The labour is very slow and requires more time than when the head presents but is quite safe to mother and child. It is slow for obvious reasons. In the first place because the angular uncoordinated
Midwifery 1685
If face does not act so well as a wedge to dilate the parts, as the round obliques head does. Secondly, because the bones from their hardness and shape cannot by overlapping accommodate themselves as well to the shape of the passage. Thirdly, because evidently in this case the internal forces act at a disadvantage; the head being thrown back a portion of its face is consequently expanded in bending the head still further back and so rather dragging than expelling the head. And, lastly, the diameter of the presenting part is greater here than in the case of head. The chief causes of this presentation are too much ligamentum, obliquity of uterus and the accipit fetaling against the spine. It was probable the length of time occupied by the dilatation of the parts in these cases, which induced them to turn. But it occurred to Paul Mortal that such cases could be terminated with safe results by Nature alone; and every subsequent observation has fully confirmed the opinion of that writer. It would be in those cases that advice would be an example of "meddlecome midwifery" as all that is required on our part is to exercise patience for in 19 out of 20 cases nature will finish the case without our aid. But occasionally an extraordinary position face case presents itself and we are constrained to do something rather than
allow the another to suffer from the great and increasing dangers of a long labour, and knew then we never think of turning, for the slightest and with the forceps, if properly applied, brings the case to a safe termination. But the forceps cannot be properly applied if failure is certain. The head cannot be extracted with the face towards the pubis, so that we must first turn it round. Of course, if it is beyond the reach of forceps or above the brim, or if any dangerous complications threaten, then there is nothing left but version. But here and here only in forceps cases should version be practiced.

When the occiput presents from the head being too much flexed on the sternum, the labour goes on rather slowly but by applying gentle support to the presenting part we can greatly assist its progress. Such presentations are very rare, only occurring in cases of large fleshy, and never require version.

Necesarily in presentation of the hand of the head be lying away from the opium turning is warranted. So also in cases birth the presenting and indeed only treatment is necessary to save the child in version (spontaneous). Like wise the presentation of the hand with forceps except the version of the child.

But let us now consider the question of version in such...
Olds Midwifery page 113.

Battles Midwifery page 196.
cases. Why did the old accouchers practice turning in these cases? As we find Ould laying it down as a general rule that if the presentation of the breech be detected early we must not suffer the child to come into the world in that position, for though the labour may happen to be very successful and expeditious when the pelvis is large and child small, yet this is but accidental. For, though we may discover the passage to be large, yet we cannot judge of the child's size, therefore we should not put the matter to the hazard." Burton makes note of the same expression and adds that "it sometimes happens, though very rarely, that it may be brought forth in this position, if the child chance to be small and the pelvis large; but yet this is very accidental." In fact we find that to be the universal opinion of the elder authors viz., that turning was necessary in breech presentations. Then what are the dangers of a labour with the breech presenting? In the first place there is the danger to the child, for we find on consulting statistics that one out of every four born with the breech presenting are lost. Then the breech does not dilute the parts and canal so well as the head as it is more compressible than the latter. In consequence of the imperfect state of dilatation of the passages, the breech has to pass very slowly, and time must elapse before it can enter the
premier diameter of brim and outlet. The end therefore
runs a great risk of being compacted and asphyxie
in judiciary asphyxie result. In addition to this the
head, from the imperfect dilatation has to rep stretch
and it requires time to suit itself to the perfect diameter
brim, cavity, and outlet. Struggling of the several organs
of the child sometimes occurs from the prepared to which
they are subjected. In some cases there is considerable
difficulty experienced in the extraction of the head.
These then being the chief dangers of breech presentation
is the substitution of the feet for the breech attended with
life dangerous results. Looking at the statistics we
find that about double the number of children are born
than in breech viz: one in less than three children.
The danger to the child arises from the same cause
as it does in breech presentations viz: the same dilatation
condition of the passages. The second stage is of unusual length and we now know that in proportion
to the duration of a labour so are the complications.
The effects of the duration of the labour on its results we
have been well worked out by Professor Simpson
from printed tables drawn up by Dr. Collins of the
Dublin Hospital and on well embodied in the follow-
ing Propositions: 1st. The maternal mortality attended
upon parturition, increases in a ratio proportion to the increased duration of the labours. 2. Infantile mortality, attendant upon parturition, increases in a ratio proportion to the increased duration of labours. 3. The mortality to the infant and mother is tenfold greater in labour prolonged than in labours terminating within 24 hours, and the mortality to the mother and infant, is fifty fold greater in labours prolonged beyond 36 hours than in labours terminating within the first 24 hours. 4. The liability to febrile and inflammatory affections in the female parturient state increases, in proportion as the previous labour has been prolonged in its duration. 5. Individual parturient and puerperal complications not only thus become more frequent as the labour becomes more prolonged, but in a similar ratio, they also become more dangerous and fatal. 6. The mother is more liable to suffer from diseases of the uterine system after long than after short labours. &c. &c.

Keeping these conclusions in view, we can readily understand why the mortality to children should be as great in foetid as in fresh cases. Besides, as the breech in foetid cases is kept in place than in regular birth cases, owing to the extended state of the thighs, the parts are not as well prepared to allow the head to pass, and consequently delay the

causing compression, for a length of time on the cord, and producing irritation of the parts. From these facts alone, excluding from consideration the changes attendant on the operation of version, we may draw the conclusion that by substituting in such cases the feet for the breech we do not by any means amend matters, indeed we do not actually make matters worse, but interfere. For, we are certain, that if the pelvis be of normal dimension, a fact, which in the majority of cases we can reasonably ascertain by measuring the infant with hands, and the child of ordinary size, nature will, in the course of time, finish the labour, without any assistance whatever on our part, and that, although in a breech case the first part of the labour may be slow and tedious, the second is generally rapid and easy. For why would we turn the child in a breech presentation, and bring down the feet? It is of course to render the labour less tedious and fatiguing to the mother, but by our facts we have been convinced, that here this result does not happen and therefore such practice would be more dangerous, than allowing the case to take its own time and way. 'Tis true that the feet being down in footing presentation or show the child is turned or the feet are made to present, we have the entire control over the whole labour, but...
we cannot agree with Dr. Churchill, inasmuch as he recommends, by a pulling or and, with or without pain, to regulate the duration of the labour, for after the operation of turning it would be dangerous practice suddenly to withdraw even were the uterine contractions the proper stimulus to the uterine contractions. Besides, we can abort the labour materially in breech cases, we proceed for it by introducing a finger or blunt broom into the groin of the child, and thereby deftly by exciting traction, although even this practice is not to be approved of unless it is absolute necessary to shorten the labour from complications on part of mother or child. Thus we see that version in the case of breech presentations is out of place, and in fact, it is probable that it was adopted by our ancestors under the well intended but erroneous idea of shortening the duration of the labour.

We now come to speak of the operation of version in cases of Placenta praevia.

In this most dangerous and fatal complication, a complication most fatal to the unfortunate mother than children or yellow fever would be — a perfect definite and clear idea of its proper treatment is denied by all accouchers. As calculated by Prof. Simpson one in every 3 to of the mother perish in connection with.
Cases in Medicine
this complication. In a long period past the prevalent practice in cases where the placenta was found attached over 'os' and hemorrhage occurring, if the fingers permitted, was to introduce the hand, at once bring down the foot, and complete the delivery as fast as possible. If the fingers should not admit of the introduction of the hand, then phlegm was adopted, until the 'os' was dilated with cerumen to permit of its entrance. This is the practice which was recommended by M. Leveque in 1776. The hand was passed in the ring of the outlet, then the fingers were insinuated into the 'os' and passed between the placenta and cervix on the side, where we conceive the placenta is narrowest, until they reach the membranes, which they pierce and ultimately find the feet, which they bring down. By some practitioners as Smellie the placenta was perforated, but this was thought inferior to the former method, because, 1st perforating a soft organ of such like the placenta, attached in these cases only at the margin and, in some cases with an resistible structure behind it, is indeed of itself a very difficult operation, besides being very dangerous from its occasioning internal hemorrhage. 2nd. That after the placenta is perforated by one finger, considerable time elapses before we can introduce the hand, to rupture the membranes and get at the feet.
† Elements Ante Obstetricae 1781 p. 133.
‡ System of Midwifery.
§ Work on Midwifery.
(1) System of Midwifery p. 394.
(2) Introduction to Midwifery.
and by that time the head may be far down in the pelvis and consequently the operation of turning rendered in the majority of cases impossible. 3. That in presentations of the head this perforation is unnecessary as nature in these cases expels the placenta before the child. It is true in cases where the placenta only partially presents, and where the hemorrhage is slight, the practice of rupturing the membranes and evacuating the liquor amnii was in request and with success. The old accoucheurs used needles to break the bag for effecting this. Menziw also wrote in 1781 declares if it "nullo remediis red et ab extructione materiam e fancis!" Bandelouque and all succeeding authors agreed in declaring that turning is the only practice here. The mind modern authors and Congest Dweese's's Benson a while all one on this point.

Besides these plans of treatment we find the accoucheurs of last century adopted another. If we refer to Bald's work on Inducings of 1742 we find him saying, "if the placenta presents at the cervix it cannot just be brought away, and then the child delivered," and then he immediately quotes a case, where he first this practice in effect with good results to mother and child. Bald was not alone in adopting this practice for we find Buxton a contemporary of his, and after him Smellie who reports
System of Midwifery.

Simpson's Obstetric Works Vol. I.
a case, in which he first extracted the placenta and then the child with the result, that the child died but the mother survived. 

Rush in 1754 remarks that the placenta sometimes presents itself at the mouth of the womb, so that once it is joined to the child, but the reverse, from the moment it is separated from the womb, that whenever the membranes break and the placenta is in the bag, you must first bring that forth and then extract the child. As I have said already, this practice of first extracting the placenta, in case of placenta previa, was common among the ancient Greeks, but it must be remembered that their object in its extraction was only to let them have more space and freedom for their incurrent operation, that by this extraction they did not injure the labor, would be thereby be hastened, for they only extracted it when it was lying detached in the vagina. But in later times this practice was either a greater extension of it has been turned to better account, for in 1845 Mrs. Simpson recommended the practice of detaching the placenta from its connections over the cervix uteri, and its extraction premature of that of the child. In an able essay which he published on the subject, he showed that the entire placenta might be separated without any hemorrhage whatever attended, while partial separation produced
* a if we include the ten fatal cases we find the mortality to be about 1-14.
dangerous hemorrhage. In the table referred to eight cases are quoted to prove, that no hemorrhage ensued, even though the placenta was separated three hours before the birth of the child, and 141 cases are recorded wherein though profuse bleeding existed before its separation, it ceased entirely after its full separation. There were indeed a few exceptions, but it was proved that in only 1 out of 22 labours, the hemorrhage did not cease. Of the rate of mortality attending this operation viz. the complete separation of the entire placenta and its extraction, Dr. Simpson found that of the 141 cases recorded ten mothers died or one in fourteen. Now if we calculate what is the rate of mortality by the other mode of treatment which was universally adopted we will find it to be far greater than this and that one out of every 3½ mothers die. In 7 out of the ten fatal cases recorded the exhaustion produced by the hemorrhage from the partial separation and other complications were quite sufficient to account for the fatal result. So that only 3 out of the 141 cases in reality died from this mode of treatment or one in 47 a very small mortality compared with the magnitude of the complication. Concerning the cause of the hemorrhage in this presentation Dr. Simpson concurs in the opinion of the late Dr. F. Hamilton, who believing
that the external surface of the placenta, and not the internal surface of the uterus as supposed by Guillemeau and Mauret. He does this from the consideration of the structure presented by the surface of the placenta and its connection with the vascular maternal cells. It appears from his investigations, that the greater the amount of the placenta detached the epithemorrhagia follows and that if the entire placenta be separated the hemorrhage will cease. For it seems that the cause of the continual hemorrhagia, which occurs when a part only is detached, is that the maternal cells, which belong to the separated portion and still supplied through the uterine placental vessels of the adhering portion, so that if this supply is cut off by the entire separation of the placenta, the hemorrhage must of necessity cease. Dr. Simpson also differs from Goode, Caves, and Rigby, who believe that the hemorrhage from the uterine veins is ended by the simple contraction of fibers after delivery on the ground, that 1st in those cases of placenta praevia, when the child is still in utero and consequently the vagina cannot contract, no hemorrhage occurs. 2nd, that after natural parturition, though the uterus is not perfectly contracted, no hemorrhage takes place. He adduces several reasons to prove, that from the anatomical structure of the parts concerned, hemorrhagia
must of suppositio case, when the placenta is entirely
separated from the cervix uteri.

Such being the causes & conditions of the hemorrhage
attending this complication, and having seen that
the complete separation of the placenta immediately put an end to it, let us see what are results to the child by
this practice. In 166 of the 143 instances, in which the
result to the child is mentioned, we find that in 73 cases the infant was born dead, and in 33 it was
born alive, so that we may say, one out of every three
children delivered after the extraction of the placenta
survived. Now we know that when turning is had
accourse to in this complication, the infant is almost
immediately lost.

Through the older accouchers Guillemerau, Parmenter,
Ould, Hayle &c. did extract sometimes the placenta
before the child we know that their invariable rule in
these unfortunate cases was to turn the child as soon
as possible. Hence this other method is extremely
new and original. The extraction of the placenta has
in view, in this practice, the immediate arrestment of
the exhausting hemorrhage, and a speedy & safe termina-
tion to the labour. How it succeeds in these ends is apt
shewn in the latter drawn up by Dr. Simpson.
The cases suitable for it have been enumerated by its
proponents. He recommends it 1st Where from rigidity of
pelvis, and vagina, from the early period of puerperal
inflammation, the safe performance of the
operation of version: Many fatal cases have occurred
from version having been practiced too early as well as
too late. In the operation of version, there is the
great danger of the hemorrhage exhausting the patient
through the loss of a large part of her blood.
The operation of version in fit cases of labor, with the
complication, is generally very fatal. In its results, Dr.
Simpson has constructed lists of cases, from different authors,
to show the mortality of the mother from the operation of
version. Dr. S. shows further, that in three cases
artificial separation and extraction of the placenta first,
would have been practicable in these cases, and would have
just as well as the hemorrhage and labor would have
been safely terminated by nature besides saving 80 or 90
mothers lives out of every 100. 2d In primiparous
labors which are premature. 3d Where utero
is too contracted or prompt of turning and where it would
be positively dangerous to attempt it.
4. When the patient is too much exhausted from previous hemorrhage, and general debility and consequent inability is unable to stand the shock of the operation of turning.

5. When the child is dead, this plan of delivery is much preferable, as the needless shock in this instance is avoided entirely.

6. That when tumours are present and turning out of the question delivery may be effected by this mode.

Dr. Simpson further recommends that when the placenta has been separated and extracted, no operative interference is to be had recourse to at all, if pains are present and the presentation natural. So that, instead of turning after its extraction, we have merely in these cases to leave it to nature to finish. It is especially in these cases specified above, that this new method of treatment is applicable, where evacuation of liquor amnii or turning was impracticable, or have failed. But still there are cases in which turning is apparently the proper practice thus in cases, where the child is alive, and at full term of gestation; when the mother has had many children, and the hand can be easily introduced without laceration, and where the child presents parturitiously, turning must be had recourse to. We may safely conclude that in all other cases this proper procedure could be the
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reparation and extraction of the placenta first, thereby entirely arresting the hemorrhage and saving the infant from sinking, and after thus leaving the labour to nature to finish.

The great care, deliberation, and careful reasoning which characterize Dr. Simpson's paper on this subject, along with the sound deductions made from laborious labour, which repeated scrutiny only serves to be the more correct, are circumstances, which, I think, should strongly recommend the general adoption of this practice.

Of course, no new doctrine can be allowed to appear without objections being urged against them from some quarters, as this one too has had its. But the majority of those urged against it have been mere theories, based on no facts of any moment whatever. For example we find Dr. Lee, alleging that the practice is objectionable, because it was not practised by the older accoucheurs. But Paul Portal relates two cases, where though he did not follow Dr. Simpson, practice entirely, he did partly. He had not the forbearance, after defecting the placenta from the cervix, to leave the rest to nature, but immediately turned and delivered. And besides even though they did not that, is no reason why we should not delight in the most modern improvements which can in any wise...
apart us and benefit our fellow creatures. The second objection he raises is, that the child must be sacrificed, but from the tables published by Dr. Simpson we see that about 1 in every 3 children are saved whereas by turning only three half the numbers are lost. I cannot in this place enter into a discussion on the long and rather sharp controversy, which have taken place between Dr. Lee and others. Sufficient it to say that the very bitterness of the contest shows the great importance of the subject.

Dr. Churchill has entered this contest against the practice, except in such cases as from great exhaustion, when the patient could not bear the shock of turning; where the circumference of the placenta is within reach; where the fleeing is excessive; the presenting part natural and the pains strong. The reasons urged by him are not very weighty either, nor do they seem to be based on truly practical grounds. Thus, the inability of the finger to reach the edge of the placenta, supplies with equal force to the old method of perforating it, and to the introduction of the hand, just as for the purpose of turning. That there is a difference between the expulsion of placenta & its forceble (separation) detachment may be the case but assuredly it is not so great as in the slightest degree to affect the new method of delivery, for by detaching it gently with the finger,
we are only doing what nature herself does — as in the analogous case of dilatation of the "oz" by the finger, such
that structure, from any cause, is rigid — not interfering with but apportioning her efforts. To examine the remaining
arguments, which have been carried, and, as I believe,
on no sound grounds, by several writers would lead us
to far, suffice it to say, that no arguments, however ad-
vanced, do, in the least degree, to my mind, detract from
the value of this great improvement in practical midwifery.
Its value is of the highest order and in such terrible,
alarmist cases, as those of placenta praevia, where now
we have a means of at once arresting the dreadful hem-
oorrhage and bringing the labour to a safe termination,
saving many lives both of mothers and children, we
aptly named should feel deeply grateful to those who
have done so much not only for the benefit of their
infant, but for the welfare and safety of their con-
jugate fellow creature.