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PLURAL BIRTHS

by

B. Watson Davies
Nature seems to have laid it down as a general law that the human being shall have but one heart, and that beneath the course of the nine months, that it bears its burden, and that the little atom of a man therein contained, live to mature, afterward, destined to live to what distinction! Shall we at least in whatever stripe, and condition he may henceforth be called upon to mingle, be "brought up in the law," to warranty the materials when invaded by the caterpillar, his care can comfort during by an extending himself. Here, alike unknowingly and unknowingly, he lies on in an unconscious state, till the time arrives when, waking from his lethargy, he finds himself no longer a tenant of his narrow home, but emergent into the outer world. "Forsaken and forsaken also in a Man!"

Like all other great laws however he finds that one over another departed from. Death and birth have been known in all ages. From the days when the patriarchal Isaac divided the land of Canaan with his brother, Esau, down to our own time, we see these are and again occurring in a brother producing more than one infant at a birth, and indeed twins occur comparatively, to often as to be regarded as an event by no means extraordinary.

"Or why it may be asked is the human female less"
two-fold, a Prosector is immediate and a tenor.

Taking a casual view of the matter and fortifying memory upon the ground of "Nature with open fruits", the speculative philosopher might argue that it was obviously the intention of Nature that woman should bear two children at a birth. For he might say: "He that Nature gives the two breasts, with one nipple in each? Can this with two fallopian tubes, bearing the uterus, with corresponding ovaries? Why should nature burden two sets of organs, if one child was intended to be produced at a birth?"

But that such reasoning is fallacious, the fact of twins occurring only once in 90 single births, as I have by accident,

First then, as to the Prosector or Human

 cited came. This I think is to be sought for in the uterus. The human uterus is essentially single. In the case of multi-pareted animals, it is usually divided and convoluted at the hinder into branches or horns. Jenner remarks: "The human uterus, alone is pyramidal, and the gradation from it to that of other animals debased to the least extremity of the carnivorous. The human uterus is a curious part of natural history. Animals might be readily as well arranged and the plan to which they belong determined, by the form of the uterus, or by any external or other internal mark. Such as the

vixen, in the form of the uterus in different animals are far removed from those of the human tribe, while

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to the human which is essentially a single organ.

In proportion to the descent in the animal scale and the complexity of the uterus as does the tendency to plurality of births increase; Brown has in his work on Parthenogenesis remarks: "It has been found that in proportion as the subject of anatomical investigation descends in the scale of animal life, the number of the dematiac germ cells (or those from which new individuals are capable of being formed) and nuclei which retain their individuality and dematiac force increase." Now there are many cases recorded of a uterus more or less double in the human female, but and it would be interesting to know whether in these cases the female had any predisposition to bear twins often than in the usual proportion. I have been unable hitherto, in the books of any of them, to find any enquiry made into this subject. 

Brown, I think, after the White upper and the conclusion that the immediate cause of the human female being uniparous is not the length of the uterus, and the height, the length, which woman occupies in the animal scale, the very dematiac germ cell, and the consequent tendency to lengthen, in the dematiac germ cell.

Secondly the art of the fall came.

So the reflection traced the working of an all-wise and foreseeing Providence in making the human female uniparous must be at once apparent. What unceasing care does the single little wayfarer.
demand at his mother hands during his early infancy. What breeze, what chance and annoy; unable to undertake even the most fundamental steps for its own formation, a renunciation of human infant life, a helpless and inert creature.

"Feeling war, putting in its arms, arm"

He many long years, say few, at last from the maternal arms, he is able to join the long strings of his fellow men, and earn by the sweat of his brow, the means whereby to live! From such an amount of care and anxiety, it is required upon one, we can at one perceive the wisdom of Providence in making woman ordinarily infirm, and only, infirming it double or triple burden upon her in care.

"In one far between"

The difference between man and the multitudinous lower animals in regard to the rearing of their young is very striking. In a few short weeks, sometimes days, after birth we see these creatures taking upon themselves, to their, all the duties and responsibilities of life, and in a very short time complete emancipating themselves from the parental control and care.

Do Demme think it probable that little birth tend to engender and increased the attachment of the female to an individual male, while on the other hand the multitudinous females forms no such attachment. This, if true, would form another strong link in our chain of argument in regard to a final cause.
let us move, proceed to inquire into the frequency, with which the low of single births is broken. The common order of generation, or the continuance of any kind of animal, seems to be more frequently invaded by an antecedent, than a failure of the principle, instance of abnormal fertility, being very often found both in plants and animals. With respect to generation, all animals may be divided into two classes, haploid and multihaploid. Of the latter, the number of young produced at a birth seems to be indefinite; and, according to accident, circumstances, very seldom, however small, it happens that a multihaploid animal brings forth only one little. But the case is very different with the haploid—here we very frequently see the female producing twins, triplets, or even more at a birth. In some of the lower animals, the tendency to being forth more than their ordinary number of young is very marked; these chances more frequently do so than cows, while the latter in their turn exceed in this respect the line.

But confining our attention solely to the human species, let us proceed to inquire into the relative proportions of plural births to single, and first in regard to swine.

As could be naturally supposed, this is by far the most frequent variety of plural birth. Even now, as before said, not unfrequent, so often indeed that it is not, in a layman, in literature, that one of the first duties of the
Vulgar, judging from the average of all statistics, occur in the proportion of one to every 1,500 single births.
accoucheur after the birth of a child, should be to examine the abdomen of the mother to the intent that he may ascertain whether there be not another. The proportion of twin births varies in the statistics of different countries, being highest in Ireland, but may, generally speaking, he stated to be an one to every 85 or 90 single births.

Twinlets

Are much rarer. Dr. Haussani, for instance, in this or any other country. 'Every one' says an old maxim, 'the hand of many such cases, very few have been.' The authenticated case, vary exceedingly in the statistics of different countries, and in the practice of different accouchers. They would seem, broadly speaking, to be most frequent in Britain, for then, again, having the prominence and least to in German practice. As, one case there, was much in individual practice. Mr. Dr. Hamilton met with triplets in Edinburgh several time, during a few years, while Mirisimos in the course of a long life of his, entered practice, informs us that he has seen triplets "a very few times," saying ten a year at a birth.

Haller computed that quadruplet, occur once in 60,000, etc., was written, and supposed, on the subject think much greater, and that one in 100,000 would be much nearer the truth. Dr. Stretcher in his paper in the Philosophical Transactions for June 1767 has made a collection of several, as he thinks, will authenticate cases of quadruplet, occurring in this County. There are two cases recorded in the Journal for 1856 at page 382, and 328, three of the children in the one case are four in the latter case.
being born alive. Dr. Carthage in one of the cases where he quotes a case of live birth as occurring in the practice of this kind of obstetrics, he relates, in addition, one or more such cases, from newspaper. Chamber relate a case of five alive, all of them, he adds, living for a time and long enough to be carried to church for baptism. Sala relate that is at a birth occurs once in a million. Dr. Cotesmae give a case where in an early abortive he saw five distinct ones and each complete. When we advance beyond this number we get into the region of tradition and uncertainty. Dr. Cotesmae indeed thinks that any the so called cases of more than five at a birth are purely fabulous, founding his argument upon the grounds of the empire being by well established fact, the greater in human fecundity than any other part of the known world, and six being the greatest number at a birth ever recorded here.

With all due deference to this opinion of Dr. Cotesmae, I will quote a few of the recorded instances of more than five at a birth. Chambor cites a particularly fertile in stories of such prodigies. He relates the case of one "bounteous" lady who in two confinement presented her living offspring with twelve pledge of affection. Again, he tells us that in this case twain, in the parish of Somers near Chambur, the mother of the then living lord of Scaldsmere, had in the first year of her marriage brought forth twain, in the second, triplet, in the third quadruplet, in the fourth, five, and in the fifth six children, "of which latter labor he with she died." One of these was he goes on in slight alien
being the present Lord of Haldene."

This last statement is, if it may be allowed the use of a vulgar but somewhat
expensive term, "true"; for rare events and published facts in the very age, and among the very people where it hap-
pened are not only to met with in reputation. The only pos-
sibility on which we may account for it is, that the two

Note last events have been the only one of the few who
lived to the first time, the remaining five having
all died as young children, and their name having
arrives at a sufficient bulk to interfere with them.

La Rochelle relates the case of a woman who produces
nine children at a birth.

But a casting astrology
immeasurably into the chaos, and as a striking example
of the length to which human credulity will sometimes
go, I may, in concluding this part of my subject,
cite the case of the Countess Kenning, a title acco-
dated many homonym in the Church of Son, denue, near
London. The Monument commences thus:

"On the mounteneous sides of Wensdesk, fauste

Ecole are a tenitane mordi stantes.

Ostedium:

This follow is from a relation of the miracle to the following
effect. That Margaret, wife of the Kent, Earl of Kemshead
and daughter of Florence, Earl of Holland and Zeeland, the
follow a Jesuit who celebrated an infirnity - being about 140
year old, was, upon Easter day A.D. 1276, at 8 a.m.
brought the bed of 9 or 10 children, all of which were bap-
tise in the brage basin. He found the ralphage of destruction
The males were all christened John, the females, Elizabeth; they
are together with their mother died on the same day, and
were buried in the aforesaid church of Loudun; in order
that nothing may be wanting to give maintenance to
the miracles, it is accounted for on the principle of
attributing justice, for it is stated that the Countess, being
solicited again by a poor woman bearing twins in her
arms, from her in contempt, declaring she
could not have got them both by one father. Thence
proceed the sermons, chronicles, the poor woman prays
to God to send the same children, as many children
then he days in the year, which came to pass, as it be
under brief in the table for perpetual recollection
betwixt as well by written memorandum, as by many
printed chronicles. Serious comment upon such
a story as those were hardly an omen of a story itself; suffice it to say that in all probability
the Countess gave birth to a man of hydastil, thinking
the most likely explanation of many of them to
called prodigies.

Dr. Gartside (of St.) concludes his observation in the
following words: "From the utmost testimony of all
the foregoing cases, it is undeniable, clear, that
the females of the human species, though most com-
monly unfruitful, are, under circumstances to
be unknown, very rare and then capable of
very far exceeding their natural number; and
it does not appear that we can set any bound
to the power of nature in this respect, or pretend to

come have done, with certainty, to say what may be the absolute limits of human fecundity."

Are there any circumstances favouring or exerting any influence upon plural concep-

tions? Climate and the state of degree of civilization, according to most authorities, seem to exert some such influence. Dr. Collin says "The proportion of twin births varies in different countries. In France the proportion is 1 in 95, in Germany 1 in 81, in England 1 in 93, in Scot-

tand 1 in 96, in Ireland 1 in 62. Then it is for the greatest in Ireland." He adds also occurred in the Dublin lying in hospital in a very large proportion - 1 in 4000, while the normal average as before said is only 1 in 6500. It is but reasonable therefore to conclude that there is something in the climate of the Emerald Isle predisposing to the abnormal fecundity.

With regard to the state of civilization, it is supposed that in proportion as man lives in the respect so much the more does he tend to become multiplacent, similarly as it is observed that in the low animals the tendency to bear more than their ordinary number of young increases, in proportion to their degree of domestication.

Various other circumstances are supposed by different authors to exert an influence. Thus Dr. Deanard says: "Twin births by common observation are more frequent in certain years than in others, and it can scarcely be doubted but that in those years..."
there is some relation between the animals and vegetable creation.

There seem to be a certain predisposition in certain families to the multiple generation, this tendency being transmitted either by males or females; we have an instance here, which we can recognize this disposition either by general observation or by the appearance of the parent (Devera). At any rate, whether hereditary or not, its results have in many cases to be constitutional; for Devereau gives the case of one woman who had five twin daughters by one and one single birth at all; another had twins three times, although not immediately following each other. In the Lancet for Feb. 16, 1850, Dr. Joseph Eggleston gives the case of three consecutive births of twins in the wife of a painter. In the Gaz. Med. Arg., Journal for 1853 there is an extract from a Russian periodical detailing the case of two kinswomen, who certainly must have proved invaluable to their country in a time of war, by the lavish means in which they increased the population. Each was married twice, and with the following result. The first born by the first wife four quads, six triplets, two twins, and by her second one triplet and six twins; the second born by the first wife for quads, six triplets, seven triplets, and fifteen twins; and by the second, two triplets and nine twins. These Russian stories cannot but be taken for what they are worth; here they tried both with this of Paris already quoted, tend to bear out the view
of a constitutional tendency, or predisposition. Another question here presents itself. Is the case, then, that the predisposition depends on the male, or on the female parent? Dr. Blundell thinks it is always to be attributed to the female. He gives the case of a lady, related to a pupil, who conceived of four children together and the lady had four own children, who all produced their husbands with twins or triplets; it was, therefore, that it was in the female system that the secondly occurred.

John Hunter's experiment of removing one of the ovaries from a pig and then submitting it to the male shows that it was found to bear one only half the number of young that an uncompromised subject to the same male did, also goes some way to prove the great influence of the female over the number of progeny. The case of which there are several on record, of females, barren, phthisical, or otherwise infirm, becoming the father of normal births. (See Bartleby op. cit.) Also, any wound also favors the view of a preponderating female influence; for it is best natural to suppose that there were, the one phthisical for the year, the other hemorrhagic for a similar period, was very little likely to have any such influence. But on the other hand, any case can be seen bearing to show that, in some instances, the predisposition was constitutional in the part of the male. This is Campbell's case, briefly informed by a fellow that a gentleman in the neighbourhood has been known to produce a very short time of each other with...
five years of twopenny by his wife, and the other four by his various mistresses. B. Kneisler in his book on
Difficult Parturition also relates the following. The case of a French gentleman had presented him at seven successive
births with an equal number of stillborn. He has been
living with a landlord's desire to ascertain whether the
ment (or otherwise) of the extraordinary fertility, long with being
a fine wife, reduced his male tenants, who in more
what less than nine months without the slightest en-
tide, to his satisfaction by presenting him with three
blooming boys! The case of the two Russian, above
quoted, if any reliance can be laid upon them, would
tend in the same direction. One may therefore, I think,
come to the conclusion, that a constitutional peculi-
arity to the begetting of plural births seems in
Case to exist, the predominating influence being
described as attributable to the male, consonance to
the female parent.

Our next enquiring shall be
What are the Chance of life in Plural Births?
Our first in regard to Living.
These are very frequently born living and very little of
at all, beneath the lives of an ordinary single Child;
this however is not the Case generally. The lives of Child
been born at a birth being, generally speaking in
the inverse ratio of their number.

From Dr. Cheneville's statistics on the Mortality
of nine, we learn that out of 471 Cases of twin/fo.
1948 Children 482 were lost or one out of two, for
The ordinary mortality of children in single births is one in.

What is the cause then of this great increase?

It being, I think, clear, on the subject, let us first enquire into the relative proportion of the same in twin births.

Dr. Swinney informs us (Sib. M. J. 1807) on the research of his careful and statistical observations, that out of 780 cases of twins in the Edinburgh, London, and Dublin Lying-in Hospitals, 339 were both male, 209 both female, and 292 were of opposite sex. Dr. Churchill's statistical data agree with these results; we may therefore assume it a fact that twins are most usually of opposite sex, and that other of the cases are twin females, and more common than twin males. This is not different from the popular idea, that twins are most usually of the same sex, an idea also advanced by so high an authority as Sir Ernest Monck, in his Comparative Anatomy (vol. 2, p. 338). It appears then, assuming it as a fact, that twins are most common by of different sex, and that female twins are more common than males, let us next enquire, what the relative mortality is in these twins, with respect to sex.

On this point Dr. Collin's excellent Report (p. 80) has filled in with invaluable information. He had 75 cases of twin births; of these 33 were both, or one in two. He had 47 female twins, of these 19 were both, or only one in two. He had 97 mixed twins; of these 83 were both, or one in 9, 'more than half of whom were boys.' From all this we learn that there is much more danger to boys than girls in twin births; for though the numbers
of boys born was less than that of girls, yet the total number of boys lost was greater. Now this result I think leads us to the conclusion that the greater mortality of the male sex depends upon cause. Operating during parturition, for Rodrigo Simpson has elaborated proofs that the proportion of deaths of boys during parturition, owing to the large size of the male head, is a ratio to those of girls, while the proportion of deaths in the two cases prior to parturition is exactly equal. Taking this incident into consideration, therefore, in connection with the fact as stated above, viz. that the number of boys in twin cases is less than that of girls, while the number of deaths among these boys is greater, I think we cannot but arrive at the above conclusion, viz. that the great mortality in twin cases, from cause operating during the course of parturition, is such a fact. That stage in the birth which would strike one upon taking a superficial glance at the matter, for one would naturally suppose that the mortality would depend more upon want of nutrition, defect of development, etc., and therefore upon cause operating prior to parturition. That death are in some measure due to these causes, also is obvious, for there were several cases of intact births. The second born in a case of twins has a great chance of life than the first, provided the labor has gone on normally. Dr. Simpson computes that, in ten cases, the birth of a second child in a twin case is more safe than that of an ordinary single one, and for reasons sufficiently obvious: the maternal energies
being thorough, diluted by the passing of the fluid, and these are great causes of delay and where delay always danger closer. As a corollary to this it follows that the first portion has an influence on the chance of life. Dr. Chedwick states it in the following words: 'The less the damage are diluted by the preceding part, the greater the mortality among the children, because of the delay in the transit of the remaining part of the child.' He of course qualifies equally, to single as it were birth, threat at the chance of life in Expectant.

Sometimes such children have been born living and been reared. Dr. Simpson (Art. Work, page 322) has had four well authenticated cases of triplets reported to him in which all the children were reared. Dr. Collin was associated with two such cases. In the Lancet for Feb. 16th 1850, Dr. Houlbe Chapman records, his having met with a case of triplets in October of the preceding year, all the children being alive and doing well at the time he wrote. There, and similar cases, however, are to be looked upon as very rare; generally speaking all these children if born alive at all, die in the course of a day or two.

Dr. Hamilton states that a woman at Penicuick was delivered of four children when she was arrived at the middle of her last month of pregnancy, and that some of these children lived ten or three years.

But when there are more than three, at a birth in general the chances of all or any of them being preserved are very little indeed, should the mother go on to the false period of intermission. She brings in to the greatest
of the frequency of premature births in plural cases.

With more than two women seldom indeed go on to the
full period says Dr. Denman. "Even with two," he continues,
"there is a great likelihood of a premature birth, especially
in first pregnancies." Now the statement does not agree
at all with the result of Dr. Collins' great experience.

This gentleman, in the course of his practice in the
Dublin Lying-in Hospital, met with 946 cases of twins;
78 of these were first pregnancies, and 266 out of these 780
premature births, while there were 21 premature births in
the remaining 165 cases, which were not first pregnancies.

In other words, the premature births in the primiparas were
one in twelve, in the other one in eight.

While caution appears therefore in the absolute, great ten-
dency to prematurity in plural births generally, they
greatly differ as to the relative frequency of its occurrence
in primiparas as compared with women who had al-
ready borne children. Irrespective of the great weight
of statistics in support of Dr. Collins' view, it leaves the most
natural one, for we cannot but conceive that the ten-
dency to premature births in women who have al-
cready borne children must be greater than in primiparas,
from the more relaxed state of theconnexion and
structure generally. To much in regard to twins.

When there are more than two I think no one
can doubt that the tendency to premature births
must be very great indeed, both from the inability of
the system to support the increased demand made of
it in each case, and also from the increased volume...
of the womb loosen or late producing disordered function and disturbance of the vital organs, more especially, the lungs and heart. Doubtless this is to be regarded as a wise provision of nature to save the life of the mother and the baby, as to the consideration of the foetus.

How do Pueral Deaths Affect the Life or prospect of the Mother?

This is a question of very vital importance indeed. Dr. Collin contends that the ordinary proportion of death in women giving births to twins is one in twenty, whereas with single births, a death does not occur in nearly five times that number. Dr. Burn states the chances of recovery to be "four times less" in twins than in single births. This danger will be, of course, increased proportionately to the number produced at a birth, as in triplets he and the chance of recovery lessened.

Now, on what does this increase mortality depend? Not, I presume, on the liability to any given complication, but simply from all the ordinary birch of single parutions being multiplied. Then, by the multiplication of the placenta and the increased size of the uterus indicating it to through contraction, all the dangers of haemorrhage are vastly increased. It is no matter what the nature of the attack may be; "says Dr. Collin; whether haemorrhage, convulsions, fever, or, it will be found much more danger in woman giving birth to a plurality of children than in others." What is the practical deduction from this? That in the after management of our plural cases we should watch with extreme care.
for the first onset of these unfavourable symptoms, to which our experience convinces us, our patient are liable, and then he may at once to attack the forearm, forearm, then, and there only may we hope to succeed here in carrying on the principal end of the physician's calling the prevention of death. We must therefore come to the conclusion, upon the whole, that Pueral birth is cause of danger both to mother and child, and are therefore unfavourable to population rather than otherwise. As few few of the children can be carried to the full time of pregnancy, and fewer still to that degree of strength which admits of their being carriers.

And if, as Dr. D'Arreet observations observe in the paper to which they refer, we are to believe in John Hunter's conclusion, that a certain determined number of ovum capable of receiving male impregnation are originally formed in each ovum, and which number when exhausted, the female has no power to renew, then Pueral births must become a very serious prejudice and threat of the human race, and become in every way direct mortal to its increase.

Let us now proceed to look into the physiology of our subject, or in other words, to enquire, how are these produced? On this subject, as on all others connected with generation and conception, that important mystery, pressing in the "arcana" of Nature, our information up to a very recent period, has been solely theoretical and uncertain. After slender dispute however and counter the same, concerning conception, recent information
feather have at length advanced considerable steps towards its elucidation. The experiment and investigation of Dr. Martin Berry and others have pretty conclusively proved that the essential point in a reptile's reproductive organs consists in the penetration of the sperm of the male into the ovum of the female, as a spermatophore. Where the junction takes place is still a somewhat mooted point among physiologists. Some say the sperm enter the ovum beyond the ovary; but the case of birds and mammals is generally more or less in the way. Egeria superflua has been described in the fallopian tubes, and more especially in their ovarian extremity by Von Baer, Bache, and the early B. North. That point. But in addition, it has been found experimentally that insemination is prevented by rendering the fallopian tube impermeable. This however does not prove that insemination may not occur even where there is no spermatozoa. But discussing these considerations, I somewhat digress from my exact subject of inquiry. I shall assume for present what the latest investigation of Dr. Berry and Von Baer leave to prove, viz., that the ovum is inseminated while still in the ovisacs. Immediately after this has taken place the whole ovaria system appears in a state of great vascular excitement and tension. The follicular extremity of the fallopian tube approximates more and more closely to each other, and at last closely adheres to one another.
After a certain time, (as yet undetermined), the intertwining
covering of the ovule, break, and its contents pass through
the opening. The ovum having thus entered the fallopian
tube, is conveyed along it, by slow and continual con-
traction, until it arrives at the uterus.

Having thus taken a short review of the process of con-
ception as taking place normally, I have cleared
the way for a consideration of the process as occurring
in the case of twins, or other plural births.

Now at the very first glance at the subject the fol-
loving hypotheses suggest themselves to the mind as
possible.

1. The twins may be the result of one ovule unites
with a double yolk and resides.

2. They may be the product of two distinct and separate
ovules with regard to the first of these views. D'Her-  
met in his lectures (Claret, for 1850 p. 385) says, in
one instance, in twins, the placenta is found to be single,
and I would suggest that there are cases in which
one ovule has contained two yolks and two germi-
al sacs, just as it sometimes does in birds, one
egg with a double yolk, producing two indi-

uals. This may be the case in twins.

the umbilical cords, the thumbs at
the placental surface, surely, dividing afterwards to go to the separate children, I think we may regard it as a very natural explanation. But that it is not the sole explanation, is, I imagine abundantly evident from the circumstances that triplet are rare and their met with having but a single placenta, for example of which are two cases in the Lancet for 1856, one in the no. for February by Dr. Chapman and another in that for March by Dr. Davis. Both were cases of triplet, and in each the pla- centa is described as perfectly single. Now how are such cases as these to be explained? Not likely by assuming that the ovule here had a triple yolk and besides, I don’t think such an analogy is ever found in the bird’s egg. For both therefore I presume, upon the whole, take the more natural explanation that they are cases each of a separate ovule, the placenta merely getting fixed together from the casing of the uterus and their consequent close apposition, allowing at the same time that there may be case, a, above stated, in which the theory of a double yolk may be regarded as a very plausible expla- nation. In such cases as these, then, it is
that all the phenomena of ordinary simple in
pregnancy will be followed out the womb being, to the
extent our purposes, single, and the result of one of
several instances. But we have only to
presuppose in the existence in the way of more
than one ovum in a state fitted for impreg-
nation, and we are at once brought to the conclu-
sion of the second of the hypothesis above stated,
viz. that twins are the product each of a separate
and distinct ovum. In questions here at once present
itself are these twins the result of one, or of separate
germinal applications. For that twins are often
the result of one intercourse, no one can doubt; there
are many instances which prove it. As, e.g. when
a woman has given birth to twin, she having
been a sailor. Dr. Campbell says: These are known
facts which would seem to support the conclusion
that plural productions are the result of one single
intercourse. Female in their first pregnancy are not
more frequently multiparous than in their succeeding
confinements, though in women recently married
it may be presumed that for some time after
the union the single intercourse and incest
be more frequent. So the next place place
place

...
birth have been prevented by male, in so debilitated a state from disease as to make them incapable of sexual intercourse, even at distant intervals.

But upon this hypothesis, how rare Dr. Carpenter see. With the Case, of which there are more than one recorded, of a black woman producing a black and a Mulatto child at one birth, or the converse, a white woman producing a white and a Mulatto child? Dr. Henry, indeed in an essay on Superposition gives the history of a crude woman in the Brazil, producing triplets, and all the children different in color, thus clearly indicating their respective father, whether white, colored, or black. These cases in doubtable, prove that plural birth, are sometimes the result of repeated seminal ejaculation, double successively, or a long interval, and before the uterus is lined with the secretion afterward, to become the decidua, or its mouth plugged up with it, unlike human. Since therefore plural birth, undoubtedly occur as the result of repeated seminal ejaculation by different fathers, it is but reasonable to infer that the same result may follow in the repeated intercourse of the same male, or in the case of ordinary toil.

With regard
to the question may be asked, Do both the ovum come from one ovarium or one from each? We may say, con-
ceiving that either of these propositions may be the case. If both come from one ovarium we may presume them
to have been the result of one intercourse. Those from each of the intercourses. Then the conception is of
more than two it is evident that one ovarium must have supplied two, for there is no case known
g from one ovarium in these organs being in excess. In reference
to this point Sir Edward Burnett, £ Vet. & Comp. Anat. Vol
200 says: "In general in cases of twinning it would
appear that both are an imprecation in the same manner.
hence they are removed and deposited near each
other in the uterus, so that the edge of both the
placentas are blended together, as we generally find
to be the case." This is a very natural step in the
process, or such, when they are attached to part of the fender, at
some distance removed from each other, we may
in like manner infer that one ovum has de-
verted from each ovary. In either of these cases,
the imprecation of each ovum may have taken
place at one or at different times. It is
Smith (p. 230) observes, it is probable that in
many cases of twin pregnancy the second ovum
has been impregnated by a critic, recurring subsequent to the first conception, and each case from the next simple instance of superperpetuation. But in all cases of twins, the continuous impregnation occurs within a short space of time, and this reason for perpetuation of the uterus serves for the double conception. This brings me on to say a few words regarding superperpetuation. It is a very extensive field for engaging, and might be made, in itself, the subject of an entire essay. I can therefore, limited as I am both as to time and space, write but very briefly, into the subject here.

By the term superperpetuation is meant the conception of a second gestation during the continuance of the first. In other words, a female already pregnant concerning a second time before the birth of the child with which she was first impregnated.

We must be careful to distinguish true superperpetuation from cases of blighted ovum or dead, stillborn twins, which frequently occur. Then a woman is sometimes delivered of a blighted ovum and a stillborn child at the same time, or again, a woman may be delivered of two living children.
At one birth, one of which may be full, developed while the
other is evidently immature. These are to be regarded
simply as retarded twins. Concerning at the same time or
within a short interval, the process of development
being more or less directly interrupted in one of them,
is the, depend not upon a variation in the time of
conception but upon a difference in the time of develop-
mens or expulsions. Rean true superelevation is when
one child, quite developed, is born 2, 3, or 4 months
after another equally well developed, or again a case
such as the following, "A young married woman, rep-
xpectant for the first time, miscarried at the end
of the fifth month and came home after more a
month that was discharged, enduring a perfect
feeling of health. From of about one
month."
The above is concluded for Dr. Living Smith. Such
cases have been attempted to be explained on the
ground of a double uterus existing, and the
may be true in some cases, but several similar to the
above have been recorded, where, after delivery there was
no trace of a double uterus. Again they have been
attributed to some winter to depend upon the timely
development of the second child, both however
having been conceived at the same time. But
the hypothesis assumes that a rise growth of the feta
involves a protective secretion, a fact he has mentioned.

"It is equally very," says J. Smith, "whether in the case of
twins, conceived at the same time, the extended term
be retained beyond the natural term."

For the reason of the above explanation being offered,
(of the conception taking place at the same time) rather
of the more natural and obvious one, that it took place
at different times, and far between, where depends
upon the difficulty of explaining her a second frequ-
rency would take place while the development of an
orm was going on in utero, the tautom at such a
time being supposed by many to be hermaphrodite,
rested - at the service of the immersing fluid and
at the fallopian tube by the decidua living.

It would seem therefore physically impossible that the
yogmatization and ovum could come into contact,
which contact, as before said, is the essential part
in impregnation. Dr. Chenevix and Rambolet and
man, other good obstetricians, contend, based the
view, and declare that these obstacles, entirely
prevent the possibility of a fresh conception taking
place. and that supposition is opposed by physi-
ical difficulties which are insurmountable in
the present state of our knowledge."

On the other hand, some of our very highest authorities hold a different opinion. Thus Dr. Simpson and Dr. W. Percival show that up to the third month of pregnancy the decidua vera is not in contact with the decidua reflexa, the ovum consisting of a bag which is merely attached to one portion of the parietes of the uterus, leaving the cavity between the two above named membranes perfectly free. Then the communication between the Bagala and uterus is at all events open, and this reduces our obstacles greatly, leaving indeed only the free mucosa plug in the way of a passage from the vagina to the ovary. Dr. J. Smith thinks he has demonstrated by numerous microscopic examination, that the mucous plug of pregnancy is in no respect different from the mucosa found in the cervix in the non-pregnated state, and through which the active spermatozoa must make their way in ordinary fecundation. I have pointed out indeed," continues he "that it is in fact similar to the secretion formed by the prostate in the male, for containing the spermatic secretions." We may therefore I think safely...
Come to the conclusion that there seem to be no insurmountable obstacles to the occurrence of superimposition, in other words, that at any period prior to the fourth month of interrelation, a second conception may take place. In short, again to borrow the word of Dr. Smith, the infrequency of superimposition probably depends more upon the absence of perfect correlation during pregnancy than upon any positive inhibitory chemical influence to the descent of the germ cell, or the incapacity of the decidua vera to receive a second ovum.

For a few words with regard to twin placenta.

In general it is found that each individual child is surrounded in its own amnion, it being removed from all contact with its fellow, that it possesses its own quantity of liquor amnii and has a fetus and placenta in like manner distinct and separate and that circulation in no way anastomosing. There are exceptions, however to this general rule. Thus B. D. Bauer gives us two other varieties; first he says, may be first enclosed in one common covering of membranes and inhabit the same uterus and float in the same water; second, they may each have a separate
Amnion while the placenta may be common to both; third, each may have its own membrane, view, and pleuritis. The pleuritis are attached sometimes to the front part of the uterus, but more frequently they are placed side by side, the one apparently, just into the other to some extent, but still without any particular connection between them.

The two first varieties disturb Dr. Barlow, thinking, they project a scheme yet offene with regard to conception. But may there yet be explained not by confining an ovum with a double yolk, or even that the children or rather one, were originally separate but by their reciprocal action they had broken the connecting membrane and then had permitted the water to unite.

In rare cases there has been but one placenta found again cases occur where the umbilical vessels of the twin or triplet children anastomose before their division to the placenta; and lastly, cases have been met with in which there was but one end at the placental surface, and one placenta, the end dividing to pass to the separate children.

Let us now proceed to inquire, What are the signs by which we may detect the presence of a plurality of children.
there is alors. In other words but we now proceed to regard medical books in their actual relation to the practice of midwifery. What then are the laws of medical practice? Now this a question not only meeting a medical man not only in carrying out his scientific investigation, but in the reality a question that he will frequently be called upon to solve during the course of practice. Nothing is more common than for women to consult themselves pregnant of twins. They get anxious, fretful, there is a morbid desire to have their suspicion confirmed into reality, the physician is accordingly examined, and is asked to give his opinion on the momentous subject. So when came out of the, Dr. Scroop says, the patient's suspicion will be found groundless. But what are we to do in this matter? "Much caution," says Dr. Denean. "Should be used in answering the question; indeed, it should always be resolved in the negative, and that for two especial reasons; first, because it is impossible to decide it positively, and secondly if it could be decided it never should be. As much mischief might arise from the anxiety it would produce. It is says Dr. Blandest - and all authorities agree with him. I believe - very difficult to judge if the
existence of two or more fetuses from appearances prior to parturition. Fortunately this uncertainty is of no consequence; for the labor has actually commenced, for previously to the time, our conduct should in all respects be the same as if there were but one child. But when the period has arrived a correct diagnosis would in many instances be uncertain by any one; for if the children were presenting externally the same of difficulty would at once be perceived, and the indication of treatment be rejected.

As might be expected consequently, where there is so much doubt, a great variety of signs have been enumerated by different accouchers, each having his favorite one. Some are more or less fallacious.

First that I shall consider the signs, as occurring during gestation, which seem to indicate a placenta. The first sign then likely to attract notice is, obviously, an unusually large size of the abdomen. Dr. Cullen considers this a very uncertain sign of the enlargement is only remarkable toward the end of extra gestation, and quite as likely to be fallacious as true. But, if any, if a woman be unusually large in the early part of pregnancy and in a
Beau, unfortunately, to the false periods, there is good reason for expecting the Vice have twins.
The females likely to miscarry are many—then, an increased quantity of liquor amnii, closing of the perineum, ovarian tumors, tympanitic enlargement, obesity, and lastly, a considerable convexity of the lumbar curve, which has the effect of carrying forward the pelvis, so as to make it appear, when seen in profile, as large as if it contained two.
An equal or greater extensiveness of the abdomen has been thought by some a good lip; two or more fulnesses, overlapping different parts of it.
Dr. Blandeas places great reliance upon "the situation of the uterus under the recumbant position." The patient being laid on the back, the twin, he thinks, naturally falls one to each side of the vertebral column; (but this I imagine would only happen in cases where the twin were in a longitudinal position and both were) the womb at first externally being then as it was divided into two lateral lumina, a sort of groove being traceable between them. Where this is clearly and repeatedly so continued, I say to, I think its constitutes one of the most valuable signs are known, indicative of a placenta which can act forever.
Perception of an unusual motion by the mother and of motion in the womb, is another of the very common signs. In the case of women who have had children before, and who are therefore, we may say, experienced, some little relaxation may be noticed upon it; yet upon the whole, the mere sensation of the patient as experienced by her, are in the great majority of cases, to be little if at all tendency to an abrupt state. The same remarks apply to the perception of the phenomena called quickening at two or more distinct and lucid signs of the pregnancy. The sensation of quickening being at best but a vague one.

Vestigial examination of the uterus. Rundelberg says that the union of all the above signs, a test, was the first necessary proof of twin pregnancy, but that touching alone can dispel one doubt, and that only during the last month of pregnancy. He says great care upon the mobility of the child when the fingers are applied externally or by the finger in the vagina. A single child, he says, is always very mobile, because it is moved in a large quantity of water, while conversely, there is very little mobility in twins, the fluid being more...
in quantity and the two fetuses encumbering each other. But this is far from a universal truth, for the liver amniotic sacs vary much even in single pregnancies, ranging in quantity from a few ounces to several pounds.

The recognition of the pulsation of the fetal heart, distinct and at some distance from each other, is the last link that I care to allude to, and it is indubitably the most certain of all, when it can be clearly made out by the stethoscope. This, however, is by no means an easy matter, there being so many causes of failure, such as the pulsation being synchronous in each, the foetuses of the children being such as that their hearts are near each other. The frequency of the maternal pulse is usually no indication of it, only when the difference in the pulsation is considerable, and the heart far apart that we can come to an accurate and determinate diagnosis.

Next as to the indication occurring during parturition, and prior to the birth of the any of the children.

An unusual looseness of the earlier stage of labor is almost invariably the case in plural births, and depends partly upon exterior action being more facile than when there is but one, and partly from it being
lier, orifice, the upper orifice being intervened between the contracting fibres of the fuder, and the increa

ing infants; and thus a great deal of the force is feinted, expended. This symptom, however, that

above stated, almost a universal one, i. f little

are in diacosis as there are such a multitude

of other cases, that might conclude to the same

result. In the event however, if a labor being de

larger, the pain strong, the head not advancing,

and yet no obstruction or part either of placenta

of head, we may be least to suspect upon good

ground, the existence of a placental.

A second discharge of the liquor amnii is rare.

During discharge is here to be a symptom. The har

the may be occasioned by an imperfect first dis

charge, or by water collected in considerable quan

tity between the membrane, the second discharge be

leading or the rupture of the corresponding mem

brane. If the water appear-hour to come, and

in considerable quantity, from a fact beyond the

presenting child, a just suspension may arise

that it is the liquor amnii of a second child.

It has not met with a case where there were fine

distinct gushes of liquor amnii, the woman
Producing five children at a birth (case rare, as that for
only quoted from the Bartletts),

The presentation of supernumerary members would be of cause
a very certain sign, that if two superior extremities of
the same side, or two inferior, were to present, we could
not have a vestige of a doubt of remaining of the
existence of two children in the uterus, unless indeed
the child were monstrous. But this very seldom
indeed happens; it could only occur where the dis-
element was central, and that is very rarely the case.

Such is a recapitulation of the symptoms which
Hippocrates, have laid down to enable us to judge
of the existence of a plurality either prior to  or
during the earlier stages of labour, i.e. before the
birth of either child, and perhaps I have en-
tered at too great length into these, seeing that its
authorities are pretty well agreed upon this point; viz.
that distinct diagnosis of twin pregnancy, however
rare and most difficult of attainment, is to be regarded
after all, as of very little practical importance, as our treat-
ment would not be influenced by the discovery.

Far different however is the case, when we come to
consider the indication of plurality an occurring after
the birth of the first child. Here, fortunately, we
find the facility of a correct diagnosis, commonly in its practical effects.

It is, as before said, laid down as a law in obstetrics, that one of the first duties of the practitioners after the birth of a child is to examine the state of the uterus in order to determine whether there be any other fetal parts remaining. For this, may sometime be ascertained by external examination alone, sometime by internal, or again by a combination of both. "Formerly," says Dr. Mac: it was the custom to introduce the hand into the uterus to bring away the placenta or any escape of blood that might remain in its cavity, and to ascertain whether there was another child. This practice has continued "as been for many years past, to be both unnecessary and pernicious, the placenta generally coming away without any or with very little attention, and coagula coming away also without any or much difficulty; and the application of the hand to the abdomen giving free satisfaction as to the other intentions.

"To carry your hand into the uterus unassisted," says Dr. Blundell, "is always improper but to lay criminals." The authority in obstetrics seems agreed that internal examination is in general unnecessary, this
external being in most cases quite sufficient. What are these external manifestations then? The abdomen, instead of feeling collapsed and flaccid, with the skin flabby and loose so as to be capable of being grasped in folds, will be found firm, tense to the touch and nearly a large as at the end of an ordinary nine months' pregnancy. The uterine flicks feel quite large, its fullness perhaps being as high as the umbilicus, perhaps above it, indeed to the appearance it occupies a place as great as before the birth of the first child. That degree of elasticity and undulated fluctuation may also be detected, if the abdomen be still flaccid, which is so characteristic of the pregnant uterus at this stage, instead of the loose, lownce, and hard feeling, which is equally characteristic of that body in its contracted state after parturition.

Most distinctly of the membranes be ruptured we may feel, through the walls of the abdomen, the existence of another child, being able to distinguish its limbs or.

Dr. TWAILLE'S has communicated many other likenesses, such as the diminutive size of the child and the water, being disproportionate to the size of the gravid uterus, the umbilicus and containing beyond the
lateral time: the occurrence of regular labor pain, the retention of the placenta. But in case of the least doubt instead of trusting to any such uncertain indication, it is at once best to proceed to an internal examination, placing up the finger into the os uteri, one or two fingers being judged quite sufficient generally; the membrane of the second fetus will then be felt protruding as in natural labor, or if they are ruptured the presenting part of the child will in like manner be felt. It may possibly happen that we may be deceived both in our external and in our internal examination. The evacuating in the uterus may be inverted into a chart so that it may retain its large form, it will hence be softer than when another child remains, and on pressure being applied blood will ooze out per vaginam. Enlargement of the liver, spleen, kidney, or even sway in like manner deceive our external examination; again, says Dr. Pocock, better to avoid fallacy from the source. Dr. Bell still gives in the following advice: "Grasp the uterus, lift it, ascertain it from above and on this and don't much content yourself with laying your
hand on the abdomen. Our internal examination may be decreased by a collection of blood beneath the membrane of the remaining placenta, resembling the unbroken cyst of a second child; the case will be rendered clear," says Dr. Ramsay, "for coagula and fluid blood will escape into the liquor amnii.

A large uterus may be evidence of a certain disproof of another fetus; a large one similarly makes us suspect the presence of one; in case of doubt we make our internal examination and become perfectly certain of the existence of a second child. The diagnosis of pluralism is then complete, and our next consideration will be how we are to proceed in the case.

The Management of Plural Birth.

Now as regards the first child, whether it may have presented with the head or any other part it will have been treated exactly as the same principles as an ordinary single birth, which indeed, to all intents and purposes, it is practically considered to be. Perhaps, however, there is one circumstance demanding our attention here, and that is, if the first child is in a case of twins, requires to be turned, we must be
Careful when we have introduced the hand into the uterus for that purpose, to avoid rupturing the membrane, if the second child is then still alive; or if already ruptured we must take care to bring down the feet of the same child (Denniss). Do with regard to the second child, the ordinary rules of midwifery are to be carried out. That says, Dr. Chisholm, if the first child be a natural labour, and the second a malpresentation, we do not interfere with the first, but assistance may be necessary with the last child.

The birth of the second child is generally speaking a very easy piece of labour, for the parents have been previously extended by the birth of the first child. One of the great causes of delay and difficulty, viz. rigidity, is at once abated. Dr. Simpson thinks that the birth of the second child is a case of two in one, generally speaking, than that of an ordinary single child. In the great majority of cases, consequently, the second labour ensues rapidly upon the termination of the first—then, out of the cases, the second child in 180 were born within 30 minutes after the first (Dr. Simpson). Sometimes indeed it is born so rapidly as to allow scarcely time for an internal examination; the second
has even in some cases been known before the first pain
paralyzed. This facility of parturition however is apt to be
obviated by the mental emotions of the mother, for
should she learn that there is another child about
to be born, she instantly becomes filled with alarm
for her own safety, and for that of the child, and this
emotion that she feels is a serious one, compared to
the loss of horror, and fear in the heart to undergo a
repetition of all the agonies she has just experienced,
in that she gets into such a state of horror excites
ability that the normal process of the labor is very
much interfered with, the action of the uterus becom-
ing suspended, by virtues of the body sympathy
between the brain and involuntary muscles, so often
exemplified in parturition. It is in consequence of
this, considers a good general rule to keep the patient
generally in ignorance of the existence of another child,
the attendant and relatives however, should be informed
shortly the patient however leaves her state, the ac-
coaches should give her cheering assurance,
congratulate her on her fortunate progress so
far, and especially assure her that she will
have very little more pain to bear, and that an
outcome will be afforded her through the next hour at
least naturally before a certain time; in her case
with the soothing attentions of the accouchewr. Convey more
comfort and induce more confidence than in this.

Having by our examination there clearly, as,
concluded that a child remains in utero, our first
duty is to determine it, presentations, as soon as
possible, as our subsequent treatment will be cer-
tainly guided thereby. "It is generally believed",
says Dr. Rembold, that the most frequent
presentation is the head of the one and the beak
of the other, but from my own table I should con-
clude that it was most usual for both the
heads to offer downward." Campbell also states
that from a register of his cases, he finds that
"both the fetuses have almost always presented
with the vertex." The collection of the Reports
of different Authors by Dr. Chevalier (Thom, a
Practitioner of Midwifery, p. 378) also bear out this
views, for in Dr. Collins report the cases of both
heads presenting were 120. While those of head
and beak were only 15; in Dr. Scott, the
former were 15 and the latter 7; and in Dr.
Clark's the former 16 and the latter 4.
While therefore we may come to the conclusion
that twins, taken altogether, obey the general rule
of the head presenting, yet we find that the exception to the general rule— in other words, the misrepresentations are infinitely more common than in single births. Thus Mr. Simpson says that in twins the arm presents once in 64, whilst in single birth it only does so once in 300, five times more frequently. Therefore, the feet present once in 10, instead of once in 60; the pelvis once in 6 instead of once in 30; in all, taken together, malpresentation occurs six or seven times as frequently as in single birth; and this is consequence of doubt of the shins' figure compelling the child to assume an abnormal position, in obedience to the general law of reflex action by which (as if by instinct) it adapts itself to its containing receptacle, so as to keep its cutaneous surface as far removed as possible from irritation.

Professor Spreck of Vienna in his Report of born births occurring in that Hospital (see Med. Times, Jan. 7, 1858) says that out of 151 cases of twins that he met with the second child was found in the crown position 13 times or one in 12. He further adds "the first child was always found in the long presentation."
Determined the presentation. What are we to do?
We are to be guided by the general rule of interference, and interfere according to the presentation. Be accurate to above.
Mal, following, in other words, more or less, the ordinary principle of practice, with perhaps this difference, that if the presentation be normal, we may at once expel the membranes and get the labor over, there being none to dilate of the passage to await, and consequently put the same necessity for keeping the bag of membranes native fluid hedge entire.

If the presentation be transverse, therefore we at once turn and do so, acting entirely on the ordinary principle, as laid down for single births. What are we to do when, after the birth of the first child, there is a suspension of the pain of labor, the uterus making no effort to expel the second? Dr. Dana in the second remarks: The process of labor with the first child is usually less its effect, or that of the second. If we are compelled to make the first labor artificial, it might be, and often is necessary and expedient to deliver the patient of her second on the same principle, unless the natural efforts should be sufficiently made known after the birth of the first child. This, if came, refer only to complicated cases.
but what are we to do when the first labor was, in every respect, natural and the birth of the first child speedy, and yet, from some inexplicable cause, the uterus makes no effort for the expulsion of the become, the patient remaining as much at her ease as if there had been no previous labor at all?  
This juncture must always prove one of considerable anxiety to the practitioners, for he at once perceives the liability his patient is exposed to, during the continuance of the state of matters, of suffering from unpleasant and even dangerous symptoms; then, in proportion to the delay will be the contraction of the previously dilated and at subsequent difficult, in the expulsion of the child.  
Then again as long as the uterus remains uncontracted, there is a great risk of hemorrhage, as the result of experience in addition testifies, that delay in pregnancy with danger to the second child, in a degree equal, if not greater, than to an ordinary simple one.  "Experience has shown," says Dr. Collin, "that the second child is very likely to be still born if left longer than two or three hours unattended."  What is to be done then?  
In this subject opinion have been extremely
dissatisfied, some authority, telling us that instant delivery is necessary, whilst others advocate the other extreme, and finding that "come cases left to nature no evil hâve cal'd" lay it down as a general rule that all interference should be avoided. Adopting neither of these extremes but holding an intermediate station, various eminent authorities have arrived at the conclusion that we should in all cases wait for a certain time, and then, nature having been allowed a fair chance and having failed, we are warranted in giving up our non-intervention and calling in the resources of art to her aid, provided always that there be no cause calling for delivery earlier. These authorities, however, differ in the time that they ought to wait. Thus, Dr. Denman advises us to wait four hours at least before we deliver the patient by art. Dr. Rambotham says "two or three hours"; Dr. Reim, "about an hour". Among the rules laid down by Dr. Collie, on the subject are the following. We should have leave till the second child is delivered. If two hours after expelling the second child we do not believe any progress made, the best mode of proceeding will be to pass the hand cautiously into the uterus and bring down the feet. When the head is made
Any considerable descent into the pelvis, the frequent will be the best means of rendering assistance. It is very rarely known as to that we are called upon to effect delivery by either of the latter methods.

Dr. Denman says with respect to the time we ought to wait: "Let it be neither so short as to risk the life of injuring the patient by tying a child or nor so long as to increase the danger should any exist, nor the difficulty of delivering the patient if we should at length be obliged to use art for the purpose."

The following are the very excellent rules laid down by Dr. Simpson (in his Lectures) and which I should most certainly adopt, as being the most precise on the subject as well as extremely practical in their bearing.

1. Conduct the labor of the first as a single birth; when the first child is born place a mark upon it so that it may be recognized. Wrap a bandage around the abdomen of the mother.

2. If detecting a second child tell the attendant at once not the mother.

3. If second child present, hear or feel in about half an hour to see if the pain returns. (If the case in 182 the second child was born within 30 minutes)
after the first.

4. If at the expiration of this time. the uterus be still increased, I endear to now succeed it.

5. If no return of uterine action within one hour delivers the child by the feet.

6. Deliver the second child by turning as long as possible the child (a) in presentation of trunk a superior anterum.

(b) If labor raging, convulsions to expand.

(c) If patient has suffered much in the birth of the first (b). This last Dr. S. gives merely from other authority recommending it; he himself being, if anything, lather of an opposite opinion.

Here are the general rules for the management of Perinatal births, that I would follow out. Should any such case under my care. They apply to all cases occurring from the 7th month onward to the first time, but in the heat of a twin labor coming on in the potential what is to be done? The womb rapid that first may cease and the second child may escape at the end of weeks or even months.

Now what should be our practice here? Supposing a woman in the fourth or fifth month of pregnancy, about of a child and we desire another to live, are we to use to induce the expulsion of the second?
or are we to allow the uterus to close upon it? Dr. Syr.

low advises more interference at any period prior to the
7th month, but after that time "always deliver within
the hour."

In the event of two sets of membranes presenting at
the same time, the rule is to capture the most pro-
minent and carefully to preserve the other.

Again if part of two children present at the same
time and become linked, as twin to twin, what are
we to do? The rule generally given is to decapitate
the head of the first as it is usually already dead,
but Dr. Simpson thinks that the cases requiring
decapitation are very rare, and that we can nor-
really overcome the difficulty, by applying the far-
 ejaculation to the head of the second, or using traction
by the feet of the first.

Any other complication that may occur with
the second child it is needless to state that he
must just be guided by the ordinary rules of prac-
tice, always bearing in mind that he must if pos-

sible be even more urgent in our attention to our
patient under such circumstances, remembering
the fact formerly adduced, that any complication
ting occurring in a plural birth is more than
really grave in its bearing on the prospect of the event.

And now, as to the Management of the Placenta.

This is a very important matter in the treatment of a twin case, and on a right understanding and carrying out of the principle laid down regarding it by our best authorities, will depend in great measure the safe conductio

of a case by the young practitioners.

With regard to the placenta of the first child there it i

a law invariable indicated that we should never interfere to extract it until the second child is born, or otherwise a great risk is run of ineffac

table hemorrhage from the utero, not being able to undergo the necessary contraction in consequence of its contents. The child being separated therefore, the

fetus is to be carefully bared by ligature at the utero as well as at the placenta's umbilicus, for if this were not

to, in the event of the circulation in the two plaenae anastomosing, the second child would be bled to death.

This indeed is the reason why in every case it is a

rule to place two ligatures on the case, and divide be

tween, for as before said we can never make certain until after the birth of the first child, whether or not

there be twins. Cases are on record by the
author of the placenta of the first child being longest, naturally expelled, and that without much haemorrhage, before the birth of the second, but this is only an exception to the general rule, and a precedent to be by no means imitated on our part. In the event of it occurring, or of any being called to any case, where, from mismanage-ment the placenta had been unfortunately detached and dangerous haemorrhage has set in, our obvious indication of treatment will be at once to evac-uate the uterus, the only mean by which we can hope to restrain such haemorrhage.

But suffering all to have gone on happily, and the second child to be born, our duty then will be to obviate the tendency to flooding which, as before said, is so apt to come to queen in such cases. He therefore tightens the abdominal bandage, applies perhaps a moderate degree of friction over the uterus and then patiently awaits, as in ordinary simple cases the natural expulsion of the placenta, only differing in these cases, if at all, by perhaps allowing a little more time than the ordinary hour to elapse, the uterus in placæ cases being less disposed to allow its exertions. Then at last we find it does hard to contract, and when, after examination,
"we find," says Dr. Ranald MacInnes, "that the heads of both can be distinctly felt and the principal part of their bulk surrounded by the finger, thus, one must take care not to make traction, taking extreme care to exert the traction upon both equally, so as to remove them together, giving the uterus the best chance of equal and uniform contraction. Should it however be called upon to expose interfere before the time, by his management interfering, the same general principle must be our guide; we must therefore take especial care in using traction that it be exerted in an equal degree upon each, the hand when introduced into the uterus, should not be withdrawn until both are fully in its grasp, located and ready to come away. In the words of Dr. Collin, "in such cases when it becomes necessary to leave the placenta we should be careful not to withdraw our hands from the uterus until both be separated, at the same time watching for uterine action, so as to induce a perfect contraction of the organ as possible: a point of most vital importance."

The rules of management as thus laid down in regard to term birth, will differ in no material respect in the case of triplet
to any other human birth, should it be our lot, in the course of our practice, to meet with occurrences of, com-
paratively, so rare a nature.

The foregoing treatise on Plurals births professes
her originality: it humbly aspire to be considered
merely a compilation of all that is best known on
the subject, a subject very little investigated or
treated upon. The materials gathered from
various sources, sources varied, indeed as the
limited opportunities of a student afforded, have
been clung together with all the care and di-
crimination that the time of a student
would allow, conformed as he is with all the
anxieties of the concluding year of a cur-
culum. Despite all the care and time
he has been able to bestow on the building up
and elaboration of the materials so gathered
much he fears that the completed structure
will be found to be but after all

"A thing of shreds and patches."

Phineas Davies