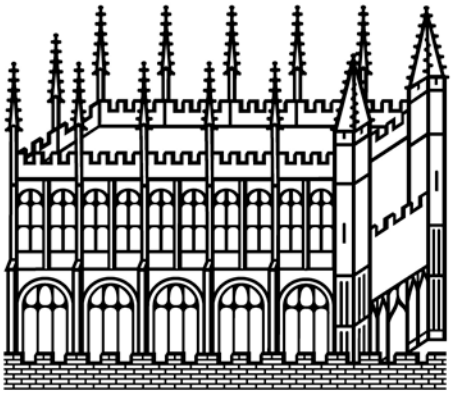

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PREFACE.

THE very favourable reception of two editions of this work, in a short time, has induced its author to revise, enlarge, and, he hopes, improve, the present impression.

The subject considered, is one of universal interest, and was investigated from the most remote period of antiquity to the present time; but most particularly from the origin of medicine, as an art or science. Considered in all its relations, religious, moral, social, legal, physical, philosophical, and medical, it will be found of the greatest importance to mankind. This will be manifest to all on the perusal of the introductory remarks, and the succeeding pages.

A philosophical, social, physical, and medical history of the reproductive function of the Vegetable and Animal Kingdoms, and of the abuses and disorders resulting from it in the latter, will, it is hoped, prove instructive and interesting to the majority of general, as well as medical, readers.

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to observe that it is the duty of every lecturer on physiology, on obstetric and on legal medicine, to describe it according to the ancient and modern conclusions; because it materially influences population, morals, public health, disease, mortality; as well as personal reputatation, property, legitimacy, and even life, together with a vast number of other questions, hereafter enumerated.

The illustrious and indefatigable Haller propounded the axiom before describing the physiology of generation:—"There are no secrets in physiology;" and our immortal Harvey and Hunters, and all their eminent successors, were of the same opinion.

Moral and legal authors in all ages adopted it. On a recent and memorable occasion, that astute and enlightened judge, Lord Denman, declared, in his judicial capacity, that the subject was most important when described and expounded by medical authority. This is also the opinion of every rational individual, who has arrived at the adult age, unless the mock-modest and pharasaical.

These facts are mentioned, to reconcile the prudish and the ignorant to the consideration of a subject, highly conducive to the preservation of the health of parents and offspring, to the improvement of morals and population, and to the correction of numerous evils inflicted on society in all countries. Whether the author has succeeded in the task he has undertaken, after several years' research and study, remains for the public to determine; but of this he is convinced, that his motives and endeavours are well intended, and solely guided by the *mens conscia recti*.

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IN ITS

MORAL, SOCIAL, AND PHYSICAL RELATIONS.

CHAPTER I.

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A VAST deal has been written both on the law concerning marriage, and on the duties and obligations of married persons. The physiology of generation has also been described in the *Dict. des Sciences Medicales*, and in the different physiological works.

Numerous questions of great importance in a medical point of view appertain to this subject, and many are connected with morals, political economy, and social relations. It is on this account that I have attempted an outline of them in the following pages. The pathology of the genital organs, as regards infecundity, has been hitherto grossly neglected by the profession in this country, and has, until

the present time, been almost consigned to empirics. It would surely be better to confide it to educated medical practitioners. The most ample evidence in proof of this position will be found in another work—*Prostitution in London, Paris, New York, &c.* 1839. In discussing this topic, facts must be revealed at which the modesty of some ignorant persons takes alarm. But the illustrious Haller well observed, " there are no secrets in physiology." This truly great man was perfectly right in his opinion of all educated and enlightened individuals; although the mock-modest, the hypocritical, and pharasiacal of all classes pretend to be horrified at the notice of matters of daily occurrence. These must be described plainly, and are chiefly objected to only by those possessed of a weak, erotic, or prurient imagination, who discover nothing to gratify a licentious curiosity or a depraved mind in the description —by those who pretend to excessive modesty and rigid chastity. But ecclesiastics, as well as philosophers, naturalists, physiologists, and legislators, as well as all classes of mankind, have taken the deepest interest in endeavouring to unravel and comprehend the mysterious function of reproduction and its various relations. It is the universal theme of conversation among men of all grades and conditions, and the numerous questions relating to it, are now matters of constant notice in the public as well as in the medical journals. Though this is the case, there are some stupid and hypocritical persons, even in the medical profession, who are shocked at the consideration of this part of physiology. I would ask these men, have they ever perused the works of Hippocrates, Aristotle, Harvey, Haller, Spallanzani, Hunter, and a thousand other cele-

brated physiologists, on the regeneration of the vegetable and animal kingdoms? Are they not aware that the generation of plants and animals has been investigated by the most virtuous of the medical profession and all classes of society? Does not the world look up to medical practitioners for advice on the many points concerning this function in the human species, and is it not well known that the decision of such advisers may affect honour, property, reputation, title, liberty, and even life? It is, therefore, manifest that if medical practitioners are to be referred to in such cases, they ought to be well acquainted with the received opinions of their profession, which are founded on nature and reason. To obtain sufficient knowledge to decide, they are required to attend lectures or peruse works on the branch of physiology under consideration; but such lectures and works are censured by the short-sighted, ignorant, and prejudiced part of the world, who, in their own hearts, are generally much more vicious than those, whose duty it is to explain the errors and follies of mankind, on the subject of reproduction. An able writer, and a clergyman of the Established Church, from whose work I shall quote hereafter, gives the following reply to such persons:—

"It is conceded that the ideas which most young persons entertain of LOVE, are both romantic and foolish; and it is not difficult to account why this is the case. Love is, too often, a proscribed topic, either of conversation or advice; all that is known concerning it is, therefore, derived from the fictions of poetry, and the high-wrought descriptions of novels. Education is employed in directing, controlling, or reforming all the other passions

and tempers of the human heart; but on this, it is systematically silent. Can we then wonder that a passion so stimulant, so powerful, so influential, shall, unguided or misdirected, urge on to error and to crime, the weak reason, and the generous unsuspecting nature of youth? That there is a strong prejudice against the discussion of this subject is confessed; and when the peculiar delicacy attending it is considered, we cannot wonder that such a prejudice should exist. Even the most chaste and correct observations concerning it are apt to give pain; or, at least, to excite alarm in a delicate and pious mind. The delicacy and the difficulty of the subject are confessed; but we ask, is it fit, is it safe, is it not preposterous, is it not ruinous to the best interests of mankind, to leave the whole discussion of it to men of loose and abandoned character?—is it wise to leave young persons to derive their notions and feelings on this subject from the exaggerated, false, and wicked descriptions of it, with which modern literature abounds? Do not these deceptions daily seduce, mislead, and corrupt thousands of the young, thoughtless, and inexperienced? Is it not infinitely better, then, that we should innovate a little on the opinions, and feelings, and, as we think, prejudices of the world, and break that mysterious and profound silence, which regards the discussion of this topic as either indecorous or mischievous?" —(*Marriage: the Source, Stability, and Perfection of Social Duty and Happiness.* By the Rev. H. C. O'Donnoghue, A.M., of St. John's College, Cambridge, and Domestic Chaplain to the Right Hon. the Earl of Dunraven. London, 1828).

This author further observes, "nor does he deem it in-

consistent with his profession, as a clergyman, to embrace any means or opportunity of giving a right bias to the mind on any subject connected with the morals and welfare of the world.

"Marriage, the author has ever considered as bearing intimately, not only on the happiness of individuals, but also on the prosperity and welfare of communities and states; he believes it to be the source of all industry, subordination, and government, among men. He, therefore, who shall succeed in rendering marriage a matter of serious consideration, and not blind experiment, will deserve well of society, and cannot offend against delicacy or religious feeling. On this ground, the author feels assured that he need offer no further apology, for the humble publication which now solicits the reader's approbation."

There is not an educated or rational man or woman in the world, who will not agree with the author from whom I have quoted, for all are more or less affected by the varied relations concerning the sexes. Let us now reflect on the judicious observations of an enlightened, talented, and virtuous lady, of justly celebrated reputation in the literary world—Mrs. Jameson, who offers the following remarks in her "Winter Studies and Summer Rambles in Canada," 1839. The dismal picture drawn by this highly talented lady of all women in the civilized world, as regards the relation between the sexes, whether legitimate or illegitimate, will be perused with interest and instruction by every thinking and rational reader.

In travelling with an American prelate, the conversation turned upon matrimonial infelicity, and led to the following observations:—

"In conversing with him and the missionaries on the spiritual and moral condition of his diocese, and these newly settled regions in general, I learned many things which interested me very much; and there was one thing discussed which especially surprised me. It was said that two-thirds of the misery which came under the immediate notice of a popular clergyman, and to which he was called to minister, arose from the infelicity of the conjugal relations; there was no question here of open immorality and discord, but simply of infelicity and unfitness. The same thing has been brought before me in every country, every society in which I have been a sojourner and an observer; but I did not look to find it so broadly placed before me here in America, where the state of morals, as regards the two sexes, is comparatively pure; where the marriages are early, where conditions are equal, where the means of subsistence are abundant, where the women are much petted and considered by the men—too much so.

"For a result then so universal, there must be a cause or causes as universal, not depending on any particular customs, manners, or religion, or political institutions. And what are these causes? Many things do puzzle me in this strange world of ours—many things in which the new world and the old world are equally incomprehensible. I cannot understand why an evil every where acknowledged and felt is not remedied somewhere, or discussed by some one, with a view to a remedy; but no—it is like putting one's hand into the fire, only to touch upon it; it is the universal bruise, the putrefying sore, on which you must not lay a finger, or your patient (that is, society) cries out and resists, and, like a sick baby, scratches and kicks its physician.

"Strange, and passing strange, that the relation between the two sexes, the passion of love in short, should not be taken into deeper consideration by our teachers and our legislators. People educate and legislate as if there was no such thing in the world; but ask the priest, ask the physician, let *them* reveal the amount of moral and physical results from this one cause. Must love be always discussed in blank verse, as if it were a thing to be played in tragedies or sung in songs—a subject for pretty poems and wicked novels, and had nothing to do with the prosaic current of our every-day existence, our moral welfare, and eternal salvation? Must love be ever treated with profaneness, as a mere illusion? or with coarseness, as a mere impulse? or with fear, as a mere disease? or with shame, as a mere weakness? or with levity, as a mere accident? Whereas, it is a great mystery and a great necessity, lying at the foundation of human existence, morality, and happiness; mysterious, universal, inevitable as death. Why then should love be treated less seriously than death? It is as serious a thing. Love and death, the alpha and omega of human life, the author and finisher of existence, the two points on which God's universe turns; which He, our Father and Creator, has placed beyond our arbitration —beyond the reach of that election and free will which He has left us in all other things! Death must come, and love must come—but the state in which they find us, whether blinded, astonished, and frightened, and ignorant, or, like reasonable creatures, guarded, prepared, and fit to manage our own feelings?—*this*, I suppose, depends on ourselves; and for want of such self-management and self-knowledge, look at the evils that ensue!—hasty, improvi-

dent, unsuitable marriages; repining, diseased, of vicious celibacy; irretrievable infamy; cureless insanity."

The commonest observer endowed with reason must admit the force and truth of these remarks, and more especially the faculties of law, physic, and divinity. This gifted authoress has not, however, included the whole of the subject, as will appear by the succeeding statements.

Were I to follow the examples of many of the host of authors who have written on Marriage, and more especially the Rev. Mr. Maddan, a clergyman of the established church, who published a learned work, entitled "Thelyphthora, or a Treatise on Female Ruin," in its causes, effects, consequences, prevention, and remedy, considered on the basis of the Divine Law under the following heads, viz.—Marriage, Prostitution and Fornication, Adultery, Polygamy and Divorce; with many other incidental matters, particularly including an examination of the principles and tendency of the Marriage Laws, now (March 1839) the subject of legislative discussion, introduced by the Right Rev. the Lord Bishop of London, Dr. Bloomfield, "*in consequence of a man having lately married his grandmother in Northamptonshire.*" I might largely expatiate upon the subject.

Were I again to follow another remarkable and distinguished author, in a work entitled "*The Delights of Wisdom concerning Conjugal Love,*"—after which follow "*The Pleasures of Insanity, concerning Scortatory, (adulterised) Love,*" by the Hon. Emanuel Swedenborg, a native of Sweden, originally published in Latin at Amsterdam, 1768, and translated in this kingdom 1794; I should enter into minute details, not only on the sub-

jects enumerated in foregoing titles, but on a multitude of others, which have occupied folio volumes, and would distract me from the more legitimate object of this work. I shall now merely observe that the learned production of Swedenborg is at the present period the subject of controversy between his Grace the Archbishop of Dublin, Dr. Whately, and the Rev. Augustus Clissod, M.A., Oxford.

I shall here merely remind the reader, that a vast number of authors, both ancient and modern, have published large volumes on Marriage, and the relations concerning the sexes, under the following and other heads or titles, which I translate and condense as follows, although I purposely omit a vast number, which could not be noticed unless in a dead language :—

Monogamy; marriage; betrothings and nuptials; the causes of coldnesses and separations, of love and friendship; iterated marriages; polygamy; jealousy; conjugal love, with love of infants; the various degrees of adultery, fornication, and concubinage; the lusts of fornication, concubinage, defloration; varieties, violation, seducing innocencies; "the state of married persons in this life, and after death; truly conjugal love; the chaste and non-chaste principle; the union of souls and minds in marriage;" the state of the change of life which takes place in men and women by marriage; the universals concerning marriage,—religious, moral, social and physical; the opposition of scortotary (or adulterine) and conjugal love. Checks against increasing a family; increase and decrease of population; the increasing licentiousness of men; the seduction, prostitution, and ruin of women; the shockingly dreadful deaths of abandoned women; the thou-

sands of these in existence; the defects of our laws relating to them, and their opposition to the laws of God, which command "whom God has joined together, let no man put asunder."

It must be evident to every sensible individual that the foregoing subjects deserve the most mature reflexion and consideration of the faculties of law, medicine, and divinity, as well as of all enlightened persons, as they are of universal interest to every class of society. One of the leading editors of the public press has thus addressed me on my description of a part of the preceding subjects:— "The boldness with which you have torn away the veil from vice is calculated to confound that large class of sentimentalists, who regard ignorance under the name of innocence as the best security of virtue. Your work is a useful, a moral, a benevolent and religious book." (*Prostitution in London, &c*). "It must do good, and great good to society. No man can read it who feels for man, without wishing to contribute something towards reducing that mass of crime, which you have well connected with human suffering and misery. There are prejudices in the world that for some time to come will present obstacles to your righteous undertaking. There is a false delicacy and a false refinement in the present age, which rather seeks to gloss over immorality, than to combat and subdue it. You have taken the bolder and nobler course; but no man can stand in advance of his age without having something to suffer from the crowd he has left behind him. Never mind that, however; such a work as yours cannot perish with the day that produced it, and every passing hour is an additional security to truth."

I urge these statements in support of my endeavour to enlighten medical students and other readers on most of the questions concerning the function of generation, which will be submitted to them hereafter for their adjudication and opinion.

I also consider that the influence of the genital function on the health of parents and offspring, and consequently on population and morals is one of the greatest importance; and, under this impression, I have felt justified in discussing it as freely as my predecessors and contemporaries have done.

The present is a reading age, in which novelty, interest, and pleasure, are the principal objects of pursuit; and the diffusion of knowledge of all kinds is unprecedented. In this age, men and women read, think, discuss, inquire, and judge for themselves. They now require intelligible information from their medical advisers; and the old system of explanation—a shake of the head, a shrug of the shoulders, is no longer tolerated. A thirst for knowledge and free inquiry has replaced ignorance and mystery.

I offer this explanation to those ignorant persons who are incapable of understanding the bearings of the subject which has given rise to these observations. I feel convinced that the profession to which I have the honour to belong, has more influence on society than any other, and that great good will result both to public health and morals, by the diffusion of correct views on the physiology and pathology of marriage and the sexual function. In support of this statement, I am proud and gratified to be enabled to observe that the preceding editions of this work have received the commendations of a large number of en-

lightened individuals, including statesmen, judges, divines, lawyers, and all classes of society.

It may be necessary to remind those who feel shocked at this species of knowledge, of the present immense circulation of the most erroneous and beastly publications relative to the reproductive function, which are well calculated to demoralize the people, and contaminate the rising and future generations, and which prove the necessity of correct and scientific productions. Are not the most revolting vices now unblushingly recommended as checks to population? and are not the most immoral works circulated and exposed in almost every bye-street through which we pass? Among these vile publications is that falsely ascribed to Aristotle, which is in great circulation, though replete with error and obscenity from beginning to end. Such is the text-book of midwives, and the only guide for their instruction. We also read in the daily journals of seductions, abortions, murders, infanticides, adulterous, and many other crimes, all the result of perverted opinions on the subjects under consideration. Nevertheless many consider it wise to withhold a species of knowledge most essential to every man and woman's well-being, and most influential on their future lives, as well as of those of their offspring. But this course is, in my opinion, productive of great and incalculable injury. I need scarcely observe, that the physiology and pathology of the organs of reproduction are as legitimate objects of study as of those of respiration, circulation, digestion, innervation, &c., and have ever been discussed by the most eminent physiologists of ancient and modern times, as an important branch of medical knowledge. I may also remark in passing, that the references made to

the generative function in the Bible, which is in every one's hands, in our church service, in our courts of law, and in the public prints, must convince every person, capable of reflection, that as a function in the animal economy, it is a legitimate object for the consideration of physiologists.

Many other arguments might be adduced in proof of the imperious necessity of investigating the phenomena of reproduction. Among these are legislation on the population question, the marriage and bastardy laws, the prevention of prostitution, criminal abortion, suicide, murder, and many other crimes, caused by error and ignorance regarding the reproductive faculty. Some of these subjects I have fully considered elsewhere (*Manual of Medical Jurisprudence and State Medicine. By M. Ryan, M.D. &c., 2nd Edit.*, 1836), with the exception of the population question and juvenile prostitution, which I have fully described in my work on *Prostitution in London, &c.*, 1839.

The questions concerning marriage laws, population, bastardy, and various other topics relating to the function of reproduction, have engaged the attention of all nations from the earliest periods of history, and are even at present under the serious deliberation of the British legislature. The history of marriage laws, customs, and ceremonies, in the various nations of the globe, is replete with deep interest and much curiosity. (For a succinct account of marriage ceremonies, the reader may consult "Marriage Customs and Modes of Courtship of the various Nations of the Universe, selected from the best and most recent Authorities. By Th. Moore, Esq. 3d Edit. Lond. 1830.") The British legislature was (in July, 1837, and March,

1839) framing new marriage and poor law acts for the improvement of population and morals; and in the opinion of some statesmen, for the prevention of a superabundant population—an evil much dreaded by a few short-sighted political economists, but without the slightest foundation. It must be admitted that the number of a family, and the extent of a population, are subjects of deep interest to a preponderating majority of society, and deserve the most attentive consideration and reflection from all classes of the community. The increase of family without the means of subsistence is a fertile source of anxiety and pauperism, and deters all thinking persons from entering into imprudent alliances. But it remains to be proved, whether there is a superabundant population in any civilized country at present; and whether the productions of the animal and vegetable kingdoms are insufficient for the aliment of mankind in general. In support of the opposite conclusion, it is only necessary to remember, that notwithstanding the immense power of reproduction possessed by the animal and vegetable kingdoms, we do not find, after the lapse of nearly six thousand years since their creation, either the terrestrial or celestial spheres insufficient to contain their inhabitants, nor has the incalculably large reproduction of fishes as yet filled up the ocean, nor is there at this day, a civilized population in any country on the face of the globe, without the means of subsistence.

This conclusion is totally opposed to the erroneous hypothesis of a benevolent and philanthropic political economist, the late Rev. Mr. Malthus—" that population unrestrained will advance beyond the means of subsistence"—" that population in most countries at the present period presses

against the means of subsistence, and that it tends to do so in all countries." The only preventive for this evil, according to this author, is "celibacy to the age of twenty-eight to thirty years, and unless this moral restraint be adopted, vice, poverty, libertinism, misery, famine, and disease must continue to be the checks of population." Let the reader only peruse the second part of my work on *Prostitution in London*, and he will see the utter fallacy of this statement. This extraordinary doctrine found some few advocates, who were however constrained to admit, "that at this moment there is nothing approaching to an excess of population, absolutely considered, in a single country in Europe."

The most zealous disciples of Malthus were said to be the Westminster political economists, including Bentham, Ricardo, Place, Mill, Tooke, Brougham, Miss Martineau, and others of minor note. A number of grossly immoral men followed their example, and in 1822 distributed the most infamous handbills throughout the large manufacturing districts in England, which purported to contain "the important information for the working classes, how to regulate the number of a family." Various abominable means were proposed, which few if any one would follow, for all were contrary to the dictates of nature, to the precepts of revealed religion, to morals, to the divine and primitive command—"go forth and multiply."

It must be scarcely necessary to observe, that the doctrine of limiting population is based upon a most irreligious doubt in the conservative power of the Divine Creator; which regulates, preserves, and reproduces the

illimitable number of organized beings in the animal and vegetable kingdoms.

It was, however, most erroneously contended by the advocates of this cold-hearted and immoral doctrine, that the consequences of controlling the faculty of reproduction would be moral, civilizing, would prevent much crime and unhappiness, that they would improve the manners and moral feelings, alleviate the burdens of the poor, diminish the cares of the rich, and lastly, that they would enable parents more comfortably to provide for, and educate, their offspring. But to these conclusions it may be unanswerably replied, that the limitation of offspring is based upon principles severely condemned and reprobated in the sacred volume, which are subversive of every virtue, and holding out inducements and facilities for the degradation of our daughters, sisters, and wives.

None can deny that, if young women in general, of the lower class of society, were absolved from the fear of consequences, the great majority of them, unless the comparatively few who are strictly moral and highly educated, would rarely preserve their chastity from the depravity of licentious men; illicit amours would be common and seldom detected—seduction would be facilitated, and degradation become almost universal, unless among the virtuous and small class, already excepted. It was partly this view, and partly the erroneous determination to render the consequences of illegitimate connexions more rigid as regards the protection of female virtue, that the Grey administration passed the bastardy clause, in the present poor law act, in 1834, which compels the woman who becomes illicitly pregnant, and also her relations to support her

offspring, while it exempts the male seducer from all liabilities—a truly unchristian and unnatural piece of legislation. This vile and unjust law was designated by its liberal framers, "a boon to the female population;" it is now, however, (1839) universally detested by the public, as it exonerates the heartless seducer, in most cases, from all the duties and responsibilities of paternity. He returns to society almost applauded for his crime of deserting his offspring, while the deluded woman is ruined and disgraced, and is often driven to commit suicide or prolicide, of which crimes the public press gives us daily examples.

The heartless conduct of a seducer has been condemned in all ages, though sanctioned by our poor law legislation. No one will deny, that the seducer who, for a momentary and selfish gratification, will deliberately entail misery, shame, and infamy on a young and hitherto virtuous woman, whose offence was a weakness of judgment, or misplaced confidence or affection, is an unprincipled villain, and the author of the blackest of crimes. The present poor law act, which sanctions this depravity, is subversive of the dictates of religion and nature, and is based on error. It must be admitted by every man who is well acquainted with the natural inclinations of the softer sex, that for one who is seduced or dishonoured by inclination, there are a hundred who have been duped or imposed on, or actuated by necessity. This fact has been well observed by many of the most eminent physiologists and writers on medical jurisprudence; and the most ample proof of the sad truth of this position is daily afforded by our public press. Look at our police and criminal reports, and you will see it daily attested; peruse the reports of the

Society for the prevention of Prostitution in this metropolis, under the patronage of the Lord Mayor and Aldermen of the City of London, in 1836-39, and you will want no further evidence as regards the extent of seduction in this country. According to these reports, it appears, "it has been proved that upwards of 400 individuals in London procure a livelihood by trepanning females, from eleven to fifteen years of age, for the purposes of prostitution. That during the last eight years there have been no less than 2700 cases of disease arising from this cause, in children from eleven to sixteen years of age, admitted into three of the largest hospitals in London. Not less than 80,000 prostitutes exist in London, a great proportion of whom are of tender age. It is computed that 8000 die every year, and yet the number is on the increase. It is lamentable to observe that scarcely a day passes without bringing to light, by means of the public papers, some new act of seduction, of desertion; and how often as the humane mind bitterly reflected on the amount of life sacrificed either by disease or suicide."

An account still more horrible and lamentable, will be found in M. Parent Duchatelet's work on Prostitution in Paris, 1836, which was reviewed in our periodicals.—"In 1835, it appears that 9637 boys, and 9207 girls were born in wedlock, in private houses in Paris; and out of wedlock, 2747 boys, and 2669 girls. The lawful children in hospitals were, 283 boys, and 234 girls, and the illegitimates, 2237 boys, and 2207 girls,—more than one-third of the births being thus out of wedlock."

Peruse the *Comparative state of Prostitution in London, Paris and New York*, 1839, and you will find abundant

evidence in proof of the preceding statements. But lest the captious reader or critic might question or deny my evidence, I shall adduce much stronger from an authenticated work, sanctioned by the following distinguished personages, who were appointed by the late King, Privy Council, and Government, viz., the Lords Bishops of London and Chester, Mr. Sturges Bourne, Mr. Senior, Mr. Bishop, Mr. Gawler, and Mr. Coulson, whose report is addressed to the Right Hon. Lord Viscount Melbourne, His Majesty's principal Secretary of State for the Home Department—late Premier—or Chief Minister of the British Government.

The work from which I quote, entitled "Extracts from the information received by his Majesty's Commissioners as to the administration and operation of the Poor Laws." Published by authority, London, 1833, on which the Poor Law was enacted. "It appears that in most parts of England, the allowance for a bastard was larger than for a legitimate infant; that a mother who had several bastards by one or several men, was much better off than a married woman whose husband ran the risk of being out of work, when she was allowed from 1*s.* 3*d.* to 1*s.* 6*d.* for each child, the former being allowed 2*s.* for each bastard; that the woman who had most bastards, was most likely to get married, she having an annuity—that some women have large families by different fathers—that three sisters were with child by the same man, two of them twice, and all receiving allowance from the same parish—that in some places farmers deduct the allowance for their daughters' bastard children, the daughters and children living with such fathers; while some girls and women threatened to

swear children to different men in succession, for the purpose of extorting money, from £5 to £30 from some, and that there are numerous instances of such extortion.

"Many women with bastard children receive from 10*s*. to 18*s*. a week, whilst the most a married woman can earn is 5*s*. a week, and hence there is an inducement to the former to commit perjury and extortion." The following striking examples are worthy of notice.

"*St. Mary's Parish, Nottingham.*—Population, 39,500. Mr. Barnet, assistant overseer, informant.

"Annual average of bastard births, 70·4; and annual removals of pregnant women, 100.

"As the bastardy account is very heavy in this parish, amounting, upon an average, to £730 per annum, on which the parish loses about £250, and sometimes more than £300, Mr. Barnet about four years ago introduced a new method of proceeding. The usual one is for the woman to swear the child before birth, which course the women always prefer themselves. He determined never to permit a child to be sworn till after birth, for the purpose of saving the £3 or £4 expense, incurred in getting at and securing the father before birth, as he found this outlay fall mainly on the parish. Since he has acted on this plan, he has been surprised at finding women continually naming and swearing their children to different fathers from those whom they named and wished to swear against before birth; and in these cases is convinced that they really name the true fathers after birth, and were ready to swear falsely before birth. The continual recurrence of this fact makes a strong impression upon him, and he accounts for it as follows:—Various motives influence them before

birth ; they wish to swear the child to a rich father ; or to extort money; they wish to spare the real father if they like him, and fix on another; they take a spite against some one, and rush to the overseer, and make him an instrument of vengeance in their hands ; but after birth—when they are ill—can extort nothing—have no hope of vengeance—and are serious from the dangers they have just passed, their minds are more open to the action of good principles, and they lose, besides, all hope of the overseer aiding them in marrying, if they fixed upon an ex-parishioner, as the child, by being born, is already settled. He considers that this change has greatly diminished perjury ; though, if generally introduced, it would still leave overseers open to the temptation of encouraging perjury, as they always wish women to fix on rich fathers, as the parish is thereby better secured."

"The order on the father varies according to his circumstances, and the parish always gives the mother all they get. This, Mr. Barnet is aware, operates as a direct premium on perjury. He has seen many instances where he has felt no conviction that the woman selected the right man, and knows of many instances of perjury. A young man courted a girl, aged seventeen, with intent to marry her; but they quarrelled. He was a journeyman, honest, industrious, and likely to do well. She came to the overseer, and wanted to swear a child to this young man. The overseer sent for him: he declared he had never had illicit connexion with her—had never suspected she was capable of incontinency, believing her above it, and would not credit that she was unchaste. However, she turned out to be with child, and after much cross-ex-

amination, admitted that she had never had connexion with this young man; and said that she had fixed upon him as the father, because she knew he was honest and industrious, and thought they would force him to marry her."

"Twelve years ago we introduced this custom: when a woman came, saying she was with child, she was taken before the magistrate in the usual way; the sessions made the order on the father in the usual way. Then we told her she must get the money from the father herself, as we should never trouble him; and that if she became chargeable to us, we should send her to the house of correction, *and all women are invariably so sent.* Before this, we used to have five or six bastards born every year; now we have under two. These are still sworn and affiliated in the usual way; there is no change in that respect; but if the mother applies for relief, we enforce the law and send her to prison. So the mothers now never think of applying to the parish, but arrange with the fathers as well as they can, and maintain their children as well as they can. There are no bastards on the parish books now but *one;* and this is a particular case, where the mother was ill-treated by the father. For nearly the first three years after the first example was made, there was not one bastard birth in the parish (except in the case of a woman who was an idiot); neither has there been any instance whatever, for the last twelve years, of any woman *ever* having a *second* bastard child. Before this change there were many—one woman had five; but at that time this parish paid, as others do now, 2*s.* for every bastard, whether the money was obtained from the father or not."

"This method of dealing with bastardy sweeps away the

motive to perjury—the power of extorting money—deprives the woman of the hope of getting a husband, or large weekly allowances by incontinency, and the man of the most powerful topic for effecting seduction; and turns the moral sense of the poor into the right channel."

"All laws regarding bastardy, which contemplate the slightest punishment on the man, have the inherent defect of encouraging what they aim at repressing.(?) Such laws must give the woman power, either directly or indirectly, over the man; he will use that fact as a motive to induce her to yield; and she will yield because she knows she shall be able to effect his punishment if he deceives her."

"The man may, in all cases, be as guilty as the woman; and it may seem hard or unjust to punish *her*, the weaker and more helpless of the two, and to suffer *him* to go unpunished; but the object of penal law is to *repress crime*, and not to punish it! Punishment is a means to an end; the end is the *prevention of crime;* and a punishment which operates to *encourage* instead of to *prevent* crime, (as is the case in bastardy when the father is punished), frustrates the very object which alone can justify one human being in inflicting pain on another (!!!)

"It may safely be affirmed that the virtue of female chastity does not exist among the lower orders of England, except to a certain extent among domestic female servants, who know that they hold their situations by that tenure, and are more prudent in consequence. Among the residue, all evidence goes to prove that it is a nonentity. A daughter grows up—she learns what her mother was; she sees what her sisters and neighbours are—finds that nobody thinks the worse of them, and that nothing is ex-

pected of herself, and that there is a short road to marriage or a maintenance. The English law has abolished female chastity, self-respect, proper pride, and all the charities of domestic life, derived from and connected with its existence. It has destroyed, likewise, the beneficial influence which this virtue in women reflects on the character of men. If it is considered desirable to restore it, the way is easy, and sure, and short. It is only necessary to enact that it shall be unlawful for parishes to give relief to a mother for a bastard, without sending her to prison for three or six months, and to deprive parishes of all claim on the father. By acting on a somewhat similar principle, Mr. Whately, of Cookham, Berks, has reduced the annual bastardy births of his parish from fifteen to one." (!!!)

"In referring to the printed lists, it will be observed, that out of sixty illegitimate children, the allowance from the father is only recovered for twelve; five of the women on this list have also each two children. Punishment for bastardy appears to be very rarely inflicted, indeed only when the overseer makes such an application. Bastardy, and the litigation it causes, is referred to in this neighbourhood, in assigning reasons for the increase of the poor-rates. It seems not unusual for the daughters of the small farmers, or statesmen, as they are here called, (men farming their own property), to have bastard children, and to come to the parish for an allowance."

"It cannot be expected that the overseer will apply for the punishment of people in this station of life."

"The following extract is from a letter written by the overseer of the parish of———"

" ' We, at this time, in our parish, are supporting two bastard children whose mothers have landed property of their own, and would not marry the fathers of their children." '

" ' The daughters of some farmers, and even land-owners, have bastard children. These farmers and land-owners keep their daughters and children with them, and regularly keep back their poor-rate to meet the parish allowance for their daughters' bastards. We have no doubt the same grievance exists in many other parishes." '

" I could adduce many townships where one or more cases of farmers' daughters receiving such an allowance had occurred, but shall prefer giving an extract from the letter of a clergyman of a parish more than twenty miles from that to which the above refers :"—

" ' A very different description of women have, of late years, become the mothers of bastard children ; formerly it was confined to the daughters of cottagers, and girls employed in farm husbandry : but of late very respectable farmers' daughters have been in that situation, and applied to have their offspring taken care of by the parish. As one plan to remedy the evil, the magistrates should impose a larger sum on the mother ; although this would not put an end to bastardy, the parish would not be so much burthened by this numerous description of mothers, as they would, in many instances, be kept at the expense of her parents, who, from their mode of management, are often too frequently to blame." '

" In another parish, the clergyman said, that in one year, to seven legitimate children he had baptised nine bastards; they were almost all of them, however, the

children of women at service out of the parish, removed there to lie in. One from Suffolk, at a great expense."

"It was an observation frequently made, that the custom of hiring farm servants to live in the house leads frequently to these connexions; and that the certainty of an allowance of money to the mother, either from the father, or from the parish, encourages it; whilst in the south, the contrary system leads to improvident early marriages."

To remedy these monstrous evils, Lord Grey's ministry led the legislature to enact "that a husband is liable to support the legitimate as well as the illegitimate children of his wife;—that mothers of bastard children are bound to maintain them—that the evidence of the mothers of such bastards must be corroborated in some material particular by other testimony; and lastly, that if the mother be not able to support their infants, the grandfather or grandmother must do so; and should they be unable, that in such case the father must do so if able, or if not, that the sum paid by the parish must not go into the mother's hands, but be expended for the support of the child or children." Here is legislation with a vengeance. All the expense, the odium, and the ruin, are placed on the mother, who is, in ninety-nine cases in a hundred, the victim of seduction, by some heartless, vicious, and unprincipled scoundrel. It is proved by the host of evidence on the state of prostitution in this and other countries, in the work already quoted, that for the most part, girls and women are decoyed and ruined by men, and not by reason of inherent licentiousness. No rational individual can deny the accuracy of this conclusion.

Such are the proofs that females are seduced in a large proportion, and do not become depraved by inclination. It is, therefore, in my opinion, a most glaring defect in our legislation, to exonerate the male sex from all responsibility and punishment for seduction and bastardy, because this sex is by far the most guilty and vicious; for all physiologists admit, that amorous impulse is stronger in the males than in the females of all grades of the mammiferæ, from the lowest to the human species, because the male imparts vitality and perpetuates the species. This conclusion will be incontrovertibly proved in the following observations, as a physiological and not as a political axiom; and I must take leave to observe, that there never can be sound legislation unless in strict accordance with physiology or nature, and the sacred scriptures.

The only punishment in this country for seduction or criminal conversation with the wife of another, is a pecuniary fine. This law affects the upper rank of life only, and not the great bulk of society. Mr. Chitty, the eminent and voluminous legal author, has ably exposed the defects of the law on this subject, in his late valuable work on Medical Jurisprudence. Among many excellent remarks, he mentions the case of a squire, who was fined £1000 for seducing the daughter of a respectable neighbour. The day after the trial, the convicted seducer sent his servant with the fine to the father of a degraded daughter, "with his compliments, that he would have much pleasure in forwarding a similar sum for the use of the other daughter for the following night." Surely, such a depraved monster as this ought to be punished in his person as well as his purse. Our laws are very unequal, and sometimes unjust.

A man is transported for life if he steals a few shillings; but the seducer or adulterer is fined according to the opinion of a jury (often a most incompetent one) for a much more heinous offence.

That prostitution is often caused by necessity, can also be easily proved. I shall only quote, on this occasion, one of the public journals, which has the largest circulation, and the greatest influence on this point.

"The principal source of that most melancholy evil which the Society for the Prevention of Prostitution seeks to remedy, is, the insufficient wages that are given to females in almost all the various departments of needle-work. The instance mentioned by our correspondent, of a mother and her three daughters who are toiling for only 8*s*. a week, is, we are sure, not a solitary one, and that many unfortunate girls are literally compelled, at the close of their ill-requited, honest daily work to walk the streets for money to procure the necessaries of life, is a notorious and a very deplorable fact. The miseries of this wretched class of females, who would be virtuous if they could afford to be so, and many whom unquestionably do submit to sad privations and severe toil, rather than degrade themselves by mercenary pollution, are increased by the vile Poor Law Amendment Bill—a bill which the manly Whigs rendered particularly cruel to the defenceless sex. Unfortunately, we know of no means by which the evil pointed out by our worthy correspondent can be redressed. But heartily wishing the Society in question (For the Prevention of Prostitution) success in their commendable object, we entreat their attention to this part of the subject. We may be permitted to take

this opportunity of recommending the Society, to adopt the most energetic measures for the suppression of that vile traffic which they have described. Notwithstanding the punishment of those wretches, it has been proved, in several cases that have come before our police magistrates, especially at the eastern end of the town, that the infernal traffic in question is still carried on to a great extent, principally by Jews. These white slave-dealers trepan young girls into their dens of iniquity, sell them to vile debauchees, dress them out in fine clothes, and take from them all the wages of their horrible calling; and when the miserable creatures are worn out by disease, they are turned adrift to perish in the streets, to steal, or to seek refuge in a workhouse or an hospital. The horrible death of at least one of the victims of this disgusting and cruel system, is yet fresh in the public recollection." (For many others proofs, see *Prostitution in London, &c.* 1839.)

Amongst other reprehensible customs of our times, is the employment of men in haberdashers', linen drapers', and other shops, in place of young women, and thus lessening the means by which the latter can gain an honest livelihood. It is really humiliating to see young men, in the prime of life, engaged in selling tapes, caps, ribbons, &c., and bestowing as much consideration on the shades and shapes of one of these articles as a statesman would on framing an act of parliament.

This plan is adopted on the erroneous principle, that women are more pleased by being served by the other sex —an insult to the sex, which means that they are much more, or equally depraved.

Another cause of the demoralization of the youth of this metropolis by the sale of indecent books, might be easily abolished by legislative enactment, more particularly were the public press to suppress the reports of the prosecutions under such a statute, or at common law, which it seldom does, but seems rather to foster this depravity. The evil is thus described by the able writer I have just quoted.

"The open exhibition of disgustingly indecent books and pictures—especially cheap prints—in numerous shops in this metropolis, is highly disgraceful to the police. Filthy miscreants are allowed to pander to depraved taste, to corrupt the minds of young persons, and to insult females by exhibiting and selling, with absolute impunity, horrible and indecent representations that would not be tolerated even in Paris. What has become of the Society for the Suppression of Vice? And why do not parochial officers, many of whom are husbands and fathers, suppress this abominable nuisance, and punish its beastly perpetrators? From what we have heard on the subject, we are convinced that within the last twenty years this infamous traffic and this abominable outrage on common decency, have not been carried to so great an extent as at the present period."

I have adduced the clearest evidence in support and proof of the preceding extract from different public functionaries in another work — *Prostitution in London, &c.* But it appears by that work that the last sentence in the above extract is not correct, as the sale of improper works and devices is very considerably diminished, indeed nearly destroyed in this metropolis.

When we consider the mass of crime, of ignorance, and of folly, caused by the abuse of the reproductive function, the natural history, or physiology of this function is a legitimate object of study for all classes of society. Reason never differed from nature, though certain depraved individuals may advise their disassociation. They have fruitlessly endeavoured to recommend checks and preventives to reproduction, which are most severely condemned by society at large. To such men we may say, with an ancient writer, "Venus sine concubitu nunquam natura aut sapientia dixit."

All Christian moralists maintain that the chief end of marriage is the propagation of the species; that it is sinful in married persons to wish not to have a family, or to use any means of prevention, or to procure abortion at any period from the moment of conception, as the fœtus is a living being, according to standard medical authority in all countries, and that to destroy it before or after quickening, is murder. The violation of these precepts is contrary to the laws of God and civilized man, and is only recommended by those immoral wretches who set both at defiance.

There are many other causes, which will be noticed hereafter, that excite amorous impulse, and lead to premature illicit sexual unions. So numerous and powerful are these causes, that early marriages would be almost universal, did not reason, physiology, legislative enactments, and prudential considerations, prevent them. But the passions are very strong, modern morals much too lax, and temptations, in all large cities and towns, very great; and hence libertinism and depravity

are the consequences. (Vide—*Prostitution in London, &c.*) 1839.

It is also to be borne in mind, that persons, in general, must defer marriage until they arrive at a proper age, and until they can support a family, or form mercenary and demoralizing connexions, by unequal unions which too often destroy domestic happiness. It may also be maintained, as a general proposition, that those who marry early in life, after the adult age, and who can support a family, have the best chance of forming their children's character, of watching their progress to the adult age, and providing for them in the world; while those who marry late in life, are generally separated from their offspring while young and inexperienced, and obliged to consign them to the mercy of fortune, and the care of heartless. relations and strangers.

These and a great variety of other important considerations relating to the function of reproduction, will be fully considered in the following pages. In fact, the sole object of the medical inquirer is to display nature in her true character, to defend her laws, and to expose the errors and follies of mankind in their violation.

Let us now glance at the extent and importance of the function of reproduction in its moral and physical relations, and we shall readily perceive its great influence on every class of society.

The physiology of generation comprises all medical knowledge, relative to the reproduction and conservation of the human species. There is not a function in the whole domain of physiology so interesting to the adult portion of mankind, or one that has been more zealously

investigated by the ancients and moderns, whether theologians, philosophers, or physicians. The love of offspring is inherent in almost all healthful individuals at the adult age, though some few may not possess it, others attempt to control it, and still fewer to extinguish it.

In 1828, I proposed the following nomenclature, which was at first censured and ridiculed by the ignorant, but speedily adopted by the learned and scientific in this and other countries. (*Manual of Midwifery and Diseases of Women and Children, first edition.*) There are many other terms which I was the first to introduce into the medical literature of this kingdom, which have been treated in the same manner; but no one objects to the brevity and expressiveness of the Greek language, unless those who do not understand it. The learned of all countries employ it constantly, and I never could perceive any reason why Britons, who have long stood pre-eminent in learning, the arts, and the sciences, should not imitate other nations in correct terminology. If Europe, America, and India are proposing improved terms in the science, I should like to know why we should not keep pace with them.

Androgeny, or anthropogeny (*ἀνηρ*, man, mankind, *γενναω*, I engender: *ἀνθρωπος*, man, *γενναω*, I engender), or the power of generation of the human species, in strict physiological language, exists from the period of puberty to old age; it comprises numerous moral and physical inquiries—as the physiology of puberty; the age proper for marriage; early, premature, ill-assorted, and late marriages; the physiology and pathology of the generative organs; the hygienic and morbid effects of the use and

abuse of these organs, on fecundity, health, and longevity; the moral and physical qualifications and disqualifications for reproduction; the influence of monogamy, polygamy, prostitution, and concubinage, on morals and population; legal and clandestine marriages; seduction, adultery, rape, bastardy, criminal abortion; and the influence of age, habit, constitution, temperament, season, climate, plenty, famine, public amusements, war, pestilence, &c.; on fecundity, nativity, and mortality. Such are only a few of the principal medical, legal, civil, political, and social topics, relative to the function of generation. Medical practitioners are generally consulted on all these topics, both by the legislature and every class of society, in civilized countries Andropogeny, or the reproduction of the human species, is a universal theme of conversation, under many different popular terms, and especially with all those capable of begetting offspring. Legislators designate it "the population question," about which so much has been discussed and published of late years; and the different grades of society denominate it "family." Lawyers and divines also discuss numerous questions relating to this subject. The most renowned theologians, philosophers, physiologists, legislators, and jurisconsults, as well as all classes of society in ancient and modern times, have occupied their minds with the study of the various phenomena and anomalies of reproduction, and the numerous questions connected with it. All their studies have, however, signally failed in determining the mode in which life is transmitted by parents to their offspring; and the innumerable investigations of ages have been insufficient to explain this still mysterious phenomenon. Medical

physiologists trace the human being from the instant of its origin; yet they, too, have failed to discover the mode by which it acquires vitality; though they have accurately traced its developement from its commencement, and the means of its conservation until it becomes an independent being, and a member of the human family. They have also described the physical changes of the human female, from almost the moment of conception until the period of parturition; and those of the latter state, from the moment of its completion until the organs concerned are restored to their natural condition before impregnation, or very nearly so.

I have given a comprehensive account of most of these subjects in my works on *Midwifery* and *Medical Jurisprudence*, and shall embrace those that are omitted in the following pages.

It would far exceed the limits of the size of an ordinary volume, were I to attempt the investigation of the numerous topics which I shall now proceed barely to enumerate.

The science of androgeny or anthropogeny, gynæcology, (γυνη, woman, and λογος, a discourse), and pædology (παις, infant, child, and λογος), is one of the most important and positive in medicine. It comprises a vast deal of physiological inquiry regarding the formation, animation, and developement of the human being, from the moment of conception, when it is only an atom in the vortex of infinity, and invisible to the naked eye, until aided by the microscope, although it contains the mind and body of the future man, the philosopher, the statesman, the emperor, &c. I have arranged the subject as

follows, in my *Lectures on Midwifery and Diseases of Women and Children.*

This part of the subject is designated geneseology (γενεα, generation, from γεινομαι, I beget, and λογος, a discourse), or generation, and the co-operation of the sexes in accomplishing it. The next part of our investigation is termed ovology (*ovum*, an egg, a term applied to the embryo of plants and animals soon after generation, and λογος, a discourse—an unclassical term, though much employed); and after a certain period of intra-uterine life, about the third month, it is designated embryology, or the developement of the human being from the moment of conception to nativity. The physical changes effected in woman after conception, for the purpose of preserving and nourishing the offspring, are described in the section encyophysiology, or the developement of the womb of a pregnant woman (εγκυος, a pregnant woman; φυσις, nature, and λογος, a discourse. The physiology of the gravid or pregnant uterus.)

The next part, relating to anthropogeny, is tocology (τοκος, parturition, and λογος), or parturition—a physiological function, or vital process, which obeys the laws of mechanics with mathematical exactitude. This function is divided into eutocia (ευ, good, and τοκος, labour), natural parturition, and dystocia (δυς, difficult, and τοκος), difficult parturition, which embrace a vast number of anormal or morbid states, that require to be sedulously studied by obstetricians.

Lochiophysiology comprises an account of the puerperal or child-bed condition in a normal or natural state (λοχεια,

a woman after delivery, φυσις, nature, and λογος, a discourse.)

The second division refers to abnormal or preternatural states of parturition, and to diseases of the generative organs in woman. These are fully described in my work on *Midwifery*, and in my *Obstetric Aphorisms*.

Gynæcopathology embraces the diseases peculiar to women (γυναι, woman, παθος, disease, and λογος, discourse.) This is subdivided into parthenosology (παρθενος, a virgin, νοσος, disease, and λογος, a discourse), or diseases of virgins; encyonosology (εγκυος, a pregnant woman, νοσος, disease, and λογος, discourse), diseases of pregnant women; dystocia, or abnormal parturition; and lochionosology, or diseases of women after delivery, while in the puerperal state.

The obstetrician has therefore to study the anatomy of the organs peculiar to women (gynæcotomy), the physiology (gynæcophysiology), geneseology—generation (tocology and lochiophysiology), and also their diseases (gynæcopathology), including parthenosology (diseases of virgins), encyonosology (diseases of pregnant women), toconosology, or morbid or difficult parturition; lochionosology, or diseases of the puerperal state.

Pædophysiology is the natural history of the human being from the time of conception, during pregnancy, and from the period of birth to puberty. The medical practitioner has likewise to include, according to usage, ovonosology and embryonosology, fœtinosology and pædonosology

Pædonosology embraces the study of the diseases of the human offspring from the instant of its vivification to the

epoch of puberty, which comprises all the diseases, from conception, during intra-uterine existence, at birth, and from birth to puberty. In fine, he has to study all medico-legal questions relating to andropogeny and its subdivisions —the causes and treatment of impotence and sterility in both sexes, qualifications and disqualifications for marriage, the various grounds for divorce, ambiguities of sex, concealment of sex, criminal abortion or prolicide, infanticide, signs of pregnancy—as in cases of reprieve and heirdom—duration of pregnancy as regards legitimacy, signs of delivery, substitution of a living for a dead infant, survivorship of the mother or infant when both die immediately after parturition, and property is to be gained or lost by the husband; defloration or rape, and many other important questions.

A full account of all the medico-legal inquiries concerning androgeny, or human generation, will be found in my *Manual of Medical Jurisprudence, and State Medicine*, 2nd edit. 1836.

In fine, I shall consider the following subjects in the succeeding pages—Marriage in its moral, physical, and social relations—its object, institution, physiology, hygeiology, effects on morals and population—influence of polygamy, prostitution, concubinage, monogamy, and sexual abuses on society—conjugal and parental duties—physiology of the sexual organs—effects of puberty—hygienic and morbid effects of the use and abuse of the generative function on parents and offspring—causes which influence fecundity—universal code of generation of the vegetable and animal kingdoms—comparative and human generation —human ovology and embryology, or developement of

the fœtus during intra-uterine existence—hygeiology of woman at the periods of life which influence reproduction —at puberty, before and after marriage, during pregnancy, parturition, the puerperal state and lactation—influence of the maternal imagination on the fœtus in the womb—parturition—duties and aid of male and female obstetricians —physical management or education of infants and children—pathology of the sexual organs, and treatment—causes of impotence and sterility in both sexes—curable and incurable cases—syphiliography, or history of the ravages of syphilis—primary symptoms—modes of infection—chancre—bubo—abscess—secondary symptoms—ulcerated sore throat, copper-coloured and numerous other eruptions—osteocope or pain in the bones at night—nodes or painful swellings on the bones—contamination of the fœtus in utero, and during nativity—sloughing of the sexual organs, soft palate—nose—various ulcerations—warts—severe nervous, neuralgic and rheumatic pains—alopecia or falling off of the hairs—phthisis, ulceration of the bones—blindness from iritis—breaking up of the constitution.

I shall also notice urethritis—blenorrhagia—gonorrhœa communicability to the infant during nativity, and destructiveness of its vision by purulent ophthalmia—diseases in both sexes—blenorrhœa or gleet—orchitis or inflamed testicle—phymosis and paraphymosis—sloughing of the penis—diseases of the spermatic cord—strictures of the urethra—disease of the prostate gland—general observations—conclusion. These diseases, slightly noticed in these pages, are fully described in my work on *Prostitution in London*, &c., 1839.

CHAPTER II.

INSTITUTION AND OBJECT OF MARRIAGE.

THE preceding introductory remarks being premised, I now proceed to notice the opinions of moralists and physicians on the importance of matrimony as the natural source or origin of population and of society. Secondly, as to the proper age for entering into the matrimonial contract, including observations on constitution, predisposition to diseases, and the immediate state of health. Thirdly, as to the good and bad effects of marriage on health and disease. And fourthly, as to the disqualifications for marriage, comprehending impotence and sterility.

Marriage is a natural, religious, civil, and legal contract, wisely instituted for the procreation and conservation of the species.

Man was born for society; his condition, faculties, and propensities require that he should associate with other men. At every period of his life he stands in need, and wants the assistance of others. If we look to the infantile state, we observe that the new-born babe cannot long exist unless by the sedulous care of its parents or others, who protect, clothe, and nourish it. Were it left naked on the ground, exposed to the inclemency of the air, destroyed by hunger, or left a prey to ferocious animals, it must speedily perish. If we follow it through childhood, we find, that, unless it is directed by the advice of others of its species and assisted by them, it would be little better than an irrational animal.

When the human being arrives at the adult age, he possesses the power of generation, and is bound to protect, support, and cherish the individual who co-operates with him, in perpetuating his species; and hence originates society.

Finally, when senescence, or old age commences, the same imbecility, the same infirmity recurs as in infancy; therefore, if society did not exist, the human being would fall to the ground, would be affected with various diseases, unremoved, or unalleviated by remedies, he could have no food, and must be destroyed by hunger. It therefore follows, that the condition of man, at all periods of life, requires the care of his fellow creatures. His faculties, reason, senses, voice, gestures, and capacity for learning the arts and sciences, require the benefits of civil society. The offices, by which we are bound to all other men, arise from the duties of humanity, or draw their origin from society.

The general principle from which all our social duties are derived, is the golden rule—do unto others as you would they should do unto you—the truth of which precept reason demonstrates to every man; for all men are born equal; the same nature is inherent in all; they enjoy the same faculties, want mutual assistance; they are all formed by the same Deity, and they are destined to the same end; all are born with the same reason, they pass through the same periods of life, and they cease to exist in the same manner. It is, therefore, necessary that they should be united in one common bond of fraternal charity, as if members of the same family; that they should mu-

tually assist each other in their necessities, and that they should live happily together.

Society is defined by moralists, the congregation of many men, for the object of acquiring powers by their united efforts. Laws are made for the good of all, and every rational being is bound to obey, uphold, and enforce them. Hence it appears, that every one is bound to obey and support the laws of his country.

Society, or the mass of mankind, is divided into domestic and civil.

Domestic society is that which exists between certain individuals, who, by relationship or contract, form one family, which is necessary to man, and was destined for him by nature ; for, without this, the human race could not be propagated or preserved. Domestic society is again divided into conjugal, paternal, and herile.

Conjugal society is a perpetual compact between man and woman to live together in mutual love and friendship, for the procreation, conservation, and education of children, and to aid each other by mutual succour for the course of life. The diversity of the sexes was instituted for this purpose ; and there is an innate desire implanted in both to perpetuate their species, their names, and to transfer their property to their children.

Marriage was instituted by the divine Creator in the time of man's primitive innocence, as the means of his happiness, and the perpetuation of his race. The wisdom of its institution has been felt and acknowledged in every age. Man found by experience it was not good for him to be alone, or to lead a life of celibacy or isolated selfish-

ness. Marriage does not, however, restrict its beneficial influence to individuals, but extends to states and kingdoms. "It is," says Jeremy Taylor, "the mother of the world, and preserves kingdoms, and fills cities, churches, and even heaven itself." It is the primitive source of morals and of society, and offers incalculable securities to governments. It presents matter of important consideration to the statesman, the divine, the barrister, and the physician.

Of all the social institutions, there is none which exercises so great an influence upon states as marriage. Every state is composed of families, and these are the result of conjugal unions. The prosperity of a nation depends upon the strength and vigour of its inhabitants, which are powerfully influenced by the comparative perfection of the marriage and bastardy laws. These again have great effect on the morals and civilization of society, the rights of persons and property; and even sceptres and thrones are alike dependent upon them. It was, therefore, wisely ordained that marriage should be a sacred compact, for which those engaging in it should forsake their nearest relations and friends. The parties contracting it form the strictest union and nearest relation that can be established between two individuals; their temporal concerns are identical, and consequently marriage is universally considered the source of the greatest comfort and most perfect enjoyment on earth, securing all the advantages of sincere friendship, and the reciprocal offices of true and tender affection. The parties entering into this state, vow mutual love, fidelity, and friendship. It was therefore most wisely ordained in the beginning of time, that "a man shall leave

his father and mother, and shall cleave to his wife, and they shall be two in one flesh." The only motive that virtue allows, besides the selection of an individual of the opposite sex, for the mutual succour necessary in the management of the affairs of life, are the perpetuation of the species, and the physical and moral education of children, so that they may enjoy health, render due homage and reverence to the omnipotent and beneficent Author of the universe, and become useful members of the human family.

Marriage was originally instituted between the first of the human species, as a religious, political, civil, and moral contract of Divine ordinance, the origin of society, the law for the reproduction of the species,—a contract for the transmission of property, a guarantee for obligations the most interesting to mankind. It is, therefore, universally respected.

Man is a rational and social being, deriving his chief of earthly happiness from the delights of society, and the interchange of thought. It is the interchange of the charities and the sympathies of life, which gives to human existence its real and only value. Hence, man in a state of solitude, or even isolated luxury or affluence, would be the most pitiable and miserable of creatures.

Exposed to the corroding cares, sorrows, bitter disappointments, and misfortunes of life, man cannot brave alone, and unbefriended, the ingratitude, envy, and malevolence of the world.

The perfection and sincerity of friendship can only be found in the marriage state, where an identity of interest shuts out all petty jealousies and vexations, and a unity of

thought, sentiment, feeling, and conduct, exists. The qualities essential to conjugal happiness are chiefly of a mental or moral nature, and not merely of a physical kind, as is unfortunately too generally the case.

Marriage was instituted between the first of our species as a natural, civil, and religious contract, and has ever since been celebrated with a degree of solemnity and importance, suitable to its dignity. It is a sacred compact, for which those entering into it, forsake their nearest relations and best friends. A mutual love should subsist between them, a mutual charity to bear reciprocally their natural defects, tempers, and all other inconveniences and infirmities of life. They mutually vow to observe an inviolable fidelity to each other; they are bound to labour with indefatigable industry, so as to augment their means for the sustenance and education of their future offspring, and to provide for themselves in their infirmities and old age. "Love," says Virey, "is the basis of all association, and consequently of human civilization: libertinage, which ruins love, attacks sociality, whilst good morals, on the contrary, cement the edifice."

Mutual fidelity and constancy are conjugal duties; and hence adultery is a grievous injury to either party. Nothing can be more infamous or injurious on the part of a woman, than to supply an adulterous infant to her husband, and to deprive the real heir of his rights; and it is perhaps equally iniquitous on the part of a husband to deprive his wife of her conjugal rights, and his children of his property and affection. Moreover the desertion of illegitimate offspring is inhuman, and is the cause of an immense destruction of life. It is true that society humanely affords

asylums to such unfortunate children; but they still are deprived of that tenderness and solicitude which can only be afforded by maternal affection: and hence the immense mortality of them in foundling hospitals, workhouses, &c., and their infirm and delicate constitutions.

It is not enough that children should be procreated by parents; they are also to be nourished, clothed, and educated; they should be nourished by the milk of the mother, and not delivered to other women, unless in certain cases, for nature generally gives the parent the gift required for this purpose; and she never can morally, unless this is withheld, or unless there is dangerous infirmity or some great cause, omit to afford it: for by the neglect of this sacred duty, the offspring suffers not only great inconveniences, but often loss of health and life, and the mother herself becomes liable to diseases, or propagates unhealthy offspring. Nature commands maternal lactation; for the mind and milk of a stranger affect the mind and body of the infant, and render both dissimilar to those of the parents. The injuries and bad effects of strange or mercenary lactation, are universally admitted, and will be fully described in a succeeding chapter.

It is well known that when children are committed to the care of mercenary nurses, maternal love and tenderness diminish, or almost cease; whilst infantile affection is naturally bestowed on another individual, and finally it scarcely exists towards the parent. It is also well known, that children have been changed at nurse, and properties and titles conferred upon persons who had no just right to them.

It is likewise an indispensable obligation on parents, that

they inform their children, by word and example, of the existence, culture, and love of the Deity, for in infancy we are most tenacious of perceptions; and the greatest care should be taken that children do not see, hear, or read, unless what is good and right, because their early impressions generally continue to old age. For this reason they ought to be kept, as much as possible, from the society of servants. Nothing is more tender, flexible, or susceptible of impressions than the minds of children. There is, therefore, great danger lest they are contaminated by indecorous, profane, and obscene ideas, if they are intimate with most servants, whose morals are generally bad and corrupt. Every one knows the force and truth of this statement.

Parents should also take care that their children are kept from idleness, the root of all evil, and that at a proper age they are initiated into the principles of literature, the arts, and sciences most suited to or even above their sphere of life. When they arrive at the adult age, and become members of society, they are expected to discharge their social duties in their station in life, as well described by Juvenal, in his fourteenth satire :—

" Gratum est quod patriæ civem populoque dedisti.
Si facis ut patriæ sit idoneous, utilis agris,
Utilis bellorum et pacis rebus agendis."

The proper age for marriage — Constitution — Predisposition to diseases, aud the immediate state of health. —The proper age for marriage, according to the law of this country, is twenty-one for the male, and eighteen for the female; but many physiologists are of opinion that the ages of twenty-five and twenty-one would more accord

with the complete developement of adults. Buffon held this position, " the natural state of man after puberty is marriage;" but this is evidently untenable, because the human body is not fully developed at this period of life, the different functions are not perfect, and as the organs are only in the progress of their growth, the offspring would be infirm and delicate; and the sexes totally incompetent to perform the various important duties of parents. It is at, or rather after the adult age, that the mind and body have arrived at perfection; and therefore moralists and legislators have fixed this age as the best for marriage.

It is universally known, that premature or excessive exertion of any part of the body is succeeded by fatigue or decay of such part; and more especially before complete developement has taken place. Hence it follows, that the premature exertion of the genital function, or marriage at too early an age, must not only be highly injurious to the parents in most cases, but also to the constitution of the offspring. It is also a moral and medical precept, that both male and female should observe the strictest continence until the adult age, so that the great end of marriage, the propagation of healthful infants, may be accomplished.

The ancient Germans did not marry until the twenty-fourth or twenty-fifth year, previous to which they observed the most rigid chastity; and in consequence of which, their offspring acquired a size and strength that excited the astonishment of Europe. " Sera juvenum Venus," says Tacitus of the Germans, " coque inexhausta pubertas, nec virgines festinantur. Ergo septa pudicitia

agunt, nullis spectaculorum illecebris, nullis conviviorum irrationibus corruptæ."—*Tacitus de Mor. Germ.*, 19, 20. Cæsar said, that the Germans of his time, under twenty years of age, were like women, and hence their youth allowed time for their growth, and gave their bodies large dimensions. "Qui diutissime impuberes permanserunt, maximam inter suos ferunt laudem: hoc ali staturam ali hoc vires nervosque confirmari putant. Intra annum vero vicessimum feminæ notitiam habuisse, in turpissimis habent rebus."—*Cæsar de bell. Gall. Lib.* 6. It is impossible, perhaps, to fix the exact period proper for conjugal union in all cases, because there is so great a difference in the growth of individuals, some being more developed at eighteen or twenty than others at twenty-five. Some girls have been mothers at the twelfth year and a half of their age in this country; and indeed I have attended a labour case of this kind, and have heard and read of many others. I have been repeatedly told by mothers, that their daughters were parents at the age of thirteen and fourteen years. It is common in tropical climates to see girls at the age of nine years married, and become mothers at ten: while in the polar regions, menstruation, or the establishment of womanhood, does not occur before the eighteenth or twentieth year. It is, therefore, evident that, taking the whole of mankind, on the face of the globe, into view, it is impossible to fix a certain age for marriage.

The evils resulting from too early marriages, are diminished growth and strength of the male, delicate and bad health of the female, premature old age, or death of either

or both, and a feeble infirm, and diseased or orphan offspring.

It has long been observed by all physicians, that persons advanced in life, provided they are healthful and vigorous, and have observed strict continence, procreate much more vigorous infants than the debilitated young, who have injured their constitutions; for as one of my distinguished American correspondents, Professor Dewees, judiciously remarks, "it is oftentimes better to be old in years than in constitution." This learned physician also observes, that feeble parents may propagate robust children, but these, according to his experience, which is that of more than thirty years, seldom survive beyond the age of manhood, and old age is out of the question. We see the truth of this statement verified every day: we have only to observe the many delicate mothers who daily present their children at our hospitals and dispensaries, emaciated and often dying, who, generally inform us that for some months after birth it was impossible to behold more robust, or finer infants. I have long noticed this fact in hospital and dispensary practice, and have repeatedly pointed it out to medical students in my lectures on the *Physical Education and Diseases of Children.*

There is another position maintained by the profession worthy of attention, viz.: that persons who attain extreme old age, often marry and have children. Attestations of this fact are afforded by two remarkable instances.

Thomas Parr, who died at the age of a hundred and fifty two, was married at a hundred and twenty, and performed his nuptial duties so well at a hundred and forty

as to make him forget his old age. He was compelled to do penance in a white sheet, for an illicit amour, in the one hundred and fortieth year of his age; while De Longville, a Frenchman, married ten wives, the last when he was in his ninty-ninth year, and she bore him a son when he was in his hundred and second. He died at the age of a hundred and ten years. These individuals possessed, in some measure, the longevity and vigour of the antediluvians; but, in general, the power of propagation is supposed to cease about the seventieth or eightieth year in man, and much sooner in woman. It is said, that the latter become sterile at the cessation of menstruation, which usually, but not invariably, occurs at, or after the fiftieth year, in temperate climates, though, according to M. Magendie, sometimes not before the seventieth year. The universal belief of physiologists is, that while the function of menstruation continues, conception may happen; though this seldom occurs after the fiftieth year in this country. I have met with one case in the sixtieth, if the lady's account be correct. This is a point of importance, for a cause was decided in the Court of Chancery, I think in May, 1833, about which I was consulted, and where a large property was the matter in dispute; and the sole question on which the decision of the then Lord Chancellor Brougham depended, was, whether a woman might bring forth a child at the age of sixty years, in this climate. The Attorney General, Sir William Horne, observed, that there was no such case on record, and that if credible evidence could be produced in support of one, he would give up the claim of his client. No such evidence was produced, and he succeeded. I men-

tion this case to show how necessary it is that medical practitioners should record every case of this kind observed in practice. I was not examined in the cause, nor could I give more positive evidence than what the law calls hearsay; but had I been, I should have adduced the examples of Parr and De Longville, and inferred, that if men of 99 and 140, could perform sexual commerce, there was no physical reason or obstacle to prevent women doing so at the age of sixty.

It is true that women in general lose the faculty of conception from the age of forty-five to fifty years in this climate; but some attain the function of maternity much later.

Pliny states, that Cornelia, one of the family of the Scipios, gave birth to Valerius Saturninus, at the age of sixty-two. Valescus, of Tarentum, attended a woman in labour at sixty-seven years of age. The illustrious and indefatigable Haller mentions the case of a woman who was delivered at sixty-three, and of another at seventy. All these authors observe, that the women whose cases they mention, had menstruated regularly, and were not liable to greater inconveniences than those of the fecund age.

It was, in my opinion, fully as rational to maintain this conclusion, as to deny the possibility of conception after the age of sixty;—indeed, I believe much more so. Nature has equally endowed both sexes with organs and functions; and though she has been more bounteous to man, it still remains to be proved whether she has established so great a disparity in the sexual functions as above stated. I am convinced, that were the facts I now re-

cord, submitted to the astute understanding and gigantic mind of Lord Brougham, he would have given an opposite decision.

Mr. Chitty, Sen., the eminent legal author, who argued the above case, kindly informed me that the Court did not limit the term of fecundation, and decided on totally different grounds.

It is said, that Lord Kames and David Hume asked a decrepid old woman, apparently over seventy years of age, at what period of life the sexual function ceased in her sex. She replied, she could not tell, and that they should inquire of some one who was older than she was.

Medical practitioners are often consulted by individuals, who are anxious to know whether marriage is, or is not conducive to health and longevity. It is now universally admitted, than an answer in the affirmative ought to be given to all healthful and well formed individuals of the male sex, from the adult age to the sixty-fifth year, and sometimes even later. Longevity, however, does not depend upon the benefit of proper regimen alone, but on the degree of vitality which is transmitted by parents. An individual born of healthful and robust parents ought naturally to expect a long life; but one whose parents are delicate, feeble, or aged, or affected with scrofula, syphilis, gout, pulmonary consumption, distorted spine, or calculous diseases, will have a delicate and infirm constitution.

Hufeland lays down the following precepts on the subject of marriage :—

1st. "A person should not marry unless into a family remarkable for longevity," and, he should have added, free from certain hereditary diseases.

2nd. He should not marry a woman advanced in life, delicate, feeble, or affected with any deformity or disease, more especially those transmissible by generation, as gout, stone in the bladder, gravel, herpes, certain diseases of the skin, syphilis, scrofula, mania, or hæmorrhoids.

3rd. The age most proper for women is eigheeen years, and for men twenty-four or five.

4th. They must not give themselves to the pleasures of reproduction but when the natural impulse is strong, and, above all things, avoid propagation during drunkenness.

5th. Every pregnant woman ought to be considered as a laboratory, in which she prepares a new being, to which the slighest physical or moral emotion is injurious.

6th. Women of a nervous temperament, those who are very irritable, nervous, hysterical, subject to convulsions, or epilepsy, ought to avoid matrimony, as they will give birth to infants who can live but for a short time.

This last precept is liable to exception, because nervous and hysterical women are often cured by marriage, and may have healthful infants, as I have frequently known.

Whenever medical practitioners are consulted as to the propriety of marriage, they ought to recollect, that they touch a delicate chord of affections, that man is more than a machine, so that they should combine moral with physical medicine—that science of the heart and mind, with which all the learned and well informed of the profession are well acquainted.

There are many infirmities which are not sufficient to prevent married persons from affording each other mutual succour, and are no bar to conjugal union ; but there are others which totally disqualify persons from engaging in

this contract—such as malformations and incurable diseases of the genital organs, of which I shall treat in another chapter.

Every individual who entertains a doubt as to his capabilities for generation, is anxious to obtain medical advice on his condition; and it is much to be regretted that it is too often the practice of the profession to treat the matter with levity or derision. Hence few of the faculty are consulted, an unreserved disclosure of the symptoms is seldom given, and the inquirer is often fearful that his condition may be made known to his acquaintances. Every duly educated physician is bound to secrecy, in all delicate matters, by an oath, and so far from treating his patient with levity or carelessness, should consider his case as attentively as any other that may come before him. Were this line of conduct generally adopted by the medical profession, an immense number of the public would not be driven to seek advice from low, ignorant, and unprincipled empirics, who not only defraud them of immense sums of money, but also destroy, what is far more important, their health.

The period has at length arrived, when sexual diseases obtain as much attention as any other class of infirmities, and when the most distinguished medical practitioners devote themselves to their study and treatment. It is scarcely necessary to mention the works of John Hunter, Sir Astley Cooper, Mr. Guthrie, and many others. (For a full account of celebrated authors, on this subject, see *Prostitution in London.*)

CHAPTER III.

PHYSIOLOGY AND HYGEIOLOGY OF MARRIAGE—PREMATURE AND ABUSIVE EXERCISE OF THE GENITAL FUNCTION.

Much error exists on the physical laws of reproduction among all classes of society, and especially in relation to the consummation of the marriage contract. This requires to be exposed with all the delicacy of which the subject admits, and the precision necessary, and privileged in medical works.

The consummation of marriage ought to be effected with gentleness and moderation, and not with unrestrained impetuosity, as among brute animals; for if it is accomplished with violence, more or less severe pain, laceration, effusion of blood, with inflammation of the external and internal genital organs, will be frequently induced. All obstetric authors, and all writers on medical jurisprudence, attest the truth of this statement. Sir Charles M. Clarke, Dr. Dewees, Dr. Beck, and many other esteemed authorities relate examples, and many have fallen under my own observation. Every experienced medical practitioner is aware, that in cases of female violation, more or less contusion, laceration, hæmorrhage, and inflammation are produced, more especially in cases of very young persons, and when there is much disproportion between the age and developement of the individuals.

When most of these diseases are induced, they are aggravated by the frequent repetition of the cause which

excited them, it occasions excruciating pains, and generally produces sterility and bad health. I might narrate many cases of this kind, about which I have been consulted.

It is also to be remembered, that malformation of the external genitals may altogether prevent commerce, as will appear hereafter in a future chapter.

There is nothing more certain than that precipitation and impetuosity in the consummation of marriage often causes, in the very young or aged individuals, exquisite pain, from contusion, laceration, &c.; and these evils result from more sensual passion than the legitimate object, the propagation of the species. In farther support of this opinion I may add, that the Jews and many ancient nations maintained, that the consummation of marriage ought to be characterized by the effusion of blood; and this is generally the case, but there are many exceptions, as when leucorrhœa or other mucous discharges are present, which relax the external genitals and destroy the hymen. In these last cases, there may be no effusion of blood, on the consummation of marriage, though the individual is a virgin—a fact well known to every scientific and practical obstetrician and medical practitioner.

It is also well known that pregnancy has occurred and the hymen perfect. Again, a woman may be delivered and such cohesion occur soon after as to totally impede sexual commerce; and in certain cases there will be copious effusion of blood. I have known such cases, and have recorded them elsewhere. In fine, the most respectable medical authors have been unable to determine whether women who had been depraved twenty or more years, were not virgins, as the presence or absence of the hymen

is no real proof of virginity. This is the universal opinion of scientific and learned physicians in all countries. This conclusion has enabled me on many occasions to prevent conjugal separations and divorces, and restore domestic happiness. I hold it as an axiom, that it is the duty of every author to inform his species as much as possible, and thereby to give information, diffuse knowledge, dissipate ignorance, and familiarise truth and science.

It is also a general conclusion among physiologists, that repeated conjugal intimacy within a few hours is unprolific, and a mere animal gratification. Abstinence for one or more days, and tolerably good health, are necessary to most individuals for procreation of healthful offspring.

According to most physiologists, morning is the best time for reproduction, that is, after the fatigues of the preceding day are dissipated by repose, and when the majority of healthful individuals possess most virility. Galen well observed, labour, food, drink, sleep, Venus, "labor, cibus, potio, somnus, Venus;" an axiom in perfect accordance with modern physiology. "Cras amet, qui nunquam amavit, quique amavit, cras amet."

As the hygienic precepts, relative to the generative function, are deeply interesting to most individuals, they may be slightly noticed.

1. It should never be indulged in until there is a natural desire and vigorous impulse; and seldom, if ever, before the adult age.

2. It ought to be avoided whenever it produces more than temporary depression of spirits, or the least debility of the moral, intellectual, or physical states, also during

intoxication, mania, and when there is venereal or any other disease of the sexual organs of either party.

3. It ought to be used in moderation, when the individual makes much mental or corporeal exertion, or during recovery from any severe disease, when there is a state of debility, or when restorative aliment, &c., cannot be procured.

4. It ought to be entirely abstained from during the presence of the menses, the child-bed evacuation, which continues for nine, twelve, or more days after delivery, and only used moderately and occasionally during pregnancy, and suckling. It ought to be avoided in all painful diseases of the generative organs. It is also particularly injurious immediately after taking food, and until digestion is completed, which is from two to three hours afterwards.

There can be no rule laid down as to the proper exercise of this function, as this will depend on age, habit, occupation, situation, climate, season, aliment, and numerous other moral, physical, and external influences, which are capable of modifying this function.

Much farther information might be given, though not published, in a popular form, or in our language, on this subject, and much will be found in the account of the morbid effects of sexual abuse in the second part of this volume, and in the work on *Prostitution in London.*

It has been already stated, that nearly all mammiferous animals, with very few exceptions, refuse to admit the male after they are with young, because the great object of nature is accomplished. The violation of this law by the human species often causes abortion, frustrates the view of nature, and seriously injures the health or may destroy the

life of the woman. I have fully described the injurious consequences of abortion, in another work, (*Manual of Midwifery*, Third Edition; and the *Cyclopædia of Surgery*, 1837—Art. Abortion), and proved that women suffer infinitely more harm from abortion than from natural parturition, or delivery. Moderate intercourse may be indulged in with caution and gentleness at all times, unless those excepted, but violence is invariably injurious.

Every pregnant woman is the depository of a new and feeble being, at first imperceptible to the human eye, though the future statesman, philosopher, or emperor, and which is powerfully, though indirectly, influenced by the moral and physical conditions of the mother, or by her state of mind or body. I shall, hereafter, minutely describe the hygiene, or precepts for the preservation of female health before marriage, with a view to woman's well being as well as that of her offspring, and those relative to the function of reproduction, pregnancy, parturition, the child-bed condition, and lactation or suckling.

It would occupy by far two much space in a work of this kind were I to discuss fully the various topics connected with this part of the subject; as, the motives which influence matrimonial contracts, the true source of human happiness, of vigorous offspring, and of a moral state of society. These, and many other questions relating to reproduction, are referred to the moralist and legislator, although they have the most powerful influence on the health of parents and their children; and on this ground I shall briefly notice them as a physician.

The motives which influence the majority of the world in contracting matrimonial unions, are generally false,

selfish and most detrimental to the procreation of sound and vigorous offspring; such as ambition, wealth, rank, title, interest, a love of independence, of an establishment, a desire to escape parental restraint, anger, a determination to disinherit relations, disdain for a faithless lover or mistress, necessity, obligation, passion, imitation, and very rarely the only proper motive, pure and virtuous affection. It is also generally admitted that parental authority cannot reasonably or morally compel alliances when the inclination of the individual most concerned is opposed; although we see too many forced and unhappy marriages which are to be ascribed to this cause.

It is scarcely necessary to observe, that love is implanted by the Deity in human beings, all grades of mankind have felt the power of this passion—it is the same in all—as the poet has it, "*amor omnibus idem*"— or, more strictly speaking, in almost all, for it is alleged that some few have never felt its influence. It is equally powerful in the palace and in the cottage; it is universal, or very nearly so; it glows in almost every breast, and it has been sung by the sweetest bards of ancient and modern times. Its power so strongly attaches two individuals, that no human law or intervention can separate them; for though united to others, they never can be happy, nor their offspring vigorous.

As a general rule it may also be laid down, that parties about to contract matrimonial unions ought to be of the adult age, and in good health.

Man and woman ought naturally to perform the act of marriage when the body has acquired all the developement of which it is susceptible. Nature always tends to perfec-

tion in all her operations, and assuredly a feeble being and one imperfectly grown, cannot be the source of a sound and vigorous generation; while, at the same time, the premature exercise of certain functions essentially debilitating even to individuals fully developed, cannot but remarkably retard the growth and vigour of persons under the adult age, when carried to excess.

Premature, ill-assorted, and late marriages, are highly injurious to the procreation of vigorous and healthful infants, and to public morals.

It is also a fact, that premature exertion of the generative function is most injurious to the health of the individual and offspring. Agriculturists are so well aware of this fact, that they invariably prevent the premature intercourse of the inferior animals.

It is also right to state, that there ought not to be an extreme disproportion in stature between those who engage in matrimonial unions. A delicate, slightly-formed, small woman, whose pelvis is small, ought to hesitate in marrying a large robust individual, as the offspring will be large, produce great suffering in coming into the world, frequently require the use of artificial aid, and sometimes mutilation, while the health and life of the mother may be injured and destroyed. This is the fate of many girls of small stature, who are seduced to become mothers at an early age, as twelve or fifteen years, and of those from thirty-five to forty; both of whom generally purchase the pleasures of maternity at a very dear rate. The hip and other bones which form the cavity through which the infant has to pass into the world are not sufficiently developed in extreme youth; and the ligaments and muscles

which cover them are rigid after the age of thirty-five, in most women. It is also well known that small bitches, when impregnated by large males, sometimes die undelivered; and the same thing happens to many other animals, when greatly disproportioned.

When there is a great disproportion between the reproductive organs, the generative function cannot be performed. Thus, excessive size, thickness or length of the virile member, may render sexual intimacy excessively painful, or indeed impossible for some time, with very young persons, or those of small stature; and cases have fallen under my own observation, in which marriage could not be consummated. See also Schurig. *Gynœcology*. p. 226, Wadel. *Pathology*. Sect. 3. Albinus records a case of divorce against a husband, ob penem enormen. (*Dissert de Inspectione Corporis, forensis in Causis matrimonialibus fallacibus et dubiis;*) and Plater describes a similar one. These, however, are rare causes of impotence or solid grounds for divorce, because a cure can be effected in most cases.

I have also been repeatedly assured that sexual approach had been productive of pain for two and three months after marriage. Infecundity was the result in some cases, and sometimes inflammation of the womb, which was succeeded by painful menstruation, barenness, and finally by cancer, or some of the many other ulcerations of the internal or external genitals. Such cases are fully described in another work.—*Manual of Midwifery, 3rd. edition.*

With respect to the extreme narrowness of the vulva, if there be the slighest aperture, conception may happen,

and the vagina dilate spontaneously during pregnancy, or it may be dilated by instruments or incision. I have collected some remarkable cases of this description in my work on *Medical Jurisprudence,* 1836; and I once attended a similar one with Dr. Ashwell, in Southwark.

It is a fact that the genital function is as imperious in the human species, at a certain period of life, as the digestive, but ought to be exerted at all times with moderation, to preserve health, and procreate healthful new beings. It is well known that rigid continence is seldom observed about the age of puberty, and for years afterwards by the male sex, as the accumulation of the seminal fluid in its receptacles will excite the whole of the genital organs during walking and sleep, and often terminate by spontaneous and involuntary emissions. These, when frequent, as well as all venereal excesses, disorder the mind and body, induce sadness, ennui, disgust at life, extreme lowness of spirits, melancholy, and even loss of reason; whilst natural sexual enjoyment excites and exhilarates vitality, improves the mental faculties and corporeal functions.

It is also important to state, that the baneful habit of exciting the organs under consideration, often arises from disease or a morbid state of remote tissues, at an age when amorous impulse cannot exist, and this self-abuse is too often continued until the adult age.

Infants at the breast, whose sexual organs are so imperfectly developed, and who can have no sexual desire whatever, often contract the habit of frequently touching these parts. This apparent phenomenon is easily explained by

physiology. The sexual organs are lined by a mucous membrane, similar to that which covers the lips, throat, intestines, and lungs; and irritation in any point of this membrane may derange every part of the body, which is covered or lined by a continuation of it. There are few infants who do not suffer from irritation in some part of this membrane, induced by numerous causes, as teething, improper food, or cold; and the effect will be irritation or inflammation in the eyes, ears, nostrils, throat, lungs, or stomach and bowels, and also in the genital passages, as every one of these parts is covered by mucous membrane.

But the habit of touching the genital organs acquired in infancy, often continues to the age of puberty, when these parts become more developed and highly sensitive, and render it almost inevitable. In other, and unfortunately in most cases, this habit is learned by example or intuition, more especially by allowing grown persons or adults to sleep with children, or by the depravity of some who have the care of children and youth as servants, ushers, or tutors in schools or families, or those contaminated by it. The bad effects of it on health, on the mind and body, and especially on the source of human existence, have been forcibly described by physicians of all ages and countries. (See *Prostitution in London*, &c., already referred to.)

There is not a mother or a nurse who must not have observed the virile member of male infants in the cot or cradle, capable of erection, from the presence of urine in the bladder, or by the slightest physical irritation of that organ.

Again, we observe children before the age of puberty, and when no sexual desire can exist, instinctively manipulate certain organs, and some who even make attempts at sexual approach; and hence it is an established custom in all well regulated families and schools, not to allow those of the same or the opposite sex to sleep together.

It is a common and scandalous custom among the Italians of the present day to allow their grown daughters to sleep in the same bed with their parents, which is the more improper and indelicate, as from the warmth of the climate, they can bear but very slight covering on them in bed, and they are in consequence very frequently in a state of nudity. (*Moore's Marriage Customs of all Nations*, already quoted.)

Sensibility or irritation in the mucous membrane lining the mouth, throat, gullet, stomach, bowels, or genito-urinary organs, is the exciting cause of the vile abuse alluded to, and is induced by too stimulating and improper aliment, as ardent liquors of any kind, spiced meats, &c. The effect of this irritation is manipulation of the generative organs in either sex. Female infants are equally liable to irritation or itching of the external genitals; numerous examples of which I have repeatedly observed in hospital, dispensary, and private practice. Muco-purulent discharge is the result, which has been often mistaken by the ignorant for gonorrhœa. (A full account of the muco-purulent discharges of female infants from birth to puberty will be found in my *Manuals of Midwifery and Medical Jurisprudence.*)

It is, however, at puberty, that the genital organs suddenly and astonishingly develope, that touches and mani-

pulations are instinctively practised, and lead to masturbation or self-pollution.

The natural excitement of the organs at this age is succeeded by the secretions of semen, and the menstrual fluid, which produce the most extraordinary physical and moral changes, as will be described in the chapter on puberty. All the characters of childhood are lost: there is great amorous impulse, and those who have already experienced it, too often initiate children in the delightful but baneful habit of artificial excitation. This is most prejudicial to children, adolescents, adults, and, in a word, at every period of life. The habit is indulged to excess, and then enfeebles both mind and body. It may be practised almost at all times, both day and night, and produces much more debility than natural enjoyment at the adult age, while it induces a host of diseases.

This unmanly vice often excites in young persons the greatest antipathy and disgust to natural enjoyment, until the adult age renders reason more mature and perfect. The bad effects of unnatural excitement will be more fully noticed hereafter, and I have been repeatedly consulted by adults, who were initiated as early as the sixth year by servants, whom they censured in the strongest terms. I might cite numerous examples about which I have read or been consulted. This destructive habit is unfortunately too common in many schools, colleges, and in all places in which a number of youths or unmarried persons are congregated. "It is the contagion of scholars." How, necessary, then, is it for parents, and those who have the guardianship and instruction of youth, to preserve

them from contamination, and to watch them closely! They ought never leave them alone, or in company with older children, companions, or servants. What a responsibility is imposed upon instructors, who really possess the most powerful influence over the welfare of a large portion of the present and future generations! They ought never allow two children, even of a tender age, to sleep in the same bed, but prevent it without assigning any reason; or two scholars to remain too much together, or to be constantly in company with each other in lonely situations. In fine, parents and those who have the charge of children ought to observe most carefully the changes in the physiognomy, hereafter described, which result from the baneful, unmanly, and inhuman habit under consideration. (See *Copeland's Medical Dictionary*—Art. *Age*. See also *Prostitution in London*, &c.)

Every effort should be made to suppress this unnatural, sinful, and degrading vice. The best means of prevention are moral restraint, and physical exertion taken to fatigue, amusements in the open air, active employment, moderation in diet, temperance in drink, and a proper use of sedatives at bed-time. The perusal of all immoral works, and the inspection of immodest pictures should be avoided. But of all means, religion is the most effectual in restraining and correcting this vicious habit.

It is lamentable to observe the gross immorality of children on the approach of puberty. In August, 1836, four boys, each of twelve years of age, were accused at the Mansion House of theft, and each had his concubine. Such boys present themselves almost daily at our hospitals

and dispensaries, labouring under venereal infection ; and we see abandoned female children on the town, apparently no more than ten or twelve years of age. (See reports on *Prostitution in London*, 1839.)

Nature is thus outraged, and one of the noblest faculties of our species debased below the level of the brute. Incalculable is the suffering thus inflicted upon these unfortunate creatures. Incalculable is the mischief forced upon society by the example here produced.

Distressing as this statement must be to every virtuous mind, the evil does not rest here. It is impossible to calculate what extent of suffering is communicated to the youthful profligate of the female sex, by the poison of disease thus thrown into the mass of the population. In addition, there is the immense injury sustained, in a moral point of view, by the example thus afforded to the rising generation. If the reports of the London Criminal Courts are carefully examined, it will be found that nearly two-thirds of those convicted of outraging the laws of their country are connected with the keepers of brothels, who are the encouragers and promoters of theft, dissipation, and every species of crime.

What revolting scenes, too, do we daily witness! To be deaf to the obscene language vociferated, or to be insensible to the dreadful practices adopted by the most abandoned of these creatures, is impossible. Will parents attempt to deny that their sons and daughters are not liable to the contaminating effect of the example thus openly placed before them?—or that a high responsibility attaches itself to them to endeavour to eradicate this alarming evil?

To prevent such evils, premature marriages have been recommended by some writers, though these are highly objectionable, and injurious to the well-being of offspring as well as parents.

CHAPTER V.

PREMATURE AND LATE MARRIAGES.

PREMATURE MARRIAGES.—The most deplorable consequences are produced by precocious marriages. "Precocious marriages," says Aristotle, "oppose a good generation; for in the entire animal kingdom the fruits of the first signal of reproductive instinct, are constantly imperfect, and have not any well established form. It is also the same with the human species: and the proof is evident, for precocious marriages procure small and contemptible men." M. de Fontaine, chief surgeon to the late king of Poland, attributed to the premature unions of the Polish Jews, the extreme physical debility which characterised them and their progeny. Montesquieu affirmed that the fear of military service caused a great number of young men, almost of the age of puberty, to enter into matrimonial connexions; that these unions, it is true, were fertile, but that the diseases, and misery which they produced greatly diminished the population of France.

Precocious sexual intercourse greatly debilitates the moral, intellectual, and physical power of both sexes, and predisposes the female to abortion and disease.

Premature marriages have been advocated on the

grounds of morals, for the prevention of libertinage : but I agree with Frank, Mahon, Marc, and others, if there be no other means than marriage to restrain youth until it becomes vigorous at manhood, we can only lament the issue of beardless fathers. Moral and religious impressions are more rational means ; and seldom does the fear of debauchery lead to early marriages, which generally take place from motives of interest or ambition. Louis XI. cohabited before the age of fourteen with his queen, who was not twelve; and, in the opinion of M. Marc, his effeminate and ferocious character depended, in some degree, on the exhaustion of his nascent powers. This able writer observes, in addition to the preceding remark, " It is to be desired, for the prosperity of states, that sovereigns should be the first to perceive the importance of the reasons which are opposed to precocious marriages. A man elevated by birth to rule the destinies of a nation, ought, to render it happy, and to be so himself, reunite physical vigour and moral power in an eminent degree; so that his progeny should sustain and enjoy the same corporeal advantages as himself. A precocious union forms the greatest obstacle to the accomplishment of these views." (*Dict. des Sciences Med.* Art. *Copulation.*)

It is impossible for a physician to determine, as a general rule, the proper age for marriage, so much depends upon constitution, climate, and other circumstances already noticed, and therefore the age must vary.

Premature marriages are exceedingly injurious to the health of both husband and wife, and the cause of weak and enfeebled offspring, which seldom arrive at maturity. It is well known to agriculturists, that when cattle breed

too early, their young is not worth rearing. The laws of all civilized countries are against early marriages. Their bad effects are thus graphically described by Mr. Roberton, of Manchester. "In large towns, and in crowded manufacturing districts generally, marriage, and the vicious union of the sexes, at a premature age, are extremely common. When to this we add unwholesome scanty food, confinement to labour from an early age, and unhealthy employments, we cannot hesitate to conclude, that the progeny of such parents will be of more delicate organization than that of grown people, whose physical powers have been fully and naturally developed."—*Observ. on the Mortality and Physical Management of Children*, 1827.

In a work by M. Dupin, entitled, "*Productive and Commercial Powers of France*," it is stated, according to a return to the Chambers, in 1826, presented by the Minister of War—that of 1,033,442 youths, there were 380,213 rejected, because they were under five feet one inch and three-fourths (English) in stature. This distinguished author attributes this diminution in size to the wars of the revolution having destroyed the virile part of the inhabitants, the consequent unions between old men and young women, the premature marriages of young men to escape serving in the army, the inferior food of the working classes, the encouragement to licentiousness afforded by the Foundling Hospital, and various other causes.

It was held, by some writers, that the age of puberty was intended for marriage; that animals copulate at this age; and that therefore nature points out this time for propagation.

In reply it is urged, with more reason, that neither the mind nor body of man has acquired its perfectibility for many years after puberty; and that the sexes at this age could not perform all the duties of parents efficiently. Common sense and observation are opposed to the opinion, that a giddy youth at the age of puberty, with down on his chin, could communicate a perfect vitality to offspring, or discharge the paternal duties required for the physical education of infants.

The same objection may be urged against a girl at puberty becoming a mother; and, in addition, that the disorders of pregnancy, the fatigues of labour and of suckling, would be much more than her constitution could sustain. Conjugal unions at this age, before the moral and physical states are developed, would also be influenced by impetuous and ungovernable passion, and the facilities of prolonging it would lead to satiety, disgust, debility, and sterility.

Early marriages are admitted, by moralists and physiologists, to be serious evils. The author of "Marriage" makes the following very judicious remarks on the subject:—

"Very early marriage is, in our opinion, a serious evil. Acting under the impulse of headstrong passions, or caprice, or dissatisfaction, young persons too often prematurely rush, thoughtlessly and blindly, into engagements which, in after life, become matters of deep and painful regret. The fairy visions of love's paradise now vanish; and the sober realities of life, its cares, its difficulties, and its positive evils soon lead to discontent, heartless repinings, and, worse than all, to a growing mutual indifference.

Would that such cases were either rare, or only speculative; but the fact is otherwise. We every day see boys and girls at the head of families, who want discretion to direct themselves. No wonder that families are ill-governed, children ill-managed, and their affairs ill-directed, when the elm is entrusted to unskilful and inexperienced hands. Is it possible, we would ask, that wives of sixteen, or eighteen years of age, should possess that discretion, prudence, and wisdom so essential to enable them to govern households, rear children, and form their tempers, and their principles? It would be well if young wives were humble and modest enough to place themselves under the guidance and direction of some prudent well informed matron, as their friend and mentor. But of this enough. A settlement in life offers an immediate exaltation in public opinion, independent of moral worth, or virtuous conduct. It is a rank obtained without exertion, and preserved, too often, independent of virtue.

"From these observations we are unwilling that it should be supposed that we advocate marriages deferred till fortune shall have been acquired, or rank attained. On the contrary, we believe that such marriages seldom realize the anticipations which are formed of them. If an age must be stated below which marriages ought not to be contracted, we would fix it at twenty-five for men, and twenty-one for the female sex. This would find each party in the full vigour of all their energies, with some moderate acquaintance with the world; and with some experience and discretion in the management and guidance of family affairs. When marriage is unreasonably deferred, the heart losing the elasticity of youthful ardour

and hope, becomes blunted by the vexations and disappointments of life, and is seldom the subject of disinterested love, and genuine affection. The tastes, habits, and feelings, then become settled and fixed, are little disposed to accommodate themselves to the peculiarities of others." (*op. cit.*)

The assertion is not true, that animals copulate precociously; those in a state of nature seldom do, and the few that are domesticated are the exceptions.

The ancient legislators and philosophers opposed early marriages. The laws of Lycurgus enacted that men should not marry before the age of thirty-seven, and women not before the age of seventeen years. Xenophon and Plutarch explain the spirit of these laws, on the grounds that they were intended to secure the most vigorous offspring, and powerful population. Aristotle held that a husband ought to be twenty years older than a wife: he ought to have said ten, as the former disparity is now properly considered too great.

Plato assigned the period for propagation to man, from the age of thirty to fifty-five, and to woman, from twenty to forty years; and he held that all infants procreated under or over these periods ought to be consigned to infamy. Every day's observation proves that he was in error, as vigorous infants are propagated much later than his prescribed periods.

Some of the Athenian laws permitted women to marry at twenty-six, Aristotle fixed the age at eighteen, and Hesiod at fifteen. The season most favourable for marriage, was, according to the Athenians, when there was a

conjunction of the sun and moon, at which time, they celebrated the marriages of the gods.

The Jews regarded girls to be marriageable at the age of twelve years; but their laws were suited to warm climates, and would be inapplicable to temperate or northern regions, in which puberty does not occur at this early age.

"The law of Germany renders it illegal for any young man to marry before he is twenty-five, or any young woman before she is eighteen; and a young man, at whatever age he wishes to marry, must show the police and the priest of the commune where he resides, that he is able and has the prospect to provide for a wife and family." —(*Magazine of Natural History.*)

There must be some mistake in this statement, for I find, on inquiry from natives of Germany, that persons under the adult age may contract marriages, provided the husband is able to support a wife and family. The magistrate will not certify for any individual, under age, of whatever rank, unless on this condition.

The ancient Germans entertained great respect for the fair sex. The fine for baring the arm of a free woman against her wish was fifteen shillings, which was as much as for cutting off the finger of a man; and if a man touched her bosom, he was fined forty shillings, which was the amount for cutting off the nose or three fingers of a warrior. A kiss snatched from a female without her consent, was punished by exile; and if with her consent, but without the knowledge of her husband or brother the fine was three marks of silver.

During the spring of 1837, a man prosecuted a woman, at the Surrey Sessions for having bitten off his nose. Her defence was, that he forcibly kissed her without her consent. The judge said she was perfectly justified in biting off the prosecutor's nose for his offence.

The Arminian and Georgian children are married during infancy—a political precaution which preserves them from being sent to the emperor's seraglio or the harems of the grandees; but cohabiting is not allowed until a suitable age. The custom of such marriages is, however, by no means general.

The Brahmins marry their children very young, especially the affluent portion, some at the eighth year, and others at the fifth.

The Tonquinese are greatly opposed to celibacy, and maintain that it is as criminal not to give life to what has it not, as to take it from those who already enjoy it.

The Calmucs betroth their female infants before they are born.

There is no country in Europe in which early marriages are more common than in Ireland. This arises from the proverbial chastity of the women, the rarity of seduction, and illegitimacy, the severe denunciations of the Roman Catholic clergy, the personal danger of women from their brothers and other relations for such offences, and the utter ruin of the women for having disgraced their family; unless their seducers marry them, which they are generally compelled to do, both by their clergy or relations. There is also another strong reason which will appear by the following testimony of witnesses of different religious persuasions, and political sentiments, which is compiled and

abridged from appendices, A, D, and F, to the reports of the Commissioners of Irish Poor Inquiry, 1836. The assigned reason is poverty, but the true causes are those already assigned. The Irish are proverbially a chaste yet amorous people; licentiousness, prostitution, seduction, concubinage, adultery, and infanticide are rare crimes amongst them, and these are avoided by early and virtuous marriages—which are in strict accordance with nature, though often injurious to health, population, and national prosperity—on account of the artificial state of civilized society. The Roman Catholic doctrine enforced from the pulpit, in books, and in the confessional is, that impure thoughts and words are sinful, and generally lead to violations of chastity, and this has the most powerful influence in preventing licentiousness, seduction, illegitimacy, and destruction of female virtue and happiness.

The evidence and other information collected by the assistant-commissioners upon the state of the poor of Ireland, fully confirm the truth of the important principle, which has been found the same in all ages and countries—namely, that the only effectual check to surplus population (that is, to the progress of population outstripping that of employment and comfortable maintenance) is the attachment of the working classes to the comforts and decencies of civilized life. That barrier once removed, and the hopes and ambition of the labourer confined, as in Ireland, to the mere absence of hunger and cold, and, as is shown by the evidence subjoined, the labouring population will be found marrying when little more than children, although without a blanket to cover them, or a potatoe for their next day's meal, reckless improvidence and callous

despair, thus filling the land with hopeless destitution. The evidence proves that the sons of the farmers, and even the few of the labourers who are in better circumstances than the generality of their class, are much more cautious in contracting marriage than their poorer brethren, and that they wait until they meet with a woman who has also some little property or other means of assisting to maintain a family. In short, it appears quite certain that in every part of Ireland the more destitute the labouring population are, the more recklessly, nay, the more eagerly, and at a much earlier age, do they marry. A very remarkable instance of this disposition will be found among the evidence which follows, in the case of the district of Ballintemple, in Sligo, where the continual drifting of blowing sands has buried the land and all but the roofs of the cabins, the inhabitants having now no access to their dwellings but by a ladder through the roof or chimney, and subsisting upon shell-fish and seaweed; notwithstanding which they are marrying and increasing their numbers as fast as in other places! It must, however, be mentioned, that the labourers themselves give other reasons for their desire to marry, and that those reasons would really seem to be well founded in the present lamentable state of Irish society. They say that their only means of support in old age, or in illness and under infirmities, are their children, and that they, therefore, marry young in order that their children may be old enough to maintain them, before their own strength begins to fail, which, in consequence of insufficient food, clothing, and other hardships, takes place at a much earlier age than in Great Britain. Their wives and children can also beg for them

when they cannot procure employment, and their potatoe crop is consumed, which the pride of the men would prevent them from doing, besides the "small luck" which would attend an able-bodied man as a mendicant. "Without wishing to detract from the reputation of Irishwomen for chastity, we may add, that this universal prevalence of very early marriages is surely quite sufficient to account for the alleged superiority of the Irish peasantry in this respect, over the labouring classes in England and other countries."

Any one who knows the character of Irishwomen must object to this conclusion. It does not apply to one-tenth, even of the lower classes, who are influenced by the motives and causes, which I have already given in this chapter. Early marriages are very far from being general among that, or any other class of society, according to my own observation.

Labourers say, that the poorer a man is, the earlier he marries. Waldron (a labourer), who concurs in that opinion, adds—"the young man says to himself, I am here under the lash of my father, and there are seven or eight children on the floor with me, and I am starving along with them, and striving to earn for them, and it is little use to strive—we are in misery together; so I will take up with some girl, and I will have a house of my own, and we will live for ourselves,—the longer I am waiting the worse I am getting. Another man has a grown up daughter and a large family besides; so he will think with himself, I must shift for the weak ones, I will try to get some one else to do for her, and the sooner the better. The girl is as anxious as her father, and the young man sees that

he can get no good by waiting, so they marry without any fear of being worse off than before; for when he has no work, if he is ashamed to beg himself, the wife and children will beg and support him: or, if he choose to take a fling out of the country to some other part of Ireland, or to the English harvest, they will support themselves by begging till he comes back." In Sligo, Dr. Langhead states, "the most destitute are the most reckless in contracting marriage, under a belief that nothing can render their situation worse. I frequently attempt to show them the folly of their conduct, but their answer is, that they trust in God, and that they can but go out (beg)."

In the county of Clare, M'Mahon, a labourer, stated, "It is always the poorer man that marries first, because he knows he cannot be worse off by it; it is better for him to marry early than to seduce the girls, who are so poor and wretched that this would often happen. Besides, we poor people have a strange idea that it is a good thing to have children as soon as possible, to help to support us when we begin to grow old." In the county of Cork, the Rev. Mr. Barry, Roman Catholic curate of Scull, observes, "Early marriages are very common here; I have married boys of sixteen, and girls of fourteen or fifteen, and many from sixteen to twenty. It arises in part from the facility of setting up establishments, and in part from the wretchedness of their condition. When a servant boy is with a farmer, he says to himself, I have no one to wash, make, or mend, or do any thing else for me, and I may as well have a wife to keep house; we will be able to make out life some way or other, and I do no more now." The following cases were mention by the labourers present,

to confirm this statement:—"John Baskum, a servant boy of sixteen, married a girl of seventeen. He had hardly as much as would cover his skin; they had scarcely bed-clothes to cover them; he is badly off now, but he could not be worse. Daly, aged seventeen, married a girl of sixteen,—they were both servants; he was not sixpence above a beggar." Mr. Barry adds, "He had not four-pennyworth of furniture in his cabin." "James Helan, seventeen, married a girl of the same age, though he was hardly able to cover himself. Fitzgerald, a poor servant boy of seventeen, married a girl of seventeen; they are as poor now, and cannot be worse." Mr. Barry endeavoured to dissuade Fitzgerald from marrying, but he would not listen to him, saying, "I cannot be worse than I am." In Kerry, the witnesses stated that "parents who have a grown up family and but small means, are in favour of these premature matches, to throw their children upon their own resources, and that the virtue of their daughters would be otherwise endangered. A girl in the poorest class is always ready to marry; it takes her out of other people's mouths, that is, removes censure; she has also another motive,—she wishes to have children to support her in her old age. In fact, poverty is not only the consequence of early marriages, but still more frequently the cause of them. In one instance here, a woman had an illegitimate child with a view (as she herself stated) of having somebody to look after her, when she was too old to take care of herself." In the county of Donegal, the labourers stated as a reason for marrying so early, "We cannot be worse than we are, and probably our children will be a good support to us." In the county of

Londonderry, Millar, a beggar, observed, "A poor man ought to marry young, that his means (children) may be able to assist him when he grows old." The poorest always marry first, added the witnesses, and often borrow the money for the marriage fees: the only requisite there is, is to get a shelter for the night. In the county of Sligo, Dr. Kenny stated, that "the labourers say, 'If God give us a family, and we marry young, our children will support us when we are beyond work; but if we did not marry soon, we should be broken down before our children should be grown enough to support us.'" In the county of Westmeath, the Rev. Mr. Gibson, Presbyterian minister, observed, "The poor consider that when they have brought up a family they have made a provision for their old age." In many places poor single women, widows without children, and even crippled beggars, were found to seek and bring up orphan or deserted children without any remuneration, and merely with the expectation of having some one "to assist them in their old age." Want of employment is also thought to assist in producing early marriages, as young men who have no work lounge about and become acquainted with females at fairs, markets, funerals, &c. In Donegal, Patrick M'Diarmid (cottier), stated, that "men who are employed have not so much time to mix with females: in the north, where the people have more work, they do not marry so young." In Tipperary, Mr. Mullins, a weaver, said, "Idleness (the want of work) is the cause of early marriages. If a man had employment to keep the devil out of his mind, he would not be talking to women in the town." In the county of Cork, the witnesses mentioned, that "there were many

houses where the lower classes met to drink and dance, which led to many early marriages. Many such unions were also contracted at fairs, in the heat of the moment."

Mr. M'Henry says, "A comfortable farmer's son is very slow to marry; he not only marries late in life, but he always waits until he gets a girl with a fortune; below the class of middling farmers, unmarried men above twenty-five years of age are very uncommon in the country."

King's County, Barony of Philipstown.—"It was the general impression that many persons marry from the conviction that their condition cannot be made worse, and that those who are a little above the wants of a labourer or a cottier are more cautious of marriage."

County of Armagh, Barony of Lower Ferns.—"I know a man, and the age of his father and mother put together the day they were married did not amount to thirty-one."

Many other causes are assigned for the populousness of Ireland. Sir John Davies ascribed the infinite multiplication of the people to living on the milk of the cow. Lawrence, to the great plenty of provisions; and Malthus concentrates his rage against the use of potatoes. These are samples of the philosophy on Ireland. The chief remedy is late marriage, and we shall now examine its value.

LATE MARRIAGES.—Late marriages are also highly detrimental to the welfare of society, and especially those between persons of a very advanced age. Fecundity cannot follow after the woman has ceased to menstruate; but there is no age at which we can declare man to be absolutely

sterile. These facts do not, however, oppose the general rule as to the proper age for marriage, though a man or woman at a very advanced age cannot fulfil the real end of this union, the procreation and physical education of the species. Thus when two aged persons, deprived of the faculties necessary for generation, marry for the purpose of affording mutual cares in old age, and sweetening the last years of life, there is no inconvenience to society, except that of favouring celibacy, and deferring conjugal union to a period when it is useless to population. But when the woman is not beyond the term of fecundity, the consequences of late marriages are often very serious. She may be barren, which is frequently the case, or she may become pregnant at a period of life when the rigidity of her fibres may not readily yield to the efforts of parturition. Such is often the condition of women between the age of thirty-five and forty: they suffer severely during a first labour, their lives are endangered, and often destroyed. If they become mothers, their offspring is often extremely debilitated, or when the parent is still more advanced in age, her infant is often destroyed at the portal of life, or, if born, it inherits the languor of its progenitors, it becomes an orphan before it is reared, it remains a charge to the public, if there is not a property left to render it independent. When marriages are contracted between persons of a disproportionate age, they are usually followed by great immorality. The power of fecundity ceases with one party, while it is continued with the other. These unions, therefore, give less infants at one time than at another. It is also a matter of observation, that in many instances young women bear no children when united to old men,

though they often become mothers on future marriages. Another evil consequence of this class of late and ill-sorted marriages is the physical debility of infants; for the youth of the mother is counterbalanced by the languor of the father.

Conjugal union between a young man and an aged woman causes bad effects upon the social order, for it is a kind of sanction for concubinage. Man can engender to an old age, but woman is sterile after the cessation of the menstrual function. These marriages generally take place on account of pecuniary, or other worldly considerations: they lead the husband to debauchery, and the wife to all the excesses of jealousy. They are, therefore, injurious to society, and to the increase of the population.

The laws of ancient nations on late marriages merit notice. In Sparta, when a woman brought a fortune to an aged and important man, he was compelled to permit her to choose an adjunct to his family. In Italy certain ladies stipulate for their cecisbeo and cavaliere servanti, and in Spain for cortejos or individuals with similar privileges.

According to the Roman law in the reign of Augustus, men who were more advanced in life than sixty years, and woman than fifty, were not allowed to form matrimonial unions. Numerous other examples might be given of laws against late marriages. (For ample information on the different ages proposed for marriage, see Moore's Marriage Customs in all Nations, already quoted).

Conjugal unions should be entered into with the natural liberty of choice. Young persons form attachments which neither parental authority nor any other consideration can prevent or destroy. But as a general rule, the consent of

parents ought to be obtained; and it never should be withheld when there is mutual love and affection, and an adequate support for the parties and their offspring. Parents often refuse consent on the score of interest, ambition, rank, title, family connexion, and lucre, and compel their offspring to marry against their own inclinations. The most unequal unions take place; the wife might be the daughter of the husband, or the husband the son of the wife; and the usual results are domestic misery, unhappiness, jealousy, infamy, premature or perhaps criminal death.

It has been long remarked, that old men generally beget infirm, delicate infants, as well as those persons who are affected with syphilis, scrofula, gout, phthisis, &c. These, and many other diseases, are transmitted to the offspring. Every one knows that children generally resemble their parents in features, limbs, and dispositions, so that the moral and physical condition of parents are also transmitted to their offspring; although in some cases family resemblances are not always the most striking.

"As parents would sin grievously who should not leave marriage to their children's free choice and deliberation, as it is their own personal engagement, so children sin morally against the respect and obedience which they owe to parents, if they marry against their consent, or without their advice, unless the parents' opposition be notoriously unjust."

There never should be a very great difference in the ages of those who are about to form conjugal unions. The authority of parents, guardians, and the conductors of schools, should be exerted over those under their care,

more especially when youth have little acquaintance with the world. Inconsiderate and rash unions are often effected while young ladies are in scholastic establishments.

They should discourage visits, private interviews, and all familiarities, unless an honourable intention of marriage is declared in the presence of a competent witness, for otherwise such a line of conduct is contrary to the rules of decency, good manners, and religion, and gives scandal to others.

A continued familiarity between young persons of different sexes necessarily produces attachment and love, or excites amorous impulse, which often leads to female dishonour and ruin.

CHAPTER VI.

MARRIAGE IN ITS MORAL RELATIONS—HAPPY AND UNHAPPY MARRIAGES.

Of all temporal evils, an unhappy marriage is the greatest. It is the source of confusion, misery, and vice, of a bad education of children, of bad citizens, and of a violation of every duty. No one, therefore, ought to engage in this contract without the most mature deliberation and a virtuous intention.

One marries for love or sensual gratification, which he imagines will be perpetual; but this passion is soon subdued or extinguished if founded on beauty or other fading qualities. Another embraces this state for fortune, splendour, title, and so on; and he too, will, in general, be

disappointed. Most persons expect happiness, pleasure, wealth, &c.; but disappointment is the commonest result. Marriage, unless based on religion, virtue, and nature, is seldom happy.

Unsuitable marriages among persons of different ranks cause dissensions among families, and are generally unfortunate. Persons usually prefer individuals of their own age, disposition, rank, and fortune; though, from instinctive feeling and worldly motives there are exceptions.

Nothing is more dangerous than great contrasts,—than, to use the words of the poet, "the union of January and May."

Again, a masculine woman disgusts a man who compares her to himself. In like manner, an effeminate man, in place of being preferred by women, is despised. The best mode of establishing ardent love between the sexes is, that the woman should be feminine and the man masculine. If all conjugal unions were assorted after the dictates of nature, or the secret instinct of sympathy, nothing could, without doubt, be more delightful and lasting than the bonds of hymen. By these well-assorted, natural proportions, both sexes become certainly better and more perfect; the mutual abandonment of one to the other forms one being in two bodies, it doubles the sentiments and life, cares are lessened by participation, and pleasures are rendered more vivid and exquisite.

A husband or wife who is virtuous, prudent, and well informed, will be the greatest comfort, support, and treasure.

The chief characteristics of a good husband or wife are

piety, love, meekness, reasonableness, application to duties and a love of home, "sweet home."

It is not easy to find such individuals. A philosopher compared a man going to marry to one who was about to put his hand into a sack, in which were ninety-nine serpents and one eel; the moral of which is, that there are ninety-nine chances to one against a fortunate selection.

He might have urged, with much more reason and sense, that a thousand times more chances were against the female sex.

Men have more acquaintance with the world, and are, I am convinced, infinitely more depraved than women.

A good husband or wife is rarely found in highly civilized countries. The reason is apparent, because few strictly follow or adopt the divine precepts of Christianity.

According to these, marriage is a holy and inviolable union, an honourable alliance, a sweet society maintained with constancy, a mutual confidence, a continual chain of good offices and duties mutually paid, a reciprocity of chaste affections, perfect friendship, will, inclinations, interests, and goods. The principal obligations of the parties are love, fidelity, the healthful propagation and proper education of children, and constant care of temporal affairs.

The first duties of the married state are mutual love and affection. This state is the closest alliance and union in hearts, bodies, and concerns.

Mutual fidelity is the second great conjugal duty, which those entering into matrimony vow before their Creator. A marriage, without mutual love, is the most unfortunate; for a perpetual cohabitation with one whose person and

conversation are disagreeable, and who is an object of aversion, conjoined with the thought that a divorce only or death can be the deliverance, renders such a union much more uneasy than can be expressed or described.

Every imperfection, capricious temper, vanity, folly, &c. appear in the married state. The demeanour towards the world is agreeable and obliging; but, in domestic life, the mask is thrown off, and an individual appears such as he or she really is. Hence it is incredible how much a wife has to bear from a husband who is capricious, haughty, choleric, dyspeptic, and intractable; or what a sensible husband has to endure from a silly, unreasonable, and intractable wife.

It is difficult for married persons to acquire each other's tastes, feelings, and opinions. Patience is an indispensable virtue to this state. No one is free from imperfections, both of mind and body: and both husband and wife will have to bear with, and often to forgive, each other.

Unhappy marriages are seldom fecund, and hence opposed to the increase of population.

The chief end of marriage is the propagation and education of children, and bringing them up with piety and virtue, so as to be dutiful to parents, and good citizens. The second end is affording mutual society and comfort in the various transactions of life.

Every prudent individual should endeavour to become well acquainted with the disposition of the woman whom he thinks worthy to be his companion for life, and the mother of his offspring. He should ascertain her temper and peculiarities, and decide whether they are similar or suited to his own,

"A captious, peevish spirit; a mind full of suspicions, and easy of offence; a temper sour, fretful, passionate, ever on the watch to find fault and to express dissatisfaction, which no attentions can satisfy, and no efforts please; rude in its language, scornful in its expressions, and unreasonable in its requisitions, treating the old with disrespect, and the young with hauteur;—these are blights and deformities of character, for which no other qualities can adequately atone or compensate.

"Nor is it only the *quality*, but the *general similarity* of temper which must be regarded. Where strong affection prevails, a spirit of accommodation will prevail also. But it is not desirable that the spirit of accommodation should be subjected to very frequent, or very rigorous experiments.

"Should the wife, unfortunately, be allied to a husband of irreligious character, it is incredible how powerfully his heart may be won over to the love of Christianity by the gentle and peaceable demeanour of his wife; whose virtuous deportment, suavity of manners, and diligence in duty, united with humility and unobtrusiveness, cannot fail to render her both respected and beloved; whilst they forcibly recommend, and beautifully illustrate, the loveliness and the influence of that religion, which produces effects so holy, excellent and attractive.

"A fretful temper is its own tormentor, but it is also a tormentor to every one around, and to none more than to the husband, or the wife, who may be exposed to its influence. No day, no hour is secure. No incident is so trifling, but it may be wrought up into a family disturbance. If it be commanded 'that all bitterness, and wrath,

and anger, and clamour, be put away,' surely the injunction has an increased obligation on those, whose interest as well as duty it is to obey it."

The cares of married life are undoubtedly many. The husband and wife are not solitary individuals. In their welfare are bound up the comfort and well-being of many dearer to them than their own individual comfort. In them is centred the hope, and on them rest the confidence, the prosperity, and happiness of family and friends. Exposed to the daily mortifications, disappointments, and perplexities of the world, it is not marvellous if care clouds their brow, or anxiety wounds their hearts, and therefore their sorrows are numerous. They have their many conflicts with the troubles of this world; they have their corroding cares, sleepless nights, and anxious days; sickness will invade their dwelling. But, it may be asked, is celibacy always "a life of single-blessedness?" have the unmarried no cares, no sickness, or no wants? and if they can plead no prescriptive right of exemption from the common lot of man, upon what bosom can they pillow an aching heart, or into what ear whisper their many sorrows? what friend will sympathise, with cordial disinterestedness, in all their varied woes?

The marriage union is the most important of any we are capable of forming in this life, and it is not our own happiness alone, but that of others also, which is affected by our conduct in it. It is a union, not merely constituted with a view to the reciprocal benefit of the two individuals who contract to form it, but exercising likewise a paramount influence on the manners and happiness of society at large. It is, therefore, a matter of the deepest importance that

the duties and obligations of our domestic and social relations should be accurately defined, and duly impressed on the hearts and consciences of mankind. It is on a due understanding, and a faithful discharge of these duties, that the happiness of the parties themselves, and the prosperity and welfare of the present and future generations depend.

It is for these reasons that marriage is an indissoluble contract, which cannot be broken on account of caprice, interest, or other motives. Were it a civil contract only, men would be at liberty to part with their wives as they would with their cattle, and encouragement would be given to vice, immorality, and domestic disunion.

"Let us also contemplate how seriously such a state of things must operate on the well being and comforts of the innocent children. Deprived of a father's support, or a mother's care, abandoned, in all probability, to the care of servants, destitute of education, children would then be left to the mercy of the world, to the supplies of accident, to the charity of the street, to the bleak and desolate waste, to the frozen hospital, to the inclemencies of the sky,—to pine with hunger, to chill with nakedness, to linger with disease, and to droop with unkindness. Unrestrained by moral or religious considerations, it is to be presumed that they would follow, with too true a zeal, the vicious course pursued by their guilty parents. The limits of virtue and vice would become undistinguished; and the respectability, stability, and honour of character which married life confers on individuals, would be henceforth sought in vain. The guilt of the parents would thus find its consummation and its punishment in the profligacy, dishonour, and

misery of their degraded and wretched offspring."—*Op. Cit.*

When individuals are aware that the situation in which they are placed is only terminable by death, they are obliged to bear with patience the troubles and vexations of domestic life—and this is in most cases a wise ordination. As a civil contract, the parties are at liberty to choose and to deliberate as to their future connexion; it leaves to their own discretion the time, circumstances, prudence, and propriety of their union. But when once that union has taken place, no earthly power possesses the right to suspend or to dissolve it, on grounds of mere *convenience, caprice,* or *pleasure.* According to our laws, marriage may be dissolved on the grounds of adultery, by either party, or cruelty on the part of the husband: and divorce is considered an admirable palliative for the evils of conjugal life. It may, however, be as fairly considered an encouragement to conjugal infidelity and immorality. Were divorces generally obtainable, which they are not, on account of the great expense attending them in this country, society would fall into disunion, disorder, and crime; licentiousness would be general, and the world exhibit one mass of infamy and misery. Ample proofs of this conclusion are adduced in the remarks on polygamy in another part of this work. There is something unnatural and inferior to brutality in a parent who deserts his or her offspring. No attachment is so strong, no tenderness is so great, as that which is originated and cherished by marriage; and when this is violated by adultery, or elopement, it never can be revived, and a subsequent union is unhappy, as many recent examples too amply testify. A man, indeed,

must be a bad judge of human nature, if he supposes that the wife of his neighbour, whom he seduces, will be more faithful to him than to the man she has dishonoured. Nevertheless, we daily observe persons in the higher ranks forming marriages of this kind, and, in general, deserting and rendering miserable the victims of their unhallowed passion.

"Men," says the eloquent author of Marriage, "may, and do, violate the sanctity of the marriage vow; ruin unsuspecting girls, whom they have first deceived by promises, which they are neither able nor willing to fulfil; destroy the comfort, the respectability, the welfare, and the happiness, of innocent families, by the seduction of the female parent; and yet these very men pass in society as respectable persons; are associated, by common assent, with our virtuous daughters, and modest matrons, and find a ready admittance into good society. Can it be a matter of surprise that such evils as we have glanced at, should disgrace and degrade, injure and afflict society, so long as that society upholds and sanctions the vile adulterer, and purse-proud profligate?

"As Christian moralists, we must denounce that perversion of feeling, which would apologise, extenuate, or soften down the criminality of men, whilst its whole weight of severity falls on the weaker sex. In our view, the duty of both is equally plain, and equally binding: and be the offenders of what sex they may, they equally sin against conscience, the obligations of their own vows, and the conditions of their own happiness. A man of virtue will be not only virtuous himself, but the friend of virtue also. He will honour his wife, and show his regard to decency

and morals, by refusing his frendship and acquaintance to those who bring contempt on virtuous love, and outrage decency by their vice, and disgrace marriage by their easy virtue.

"To those who are unacquainted with the accommodating morality of high, or, as it is called, fashionable life, the moral distinctions and considerations which prevail in it, would be incomprehensible and mysterious. A cast-off mistress, if she be of the privileged order, receives the respect which less initiated persons would infer to be the homage paid to virtue and decorum; and it must be remembered that this equalization of virtue and vice, this insult to morality, this patrocination of depravity in manners and morals, is generally sanctioned by married ladies, who consider themselves, in virtue of their married state, as exempted from what they contemptuously term the precise strictness of old maids.

"Could the guilt, the folly, the vanity, the extravagance, the shamelessness, the frivolity, the heartlessness, the utter degeneracy of fashionable life be laid open—could the pen of truth depict in all its debasement and iniquity—could we penetrate into the various recesses of this mystery of iniquity—then would it be found that the orgies of Bacchus, or the impurities of the Corybantic festivals, never reflected a deeper or a more degrading stigma on the virtue of Roman morals, than the arena of fashionable life in London does on the conduct and opinions of our nobility and gentry."

It appears, however, from the "History of Marriage in all Nations," that licentiousness prevails among all ranks of society, both civilised and savage,—*amor omnibus idem.*

Marriage is a fairy land—the land of promise; but what

constitutes its felicity is to many, if not to most, an indistinct and undefinable question: the universal consent of mankind has pronounced it good and salutary; it is the hope of many who can assign no definite reason or motive for its indulgence.

"Mercenary considerations, in many instances, lead to the contracting of this holy union. How often is the decrepitude of age, with a large estate, and a handsome settlement, preferred to the manly vigour of youth, and to virtuous conduct when unconnected with a weighty purse? How frequently is the titled libertine a more favoured lover than the virtuous commoner? Nay, have we not, in our own day, seen the glitter of a coronet, by its false glare, rendering mental imbecility and depraved passions considerations of no consequence compared with the attainment of high rank and ample fortune?

"Nor can we censure too severely that levity, inconstancy, and duplicity with which men act in the violation of the most solemn engagements, when, having won the heart and the affections of a deserving and amiable, though portionless female, and disregarding all their vows and protestations, they lead a wealthier, though often a less deserving bride, to the altar. Honour, feeling, and religion alike proclaim the infamy of the act, and the heartlessness of the wretch who can thus traffic in the most sacred engagements, with all the coolness of mercenary consideration.

"If the distinctions of rank, or the adventitious circumstances of fortune, could shut out the oppresive cares of life—if the pride and pomp of worldly distinction could lull the pains of disease—if the splendour of high life

could shed one gleam of hope over a dying pillow, or dispel the gloom which broods over 'the house appointed for all living;' if, in fact, human calamity and suffering could be averted by the sacrifice of feeling, affection, and honour at the shrine of human vanity and human greatness—then, indeed, but not otherwise, would we extend forgiveness to the guilty trafficker.

"Less criminal, because less selfish and mercenary, though equally foolish, is the importance attached by many to personal charms. Sickness, we know, will dim the lustre of the brightest eye, and wither the loveliest flower. The hue of health, and the bloom of youthful vigour will alike fade before the noxious breath of sickness and disease. The verdure of spring, and the gaiety of summer must be succeeded by less pleasing seasons; but each season, to a pious and well regulated mind, offers its appropriate charms. If the flowers of spring, and the fruits of summer cannot continue in unfading beauty and richness, so neither can the graces of beauty, and the loveliness of youth.

"But it may be asked, are we then to woo poverty, and to wed deformity? By no means. We do not disparage rank, and wealth, and beauty, and outward grace; we allow them to be valuable, and even desirable blessings; but we pronounce them to be, of themselves, unconnected with those gifts and graces which no adversity can destroy, nor lapse of time corrupt, most unsatisfying blessings, and miserable comforters. We are not such stoics as to exclude all reference to personal appearance, or pecuniary circumstances; we give them their full weight in our decision; and that weight is by no means trifling—but,

after all, we consider these things as of very inferior and secondary moment.

"Were we to live always, or even generally, in public; were the ball-room our residence, and the scene of our daily duties; were we to be happy, only in proportion as we secured public applause and admiration, then, indeed, we might be justified in our own conscience, and in the opinion of the world, for expending all our care and concern on the dazzling pomps and vanities of life, and for making them the chief objects of our solicitude in our matrimonial alliances. But let us seriously inquire, how far does truth justify such a supposition? Do not the sober and important duties which attach to us as husbands, wives, and parents, require that we should renounce, to a very considerable extent, the giddy pleasures, and the tumultuous joys of public life? As rational beings, as heads of families, as men pledged to the performance of important and solemn duties, HOME ought to be the centre to which our thoughts, our affections, and our desires should ever turn. HOME is the seat of man's truest pleasure, as it is the sphere of his most important duties. The qualities which shed their kindliest influence over the domestic circle,

> Where all the tumult of a guilty world,
> Tost by ungenerous passions sinks away,

are those alone which should attract the esteem, and conciliate the regard, and secure the affection, of a rational and sober minded man."

"Let us," says Gisborne, "consider the case of two persons, of unequal tempers and dissimilar habits, about to form an engagement for life, by which their whole

future existence might be affected; what repugnance, on reflection, would they not mutually feel to such an engagement—especially if one of the parties was to be in a state of subordination to the other. How diversified, how strict, how persevering would be the enquiries of each respecting the other? Unless the dispositions, the temper, the habits, the genuine character, and the innermost principles were mutually known, what rational hope, what tolerable chance of happiness could subsist?"

There are far more important requisites for marriage than temper and accomplishments, and these are principles and habits. Without attention to these, every promise of happiness will be infallibly blighted.

"On what solid ground can a woman anticipate happiness for life, when she confides her person and her property to one on whom the laws of God have no influence? Are the proud, the covetous, the ambitious, the malignant, the censorious, the worldly-minded, the lovers of pleasures more than lovers of God, likely to be the indulgent husband, the fond father, the kind master? Can he who habitually violates the precepts of the gospel, and lives in utter neglect of its authority, be reasonably expected to discharge the duties he owes to man, with more integrity than he manifests to heaven? Let it also be remembered that he who is not under the habitual influence of Christian principles, and conscientious as to its practical duties, is likely to have an unhappy and pernicious influence on the principles, conduct, and happiness of his wife. He who disowns, or neglects the duties of the station he now occupies, has no pledge to offer his bride that he will more

conscientiously respect the obligations of the new relations of life into which he is about to enter.

"Thus it is in life. An amiable temper, sound judgment, good sense, a well-informed mind, correct taste, religious principles, united with the lighter accomplishments of a well-educated mind, and blended with mildness of manner, and gentleness of heart, will be found the substantial qualities which cannot fail to win the affection, and secure the heart. These constitute the essential qualities

> Of fellowship, fit to participate
> All rational delight.

"Add to these a moderate share in the gifts of fortune, and the most boundless wishes of the human mind must receive their complete gratification and fulfilment; but without the more enduring qualities of heart and mind, the favourites of fortune cannot enjoy happiness themselves, nor confer it on others.

"Whilst, however, we condemn, with a just and severe reprobation, the folly and guilt of those who sacrifice honour, and the best affections of the human heart, on the altar of Mammon, we must not be supposed to overlook, or to undervalue, the dictates of prudence. Love marriages, as they are called, usually terminate in bitter disappointment; the claims of a young and increasing family will eventually force themselves on the attention of the parents, and, it is to be feared, that the vulgar considerations of discharging bills and meeting family expenses, will prove a fruitful source of those bickerings and disagreements which too plainly show the incautious folly and

heedless imprudence with which their union was formed. Love cannot clothe, educate, or maintain a family, nor yet satisfy the importunity of a distressed, or an impatient creditor. We would temper the ardour of passion by the sobriety of reason; and bring the affections of the heart under the control of prudence and discretion."

It is evident from the preceding observations, that judicious and virtuous parents are bound to interpose their authority when there is danger of improvident alliances, and ought to point out the impropriety and inexpediency of marriage. But it is never justifiable that parents should seek to ally their children with those for whom they have no affection, or contemplate only with disgust and repugnance. Paternal authority cannot reasonably compel alliances against which inclination protests; though there are too many forced and unhappy marriages arising from this cause.

The happiness resulting from a well-formed marriage, depends on mental excellence of the parties. This can only be known by long acquaintance. Love at first sight, and ball-room and street matches, are generally the sources of endless misery; they are formed without consideration, and originate in a transient excitement of feeling. "True love is founded on esteem, and esteem is the result of intimate acquaintance and confidential intercourse." This is the origin of pure and virtuous love. Marriages based upon this, and on proper religious feeling, are the only happy ones.

CHAPTER VII.

INFLUENCE OF POLYGAMY AND MONOGAMY ON SOCIETY —ON CONJUGAL AND PARENTAL DUTIES.

POLYGAMY, or Polygyny, is sanctioned by laws of eastern nations, such as are governed by the Alcoran, and by those savages who follow natural religion. Although polygamy is interdicted by our laws, it does not exist the less in the hearts of most men who profess to be monogamous, but who are no less polygamous by their actions. Polygamy naturally affords more attraction to men than to women, as it is better suited to them than monogamy, because, according to the rights of nature, but contrary to human laws, they could engender with many women while their wives were periodically affected, pregnant, in childbed, or nursing. St. Augustin, Grotius, and other moralists, admit this truth, but declare it would be contrary to morals, the interests of society, and the increase of population. Nevertheless, polygamy, or concubinage, is common among the higher classes in all civilised countries. The toleration of this immorality was one of the principal causes of the rapidity with which the religion of Mahomet spread in eastern countries, as the prophet allowed persons as many wives as they could support. (*See Moore's Marriage Customs in all Nations of the Universe, &c.*)

It is almost universally admitted that the most natural state of man is monogamy; the equality of the sexes, especially in temperate climates, domestic peace, and the social

happiness which results from it, the mutual co-operation so necessary for the physical education or rearing of children, announce that they ought to be in equal number, and to concur in forming a family. It is, however, true, that by the law of nations, independently of social laws, the promiscuity of the sexes would be justifiable according to many writers (Pliny, Diodorus Siculus, &c.), and that there are some few eastern countries in which a community of women was, and even now is tolerated. Plato wished to establish it in his republic, in which every one was considered as his parents, the young as his infants, and his contemporaries as his brothers and sisters; and a preposterous attempt has lately been made to revive it by the St. Simonians, in France, and by Owen, in this country. It is easy to adduce many valid reasons to prove that this community of women, and promiscuous intercourse of the sexes, can never be tolerated in any enlightened country. It must be obvious to the commonest understanding, that without marriage, neither paternity, nor family, nor patrimonial possession, nor division of landed property, nor legitimacy, could be accurately determined; and thence it would follow that all would belong to all, every one would be benefited in common, no one would exert himself for all his race, and the result would be a state of barbarism as in savage nations, and all the laws of society would be overturned. This perfect community of women and property, if it could take place, could only exist among people living as savages, and among a very small number on a vast territory. Suppose the community of women was established, what man would willingly allow an infant to be affiliated to him, of which he had any right to doubt

that he was the father? The woman would violate the sacred duty of nursing her own infant only, and in a few centuries the human race could not be preserved; there would also be incessant desertions of infants, and a great increase of infanticides, crimes unfortunately too common, even under existing laws, but which would be innumerable in proportion as the people and their morals became more corrupted, and where no asylums would exist for the fruits of universal debauchery. Every fine feeling of paternal and natural love would be destroyed; all cares and protection of children would be at an end, and the mortality would become so great as in a few ages to exterminate the human race. This community of women would daily excite quarrels for those possessing beauty; for if animals, during the season of rut or heat, contend for their females, how much more would man, who can engender at all times, and who possesses so much more power in appreciating beauty? Woman in all ages has caused contentions, and there were wars, even before the time of Helen, according to Horace, "Nam fuit ante Helenam," &c. In fine, this general confusion of individuals would debase the whole human race by incestuous unions, as is proved by those nations in which such a state is tolerated.—(See *Moore's Marriage Customs of all Nations*, already quoted.)

The legitimate marriages between brothers and sisters, among the ancient Egyptians, (Diodorus Siculus, L. 1,) caused degenerate offspring, a result also common among the Persians and Parthians, (Xenophon Memorab. iv. c. 4, and Dion Prusœus Orat. xx.) These authors also state that the incest allowed by Zoroaster, between parents and

children, was followed by sterility, or by the most feeble offspring, on account of the disproportions of age, and the identity of constitutions. The Grecians did not allow marriages within certain degrees of consanguinity. Hermione, in his play of Euripides, speaks of the custom of brothers marrying their sisters with no less detestation than sons marrying their mothers, or fathers their daughters.

Nature also condemns such unions; she wishes marriages between different families and nations, because these intermarriages, or crossing of the races, are the true means of improving and invigorating the species. Some of the ancient legislators framed their laws on this ground, (Plutarch, Quæst. Roman. St. Augustin. City of God, &c. Vandermonde, Essai sur le Perfect. de l'Esp. Hum., Buffon, &c.) Daily examples confirm the validity of the opinion. Pallas adduces the fact that the intermarriages of the Mogul Tartars with the Russians produce very fine individuals; while Humboldt has observed, that the offspring of a negro and European is more robust and active than that of a white with an American; because the best mode of effacing hereditary diseases, gout, scrofula, phthisis, mania, epilepsy, &c., is by the commixture of the species in intermarriages, as this corrects the defects of one individual, by the soundness of the constitution of another. The Jews, who refuse to intermarry with other nations, transmit many hereditary diseases to each other; and they preserve, by this custom, their Hebrew cast of countenance in all countries. (For other proofs of this position, the reader may consult *Mr. Coombe's Essay on the Constitution of Man, considered in Relation to External Objects*, 1835.)

Monogamy appears to be the law of human nature in all cold and temperate countries in which the number of men and women is nearly equal. Even in warm climates, where polygamy is legalised, it is not general, except among the rich and great, who can purchase and support many women, but the people at large are monogamous. Many proofs might be adduced that polygamy produces more female offspring among mankind, and other animals, (Hippocrates, Harvey, Willoughby, Forster, &c.) and that more males result from monogamy.

Conjugal fidelity ought to be strictly observed by both sexes, for the reasons already stated; and I agree with M. Virey in the opinion, that it is unjust to require fidelity of women when it is not observed towards them; though it is true that the results in the one or the other sex are widely different as regards the increase of population and society. Nevertheless, we now see in Italy, *cecisbeos;* in Spain, *cortejos* sometimes replace husbands without their having any right to complain; and these are not the only nations in which husbands are equally accommodated.

"The Cecisbeat, a custom observed all over Italy, is no where carried to a more ridiculous and extravagant degree than in Genoa. With the day of the nuptials ceases every public intercourse between husband and wife; they must not even be seen together, neither walking, nor at the play-house, nor in company; in short, no where but at home. In other cities, many a husband puts himself above that foolish usage out of love to his spouse, and has nothing else to fear than to be looked upon as an unfashionable husband; but here the most united couple must not think of such a thing. To be forsaken by all friends, derided

by enemies, insulted by the mob, are unavoidable consequences, if they are ever seen together in public.

"Lycurgus thought that freely imparting their wives to each other was the best way of preventing jealousy, ridiculing those who thought the violation of their bed an insupportable injury, supposing that children were not so much the property of their parents as of the state, in which all had an interest."

The people of India, Africa, Tartary, and other eastern countries, sanction a similar custom; and it is said to have prevailed in ancient and rude times, even in Scotland and England, according to Buchanan, Rerum Scot. L. iv., Polydor, Vergilius, Hist. Angl. L. x., and Sueton. in Caligul. c. 40, and Sir James Mackintosh's History of England, see Lardner's Cyclopædia.

"Among the ancient Britons, in very remote times, it was customary to have the women of ten or twelve families, who dwelt under one roof, in common, even to brothers. It is said that Julia, wife of the Emperor Severus, reproaching a Briton with this custom, received the following answer:—'that the Roman ladies ought not to reproach the British ladies on this account, as what the latter did publicly with men of merit, the former did privately with the worst, and sometimes with their slaves."

"There was a custom in Scotland formerly that savours so much of brutality and tyranny, that it seems almost incomprehensible to the present polished state of society, that it should have ever obtained the sanction of a law; but we have it from undoubted authority that Evenus III, sixteenth king of Scotland, made a law that the king

should have the first night after marriage of all noblemen's daughters, and noblemen and heritors of lands should have the same freedom with their tenants' and vassals' daughters, and that both wives and daughters of every subject should be common to the king and his nobles. The law giving the first night after marriage to the landlord was in being till the time of Malcolm III., whose queen, called St. Margaret, procured the abolition of so wicked a law, and in lieu thereof they were to have a mark of silver to redeem their chastity.

"The practice of espousing stepmothers in this country appears to have been prevalent so late as the eleventh century, and is supposed by Lord Hales to have originated from motives of interest, that the estate might be exonerated from the payment of a jointure.

"By the Scottish laws, the crime of incest is punished by the decapitation of the guilty parties.

"Some of the Kamscatdales marry three wives, who live together amicably, and are seldom or ever jealous. Every attempt to induce abortion is a capital crime in the woman; though when twins are born one of them must be destroyed.

"In many of the Russian provinces men may marry as many wives as they are able to support.

"The number of women in the Turkish harem, depends on the taste of the reigning sultan. Selim had two thousand; Achmet had but three hundred; and a late sultan sixteen hundred. The brave Prince Heraclius abolished the infamous tribute of both sexes, which Georgia paid to the Porte yearly! The Grand Seignior is

not permitted to take a virgin to his bed, except during solemn festivals, and on receiving good news; upon which occasions the ceremony is described as follows:—

"As soon as the Grand Seignior has chosen the girl that he has destined to be his companion for the night, all the others follow her to the bath, washing and perfuming her; she is then dressed superbly, and conducted to the Sultan's chamber, with singing, dancing, and rejoicing, who is generally on such an occasion already in bed. Scarcely has the newly-elected favorite reached the chamber of her lord, introduced by the grand eunuch, who is upon guard, than she kneels down, and when the Sultan calls, she creeps into bed to him at the foot of the bed, unless the Sultan orders her by special grace to approach by the side. After a certain time, upon a signal given by the Seignior, the governess of the girls, with all her suite, enters the apartment, and conducts her back with the same ceremony as before to the women's apartment. Should she fortunately prove pregnant, and be delivered of a boy, she is called *Asaki Sultaness*, that is to say, Sultaness-mother; for the first son she has the honour of being crowned, and has the liberty of forming a court. She has also an appointed guard of eunuchs for her particular service. None of the other ladies, though delivered of boys, are either crowned or maintained with such costly distinction as the first; however, they have their service apart, and have handsome appointments.

"Lady Montague, the lady of our ambassador, describes her reception at the palace of the fair Fatima, in one of her letters to her sister, the Countess of Mar.

"'She told me the two girls at her feet were her

daughters, though she appeared too young to be their mother. Her fair maids were ranged below the sofa, to the number of twenty, and put me in mind of the ancient nymphs. I did not think all nature could have furnished such a scene of beauty. She made them a sign to play and dance; four of them immediately began to play some soft airs on instruments between a lute and a guitar, which they accompanied with their voices, while the others danced by turns. This dance was very different from what I had seen before. Nothing could be more artful or more proper to raise *certain ideas.* The tones so soft!—the motions so languishing!—accompanied with pauses and dying eyes! half falling back and then recovering themselves in so artful a manner, that I am very positive the coldest and most rigid prude upon earth could not have looked upon them without thinking of *something not to be spoken of.* The music is extremely pathetic; 'tis true I am inclined to prefer the Italian, but perhaps I am partial.'

"The laws of the harem in Persia are most arbitrary and tyrannical. When the route of the royal harem is known, all the male inhabitants near where it is to pass must quit their houses. When Chardin was in Persia, the harem of the young monarch paid frequent visits to the country during the first two years of his reign, and the train invariably traversed the suburbs of Ispahan, to clear the intended road of men. The king's concubines sometimes left the seraglio at night, when all males in the route were obliged to leave their beds and get out of the way, whether sick or well, old or young, let the weather or roads be ever so bad. When the harem travels in the country, the

attendants are employed for half a day at least before they set out in clearing the roads they are to pass; a whole regiment of cavalry is employed to perform this duty. The first notice is not considered as sufficient; for, two hours before they set off, the guards again scour the roads, and by incessant discharges of musquetry announce the expected arrival of the cavalcade. Not content with these precautions, the white eunuchs, one hour before their departure, sally forth to see that the road is clear and safe, for, should they meet with a man, he would be immediately dispatched, let him be ever so old, imbecile, or infirm in body or mind. Chardin records several examples of men losing their lives, who, on account of their great age, conceived themselves entitled to the rights of eunuchs, and approached the person of the monarch to deliver petitions of travellers who were ignorant of the passing of the harem and of the servants of the king, who had fallen asleep through fatigue, who suffered either by the hand of the despot himself, or by his executioners."—*Moore's Marriage Customs.*

It is usual in Thibet for the brothers of a family to have a wife in common, with whom they generally live in harmony and comfort. A plurality of husbands is highly respected.

It is a frequent practice with the Calmucs to betroth their children before birth, on the condition of their being girls. The priests are not permitted to marry, but they may pass a night with any man's wife, which is esteemed a favour by the husband.

The Javanese are so jealous of their wives, that they

will not allow even their sons, when grown up, to see the mothers who gave them birth.

There is a law in force at Algiers, which is strictly put into execution. When a woman is guilty of fornication with a Christian, her head is inclosed in a sack, and she is thrown into the sea, unless her paramour agrees to become a Mahometan. Such punishments are often inflicted, and yet both married and single women are continually intriguing with Christians.

In Morocco, the emperor is said to have eight thousand wives and concubines.

The Copts of Egypt betroth female children at the age of six and seven years, by putting a ring on their finger; but permission is obtained from the parents or friends to educate them until they arrive at the years of discretion. The Mahometans consider marriage as a civil institution, entirely unconnected with religion.

"There is no form of marriage among the Abyssinians, except mutual agreement may be so termed, which is dissoluble at pleasure. They cohabit together when they please, and annul or renew the contract in the same manner. Thus a woman or man of the first quality may be in company with a dozen who have been their bridegroom or bride, though perhaps none of them may be so at present. Upon separation they divide the children. The eldest son falls to the mother's first choice, and the eldest daughter to the father; if there is but one daughter, and all the rest sons, she is assigned to the father; if but one son, and all the rest are daughters, he is assigned to the mother: should the numbers be unequal after the first

election, the rest are divided by lot. There is no distinction from the prince to the beggar, of illegitimate or legitimate children.

"In the more civilized parts of Abyssinia all their marriages must be confirmed before a priest. They are given to polygamy, though the laws of their church forbid it. The previous ceremonies only consist in each agreeing to live together as long as they like each other; they then proceed to the door of the church, where the priest performs the ceremony, and gives them his blessing. Divorces are very easily obtained; they then petition the priest for a permission to marry again, which is as easily obtained; though, in either case, the party may be excluded the communion for a time at the discretion of the priest. In cases of infidelity, they compensate the injured party by presents; but, in case they cannot agree as to the compensation, the man is sentenced to pay a fine, which is appropriated to the use of the injured wife.

"Hottentot marriages are made by the parents or nearest relations; and if the female disapprove of the match, she is nevertheless compelled to pass the night with the man whom her friends have chosen. If he force her to consummation, she is constrained to become his wife; but, on the contrary, if she preserve herself uncontaminated, she is ever after free from him. Should the nuptials take place, the day after an ox is killed to feast the company, who not only eat the flesh, but also besmear themselves. with the blood and fat, powder themselves with a stuff they call *bucku*, and paint their cheeks with red chalk. The marriage ceremony is thus performed:—the men squat in a circle, as, indeed, they do upon most occasions,

and the bridegroom is placed in the centre; the women, also, in the same manner, form another circle to surround the bride. The priest then goes from one circle to the other, and alternately urines on the bride and bridegroom, who make furrows with their nails in the grease with which they are plastered, in order to rub in the precious libation; he then pronounces the nuptial benediction in the following words: 'May you live happily together! may you have a son before a year is expired! may he be a good huntsman and a great warrior!'

"The portion they give a son on his marriage is usually two cows and two sheep; to a daughter, one of each, which are to be returned to the father if the bride die without having any children; but, if she ever bore any children to her husband, even though they are defunct, the portion becomes his. Divorces are permitted, if the party can show sufficient cause to the heads of the village; but adultery is punished with death. A man who has been divorced may marry again, but a woman may not, while her former husband is living.

"When a widow is inclined to enter again into the married state, she must give a severe proof of her inclination thereto, being under a necessity of losing a joint of her little finger, which is repeated every time she is married after the first. A new-born child, after having its nose flattened, is always rubbed over first with fresh cow-dung, then with a juice expressed from the stalks of the African fig; thirdly, with sheep's fat or melted butter, and lastly, well powdered with *bucku*. Male twins occasion great joy to the parents; if female twins, they destroy the least favoured; if one is male, the other female, they inevitably

destroy the latter. When a child is still-born, they deem it a bad omen, and immediately remove their hut.

"When the child has been smeared, greased, and daubed, as above, the mother gives it what name she thinks proper, which is usually that of some wild or tame animal. When the woman is well again, she then daubs herself with cow-dung, which they look upon as a kind of purification. Being thus delightfully perfumed, and elegantly decorated with sheep's guts, she is permitted to go abroad or see company.

"The eldest son has encouragement to exercise a kind of tyranny over his brothers and sisters. The male Hottentot is deemed of age at eighteen, when he is admitted into society, at which time a feast is given, but the youth himself is not permitted to partake thereof, until all who are present have been served. It is then expected that he should behave ill to women in general, and to his mother in particular, in order to evince his contempt for every thing that is feminine. Indeed it is usual for a youth when admitted into male society to go home and cudgel his mother; nor does she disapprove thereof, but congratulates herself for having had the happiness to bring so spirited a youth into the world: so much does custom reconcile us even to things which are in themselves unnatural.

"Polygamy is common at Sierra Leone. The women are frequently hostages for alliance and peace. The chiefs, who have been at war, cement their treaties by an exchange of their daughters; private individuals do the same; and this may account why the chiefs have such numbers of women. A girl is frequently betrothed to a man as soon

as she is born, and on the day agreed on for the marriage, the bridegroom places on the road which the bride has to pass several persons with brandy and other refreshments; for, if these articles be not furnished, the conductors of the bride will not advance a step further, though they may have got three parts on their journey. On approaching the town, they stop, till joined by the friends of the bridegroom, who testify their joy by shouting, drinking, and firing their guns. At this period, an old woman takes the girl upon her shoulders, and the attendants cover her with a fine veil, for from that moment no man must see her face till the consummation of the marriage. Mats are spread before the old woman who carries her, as she must not touch the ground with her feet. In this manner the bride is conveyed to the house of her husband, followed by the friends of both families, singing, dancing, and firing off their muskets. Towards evening the husband comes into the apartment of his wife. If he have reason to suspect her chastity, he immediately leaves the room, which is no sooner known among the friends, than those who have conducted her to him hasten from the sight of observers, crying and howling with shame and confusion; if, on the other hand, he is satisfied, he remains with her the whole night, the friends rejoice, and next day the testimonials of her virginity are carried through the streets in triumph. In both cases, however, the husband may keep the girl; but, should he send her back, he must return all that she has brought him.

"From these details it will be seen that chastity is a virtue highly esteemed among the Africans, at least till marriage; but from that moment it is a trait of unpolite-

ness and want of education in a woman to resist the importunities of a lover; she would indeed be punished if discovered, but her reputation would remain unsullied. Among the black savages of Africa we find the customs which are prevalent in Italy and Spain, for each negro lady has a cicisbeo or cortejo, whom she makes choice of and consults on all occasions. The husband is obliged to tolerate this intercourse in silence; nevertheless, there are laws sufficiently severe to punish adulterers, but they are of little effect, unless they are applied to by a man of great power; and even then he dare not make a great bustle, on account of the ridicule to which he would be exposed. It is mostly among the great men that the above is practised, who keep a number of women.

"A remarkable and truly extraordinary circumstance is, that the women never impose illegitimate children on their husbands, always declaring before accouchement who is the father. If, however, the husband wishes to have a child of his own by a woman he loves, he obliges her to swear she will be true to him for a certain time; she takes the oath, and generally keeps it; but if in the interval, either by violence or the persuasion of her lover, she breaks her promise, she confesses her fault immediately to her husband, which is the more singular, as they are ever after devoted to shame and infamy.

"The union of a white man with a black or a mulatto is not indissoluble, but only lasts during the pleasure of the parties, nor does a separation reflect any discredit.

"A black woman in general thinks herself honoured in partaking of the touch of a white man, and is true, submissive, and grateful, to the utmost; in short, she uses

every art to merit his kindness and love. If the husband embark to cross the sea, the disconsolate wife accompanies him to the shore, and sometimes follows him by swimming a considerable way after the vessel till her strength is exhausted; when obliged to return, she gathers up the sand on which are the last impressions of his footsteps, which she ties up in a piece of cotton, and lays under her pillow.

"The women never wean their children till able to run alone: their husbands, during the time they are suckling, never cohabit with them, looking upon an infringement of this rule as a crime of the most heinous nature.

"Many of the inhabitants of the banks of Sierra Leone perform that operation upon females which among the Turks is only practised upon the males; the ceremony of which operation is as follows:—Every year during the fine season, when there is a new moon, all the marriageable young girls in a village are assembled. The night preceding the day of the ceremony they are conducted by the women of the place to the most secret part of a wood, the avenues to which are scattered with amulets, the object of which is to keep away every person who is inclined to pry into their secrets, whose presence would profane the ceremony. The girls are there secluded for upwards of a month, during which period no human being, except the woman who performs the ceremony, is suffered to see them, and she every morning brings to them their food; if her decease or any other obstacle prevents her bringing them their supply of food, the woman who is to succeed her in this office, as she approaches the spot, calls with a loud voice to give notice of her approach, deposits the victuals at a certain place, and then hastens away without

seeing any of them, or their seeing her; for, whether by chance or inclination, any one who violates this sanctuary is punished with death.

"It is at this period only, when the body is reduced by the austerities they undergo in this place, and the mind prepared by the religious obscurity and silence of the forest in which they remain, that the girls are taught and initiated into the customs of the country, for till this period they are not esteemed worthy of knowing them. At length, when the time of their retreat expires, and the wound caused by the operation is nearly healed, they are taken back to the village with the same forms used as at leaving it; and, when arrived, they are received by all the women therein quite naked, and in this state they parade the streets with musical instruments by day-light. Their return from the wood is succeeded by a month's probation, during which time they are each day conducted in procession, accompanied by music, and covered from head to foot, to the houses of the principal inhabitants, where they sing and dance till the owner makes each of them a present. When the month is expired, they are liberated from all those ceremonies, and given to the men intended for their husbands.

"Neither the origin nor the motives of this ceremony are known; but, so great is their veneration for it, that the most shocking of all insults is to reproach them with not having done it honour; and this reproach is even lavished on strangers, who may not have come among them until after the time appointed for the rite.

"Polygamy is almost universal on the Gold Coast, a

poor man has forty or fifty wives, a prince four or five hundred, and a king as many thousands.

"It is no uncommon thing for a father to have two hundred children living at the same time; and it often happens that a man has five or six born to him in one day. They never cohabit with their wives during pregnancy, which is the principal reason given for their taking so many. A man's principal wealth consists in the number of his children, all of whom he can dispose of at pleasure, except his eldest son.

"The Chevalier Marchais, who was present at an execution for adultery, gives the following account of it:—

"A grandee complained to the king that a private person had debauched his wife; his majesty, upon hearing the witnesses, sentenced the adulterer to be beaten to death wherever he could be found, and the body left there until it was devoured or rotten. The officers belonging to the governor of *Sabi* found the culprit just entering his own door: they soon dispatched him with their clubs, and left the body as the king had ordered. The neighbours went to acquaint the captain of the seraglio that the body would infect all that quarter of the town where it lay before it was consumed, and entreated he would obtain the king's orders for its removal. The officer represented their complaint to the king, who replied, 'If I did not punish adultery with severity, no person in my country could be safe. The body shall lay there till it be devoured or rotten. The people shall see it, and learn at the expense of this wretch how they invade their neighbour's bed. All I grant is, that they may in the day-time throw a mat over the

body,' leaving the face uncovered, that all persons may see the countenance of him who has defiled his neighbour's wife, and detest him.' Not content with this, the king gave all the effects of the offender to the injured man."—*Moore's Marriage Customs.*

Other customs are tolerated in certain countries with regard to marriage. These are, perhaps, derived from the laws of Moses, Deut. c. xxii., with respect to the signs of virginity, and the Jews still require the proofs therein mentioned. This custom still prevails in Germany (Vallisnieri, *Galer di Minen* Schlichting), in Spain (Ranchin *de Morb. Virgin,* Jobert Err. Popul.), it is indispensable among the Turks and Egyptians (Perry), Africans (Saint Olon, and Lemaire Voyages, &c.), among the Persians (Chardin), the Arabs, according to Niebuhr, and the Asiatics, according to Sonnerat, Lengintil, and many other travellers. Nevertheless, it is well known to every well informed medical practitioner, that all signs of virginity are equivocal, and that all may be present though pregnancy has occurred. I have quoted several cases in support of this statement in my works on *Midwifery and Medical Jurisprudence.* The hymen may be destroyed by ulceration in infancy, or by many other causes besides sexual intercourse, and the vagina may be very much relaxed and enlarged by leucorrhœa, or vaginal mucous discharge, a disease so very common to pale, delicate individuals. But in strong healthful persons, the Mosaic proofs are generally present to a greater or less extent, and there is, in most instances, more or less pain, and more or less sanguineous effusion at the consummation of marriage, though there are many exceptions. (See p. 57).

Every physiologist and well informed obstetrician is aware of the fact, that a woman may be in labour though hymen is present. Such cases are recorded by Mauriceau, Ruysch, Pare, Meckel, Walter, Smellie, Boudelocque, Capuron, Nægele, and many others. The effusion of blood on the consummation of marriage is no proof of virginity, as the following case incontestibly proves, the medical part of which I have heard from the physician of the family. A young lady was seduced by a professed libertine in the prime of life; she was stupified by him, either with wine or some sedative; she awoke and found herself in bed with him, when he attempted to repeat an offence he had already committed. The lady resisted, escaped from him, and finally convicted him of rape, for which he was sentenced to be hanged. He was, however, transported for life. She married in two years afterwards, and her husband was so alarmed at the effusion of blood the night of his marriage, that he consulted the family physician of his wife, who related the fact to me. In this case there was every reason to conclude that there was a previous connexion, and most probably, that there was more or less laceration of the hymen, or of the external genital aperture. The parts healed in due time, and might have narrowed, or even entirely closed the os externum, and be again lacerated on the consummation of marriage. That such occlusions occasionally happen, I can attest from personal observation, and I have recorded examples in my work on Medical Jurisprudence. It clearly follows from the preceding facts, that the scriptural and physiological inference, that blood ought to be effused during the first sexual intercourse, is correct in most cases, but liable to numerous exceptions,

and these should be always remembered, and especially by medical practitioners, when giving opinions upon the subject.

These signs may, therefore, be absent, as much will depend on the age, stature, and proportions of individuals. Mankind, in general, entertain the preceding erroneous opinion on this subject, and I have in a great number of cases dissipated and removed unfounded doubts and fears excited by ignorance, which a correct knowledge of science for ever set at rest. This conclusion will quiet the mind of a suspicious husband, and cement conjugal affection, which, without it, would have been destroyed. My opinion has prevented conjugal separation in the first days of marriage, and secured the strongest conjugal affection.

Virgin purity has ever been highly estimated; and it is always certain, says Virey, that a woman is most attached to the man who has initiated her in the mystery of the relations between the sexes; and that she becomes the most faithful wife. Daily observation confirms the trut of this remark.

It has been already observed that libertinage and polygamy have always afforded more charms to men in all ages and countries than monogamy, which every one knows offers more chances of a happy life, by constancy, fidelity, and the conjugal duties. It may, therefore, be asked, why do men act in opposition to their own interest and happiness? The reason is very obvious. An advanced state of civilization affords too many incentives to amorous pleasure. Stimulating aliment and drink, the perusal of improper works, the inspection of licentious pictures and paintings, the exhibitions at theatres, and many other causes tend to

give a precosity to the development of the sexual organs, to excite the passions, and to predispose to the greatest excesses. Influenced by these causes, the sexes too frequently indulge in amorous pleasure long before the body is properly developed, or of sufficient strength to sustain the depressing and debilitating effects of the precocious performance of this function. The consequence is, enfeeblement of mind and body, and more particularly of the genital organs. This is also the cause of the involuntary disgust which often occurs after the generative act. Men seldom refer their feebleness and disgusts to the real cause—their premature and excessive enjoyments; and they search for objects which are most likely to excite their languid powers. A strange individual offers them most charms without giving rise to the disgusts of the first. But she, too, as speedily loses her charms, becomes an object of disgust, contempt, or aversion; and another is selected, and thus they proceed until the virile power is impaired or entirely destroyed. It is, however, certain that polygamy, adultery, fornication, or concubinage destroys true love and sincere affection, and that women despise those who are gregarious in their amours, and are often guilty of infidelity towards them.

In many instances, however, certain women restrain the most inconstant husbands, by love, affection, attention, proper reserve, by a variety of thoughts, reflections, and acts, which make a man find many women in one only, whose mind is properly constituted. Those who do not possess these advantages cannot always secure the heart of a husband, unless his mind be influenced by religion and virtue. It has been well observed that art is as indispensable

to women as virtue itself. Attention to dress, personal appearance, manners, &c., have no small influence on the passion of love, and upon conjugal fidelity with many individuals. These are contemptible in the opinion of men of mind and genius, and of all who estimate matrimony in its proper light, though they have great weight with the world in general.

CHAPTER VIII.

CONJUGAL AND PARENTAL RIGHTS AND OBLIGATIONS.

We have now to describe the conjugal and parental duties and obligations as regards the perpetuation and preservation of our species.

The first end of marriage is the procreation and proper education of children. The second end is a mutual society, a reciprocity of aid and comfort in all the affairs of life.

It is not lawful for married persons to wish not to have offspring, because that is contrary to the end of matrimony, and opposed to the command of Divine Providence. It is not lawful to use it immoderately, which is prejudicial to the health of both parties. The obligations of matrimony are, first, to preserve conjugal fidelity; secondly, to secure the physical, moral, and religious education of children.

Conjugal fidelity requires two things:—

First. That the debt should be paid by one spouse to the other; secondly, that it should be paid to this person alone.

Both are equally bound to fulfil this obligation when

the debt is demanded, either expressly or tacitly (Corinth. vii. 3, 4), unless a legitimate cause of denial intervenes. Refusals would lead to quarrels, hatred, dissentions, and incontinence, and perhaps greater crimes.

The legitimate grounds for refusal are, when there is doubt of the validity of the marriage, or if asked during drunkenness or madness, or when the menstrual or lochial evacuation is present, or when there is any mortal disease which might be aggravated by it, or when one party labours under very severe illness or a contagious disease after marriage, as syphilis, gonorrhœa, leprosy, &c.; and lastly, when a woman is so deformed, that in the opinion of her medical adviser, her life will be endangered by parturition, or that the infant must be destroyed in her womb to save her from death. The danger in this last case is produced by natural or accidental deformity, which offers a physical impediment to parturition and the birth of a living infant. It is the opinion of moralists and physicians that women so formed ought not to marry or have children.

Again, if either party seeks it too frequently or immoderately, the obligation ceases. Neither is it lawful to demand it, when immorality would be induced by it, as in a public place, before children or domestics, or when frequent abortion is caused by it, which is highly destructive to health and life. Nec etiam idem peti vel reddi potest, eo modo qui sit contra naturam ut si mutetur naturalis feminæ usus ut loquitur apostolus, vel impediatur prolis generatio.

The canon law of Muscovy forbids conjugal intercourse on Mondays, Wednesdays, and Fridays, and whoever

transgresses it, must bathe himself before he enters the porch of the church. If a woman is barren, the husband generally persuades her to retire into a convent; and if fair means fail, he is at liberty to whip her into condescension.

It cannot be demanded or paid during menstruation or the puerperal discharge, and ought to be seldom required during pregnancy or lactation. The reason is, because the use of matrimony under these circumstances is opposed to the views of nature. The womb is performing certain functions during the first and second conditions, which altogether prevent generation; and in the third and fourth conditions the mother and the infant may be seriously injured by it; and in the majority of instances, no conception can take place for some months of lactation. Under all these circumstances, the great and sole end of marriage, the propagation of the species, cannot be effected, and animal gratification alone can be the only object. No physiologist can question these statements, and it is very remarkable that the primitive fathers of the Christian church entertained these identical opinions.

St. Augustus says in his third Book against Julian, c. 21, "Conjugal modesty will not use menstruating or pregnant women." (Pudicitia conjugalis nec menstrualis, nec gravidis utitur feminis.) St. Gregory writes of puerperal or women recently delivered, "unless the time of purgation has first passed, they ought not to admit their husbands." (Nisi purgationis tempus prius transierit viris suis non debet admisceri.) Mania has been caused by sexual intimacy during these conditions, and also a simple gonorrhœal discharge from the urethra of the male. The womb

is congested during menstruation and after parturition; and is also performing a part of the function of generation during pregnancy and suckling. Some theologians maintain the contrary opinion, on the grounds that the husband might become incontinent, and that he ought to have his rights; but such reasoners were ignorant of physiology.

It has also been urged that conception sometimes happens during lactation, and, therefore, that sexual commerce is allowable during this condition. This is only the exception to a general rule; because conception very seldom happens until lactation has ceased, or has been continued too long. The reason of this is clearly explained by physiology. It is this: in almost all instances, as soon as parturition is completed, there is a determination of blood from the womb to the breasts, which are appendages to the organs of generation, for the purpose of forming the secretion of milk, which is the natural aliment of the infant. This fluid is formed, and the function of lactation becomes a part of generation. Nature supplies it, until the infantine teeth are protruded, which is the signal for more solid aliment, the infant is now independent of the mother as regards food, the function of lactation ceases, the menstruation returns, conception speedily occurs, and a regeneration of the species is again accomplished.

It is also to be remembered, that the sympathy between the womb and bosom is very strong, and that excitement in the former will affect the latter, and, *vice versâ*. We see this proved by the fact, that repeated conjugal intimacy excites the uterus, determines blood to it, and also

from the breasts, induces menstruation, diminishes and deteriorates lactation, and injures the infant. This statement is particularly exemplified towards the period of ablactation or weaning, when the milk gradually ceases.

It is also well known that when pregnancy occurs during lactation or suckling, the bosom in most instances becomes soft, flabby, and supplies less milk, and this of a less elaborated description. If the infant is not weaned immediately it will become delicate, and require artificial food. The infant ought to be weaned if of a proper age, or a wet nurse procured for it, when circumstances permit.

Moralists have discussed the question, whether a hired wet nurse who suckled the infant of a stranger, was morally bound to pay the conjugal debt, and they decided in the affirmative. They likewise concluded that when such hired wet nurse becomes pregnant, or menstruates, she ought to restore the infant to its parents, so that it may be provided with another nurse if necessary. So also when mothers conceive, they are likewise bound to wean their infant, or commit it to the care of a hired nurse, or to dry nurse it. But it is urged that poor women cannot hire wet nurses, and ought to abstain from propagating the species. This is not correct, for if they become pregnant, they can employ artificial lactation or dry nurse their infants. I cannot, therefore, agree to the opinion, that this class of women may deny the conjugal debt altogether while suckling.

Those united in wedlock cannot lawfully abstain from rendering conjugal rites on account of poverty or a multiplicity of children. Adultery would be the common

result. Lastly, it is contrary to nature to wish that offspring should not be conceived or born, although a spurious modern philosophy of our day inculcates the contrary, and has even suggested unnatural means for the limitation of offspring. Such precepts and checks to population, being contrary to the dictates of nature and reason, will never be practised by the great mass of mankind.

A husband or wife cannot morally consent to the infidelity of each other, nor can a parent consent to procure abortion by criminal or artificial means, because this is parricide, which has ever been considered the most inhuman species of murder. But it is not generally known that the embryo is a living being from the moment of conception, and consequently its destruction is murder.

Nature demands the obligation of rearing children, and even the natural instinct of the brute creation teaches and enforces it. Parents violate this obligation, when they neglect to do all things necessary for preserving the lives and securing the health of their infants. Thus, they are culpable when they do not remove all dangerous or hurtful things from within the reach of young infants and children; or when they do not supply them with a home, food, raiment, all necessaries, and with medical aid and medicines in diseases; and also when they do not educate them, or cause them to be educated, according to their own, or even a higher station in life, if their means permit it. Parents also neglect their duty when they refuse their offspring, at the adult age, their consent to marry, or a portion of their income; or when they do not allow them to adopt any trade or profession for which they have

a strong inclination or a preference. For the same reason, mothers are morally bound to suckle their infants, unless when labouring under disease or delicate health, or other conditions, which medical practitioners will explain to them. Every *healthful* woman is morally bound to suckle her infant; and nothing can excuse her for the non-performance of this duty. Nature never does any thing in vain; she has given breast milk for the nourishment of infants, and this alone is the best food for them at birth, and for several months afterwards. But when circumstances prevent mothers from performing the duty of lactation, they are bound to procure wet nurses, when their means permit; and these must be moral, not immodest, drunkards, &c. When wet nurses cannot be procured, then artificial lactation, and dry nursing must be adopted; but the kinds of food are far inferior to that which nature intended for the human offspring.

There are various other cares and duties of parents towards the physical and moral education of their offspring, which I have described in my Lectures on the Physical Education and Diseases of Children.—(See *London Medical and Surgical Journal*, 1834—1835.) I shall now merely observe, that parents should be cautious in placing young infants in the same bed with themselves, for fear of suffocating them. They are also bound to acquire property, fame, honour, intellectual education, and religious instruction for their offspring. Parental authority and correction are necessary when persuasion and mildness have failed, but it is always to be recollected that children are much more influenced by suavity than by asperity of language, and that repeated blows will disgust them and destroy their

mind. "Fathers, provoke not your children to anger, lest they be discouraged," Col. iii. 21. It is cruel to punish a child who does not know right from wrong, and has not the use of reason; and who ought to be treated with kindness and persuasion. "Spare the rod and spoil the child," is an adage opposed to physiology and reason. I have repeatedly observed children reared to the age of five years, who never were punished by corporal chastisement. The truth of this statement will appear hereafter, when we consider the development of the intellectual and moral states of infants. In my opinion, it is a most barbarous cruelty to strike a child at an age under seven years; that is to say, before it possesses reason; and I am pleased to think, that all well educated modern medical practitioners loudly condemn domestic and scholastic chastisement of children. Their dispositions and minds should be improved by moral means only, and this is the universal opinion of modern physiologists.

The obligations of parents towards each other and their offspring, are the strongest that bind society, and equally affect all ranks in life. Among these are mutual fidelity, love, and domestic happiness. Any infringements of these, leads to unhappiness and immorality. Jealousy is the usual result. I have repeatedly known ill-grounded suspicions and jealousy lead one or both parties into profligacy and ruin. When a husband or wife allows or takes the slightest liberties with an individual of the opposite sex, which amount to familiarities, abandons home, or is fond of public amusements and admiration; conjugal happiness will rapidly decline, and infamy, misery, and dishonour replace it. The unfortunate offspring will be neglected, and

left to the slender cares of relations, or of a cold heartless world.

To remedy these evils, the softer sex ought to study and excel in those arts which show mind and personal appearance to the best advantage; which characterize the greatest majority of well-educated and sensible women, and secure the love and esteem of their erratic husbands. They should prove that marriage is a holy institution, based on religion, virtue, and morality; which command mutual love and fidelity. Those who enter this state must always remember the mandate of the apostle, "not to defraud each other," as infidelity is contrary to religion, morals, and justice. Love is secured by love, and confidence by confidence. Suspicions are invariably productive of evil. Levity and giddiness of conduct excite these, and too often lead to vice. Fidelity is in strict conformity to the marriage vow, "that, forsaking all others, the parties will respectively cleave to each other." Without this there can be no happiness; the marriage contract implies this duty, and *it is one equally obligatory on both sexes.* Where this is wanting, the bonds of marriage are immediately rent in twain; and religion and human law equally recognize the disruption of the contract itself; nor can it be supposed that any arrangements of the world, or any opinions which it may form or promulgate on the subject, can be permitted to avail where the decisions of Christianity are so positive and so plain. "We maintain that the errors of the one sex, are as heinous in the sight of God as those of the other, but it is not so in that of man." (Marriage; the Source of Stability and Perfection of Social Happiness and Duty.) The world in general forms a

different opinion, and even Dr. Samuel Johnson has sanctioned it. He asserts "it is not natural for a man and woman to live together in the married state," (Life of Johnson, vol. iii. p. 71), and that "a husband's infidelity is nothing." Napoleon expressed similar sentiments on the discussion of the Code Civil. "Le marriage ne derive point de la nature. La famille orientale differé entièrement de la famille occidentale. L'homme est le ministre de la nature, et la société vient s'enter sur elle. Les lois sont faites pour les mœurs et les mœurs varient." It has also been urged, that "physically and morally, man is longer man, than woman is woman,"—"that marriage is contrary to the laws of nature,"—"that fidelity is impossible for man,"—"that infidelity characterised woman to the earliest trace of society,"—"that the law of love so strongly attaches two individuals, that no human law can separate them,"—in fine, "that the contracting parties are generally dissimilar in mind, thought, disposition, age, physical power, wealth, &c."—and "that divorce is an admirable palliative for the evils of marriage."

It is most remarkable that the opinions of Luther on this subject accord with the preceding. He proclaimed, that chastity, however it might be extolled by the Pope and monks, was impracticable; that all who pretended to it were hypocrites; that it was no virtue at all since it was directly opposed to the command of God, "go forth and multiply," and to the laws of nature. "It is no more possible," he observes, "to live without women, than it is to live without eating and drinking."

"When Eve was brought before Adam, he, full of the Holy Spirit, gave her the most beautiful and glorious of

all names, he called her Eve; that is, 'the mother of all mankind.' Mark, he did not call her his wife, but the mother of all living men. This is the glory, the most precious ornament of women."

The author of the Reformation, further contends, "that every man or woman who refused to marry acted in rebellion to the will of God." Nothing can exceed the contempt with which he speaks of female chastity, even admitting it to be possible; and the earnestness with which he urges both sexes to unite. He declared that all women who died during pregnancy, or in child bed, if they professed the Christian faith, are saved, because they die in the very duty and function for which God created them. He also condemned the natural modesty and coyness of women, and held that such rebellion against the laws of God and rights of husbands should be punished. He repeated the advice, "if Sarah refuses, take Hagar." He regarded marriage as a civil contract, not depending on religion, but on the laws; and wherever the object of its institution was impeded, he would grant letters of divorce, and leave the parties to make new connexions. He went further, and declared, that as polygamy was practised under the Mosaic dispensation, it was lawful in modern times. "For my part," says he, "I confess that I cannot oppose the man who may wish to marry several wives; and that I do not think such plurality contrary to the Holy Scriptures." He advanced political reasons why such marriages should not be encouraged, although he allowed Philip, Landgrave of Hesse, a second wife.—(Memoirs of Luther, written by himself; translated and

arranged by M. Michelet, 1836; reviewed in the *Athenæum*, June 18, 1836.)

Such also are the doctrines in polygamous nations; but we have already observed that they are open to unanswerable objections. They are, however, too generally acted on in all countries, for although polygamy is not allowed in most kingdoms, libertinage is common in all.

It is a physiological truth, admitted even by the St. Augustine and other primitive fathers, that man might procreate according to the laws of nature with numerous women, while his wife was pregnant, in childbed, or suckling; but this would be contrary to morals and the welfare of society. Moreover, the power of reproduction remains longer with one sex than with the other, and "man is longer man than woman is woman."—(Physiologie du Marriage, par M. de Balzac, 1834.) Woman loses the power of fecundity with the cessation of the menstrual function at the age of forty-five or fifty, in temperate climates, while man retains it to the age of eighty, one hundred, or even one hundred and forty, as in the cases of Thomas Parr, and others.

There is, however, one great error of universal prevalence among men, which deserves exposure, and that is, the opinion that women after marriage, or after having had children, become different from those who have not had children. It is well known, however, to physicians and physiologists that this is rarely the fact, and that even common prostitutes have been pronounced virgins, by many of the most experienced physicians and surgeons, examples of which conclusion I have given in my work on

Medical Jurisprudence. See also *Duchatelet on Prostitution in Paris.* The reason of this is obvious; it is because the vagina and uterus retain their power of contraction and dilatation during life, and regain their natural condition often in a few minutes after parturition, and invariably in a few days afterwards. I mention this fact, as the general opinion of the world is the contrary, and as it too often leads to gross and frequent immorality.

There are other causes of conjugal infidelity which may be mentioned. Most women, on account of the delicacy of constitution and greater liability to diseases than men, become delicate, and fall into a bad state of health, which is unfavourable to amorous impulse, and opposed to reproduction.

Men are more robust and vigorous, and retain their generative power to a much more advanced age, as already stated. It is also to be remembered, that the males of all mammiferous animals satisfy numerous females, examples of which are afforded by all the more perfect quadrupeds, as already mentioned—a power possessed by man to a still greater extent, as the most perfect of mammiferous animals. Nevertheless, he alone is morally bound to support and maintain his offspring, and not to desert them like the brute and irrational animal. He is influenced by reason and religion, while less perfect animals are deprived of both.

CHAPTER IX.

PHYSIOLOGY OF THE SEXUAL ORGANS—EFFECTS OF PUBERTY ON THE PHYSICAL, MORAL, AND INTELLECTUAL STATES OF BOTH SEXES—DEVELOPMENT OF THE GENERATIVE FUNCTION—INFLUENCED BY CLIMATE, HABITATION, OCCUPATION, ETC.

We have now to describe the functions of the sexual organs of the human species, or the uses of these organs. The sexual functions commence at puberty, and are performed until the arrival of senescence. The generative function is dormant in infancy, childhood, and ceases in old age. It is announced in both sexes by a number of changes, which have the most powerful influence on their physical, moral, and intellectual states.

It commences at puberty, and continues to senescence; during that stage of life when man is most vigorous and best able to educate, protect, and support his offspring. The description of the changes which operate on young persons, when they are endowed with the prerogative of reproduction, is a subject the most extensive and difficult to treat—changes not only in the sexual organs, but in the entire economy, and especially in the intellectual faculties. We have to notice the vivid sentiment of love, and that train of sweet illusions, sensations, and thoughts, which confuse the human mind. "We must describe the history of this age," says M. Buffon, "with great circumspection, so as not to excite in the imagination, other than phi-

losophical ideas." We must treat it in the pure and unsophisticated state of nature; that is to say, physiologically and morally.

The following description of puberty is translated from my thesis on Man and Varieties of the Human Species, and it followed the History of Infancy and Childhood. "Next arises puberty, which is justly considered that which is the principle of life, and effulgent Aurora, the season of pleasure. At this age, a sudden increase of the whole body takes place, sometimes in a wonderful manner; the voice becomes hoarser in males, the pubes, axillæ, face, and whole body, become covered with a whitish down. The genital organs, which were previously small and useless, increase with the rest of the body, and being much augmented, secrete a prolific semen, by whose stimulus the youth is incited to the enjoyment of the agreeable gifts of Venus. About the same age at which boys are puberous, girls become nubile; the genital organs are evolved, the pubes appear, and the breasts are developed; a new loveliness appears on the countenance, a new elegance of the whole figure; and if the individual was previously delicate, she often and suddenly enjoys good health; a secretion somewhat similar to the appearance of blood is effused every month from the uterus; and this organ is rendered fit for the formation and nourishment of the offspring. Hence by the laws of nature the sexes are impelled with a desire to be united, whence offspring similar to themselves is propagated." (De Genere Humano ejusque varietatibus.—Auctore M. Ryan, M. D.)

At this age, from twelve to fourteen in females, and from thirteen to fourteen years in males, nature directs all her

powers of development and vitality to those organs which she has destined for the procreation of new beings. All the other functions of the body are sometimes diminished; digestion, respiration, circulation, the intellectual faculties, the senses, the motions—in a word, nature seems to suspend the growth and functions of all other parts to give a rapid development to those intended for the perpetuation of new beings.

There is a determination of blood to the sexual organs, these rapidly increase in size, secrete fluids highly excitant, which sympathetically affect all parts of the body, and are intended to prepare the organs for regeneration of the species.

When puberty is established, an indescribable commotion often agitates the individuals of both sexes; all their functions may become deranged: the digestion bad, the action of the heart and arteries irregular, often accompanied by palpitations; the respiration laborious or difficult; the individuals often find comfort only in solitude, their desires and affections are now altered; those whom they heretofore considered dearest are often looked upon as objects of indifference, and they now experience feelings to which they were hitherto strangers. The genital organs continue to develope very rapidly; their secretions increase and aggravate the indefinable commotion in the whole body. The prolific fluids of both sexes are elaborated, and fitted for the object which nature intended. "There results a superabundance of life, which endeavours to communicate and establish itself; there is a new and imperious want developed, which compels the sexes to approach each other." (*Rousel, Systéme Physique et*

Moral de la Femme). The influence of this want on the moral state of mankind is thus correctly described by the celebrated Cabanis; "The new want produces in the young man a mixture of audacity, and timidity; of audacity, because he knows that all his organs are animated with an unknown vigour; of timidity, because the nature of his desires astonish him as defiance to them disconcerts him. In the young girl, this want gives rise to a sentiment of modesty or virgin shame, of which she was heretofore ignorant, which may be regarded as the hidden expression of her desires, or the involuntary signs of her secret impressions." (*Rapport du Physique et Moral de l'Homme*).

A complete revolution is effected in the human economy at the age of puberty; the bones harden, the chest dilates, the voice changes, the constitution becomes strong and vigorous, health is completely established, and many diseases, such as scrofula, rickets, St. Vitus's dance, hysteria, chlorosis, &c. disappear; though sometimes these diseases supervene at this period. In common with all parts of the body, the brain becomes developed, the intellectual functions are augmented, man is susceptible of the highest conceptions of the mind, the principles of life superabound in his constitution, and he vigorously performs all the noble pursuits assigned him by nature.

Woman, on the contrary, delicate and tender, always preserves some of the infantine constitution. The texture of her organs do not lose all their original softness or assume the strength of those of her companion; her eyes become brilliant and expressive, and all the graces and charms of youth illumine her person. Her bosom throbs

with tender inquietudes, her character loses its infantile vivacity, her manner and tastes become analagous to those of a full grown female, her passions become stronger and more constant, her moral and physical sensibility are greater, and she feels a sentiment hitherto unknown to her—the impulse of love—the desire of marriage.

Amidst this universal disorder of the economy, the excitement of the reproductive organs predominates, and causes the extraordinary and incomprehensible phenomena already described. Nature instinctively points out her rights.

Every effort is now made by parents to suppress voluptuous ideas, but the secret thought of amorous pleasure cannot be extinguished. Nevertheless, an enjoyment purely physical or animal is not the object of research; the heart opens to the most tender sentiments, and guides the first movements of the sexes. Until this time, they were actuated either by self-love, parental affection, or esteem for the youth of their own sexes; but now paternal tenderness and mere affection are insufficient for their happiness. Their well-being exists in another individual, and they think that they cannot enjoy real existence but in the intimate union of their body, soul, and heart, with one of an opposite sex to their own. They meet, their tastes, ages, and sentiments are similar; and now commences the scene of their innocent amours. What delightful reflections are offered to the study of a moral and philosophic mind by the innocent amours of two young persons, who know no other motives for their actions than the pure inspirations of nature and the heart! The strictest chastity presides at their first interviews; a word, a glance,

a whisper, the pressure of a trembling hand, is now the enjoyment of happiness. They do not approach each other but with a respectful fear; they dissemble towards each other the nature of the sentiments which agitate them; they think "unutterable things."

In proportion as their visits are more frequent, and their physical love is increased, which it is by the excitement caused by their meetings, their interviews are more numerous, their conversations become longer, more delicate, more intimate; a reciprocal and exclusive confidence is established between them, the trembling hand reposes longer in that of its admirer; they embrace, their hearts palpitate, a secret fire consumes them, and they finally vow to taste legitimate pleasure, after swearing eternal fidelity to each other before the altar.

This, however, is the age at which the youth of both sexes should act in strict accordance with the precepts of religion and morals, as errors committed now are too often irretrievable. The tender sex, which are the objects of the most ardent fire of zealous adoration, and who burn themselves with the same flame, must never yield to the slightest freedom which is contrary to modesty and honour. They must not countenance for a moment obtrusive familiarity, much less the slightest immodest advances, or their ruin and degradation are inevitable. The usual result of impertinent familiarity, of illicit or anticipated love, is disgust, desertion, and indelible disgrace. A virtuous and firm resolution is the only safeguard, and a fixed determination not to remain alone, or beyond the hearing of others, with him who has captivated the heart. The passion of love is as inherent in mankind

as the function of digestion or respiration, and must be gratified as well as other wants. It is, however, less essential to individual existence than other functions; but when it is established at puberty, as it is in almost all persons, it must be gratified; and human intervention or laws cannot restrain or extinguish it, except in a very few, if in any, instances.

The secretion of the sexual fluids is intended by nature for the conservation of the species. About the fourteenth or fifteenth year, in temperate climates, the sexual organs of boys become developed, and a fluid is secreted by the testicles, termed seminal or spermatic, which is destined for the perpetuation of the species. This fluid accumulates in receptacles provided for it (*vesiculæ seminales*), and not only excites the sexual organs, but every part of the body. The functions of the mind are improved, the digestion becomes more vigorous, the circulation of blood is more rapid in every organ, which is abundantly nourished, and performs its function with much more energy than before this period of life. Hence, we observe the body developes with rapidity, and the individual in a short time loses the characteristics of boyhood, and acquires those of adolescence, or manhood.

Though the sexual organs rapidly develope from the fourteenth to the twentieth year, yet they do not, in general, acquire their complete growth or functions before the twenty-fifth, sometimes not until the thirtieth year; and this is the age most proper for marriage.

The body of man is not fully developed before the twenty-fifth year of age, the spermatic fluid is less abundant and fitted for reproduction; and persons under this

age generally beget delicate sickly infants, which seldom arrive at maturity. Sexual indulgence, or unnatural excitement, before the age of twenty-one, according to our laws, but before the age of twenty-five, according to the laws of nature, not only retards the development of the genital organs, but of the whole body, impairs the strength, injures the constitution, and shortens life. Ample evidence in proof of the validity of this position is adduced in my published *Lectures on the Physical Education and Diseases of Infants from Birth to Puberty.*

The period of puberty is accelerated or retarded by climate, occupation, aliment, situation, and morals.

It occurs so early as the ninth or tenth year in warm countries, and so late as the eighteenth or twentieth in northern regions. It is observed very early in Asia and Africa, and very late in Denmark, Russia, Norway, Iceland, &c. Boys become puberous so early as the eleventh year in the south of Europe, in Italy, and even in Spain and Portugal; about the thirteenth or fourteenth year in France; and the fourteenth or fifteenth in this country. Examples of precocious puberty so early as the fifth year, in this climate, are recorded in my *Manual of Obstetricy.* It occurs earlier in large towns and cities than in rural districts, as the imagination is more excited by voluptuousness, books, prints, theatres, public amusements, the erotic and seductive discourses of the corruptors of youth, &c., than in the country. It has also been observed that the sooner puberty appears, the sooner old age follows; and this general rule equally applies to the other sex. Common observation confirms the truth of this statement.

Puberty may be advanced or arrested by an abundance

or scarcity of food, by heat or cold, or by season or climate, by residence in a city or the country, and by an easy or laborious life. According to Aristotle, "puberty ensures health or deranges it, the body becomes thin or full, delicate children become robust, or strong children become delicate. Many diseases disappear, others are developed." (*Hist. Animalium.*)

It has long been observed in all climates, that puberty appears earlier in girls than in the male sex. Buffon explains the reason of the difference in the following manner: "That man being naturally stronger and more robust than woman, nature ought necessarily to employ more time in his complete development." It is also evident that women lose the faculty of reproduction sooner than men. The external influences, such as climate, aliment, occupation, and morals, with peculiarities of constitution, accelerate or retard puberty in girls as well as boys.

The establishment of puberty in woman renders her capable of performing her part in the perpetuation of the species; and this faculty has now to be described. But I must here premise, that neither sex can morally nor physically become a parent at puberty, on account of immature development both of mind and body, for satisfactory reasons assigned by theologians, philosophers, legislators, and physicians. These reasons have been already adduced in the observations on early and premature marriages.

All researches on the reproduction of plants and animals, from the lowest to the highest, in ancient and modern times, were made with a view of explaining the generation of the human species. But all have hitherto signally failed to explain the mystery of reproduction of man—the trans-

mission of the vital and immortal principles from parents to offspring; and after the investigations of ages, the reference must be for explanation to the Omnipotent Creator of all things. Man is still ignorant of how life begins or ceases. It is all mystery to him. He cannot reason but from the analogy afforded by the vegetable and animal kingdoms. This is the most unsatisfactory. As in plants and animals, the propagation of the human species is confided to two *sexes*, male and female. Both are endowed, for this object, with particular organs, called *sexual*, whose united action and reciprocal *contact*, are indispensable to the formation of the new being.

Sexual approach or contact reunites the constituent parts of the future being. These elements are the spermatic fluid of the male, and the ovum or germ of the female. The human female possesses from fifteen to twenty germs, ova, or vesicles in each ovary, but these are never separated during the function of sexual commerce. The process by which these elements are united is the same, as will hereafter be described, in other mammiferous animals.

Man and woman, like other animals, do not enjoy the faculty of procreation at all periods of life: it is only at that age when the body has acquired complete development, and this is from the period of puberty or nubility to old age. The phenomena of this age have been detailed in the description of puberty, and the proper age for marriage.

The sexual organs having acquired perfect development, are excited by the secretion of the seminal fluid in man, and the development or perhaps secretion of the germ or egg in the ovary of woman; and this excitement leads to sexual union, by which the elements of both sexes are

united and the new being is formed. Of this I shall speak more particularly hereafter.

The reciprocal action of the male and female fluids does not produce at first, but an animated point in the female ovary possessing all the vitality of a plant. It gradually developes during pregnancy, at a certain period passes into the womb, and it is only after the lapse of nine months that the new being is perfect.

The period of fœtal development is termed pregnancy or utero-gestation.

When this has terminated, the new being is born, and the function is called labour, delivery, or parturition.

The new being, after having passed the portal of life, is extremely feeble, and would expire in a few hours or days, unless for the many parental and human cares which are bestowed upon it.

The chief of these are clothing, aliment, and repose; and nature endows the mother with milk—lactation. Many other cares are however required for the physical and moral education of the infant, which I have described in another work—*Lectures on the Physical Education and Diseases of Infants*, &c., already quoted, but shall briefly notice hereafter.

Arrived at a certain age, both man and woman lose the mysterious and brilliant power of procreating new beings, and this is the age of decline, the critical age or turn of life. There are also numerous causes of impotence and sterility, which render reproduction impossible.

After this summary review of the series of functions peculiar to reproduction, we must perceive that to treat of generation it would be necessary to describe, 1. The sexual organs. 2. Their development at puberty. 3. The func-

tion of these organs by which the new being is formed (coition, copulation.) 4. Of the action of the male and female fluids on each other, or the mechanism of impregnation and conception. 5. The development of the germ in the womb; gestation, or pregnancy. 6. The expulsion of the infant from the womb, parturition, delivery, confinement, accouchement. 7. The function of lactation or suckling. 8. The physical and moral education of infants. And 9. The loss of the faculty of procreation.

Such are the subjects which require to be described in elucidating human generation. These ought to be noticed; but a full description of them will be found in my works on *Midwifery, and Lectures on the Physical Education and Diseases of Infants from Birth to Puberty.*

All the organs or parts which are subservient to generation are denominated genital or generative organs. The unthinking part of mankind consider the slightest allusions to these organs as indelicate; but the practitioners of the healing art must consider their structure and functions.

The sexual organs of man and woman are wonderfully adapted to each other, and have a perfect power of acting on each other. Nature sacrifices every thing to reproduction: it is for this that we enjoy all strength, vigour, and beauty; so as to excite us to contribute to the procreation of the species, with which such exquisite pleasure is associated; and it is for this that we experience so many sweet illusions in the brilliant season of our amours; and that we give way to others when our reproductive powers have failed. In a word, nature always regards the species; and never the individuals.

The delightful sensations experienced by animals in the act of reproduction, causes them to perform it instinctively.

But nobler sentiments preside over the conjugal union of our species; two souls sympathise for each other, and see in common, the wisdom of procreating offspring like themselves; two hearts which console each other in the troubles of life, and centuple their pleasures by the most intimate union; the delights of a conversation full of tenderness; the affectionate cares bestowed on each other during illness; an association of talents, qualities, riches, honours, and paternal and maternal love, are the precious advantages which mankind derive from conjugal unions. But whatever may be the superiority of man over inferior animals, in the respect to generation, we cannot conceal from ourselves, that, like the brutes, we are seldom influenced by any other motive in our unions than by sexual pleasure only. It is useless for us to deny that the majority of marriages which are apparently based on real love, are almost always the result of our servile and involuntary obedience to the imperious voice of our sexual organs. Every thing that presents to our minds the idea of vigour, of a fine figure, and sufficient ardour, always influences us unconsciously. Woman can never deny that she has a particular predilection for a fine figure, a noble gait and manner, a broad chest, the head elevated and furnished with a luxuriant growth of hair, the eyes full of fire, the manners amiable, and the gallantry polite. In the same manner, man is always desirous to meet in her whom he selects for his wife, superior mental and corporeal endowments, a fine graceful figure, good eyes, and general development. Many prefer a woman of high moral worth to all other considerations; some allow wealth, titles, and evanescent temporal insignificancies to influence their choice; but conjugal unions based on such motives are

generally both infertile and unhappy. It will be found, upon reflection, that the superior qualities of mind and physical beauty, are the concomitants of great genital vigour. Numerous proofs of this position are adduced in the observations on the morbid and hygienic effects of the use and abuse of the genital function, which will be noticed hereafter.

CHAPTER X.

CAUSES WHICH INFLUENCE FECUNDITY — ABUNDANCE AND SCARCITY OF ALIMENT—SITUATION—CLIMATE—AFFLUENCE — POVERTY — BIRTHS — DEATHS — POPULATION FROM THE POLES TO THE EQUATOR—TEMPERAMEN — PASSIONS — VOLITION — IMPEGNATION DURING SLEEP—A MOTHER OF SIXTY-SEVEN INFANTS—CAUSES OF INFECUNDITY.

Reproduction of Organized Beings.—Numerous causes favour the fecundity of animals—as aliment, season, climate, &c,. and of the human species, as temperament, habit, age, occupation, and a variety of other circumstances which deserve to be noticed, as they influence generation and population.

As a general proposition it may be maintained, that abundance of aliment increases the number of mankind and of animals; and that years of prosperity are remarkable for a greater number of births, and years of famine or pestilence for the fewest.

Maritime nations are usually observed to be very prolific.

Fecundity is greater in cold than in hot climates. The Icelanders have from fifteen to twenty children, the Ger-

mans six to eight, the French four or five, the Spaniards two or three. There are, however, individual exceptions, and some relative to climate. The Negresses in Africa have many children, and the Egyptian women very often two at a birth (Encyclop. Méthodique, Art. Egypte). Baron Larrey informs us, that during the expedition of the French army to the east, there were many women who accompanied it, who had no children in Europe, but became pregnant in Egypt (Mem. de Chirurg. Militaire). Many historians and travellers attribute the great fecundity of the Egyptian women to the use of the waters of the Nile; but I think that it might be more justly attributed to the perfect equality of the temperature of Egypt. M. Larrey states, that after the return of the French army from Egypt, in 1801, several women applied to Captain Roustan, on his arrival at Toulon, to purchase some of the prolific waters of the Nile.

It has been remarked, that there are fewest children in the affluent quarters of cities; whilst they are numerous in the poorer districts. In the former, nearly all the infants die. On the contrary, poor countries have a superabundance of population; as Switzerland, Savoy, Ireland, &c. The Turks, Asiatics, and Peruvians, who inhabit a delightful climate, and are allowed a plurality of wives, have their empires thinly populated. There is a custom among the Persian women of inducing abortion, for the purpose of retaining the affections of the husband, who declines to cohabit with any of his wives when pregnant, it being held indecent to approach a pregnant woman.

"Man multiplies himself," says M. Virey, "in the United States of America, while he perishes without pos-

terity in the neighbouring possessions of Spain; for the first is laborious and without luxury; the second enjoys ostentation and idleness: the one is free, whilst the other is subjected to an arbitrary yoke."

It appears by the registries, that there are more births than deaths in temperate countries.

Moderately cold nations generally present a greater population than the warm regions. The number of children in each family in Sweden is, from eight to twelve, and sometimes from twenty to thirty (Rudbeck); and in frigid Iceland from fifteen to twenty. The excessive population of England, Denmark, Russia, &c., made incursions upon the Gauls, Italians, and Spaniards, and were greatly diminished by the crusades.

"The equatorial regions," says Virey, "notwithstanding their wealth, the profusion of their alimentary productions, the warmth and beauty of their climate, which so favour love; notwithstanding the superabundance of women, (polygamy), and the faculties of enjoyment, are less prolific, on account of many causes."

The body is relaxed and enfeebled by the heat, warm baths, and luxurious habits of the people; and is, therefore, less favourable for reproduction. These people generally abuse the pleasure of love, and are less fecund than the inhabitants of cold northern regions, who enjoy it in moderation.

It is an axiom, that fecundity diminishes in proportion as we advance from the poles to the equator.

"It is necessary for a fruitful marriage," says M. Virey, "that there should be a certain harmony between the sexes, both moral and physical; and this is manifested in

the sympathies of instinct which, independently of beauty, make us prefer one person to another. The sexes secretly wish their union by a natural impulse which cannot be explained, and which in a mixed society renders us more attentive to one person than all the rest; and nature inspires us better in this respect than reason.

"This harmony consists less in similitude of temperament, age, &c., than in diversity; for if we remark, we observe a violent bilious man prefer a mild and modest companion, while a passionate impetuous woman finds most charms in a moderate tranquil man; so that one may be tempered by the other, whether they be too cold or too hot." It is also universally known, that some married persons fail to have a family, who are fruitful after a second union.

When the characters are very different, they cannot entertain the state of harmony as in a frigid or ardent individual, until age or habit renders them more suited to each other; thus, married persons have passed fifteen or twenty years without offspring, notwithstanding their most anxious desires. Abraham and Sarah, and Jacob and Rachel, are examples mentioned in sacred writings.

When there is antipathy, disgust, hatred, or passion, conception seldom happens; though some of these obstacles may exist at first, as in women who pretend to be forcibly violated, but finally acquiesce in pleasure, and become pregnant; and it is not, as yet, I believe, determined whether impregnation can be effected when a real hatred exists. There are, however, many examples recorded of married and unmarried women who were impregnated when in a profound sleep, as mentioned in the works on

Medical Jurisprudence, and recently by Dr. Gooch (*Outlines of Midwifery, in* 1832), and Dr. Kennedy (*Elements of Obstetric Auscultation,* 1834.) In such cases, there could not be much voluptuousness, though amorous impulse employs the mind during sleep ; and there was, at the time, no repugnance for the former, or some degree of it, appears indispensable to the generation of a new being. It may be said with truth, that that which commences with apathy generally finishes with love, when the transport of pleasure ravishes the will.

Marc is of opinion, that the moral causes of sterility in both sexes are, a fear to procreate, too vivid a desire to have children, an antipathy or incompatibility of humour between the sexes, negligence or apathy of the husband to the wife, the diseases and inconveniences of some wives, violent passion and immorality or infidelity. He estimates the proportion of sterile to fecund women at ten to one thousand ; Heden, a Swedish minister, one to ten ; Franck at six or seven in three or four hundred. The fear of procreation often arises from the indigence and inability to support offspring ; or, in the upper ranks, from the vanity of women, who imagine that conception and its consequences will diminish or destroy their charms, or deprive them of devoting that time to frivolous pleasures which the rights of matrimony demand. Reserve and frigidity during the approach of the sexes, is also a cause of sterility.

Fecundity is greater with some than with others. Haller knew families who had sixteen, twenty, twenty-eight, and thirty children. A friend of mine knew a lady of title, who is still a fine and youthful looking woman,

who had twenty-seven children. A patient of mine, at St. John's Hospital, said she had had thirty-two; and a woman, aged seventy, appeared at the Police-office, Bow Street, in May 1834, who stated that she was the mother of forty children, and that her daughters had twins three or four times.

Sir George Tuthill is said to have stated, that an Asiatic Russian had by his first wife sixty-nine infants at twenty-seven births! and, by his second, eighteen at eight births!! —eighty-seven children!!! He was alive in 1782, and aged seventy-five years. (*London Medical and Surgical Journal*, vol. i. 1836, p. 768.)

Madame de Stael asked Napoleon who was the greatest woman in France? He answered—"She who has had most children."

Dr. Blundell seems to be of opinion, that fertility depends more on the female than the male sex, to which I cannot agree. He mentions an example of two sisters, who bore three children each at a birth; and of a member of the medical profession in advanced life, nearly eighty years of age, whose lady had four children at one birth; which Dr. Blundell is disposed to attribute more to the fecundity of the wife than the husband. This I very much doubt; because man imparts vitality, not woman. Were the latter endowed with the faculty, there would be no need of the former. Hanhemann, the father of homœopathy, near eighty, lately married a Parisian lady aged thirty-six. These and similar cases, show the possibility of the truth in charges of violation against very old men of which there can be no doubt.

CHAPTER XI.

INFLUENCE OF CLIMATE, SEASON, ABUNDANCE OF ALIMENT, FAMINE PROSPERITY, MISERY, LIBERTY, AND SLAVERY, UPON FECUNDITY AND POPULATION —COMPARATIVE INFLUENCE OF THE SEXES ON REPRODUCTION.

THE seasons, which are only transient climates, have great influence on fecundity. It is true, however, that man can exercise his genital function at all times, in all latitudes, temperatures, and countries. Nevertheless, the physical influences of the atmosphere, of aliments, and modes of life, render certain seasons more fertile than others.

Hippocrates was of opinion that spring was the season most favourable to conception. Pliny termed it the genital season, *geniale tempus*, when all nature possessed ardour and became pregnant of new creations. At this season, all animals and vegetables reproduce—animated nature is exhilarated—the purity of the air, the freshness of aliments, the infancy of all nature, which renews pleasure, the odour of flowers, the melodious singing of birds, the voluptuous sensations felt in every organ—all proclaim that this is the season of reproduction. Animals approach each other, the germination of seeds commences, shrubs and trees put forth their blossoms, and there is a universal effort to reproduce in all bodies endowed with life.

In accordance with this law, we have multiplied experience to prove that a much greater number of infants are

born in the months of December, January, February, and March, than at any other time of the year, which shows that sexual intercourse is most prolific in the months of March, April, May, or in spring.

Messonoe has observed that the summer months were most favourable to impregnation, but that fewer births occurred in June, November, and December; that is to say, that the autumnal months are least favourable to conception.

M. Villermé lately read a statistical report before the Academy of Sciences in Paris, in which he gave an account of 12,000 births, of which 1093 took place in January, 1136 in February, 1117 in March, 1057 in April, 1000 in November, 981 in December, 981 in September, 964 in October, 965 in May, 927 in August, 896 in June, and 884 in July. This report referred to France only; but there is a vast difference between the periods of the greatest fecundity in different climates.

In Sweden, the month of September is most abundant in births, which refers to the preceding December for the time of conceptions. In northern climates, the winter is the season in which the inhabitants associate most at festivities; and hence there is a greater union of the sexes. In summer there are more amusements in the open air. Raymond states, that the women of Marseilles conceive more in autumn and in winter than in summer; that the most prolific month is October, and the least so March. (Topograph. de Marseille dans les Mem. Acad. de la Soc. Med. t. ii. p. 128.)

In general, however, the heat of the summer is less favourable to conception than the more temperate seasons;

and the equinoxes more than the solstices. The warmth of summer causes perspiration and exhaustion, and though amorous impulse is strong, its enjoyment is followed by greater debility than in spring, and its frequent use is injurious in the former season.

The variable state of the weather in autumn often induces cholera, diarrhœa, dysentery, typhus, &c., and this season is generally considered the least favourable to reproduction. Winter, for the reasons already stated, is held to be more congenial to fecundation than the preceding season. The end of winter or commencement of spring is, perhaps, the period in which most conceptions take place. Some writers have stated that a southerly or warm and humid constitution of the year is most favourable to the births of female infants; whilst in cold and dry years most males are produced. *Hippocrates De Aere. Loc. et Aq. et Raymond Sterilib.*)

The agriculturists of France have long observed, that season determines the sex of animals. When the weather is dry and cold, and the wind northerly, mares, ewes, and heifers, produce fewer females than when the season is in the opposite condition. (Velpeau, Girou, &c.)

It is a popular, but, most probably, an erroneous supposition, that women bring forth more male infants in one year than in another. There is an adage among midwives, "This is the year for sons or daughters."

As the day is a portion of the year, it may be inquired, if there be any period of it more favourable to conception than another—a *hora genitalis*, as supposed by the ancients. It has been remarked that there are more parturitions at night than by day; because, during this time, most impreg-

nations undoubtedly occur. According to M. Virey, the morning is the most proper time for generation; then the body is repaired by the repose of the night, it enjoys the plenitude of its power; waking is often accompanied by erection, the best sign of vigour; and it is in the morning sleep that the nocturnal illusions of pleasure most commonly occur. The agitation and labours of the day, repasts, and various objects of distraction, studies and business, render sexual unions less fertile than during the stillness of the night, or in the morning.

There is no greater source of reproduction than abundance of aliment. In all countries, the number of consumers increases or diminishes in proportion to aliments. In years of opulence and fertility, all increase; men, beasts, and insects, all multiply and fill the earth; but in the sad periods of indigence and misery, and in seasons of calamity, we only observe few individuals born, and these are generally degenerate. So, also, the years of famine are certainly accompanied by a great deficiency in reproduction, as the tables of births very amply attest. The want of subsistence and of agriculture in savage nations explains the paucity of population; and hence the justness of the ancient adage,

"Sine Cerere et Baccho friget Venus."

It is very true that Ceres and Bacchus, the mythological deities of aliment and drink, might be fairly considered to influence the rights of Venus. In proof of this position, it is further urged that the most powerful means of mortifying the flesh, according to moralists, is fasting. It is also known that sexual intercourse causes hunger, and

needs restorative means, whilst an abundant restoration excites the want of generation.

Experience has also shown, that certain foods excite the genital organs of particular individuals. The employment of vinous and spirituous liquors produce the same effect on most persons; although their abuse, as also that of warm drinks, such as tea and coffee, are injurious to generation. It is held that inveterate drunkards, or those who engender in drunkenness, produce more daughters than sons, as they are less energetic, their desires less ardent, and the seminal fluid less prolific than in a natural condition. Drunkenness diminishes the powers of the nervous and muscular systems, and often renders the exercise of the generative act impossible or imperfect.

M. Marc observes, that neither sex, when inebriated, perform the genital act with sufficient power for perfect fecundation. Plutarch also laid it down as an axiom, "that no man keep company with his wife for issue sake, but when he is sober, as not having before drunk any wine, or at least such a quantity as to distemper him; for they usually prove wine-bibbers and drunkards, whose parents beget them when they were drunk; wherefore Diogenes said to a stripling, somewhat crack-brained and half-witted, 'Surely, young man, thy father begot thee when he was drunk.'" (*Morals, Translation, London,* 1718.)

Burton remarks, in his Anatomy of Melancholy, "if a drunken man gets a child, it will never, likely, have a good brain." Mr. George Coombe, in his admirable work, *The Constitution of Man considered in relation to External Objects,* relates the case of a young woman who had drunk and danced for hours with a soldier. They left the cottage,

and after an hour, were found together in a glen, in a state of utter insensibility, and the consequence of this interview was the birth of an idiot.

Many other physiologists might be quoted, who describe the evils entailed on the offspring when begotten while one or both parents were intoxicated; but these conclusions do not controvert the fact, that a moderate use of wine, or other stimulating liquor, excites amorous impulse, as well as the mind and body of most persons, and is considered favourable to reproduction. Indeed, a moderate use of such fluids generally precedes the function in question. But this custom is contrary to the dictates of nature, although it prevails, more or less, among all classes of society. It is generally considered that the population in northern nations has been very much diminished and deteriorated by the abuse of spirituous liquors, but this is by no means proved.

The most unfavourable state for propagation is excessive exertion of the mind or body. It has been long observed, that men of great genius have fewest children. Experience has demonstrated, that the pleasure of love extinguishes the fire of the imagination, abates genius and courage, as innumerable proofs have repeatedly attested. Lastly, M. Villerme is of opinion, that balls, amusements, and public rejoicings at the time of marriage, or any other period, as also privations, fasting, prosperity, civilization, liberty, misery and calamity, have different effects upon reproduction; and he arrives at the conclusion, that more infants are born under a clear sun, in countries where the arts, industry, and the sciences flourish, and where the atmosphere is pure and the country fertile, than under

opposite conditions; and that scarcity and famine produce great changes in the population.

Another question, relative to procreation, which engaged the attention of physiologists and naturalists from the earliest periods, is the comparative enjoyment of the sexes. The majority of authors have awarded it to females. Some have held that pleasure and fecundity are enjoyed in an equal degree by the sexes, (Bousquet and others.) (Virey, Blundell, &c.) by females. These, it is said, are most tranquil and less agitated than the other sex, as they contribute least to the formation of the embryo; while the latter are most voluptuous, ardent, excited, and afterwards depressed. The spermatic and ovarian fluids which effect reproduction, are supplied in very different proportions; that of the male is the most important, as imparting life; and hence there is more languor on its effusion; while the vaginal and uterine ejaculation which is alone perceptible in the act of generation, and is not spermatic, but unprolific, scarcely diminishes sensibility, nor is it followed by such great prostration as the former. The feminine prolific fluid is the germ or ovum, which does not leave the ovary for some days after impregnation, and is only a small drop of liquid. Hence it is a physiological axiom, that the function of procreation is less debilitating and more delicious with one sex than the other.

An ancient writer has observed, "Sicut unus gallus multis gallinis sufficit, sic etiam unus vir pluribus mulieribus satisfacere possit. Sed profecto quotidiana reclamat experientia, (nisi forte Herculem vel Proculem aliquem resuscitemus) unam mulierem pluribus viris sufficere potius, quam, contra, adeo ut inventæ sint, quæ trigenta duos

ordinis militaris viros continuatis vicibus sustinuerint; et satis ab antiquis decantata est effrænata libido Messalinæ:

'Adhuc ardens rigidæ tentigine vulvæ:
Et lassata viris, nondum satiata recessit.'"

Such was the conclusion of Plazzoni, and that which is now generally received. (F. Plazzonus de Partibus Generationis, Lugdini, 1664.)

If the reason be inquired why one sex is more insatiable than the other, the answer is, because the one dispenses less vitality than the other. It is now universally admitted by physiologists, that there is no supply of a feminine seminal fluid during the act, reproduction, but a germ in the ovary is impregnated, though there may be a more or less abundant secretion of fluid from the membrane and subjacent glands of the vagina and uterus; but the sensibility remains vivid after the effusion of this fluid; while the emission of the male is followed by an immediate abatement of amorous impulse. In fine, the conformation of the sexes, enables the female always to receive, and never, according to the expression of Solomon, to be satiated ("os vulvæ nunquam dicit, sufficit,") and therefore sexual enjoyment is considered more delicious and protracted in one sex than the other.

If we consider that the other sex have the nervous system much more sensitive than ours, the skin finer and more delicate, that their feelings are more acute, their mammæ the seat of vivid sensibility from uterine sympathy, the nipples erected during intercourse, we must agree with Delignac, "that their enjoyment is more intense and extended through the whole economy, than in man, and

that coition or impregnation generally excites in them a universal tremor in all parts of the body." Amorous excesses do not determine the question under consideration. Astruc and many other respectable authors relate examples of nymphomania. At one time I was inclined to doubt the existence of such cases in this country, but Mr. Mason, of Newington Butts, related the history of a case to me, which fully equalled any one of which I had read. It occurred after parturition in an unmarried woman. Such cases, however extraordinary, do not surpass those of satyriasis in men. In endeavouring to resolve the question, it is necessary to describe the genital power in men. This will vary according to age, temperament, habit, mode of life, situation and climate. It is in general much more energetic from the age of puberty to the age of thirty-five or forty-five than at later periods of life; but it is sometimes very powerful after this last age. Thus, even in our own time, we see men of seventy, eighty, and even ninety, entering into matrimonial engagements. Cabrol in his Alphab. Anatom. Observ. 17, reports the cases of men, who, (while under the influence of cantharides,) performed the reproductive function forty times in one night, and forty-eight times in two nights; but in my opinion no just conclusion can be drawn even from such cases. It is possible that such instances may have occurred, but it is extremely improbable that the secretion of semen, which is comparatively slow, could become so rapid and superabundant. Other analogous observations relating to the act of generation are mentioned by Schurig (Spermatolog.) and Sinibaldus (Geneanthropia.) It is also recorded that Proculus, a Roman general, deflowered ten prisoners of war

in one night. In one of his letters he states, " Proculus Metiano affini S. D. centum ex Sarmatia virgines cepi. Ex his una nocte decem iniui; omnes tamen, quod in me erat, mulieres intra dies quindecim reddi." (Flavius Vopiscus.) This incredible assertion was even surpassed at a trial at Westminster, in June, 1836, in which one of the parties declared that he had deflowered twenty virgin nuns in one night! He also stated that he had fought ninety duels, and shot each of his antagonists in the left eye!! The jury very properly considered that these and many similar statements incredible, and gave a verdict against him.

According to Venette, complete efforts do not exceed six or seven acts; and men who exceed this number, " quibus rigidus adhuc in inguine nervus," ejaculate no more, or sometimes have emissions of blood. Tissot relates examples of the last disease in his Traité sur l'Onanisme. When we remember the limited capacity of the seminal receptacles, we must at once perceive the utter impossibility of numerous coitions, even allowing the secretion of semen to be increased by them. But as the genital power will vary according to age, habit, temperament, occupation, climate, and season, it must differ in different individuals, and cannot be properly estimated, or a positive rule laid down respecting it.

It is not to be supposed that when pleasure is most vivid conception takes place more readily, as the contrary is often the fact, " non eo quò salacior mulier, eò fecundior;" for when the uterus is in a state of extreme and too frequent excitement, it often loses its retentive power. We see this exemplified in the lower orders of mammiferous animals

over which it is often necessary to pour cold water after copulation, to excite the contraction of the uterus. The same reason explains the infertility of prostitutes and courtesans, who rarely conceive, unless after intercourse with persons whom they prefer. In fact, a uterus incessantly open and stimulated, has a tendency to evacuate itself, and repeated venereal enjoyments induce excessive menstruation, mucous discharges, and abortions. In such cases conception rarely occurs, unless the mind be intently fixed upon one person, and there is one undivided love. It has been observed that prostitutes who were infertile for years, have become mothers after transportation to Botany Bay, when they became restrained by marriage. In the same manner, when men abuse the end of marriage, they have no children, because they secrete semen which is not sufficiently elaborated, and which is too feeble; and hence polygamy is much less favourable to population than monogamy. Chastity, on the contrary, augments the vigour of the organs and amorous impulse, and is the surest means of fecundity. Hence, those newly married persons who have observed a strict chastity before their union, procreate immediately, and their offspring is vigorous; while dissipated or aged persons seldom have children, and if they have, the offspring seldom arrives at the adult age. For this reason, animals which copulate at certain times only, engender by one act. But a rigid chastity enfeebles the passion of love, and may be the cause of infertility.

Abstinence from venereal enjoyment, for a few days or weeks, favours fecundity, and invigorates both mind and body. The ancient classic and philosophic authors held that all great intellectual generation required corporeal

continence. Minerva, the goddess of genius, and all the muses, were virgins. Horace lauded the favourite of Apollo from having abstained from women and wine, " Abstinuit venere et vino, sudavit et alsit," and Virgil wrote still more forcibly. Bacon observed that no one of great genius, of antiquity, had been addicted to women; and he stated that among the moderns, the illustrious Newton had never enjoyed sexual intercourse. This fact confirms the remark made by Aretæus, and since verified by all physiologists, that continence, or the reabsorption of the semen into the animal economy, impressed the whole organism with an extreme tension and vigour, excited the brain, and exalted the faculty of thought. From these effects, courage, magnanimity, all the virtues, and corporeal vigour resulted.

The abuse of enjoyment, on the contrary, enervates the body, destroys the memory, extinguishes the imagination, degrades the soul, and renders us stupid. Thus, idiots who abuse this function are excessively lascivious; and eunuchs are remarkably deficient in genius—they want the organs which are destined to secrete the semen, and this plunges the mind as well as the body into a languor and debility almost infantine. It has also been observed that mental exaltation and madness do not manifest themselves before the age of puberty, nor in old age, but in the adult age especially, by the retention of the sperm or ovarian fluid; and hence, castration and pregnancy have radically cured maniacs. Nothing is more certain than this, that animals and plants shorten their existence by multiplied sexual enjoyments. It was to secure vigour of mind and body that the founders of certain religious pre-

scribed chastity and celibacy to their ministers. This rule is in some degree accordant with physiology; for it is well known that our moral and physical powers are diminished by coition, because we impart a portion of our physical and intellectual endowments to our offspring, and diminish them in ourselves.

A most important train of consequences to society and government follow from this inquiry, which is, that the state of morals has a prodigious influence on the population of empires. It is proved beyond doubt that the population increases much more in the country, and in villages, than in large cities. The citizens pass their youth in dissipation, and marry late for the sake of interest. But in the country, illegitimate unions cannot occur without exposure, as every one knows the conduct of his neighbour; a man marries early in life, he is a stranger to luxury and effeminacy, and his offspring is generally healthful, vigorous, and numerous.

CHAPTER XII.

PROCREATION OF THE SEXES AT WILL—AND OF VIGOROUS POPULATION.

ANOTHER curious inquiry was attempted by the ancient authors, whether it was impossible to procreate the sexes at will: and this has been long determined in the negative by a preponderating majority of physiologists. Every one knows there are some families who are most desirous of male offspring, and others who are anxious for female; and

even some who go so far as to expect that the sex of the fœtus in utero may be determined by their medical attendants, midwives, and fortune tellers. A few remarks upon this subject are therefore necessary and allowable.

The ancients supposed that the right testicle and right side of the womb, produced male, and the left, female offspring. Hippocrates, Aristotle, and Galen, entertained this opinion; which was in time combated by Pare, Diemembroeck, Verhagen, Alberti, Franco, Hoffman, Bartholin, Vesalius, Harvey, and many others. These writers demonstrated that men who had one testicle produced infants of both sexes; and they also found male fœtuses in the left side of the womb, and females in the right; and finally, that the right Fallopian or uterine tube had been destroyed in women who had begotten both boys and girls. This exploded opinion of the ancients was, however, lately revived by M. Millot, who has offered the following hypothesis, which, though apparently feasible, is generally considered erroneous:—He states, that he made numerous experiments on human generation, and was well convinced that it is possible to procreate either sex at will. His views are, however, denied by all modern physiologists. He entertained the exploded opinion, that the rudiments of male infants are in the ova of the right ovary, and those of the female in the left ovary. He concludes, upon this mere assumption, that a certain position ought to be assumed during the act of reproduction to produce a boy or girl. "Si inclinetur leviter mulier in coitu in latus dextrum generat mas, in sinistrum fœmina." He mentions the case of a noble lady, who brought forth twins, both males, after having followed his advice. Three

other countesses obtained the same success by the same method. He proceeds to attest his physiology by the following statements :—

"The virtuous wife of the last Duke of Orleans, having given birth to two boys, consulted me, through the medium of Madame de Blat, her maid of honour, to inform her of the mode of procreating a daughter instead of another son. I gave the necessary information, and she brought two daughters into the world. This estimable princess wished again for a son, and she obtained one by following my directions. Five other ladies of rank obtained the sex they desired, by the same method."

Venette, the author of the Tableau de l'Amour Conjugal, a work always in great circulation in France, is of the same opinion. The same fact is also attested by Rhazes, an Arabian writer. Plato, and others, affirmed that the womb sucked in the male fluid by a hydraulic power, and conveyed it through the uterine tube to the ovary, which it fecundated; but many deny this hypothesis, on the authority of the illustrious Harvey, who made numerous experiments on deer, after copulation, but never discovered the male fluid in the uterus.

According to this hypothesis, the seminal vapour, so far from falling by its weight towards the right side of the womb or tube, would always tend to ascend; and by the simple inclination, it would necessarily be directed towards the orifice of the uterine tube, proceeding to the ovary which was not to be fecundated; whilst in placing the woman on the side or back, the relative situation of the organs would be changed. But the last position is that in which generation is usually accomplished, and each side

of the uterus, each ovary and tube, are in the same relative situation to the spermatic fluid; and, therefore, we cannot explain how opposite sexes are procreated by the same individuals. If the semen pass to the ovaries, as is generally supposed, it must ascend against its own gravity; and therefore this is a negative proof in favour of the ascent of a vapour from it. The experiments of Spallanzani, and others, who impregnated bitches by injecting the spermatic fluid very warm, as furnished by the male, were unsuccessful when they allowed it to cool, and its volatile part to evaporate. But in many other experiments, the male fluid of frogs, which was not only allowed to cool, but was largely diluted with water, caused impregnation. A remarkable case is mentioned by Mr. Hunter, relating to the human subject. A patient of his had fistula in perineo, through which the semen escaped during sexual intercourse, and Mr. Hunter advised him to collect it, and inject it into the vagina, which was done, and caused impregnation. I think this statement by no means satisfactorily proved; for it is not easy to conceive how the fluid could have been collected, or how it could be prolific after its exposure to the air.

M. Venette lays down seven rules for the art of procreating the sexes at will:—1. That persons should not procreate until the body is fully developed at the adult age, as the most vigorous generate more males than females; 2. They should use nourishing food and drink; 3. They should avoid all excesses of the table; 4. To obtain male infants the pleasure of love must be used moderately; for after reiterated enjoyment girls are conceived; 5. That women who menstruate moderately should not deliver

themselves to sexual pleasure, until after the end of each period; those who menstruate profusely or too frequently, should not deliver themselves to enjoy the same function but only a short time before or after the evacuation; 6. That girls are begotten most frequently when the heat of the weather is excessive; 7. To obtain sons, the generative act should be performed when the wind is northerly.

High mental endowments and physical beauty are requisite for the procreation of infants of vigour and of genius. Men of great minds generally unite themselves to women of high mental endowments, and prefer these to pecuniary considerations, family connexions, titles, and transient advantages. The nobility of this and other countries have often married their inferiors in rank; and men of the greatest minds have preferred physical and moral endowments to riches. Many modern instances might be quoted, and some are recorded very frequently in the daily journals. It is admitted that the moral and physical powers of parents, as well as their diseases, are transmitted to their infants.

Now there are unanswerable objections to the preceding hypothesis of procreation of the sexes at will. Jadelot and Velpeau have examined the bodies of women who had but one ovary, though they have brought forth infants of both sexes; birds have but one ovary. The extirpation of one ovary of a sow or other mammiferous animal does not prevent the generation of offspring of both sexes. But I am not aware of any case on record where the parents had but the right or left testis or corresponding ovary, and produced infants of both sexes; and, therefore, the exist-

ence of both organs in either, and but one in the other, does not disprove the hypothesis in question.

All that can be said at present on the procreation of the sexes, amounts to this, that the most vigorous men of a strong constitution have generally engendered more boys than girls; and that the most vigorous of the sexes determines the sex of the offspring.—(Velpeau and others). There are, however, numerous exceptions to this general rule, of which repeated observations have convinced me. It is by no means proved, however, in my opinion, that athletic men are the most prolific, or procreate a greater proportion of their own sex. We often observe the contrary, even when these are united to delicate women; and frequent observations have led me to this conclusion.

I have observed in many families the physical power of parents, and also ascertained the comparative proportion of the sex of their children. But from my limited enquiries I cannot admit that the vigour of either parent invariably determines the sex of the offspring; for though this appears to be the case in some instances, it certainly is not so in others. Thus, we see delicate women and robust husbands produce more boys than girls, and *vice versâ*; and this is also the result when young and aged persons are united in marriage.

M. Girou de Buzareingues, whose observations on the breeding of cattle are very extensive, states in his work on Generation, 1828, with a copy of which he very politely favoured me, that very young and old mothers, whether cows, mares, or sheep, produce more males than females; whilst mothers of a middle age produce for the most part more females than males, especially if the first were coupled

with old males and the second with young males, which he considers in accordance with the views of nature.

The surest means by which sound and vigorous infants may be engendered, is a good constitution unenfeebled by excessive intellectual or corporeal exertion, or any chronic disease. It is universally admitted that the moral and physical dispositions are transmitted by generation; and hence we may conclude that healthful and vigorous parents can alone produce healthful and vigorous infants. It is also generally concluded that diseased or delicate parents procreate diseased or delicate offspring. The same results are observed in plants and animals. Every one knows the truth of these statements. How often do we observe a fine, a beautiful woman of an excellent constitution, united to a small, diminutive, aged, broken-down, or deformed companion, or the reverse; and can it be supposed that the physical powers, the sympathies of such individuals, are favourable to the proper performance of the function of generation? Love cannot be recripocal in such cases; and animal or organic impulse will prefer that which is more accordant with itself; even brutes prefer males which are possessed of vigour, power, and beauty; and this instinct is implanted by nature in all animals. Whatever perversion civilization may effect in our hearts, tastes, and manners, it cannot extinguish this instinct. Even social or parental authority fails to destroy it; and though this often leads to unsuited conjugal unions, to the procreation of feeble offspring, which are doomed to constant sufferings, a miserable existence, insupportable to themselves and others of society,—still the rights of nature exist inviolate. Unequal and unsuited alliances are con-

trary to nature and to sound policy, because highly detrimental to population. Ample proof is afforded of the validity of this opinion, by a reference to the physiology of the various ages of life, and the difference in the genital power in each.

The observations of Mr. Coombe on this point are graphically correct.

" One organic law is, that the germ of the infant being must be complete in all its parts, and perfectly sound in its condition, as an indispensable requisite to its vigorous development and full enjoyment of existence. If the corn that is sown is weak, wasted, and damaged, the plants that spring from it will be feeble, and liable to speedy decay. The same law holds in the animal kingdom; and I would ask, has it hitherto been observed by man? It is notorious that it has not; indeed, its existence has been either altogether unknown, or in a very high degree disregarded by human beings. The feeble, the sickly, the exhausted with age, and the incompletely developed, through extreme youth, marry, and, without the least compunction regarding the organization which they shall transmit to their offspring, send into the world miserable beings, the very rudiments of whose existence are tainted with disease. If we trace such conduct to its source, we shall find it to originate either in animal propensity, intellectual ignorance, or more frequently in both. The inspiring motives are generally mere sensual appetite, avarice, or ambition, operating in the absence of all just conceptions of the impending evils. The punishment of this offence is debility and pain transmitted to the children, and reflected back in anxiety and sorrow on the parents. Still the great point

to be kept in view is, that these miseries are not legitimate consequences of *observance* of the organic laws, but the direct chastisement of their *infringement*. These laws are unbending, and admit of no exception; they must be fulfilled, or the penalties of disobedience will follow. On this subject profound ignorance reigns in society. From such observations as I have been able to make, I am convinced that the union of certain temperaments and combinations of mental organs in the parents, are highly conducive to health, talent, and morality in the offspring, and *vice versâ;* and that these conditions may be discovered and taught with far greater certainty, facility, and advantage, than is generally imagined. It will be time enough to conclude that men are naturally incapable of obedience to the organic laws, when, after their intellectual faculties and moral sentiments have been trained to observance of the Creator's institution, as at once their duty, their interest, and a grand source of their enjoyment, they shall be found to continue to rebel." (The Constitution of Man considered in Relation to External Objects, 1835.)

Dr. Pritchard, in his learned and valuable "Researches into the Physical History of Mankind," has accumulated a vast number of facts and opinions on the subject of hereditary qualities and diseases in our species. Among these he states—

"Children resemble, in feature and constitution, both parents, but I think more generally the father. In the breeding of horses and oxen, great importance is attached by experienced propagators, to the male. In sheep, it is commonly observed that black rams beget black lambs. In the human species, also, the complexion chiefly follows

that of the father; and I believe it to be a general fact, that the offspring of a *black father* and white mother is *much darker* than the progeny of a *white father* and a dark mother."—Vol. ii. p. 551.

Mr. Coombe comments upon these facts in the following manner:—

"These facts appear to me to be referable to both causes. The stock must have had some influence, but the mother, in all these cases, is not impressed by her own colour, because she does not look on herself; while the *father's* complexion must strikingly attract her attention, and may, in this way, give the darker tinge to the offspring." Black hens lay dark coloured eggs, but the reverse is much more generally the case.

"Dr. Pritchard states the result of his investigations to be, *first*, 'That the organization of the offspring is always modelled according to the type of the *original structure* of the parent;' and, *secondly*, 'That changes produced by external causes, in the appearance or constitution of the individual are temporary, and, in general, acquired characters are transient: they terminate with the individual, and have no influence on the progeny.'—vol. ii. p. 536. He supports the first of these propositions by a variety of facts occurring 'in the porcupine family,' 'in the hereditary nature of complexion,' and 'in the growth of supernumerary fingers or toes, and corresponding deficiencies.' 'Maupertuis has mentioned this phenomenon; he assures us, that there were two families in Germany, who have been distinguished for several generations by six fingers on each hand, and the same number of toes on each foot,' &c. He admits, at the same time, that 'the *second* propo-

sition is of more difficult proof, and that an opinion contrary to it has been maintained by some writers, and a variety of singular facts have been related in support of it.' But many of these relations, as he justly observes, are obviously fables.

"In regard to the foregoing propositions, I would observe that a manifest distinction exists between transmission of monstrosities or mutilations, which constitute additions to, or abstractions from, the natural lineaments of the body, and transmission of a mere tendency in particular organs to a greater or less development in point of size, and of energy in their natural functions. This last appears to me to be influenced by the state of the parents at the time when existence is communicated to the offspring. On this point Dr. Pritchard says, 'The opinion which formerly prevailed, and which has been entertained by some modern writers, among whom is Dr. Darwin, that at the period when organization commences in the ovum, that is, at or soon after the time of conception, the structure of the fœtus is capable of undergoing modification from impressions on the mind or senses of the parent, does not appear altogether so improbable. It is contradicted, at least, by no fact in physiology. It is an opinion of very ancient prevalence, and may be traced to so remote a period, that its rise cannot be attributed to the speculations of philosophers, and it is difficult to account for the origin of such a persuasion, unless we ascribe it to the facts which happened to be observed.' "—p. 556.

"A striking and undeniable proof of the effect on the character and dispositions of children, produced by the form of brain transmitted to them by hereditary descent.

is to be found in the progeny of marriages between Europeans, whose brains possess a favourable development of the moral and intellectual organs, and Hindoos, and native Americans, whose brains are inferior. All authors agree, and report the circumstance as singularly striking, that the children of such unions are decidedly superior in mental qualities to the native, while they are still inferior to the European parent. Captain Franklin says, that the half-breed American Indians 'are upon the whole a good-looking people, and, where the experiments have been made, have shown much expertness in learning, and willingness to be taught; they have, however, been sadly neglected'—p. 86. He adds, 'It has been remarked, I do not know with what truth, that half breeds show more personal courage than the pure breeds.' Captain Basil Hall, and other writers on South America, mention, that the offspring of native American and Spanish parents, constitute the most active, vigorous, and powerful portion of the inhabitants of these countries; and many of them rose to high commands during the revolutionary war. So much is this the case in Hindostan, that several writers have already pointed to the mixed race there, as obviously destined to become the future sovereigns of India. These individuals inherit from the native parent a certain adaptation to the climate, and from the European parent a higher development of brain, the two combined constituting their superiority.

"Another example of the same law occurs in Persia. In that country, it is said that the custom has existed for ages among the nobles, of purchasing beautiful female Circassian captives, and forming alliances with them as

wives. It is ascertained that the Circassian form of brain stands comparatively high in the development of the moral and intellectual organs. And it is mentioned by some travellers, that the race of nobles in Persia is the most gifted in natural qualities, bodily and mental, of any class of that people; a fact diametrically opposite to that which takes place in Spain and other European countries, where the nobles intermarry constantly with each other, and set the organic laws altogether at defiance.

"The degeneracy and even idiocy of some of the noble and royal families of Spain and Portugal, from marrying nieces, and other near relations, is well known; and defective brains, in all these cases, are observed.

"Many facts illustrate the influence of the state of the parents, particularly of the mother, at the time when the existence of the child commenced, on its mental talents and dispositions.

"The father of Napoleon Buonaparte, says Sir Walter Scott, 'is stated to have possessed a very handsome person, a talent for eloquence, and a vivacity of intellect, which he transmitted to his son.' 'It was in the middle of civil discord, fights, and skirmishes, that Charles Buonaparte married Lætitia Ramolini, one of the most beautiful young women of the island, and possessed of a great deal of firmness of character. She partook of the dangers of her husband during the years of civil war, and is said to have accompanied him on horseback on some military expeditions, or perhaps hasty flights, shortly before her being delivered of the future emperor.'"—(Life of Napoleon Buonaparte, vol. iii. p. 6.)

"The murder of David Rizzio was perpetrated by armed

nobles, with many circumstances of violence and terror, in the presence of Mary, Queen of Scotland, shortly before the birth of her son, afterwards James the First of England. The constitutional liability of this monarch to emotions of fear, is recorded as a characteristic of his mind; and it has been mentioned that he even started involuntarily at the sight of a drawn sword. Queen Mary was not deficient in courage, and the Stuarts, both before and after James the First, were distinguished for this quality; so that his dispositions were an exception to the family character. Napoleon and James form striking contrasts; and it may be remarked that the mind of Napoleon's mother appears to have risen to the danger to which she was exposed, and braved it: while the circumstances in which Queen Mary was placed, were calculated to inspire her with fear alone.

"Further evidence of the same law may still be mentioned. Esquirol, the celebrated French medical writer, in adverting to the causes of madness, mentions that many children whose existence dated from periods when the horrors of the French Revolution were at their height, turned out subsequently to be weak, nervous, and irritable in mind, extremely susceptible of impressions, and liable, by the least extraordinary excitement, to be thrown into absolute insanity. A medical practitioner of Douglas, in the Isle of Man, mentions the following case:—A man's first child was of sound mind; afterwards he had a fall from his horse, by which his head was much injured. His next two children proved to be both idiots. After this he was trepanned, and had other children, and they turned out to be of sound mind. A lady of considerable talent

wrote as follows to a phrenological friend:—'From the age of two, I foresaw that my eldest son's restlessness would ruin him; and it has been even so. Yet he was kind, brave, and affectionate. I read the Iliad for six months before he saw the light, and have often wondered if that could have any influence on him. He was actually an Achilles.'

"In a case which fell under my own observation, the father of a family had been sick, had a partial recovery, but relapsed, declined in health, and in two months died. Seven months after his death, a son was born, of the full age; and the origin of whose existence was referable to the period of the partial recovery. At that time, and during the subsequent two months, the faculties of the mother were in high excitement, in ministering to her husband, to whom she was greatly attached; and, after his death, the same excitement continued to operate, as she was then loaded with the charge of a numerous family, but not depressed; for her circumstances were comfortable. The son is now a young man; and, while his constitution is the most delicate, the development and activity of the mental organs are decidedly greater in him than in any other member of the family.

"Another illustration of the same law is found in the fact, that when two parties marry very young, the eldest of their children inherits a less favourable development of the moral and intellectual organs, than those produced in more mature age. The animal organs in men, in general, are most vigorous in early life, and this energy appears to cause them to be then most readily transmitted to offspring. Indeed it is difficult to account for the wide varieties in

the form of the brain in children of the same family, unless on the principle, that the organs which predominate in vigour and activity in the parents, at the time when existence is communicated, determine the tendency of corresponding organs to develope themselves largely in the children. Since the first edition of this work was prepared, so many facts illustrative of the truth of this principle have been communicated to me, and observed by myself, that I now regard it as probable.

"If this be really the law of nature, as there is great reason for believing, then parents, in whom combativeness and destructiveness are in habitual activity, will transmit these organs, in a state of high development and excitement, to their children; and those in whom the moral and intellectual organs exist in supreme vigour, will transmit these in greatest perfection.

"This view is in harmony with the fact, that children generally, although not universally, resemble their parents in their mental qualities; because the largest organs being naturally the most active, the general and habitual state of the parents will be determined by those which predominate in size in their own brains; and on the principle that predominance in activity and energy causes the transmission of similar qualities to the offspring, the children will, in this way, very generally resemble the parents. But they will not always do so; because, even the very inferior characters, in whom the moral and intellectual organs are deficient, may be occasionally exposed to external influences, which, for the time, may excite these organs to unwonted vivacity; and, according to the rule now explained, a child dating its existence from that period, may inherit a higher

organisation of brain than the parent. Or, a person with an excellent moral development, may, by some particular occurrence, have his animal propensities roused to unwonted vigour, and his moral sentiments thrown, for the time, into the shade; and any offspring connected with this condition would prove inferior to himself in the development of the moral organs, and greatly surpass him in the size of those of the propensities.

"I repeat, that I do not present these views as ascertained phrenological science, but as inferences strongly supported by facts, and consistent with known phenomena. If we suppose them to be true, they will greatly strengthen the motives for preserving the *habitual* supremacy of the moral sentiments and intellect, when, by doing so, improved moral and intellectual capacities may be conferred on offspring. If it be true that this lower world is arranged in harmony with the supremacy of the higher faculties, what a noble prospect would this law open up of the possibility of man ultimately becoming capable of placing himself more fully in accordance with the Divine institutions, than he has hitherto been able to do; and, in consequence, of reaping numberless enjoyments that appear destined for him by his Creator, and avoiding thousands of miseries that now render life too often only a series of calamities. The views here expounded also harmonise with the second principle of this Essay; namely, that, as activity in the faculties is the fountain of enjoyment, the whole constitution of nature is designedly framed to support them in ceaseless action. What scope for observation, reflection, the exercise of moral sentiments, and the regu-

lation of animal impulse, does not this picture of nature present!

"I cordially agree, however, with Dr. Pritchard, that this subject is still involved in great obscurity. 'We know not,' says he, 'by what means any of the facts we remark are effected; and the utmost we can hope to attain is, by tracing the connexion of circumstances, to learn from what combinations of them we may expect particular results.'" —Vol. ii, p. 542.

Mr. Coombe further judiciously observes:—"A man and woman about to marry, have in the generality of cases, the health and happiness of five or more human beings depending on their attention to considerations, essentially the same as the foregoing, and yet how much less scrupulous are they than the mere speculators in money? It is pleasing, however, to observe, that in Wurtemburg there are two excellent laws calculated to improve the moral and physical condition of the people, which other states would do well to adopt. First: 'It is illegal for any young man to marry before he is twenty-five, or any young woman before she is eighteen; and a young man, at whatever age he wishes to marry, must show to the police and the priest of the commune where he resides, that be is able, and has the prospect, to provide for a wife and family.' The second law compels parents to send their children to school from the age of six to fourteen.

"There is no moral difficulty in admitting and admiring the wisdom and benevolence of the institution by which good qualities are transmitted from parents to children; but it is frequently held as unjust to the latter, that they

should inherit parental deficiencies, and so be made to suffer for sins which they did not commit. In treating of this difficulty, I must again refer to the supremacy of the moral sentiments, as the theory of the constitution of the world. The animal propensities are all selfish, and regard only the immediate and apparent interest of the individual; while the higher sentiments delight in that which communicates the greatest quantity of enjoyment to the greatest number. Now, let us suppose the law of hereditary descent to be abrogated altogether, that is to say, that each individual of the race was, at birth, endowed with fixed natural qualities, without the slightest reference to what his parents had been or done! this form of constitution would obviously cut off every possibility of improvement *in the race.*"

I have made these long quotations from a vast number of others equally pertinent to the subject under consideration, but I must refer to Mr. Coombe's work, all who are desirous of valuable information on the requisites, both moral and physical, for matrimonial engagements, and the propagation of healthful offspring. Every physiologist will agree with this talented author, " that the children of the individuals who have obeyed the organic, the moral, and the intellectual laws, will not only start from the highest level of their parents in acquired knowledge, but they will inherit a tendency towards an enlarged development of the moral and intellectual organs, and thereby enjoy an increasing capability of discovering and obeying the Creator's institutions."

CHAPTER XIII.

REPRODUCTION OF ORGANISED BEINGS—UNIVERSAL CODE OF GENERATION OF PLANTS AND ANIMALS—ONE PRIMATIVE GENERATION—SPRING, THE SEASON OF GENERATION.

THE investigation of the mysterious function of reproduction in all organised beings, has occupied the mind of man from the earliest age to the present, but all the efforts and researches of ages have been unsuccessful in explaining it. We are ignorant of the manner in which life begins or ceases. Most physiologists, it is true, have only considered this question as regards the human species, and some of the inferior animals; but it is evident that the generation of plants and polypi, of the oviparous and viviparous animals, and of all that enjoy life, belong essentially to the same principle, because nature is always conformable to herself in all her works, and no one can admit several causes for the same effect. It is, therefore, necessary to have recourse to some general principle.

Primitive Generation of the Universe.—There is but one primitive generation of the universe, that is, the creation of living organised matter by the hand of the Creator. That which we term generation is but an eternal emanation from this source—a continuation of the arrangement of each organised species—a perpetuity of the vital power. There is no true generation at present, but the continuation of that which has been prescribed for ages, as we only

observe, but the successive, and always similar modifications in the same order of matter. Each individual reproduces as he has been produced himself: life gives to organised bodies a tendency to regenerate, as gravitation gives to bodies a tendency to approach the centre of the earth. Organised beings have not an isolated or independent existence, they are always under the hand of nature, which so transforms them, that generation and nutrition are only the transition from one state of life into another. All organised matter is subject to this law; a dead body is not entirely deprived of life, as it is capable of sustaining and nourishing the life of animated beings, of which the dead bodies of animals and plants are examples.

This power of life is not confined to a particular individual, but to the species, and organised matter in general. Individuals possess it momentarily, they enjoy it for the purpose of transferring it to others; so that each animal and plant do not live for themselves alone, but for organised matter in general, which alone possesses life,—they enter but as integrant parts of the whole general vitality of all organised matter. It is evident that every animal and plant has derived its vitality from its parents, and these from their ancestors, retrogading in succession to the creation of organised matter by the Supreme Being. Generation is, therefore, not a particular phenomenon, but a universal law of all organised matter.

The conclusions of Pythagoras, Empedocles, Hippocrates, Aristotle, Galen, and all their eminent successors to the time of Harvey, were inconclusive. All fruitlessly attempted to explain the generation of plants and animals,

with a view of illustrating that of the human species. But the observations and researches of the celebrated Harvey, led him to the conclusion, now almost universally received, that all animals and plants, or all organised beings, are generated from an egg or seed—*omnia ex ovo*. This was confirming the opinion of Fabricius ab Aquapendente, that most animals, both terrestrial and aquatic, were produced by oval generation. "Amplissimam autem esse formationis fœtûs ex ovis contemplationem, ex eo patet, quod maxima animalium pars ex ovo gignitur. Nam ut insecta ferme omnia, et imperfectiora omittam animalia, quæ ex ovo fieri, sensui apparet; ex perfectioribus quoque maxima pars ex ovis gignitur. Ad hunc censum refert, pennata omnia; pisces quoque (præter sola cetacea), item crustacea, testacea, et mollia omnia; ex terrestribus reptilia, multipedia, et serpentia omnia; atque inter quadrupedia omne lacertorum genus." Harvey advanced further, not only by including all animals, but all vegetables. He observes, in the first exercitation of his great work on the Generation of Animals, already mentioned, "Nos autem asserimus (ut ex dicendis constabit) omnia omnino animalia, etiam vivipara, atque hominem adeo ipsum ex ovo progigni primosque eorum conceptus è quibus fœtus fiunt, ova quædum esse; *ut et semina plantarum omnium.* Ideoque non inepte ab Empedocele dicitur, *oviparum genus arboreum.*" (Arist. de Gen. Animal, lib. 1, c. 20.—Exercitationes de Generatione Animalium, &c. Exercitatio 1). Linnæus subsequently based his splendid classification of plants according to the sexual system, and completely established the truth of the

conclusion—*omnia ex ovo*, as regards the function of reproduction, in a great part, if not all, of the vegetable kingdom.

The ancients maintained that the ovum was round, as the Creator made the world of this form, and that all animals were round at first (Aristotle, Hist. Animal, lib. 3, c. 1), and Vegetables, (Harvey, op. cit. Exerc. lxii). In tracing the function of reproduction in organised beings, we must ascend from the most simple to the most compound of its processes; and finally attempt to elucidate its complicated mechanism in the human species. It is, therefore, necessary to give a brief outline of the generation of plants and animals, previous to the history of this function in human beings.

But a complete history of the generation of the various species of plants and animals, is far beyond the limitation of this work, and would fill a large volume; I must, therefore, confine myself to a description of a few of them, as classified by modern naturalists; plants, zoophytes, insects, crustacea, worms, mollusca, fishes, reptiles, and mammiferæ, at the head of which stands the human species.

Reproduction.—Reproduction is the function peculiar to living or organised beings, which enables them to perpetuate their species. Organised or living beings are plants and animals, every one of which derives its origin from a being exactly similar to itself, and is produced by generation. It is from this function that the life and organization of all animated beings emanate.

The inorganic bodies do not engender; they have neither races, families, nor species; they do not receive any thing

from bodies like themselves, and always remain of the same primitive nature.

All matter in the sublunary portion of the universe is divided into two great kingdoms, which comprise all beings and productions. 1 *Organic bodies,* which are plants and animals; 2. *Inorganic bodies or inanimate matter,* which is the base of the terrestrial globe, of fossils, water, and air. The first, or animated kingdom, is composed of beings which are born, nourished, developed, and which engender and die. An animal and a plant succeed each other without ceasing—a mineral or a stone is contemporaneous with all ages. As it cannot live, it cannot die. All its parts subsist without dependence on each other, and obey the physical, chemical, and mechanical laws of inorganic matter.

A plant or an animal is composed of parts or organs, which cannot subsist separately. The principles of its existence, and the germs of its destruction, are in itself; but a mineral does not possess the principles of individual existence; it subsists by the laws of inorganic matter, while all its changes or alterations do not emanate from itself, but depend upon the external powers that surround it.

Reproduction is the force of life or organization, the source of communication of the living principle. The vivifying power of organic beings is an emanation from the Divinity; " in him we live, move, and have our being :" *in Deo vivimus, movemus, et sumus ;* and on Him alone depend the laws of inanimate matter.

" Superior itaque ut diximus," observes Harvey, " et divinior opifex (quam est homo) videtur hominem fabri-

care et conservare; et nobilior artifex (quam gallus) pullum ex ovo producere. Nempe, agnoscimus Deum, creatorem summum atque omnipotentem, in cunctorum animalium fabrica ubique præsentem esse; et in operibus suis quasi digito monstrari: cujus, in procreatione pulli instrument sint, gallus et gallina. Constat quippe, in generatione pulli ex ovo, omnia singulari providentiâ, sapientiâ divinâ, artificioque admirabili, et incomprehensibili, exstructa ac efformata esse. Nec cuiquam sanè hæc attributa conveniunt, nisi omnipotenti rerum principio; quocunque demum nomine id ipsum appellare libuerit: sive *mentem divinam* cum ARISTOTLE; sive, cum PLATONE, *animam mundi,* aut cum aliis, naturam naturantem; vel, cum ETHNICIS *Saturnum,* aut *Jovem;* vel potius (ut nos decet) *Creatorem* ac *Patrem* omnium quæ in cœlis et terris; à quo animalia, eorumque origines dependent, cujusque nutu, sive effato, fiunt et generantur omnia." (Op. cit.) "Omnia vero corpora naturalia, summi ejus Numinis et opera sunt, et instrumenta." (Op. jam. cit).

The Divine Spirit of the universe was recognised by the sages of all ages and nations, and also by the poets—

"Principio cœlum, ac terras, camposque liquentes,
Lucentemque globum Lunæ, Titaniaque astra
Spiritus intus alit, totamque infusa per artus
Mens agitat molem, et magno se corpore miscet.
Indeque hominum pecudumque genus, vitæq. volantum
Et quæ marmoreo fert monstra sub æquore pontus.
Igneus est ollis vigor, et cœlestis origo
Seminibus."

VIRGIL. *Æneid,* vi.

One of our sweetest poets has sung the sentiment:

* * * "What but God
Inspiring God! whose boundless spirit all,
And unremitting energy, pervades,
Adjusts, sustains, and agitates the whole.

THOMSON. *The Seasons.*

Life, organisation, and reproduction, cannot be separated without their destruction. No inorganic body is susceptible of organisation, of life, or reproduction. Every plant and animal possess these properties; they have received them from their parents, and transmit them to their descendants. The more powerful is the generative power, the more energetic is life; and the more life is communicated by generation, the more it is abridged. It is for this reason that amorous excesses impair it, and accelerate its annihilation. Plants and animals reproduce because they are destined to die; but minerals do not possess this power, because they are indestructible. Thus we observe that all organised bodies are destructible, and reproduce their species. They die, and become the nutriment of successive generations. The bodies of men entombed in the earth, furnish abundant nourishment to worms and plants. These in their turn become the food of other species, so that all change to change again. They die but to live under other forms. The brilliant flower enriches itself with nutrition from the dead matter beneath the root from which it grows. The function of reproduction is therefore peculiar to organised beings, or to the animal and vegetable kingdoms.

The age of life in which generation can be accomplished, is from puberty to senescence, and this is the most ener-

getic period. This faculty is possessed by all animals from the lowest to the highest. It is in the vigour of life that individuals produce the most robust offspring; but there are some few exceptions. The love of offspring is implanted in all animals, and has been characterised the generative Venus by the ancient poets.

" Illecebris tuis omnis natura animantûm
Te sequiter cupide, quòquamque inducere pergis.
LUCRETIUS, *De Rer. Nat.* Lib. i.

Generation is the same to all—it conquers all—*amor omnibus idem—omnia vincit amor.* Nature has given pleasure to all animal beings for their individual propagation.

" Behold," says the eloquent Virey, " what pomp, what joys, what glory, and what magnificence, are prepared by nature, for the marriages of plants and animals! How the lion and the bull pride themselves on their strength! the antelope on its figure! the peacock and swan on their plumage! the fish on its silvery coat, and on the splendour of the gold and brilliant appearance of its body! How the butterfly expands its diamond wings; how the flower displays its charms to the rays of Aurora, enjoys in silence, and drinks the pearly drops of the dew! All is the radiance of beauty in nature; the earth, covered with verdure, resounds with accents of joy and sighs of pleasure: all exhale love, all search for it and enjoy it—in a word, it is the common festival of beings. But, in a short time, the flower fades away, and languishes on its stem; the butterfly declines and dies; the lion and the bull, as if fatigued by long contested fights, search for peace and

retreat; and man himself, overcome with languor, retires in silence, full of recollections and sadness, seeing the approach of death, which presses its iron hand on all that breathes." (Dict. des. Sciences Med. *Art.* Generation).

Reproduction consists in the growth of an ovum, egg, germ, seed, or embryo in a living part, from which it is separated when capable of independent existence. The females of plants and animals supply the germs, the males secrete a fluid which, placed in contact with these, fecundates or vivifies them.

The modes of generation in all organised beings may be reduced to three. 1. Oviparous, or those that in general engender by eggs, or ova, as reptiles, fishes, insects, certain worms, birds, plants in general. 2. Viviparous, those that suckle—cetaceæ, quadrupeds, and the human species. 3. Gemmiparous, or those that engender by prolongations, sections, or offsets, as zoophytes, polypi, infusorial animalcules, and plants that are not annual. Plants and animals must acquire perfect development before they can reproduce their species. It is at the period of puberty that they acquire an excess of vitality which endeavours to communicate itself externally. This epoch is, as already stated with respect to the human species, accelerated by heat, nutriments, &c., and it is equally affected by these causes in the inferior animals and plants. Organised beings have three periods of life—youth, the age of generation, and senescence, or the epoch of sterility. The human species too often abuse the generative function; they consume their vitality, exhaust themselves, and often induce premature old age or death. It is also a fact attested by Harvey, that some birds destroy themselves in the same manner.

The puberty or flowering of plants occurs at a certain season, in which the generative function is most exerted by animals; this is spring, so graphically described by poets, philosophers, and physiologists.

"Vere tument terræ, et genitalia semina poscunt.
Tum pater Omnipotens fœcundis imbribus æther
Conjugis in gremium lætæ descendit, et omnes
Magnus alit, magno commistus corpore, fœtus.
Avia tum resonant avibus virgulta canorus;
Et venerem certis repetunt armenta diebus."

VIRG. *Georg.* ii.

Truly has this poet sung: "In spring the lands swell, and demand the reproductive seeds. Then the omnipotent father Æther descends in fructifying showers on the bosom of his joyous spouse (the earth) and great himself, mingling with her body, nourishes all her offspring. Then the shrubs, resound with tuneful birds, and animals reproduce at certain times."

Aristotle had also eulogised spring as the genital season of plants and animals. (De Gen. lib. 2, c. 10), and Harvey thus described this season:—"Ideoque Vere vigent, vernantque omnia; (appropinquante scilicet Sole, qui communis pater est, et genitor; vel saltem summi Creatoris in generatione immediatum et universale instrumentum) non solum plantæ sed etiam animalia: nec minus illa, quæ sponte proveniunt, quam quæ maris fœminæque mutua opera progenerantur. Tanquam adveniente nobili hoc astro, de cælo delaberetur *alma Venus, Cupidinisque Charitumque choro stipata;* cunctaque viventia, blando amoris œstro ad perennitatem sui existimularet. Vel, (ut est in

fabulis) quasi eo tempore *Saturni* genitalia in mare projecta, spumam excitarent, indeque nasceretur *Aphrodite.* Nempe, in generatione animalium, *superat* (ut Poeta ait) *tener omnibus humor,* spumant, turgentque semine genitalia."—(Op. cit). The sun and man generate man, because at the approach and recession of the sun follow spring and autumn, in which the generation and destruction of animals occur. Aristotle held, " Sol et homo generant hominem;" but he ought to have extended his notion —" Spring and organised beings generate their species." Let us hear the philosophical and eloquent Virey on the season of Spring:—" When the vernal sun sheds the spirit of heat and life on the atmosphere, the earth ferments and covers itself with the varied productions, the tree shoots forth its buds, the plant expands its flowers, the benumbed insect revives and seeks its kind, the bird calls its species on the solitary branch, and exhales its amorous delirium in its songs; the quadruped, whose eye sparkles its ardour, darts its glances towards its companion, and thrills with love; but winter, crowned with hoar-frost, brings sadness and the stillness of death upon the earth. In those climates in which the fecundating heat of the atmosphere never ceases, the flower replaces the fruit which ripens and falls, the nestlings of birds succeed each other, generations call forth new generations. The year is one perpetual succession of life, all the beings do not appear to exist in these happy contrarieties, but to perpetuate in the bosom of pleasure. Life passes now more rapidly, because it is most consumed." (Op. cit.)

The sexual organs enlarge both in plants and animals during the season of reproduction; and they are destroyed

in the former, and are collapsed in the latter, after the function is performed. It is also remarkable that the female organs in both classes of beings are internal and recipient, and the male are external and intromissive. Vegetables lose their sexual organs after reproduction, and have them renewed every year; but animals preserve those they have received, and these have periods of repose as well as of activity. These organs differ in different classes of plants and animals. Some are agamous, or asexual, as mushrooms, algæ, &c. among plants, and zoophytes, ceratophytes, corals, most of the infusoria, polypi, and echinoderms among animals. There are ova or eggs, even in some of these genera, and others propagate by divisions, sections, or offsets, as polypi, certain worms, and some of the infusoria. In other species, the sexes are present in one individual, either conjointly or separately. Those which have both sexual organs are plants which possess stamens and pistils; and animals, as bivalve and multivalve shell-fish, certain worms, infusoria, &c. The species which have the sexual organs separate are monoecous plants, as maize, amaranthe, cucumber, &c.; the univalve shell-fish, certain worms, &c.

The greatest portion of organised beings have the sexual organs in different individuals, and these engender from puberty to senescence, unless affected with congenital vices of conformation, or with diseases which cause infecundity.

The following table shows the preceding differences in the reproductive organs of animated beings.

Capable of Engendering.—I. Without sex; the algæ, mushrooms, &c.; most of the zoophytes, imperfect animals and infusorial animalcules.

Capable of Engendering.—II. 1. Reunited hermaphrodite

plants, bivalve and multivalve, shell-fish, worms, &c. 2. Separate hermaphrodites, monoecous plants, univalve shell-fish, worms, &c.

Capable of Engendering.—III. One sex in male or female —dioecous plants, invertebrated animals, crustaceæ, insects, cuttle-fish, &c.

Incapable of Engendering individually.—IV. 1. Null or incomplete sexes—bees, ants, &c.—natural or artificial eunuchs. 2. Inactive sexes, as in extreme infancy, and senescence of all beings, and during certain diseases.

The season of rut or amorous impulse, is to animals what floration is to plants. The maturity of the fruits and seeds of these is analogous to the time of gestation and incubation with animals.

Males in general, except man and a few animals, do not love their females, but the germs of the offspring of which they are the depositories; and they do not seek them after impregnation. Man looks on a blooming girl in the prime of life, on a pregnant woman, and on one beyond the age of reproduction, with very different emotions. Among the inferior animals, the females are seldom sought for, after conception, by the males. It is also well known that effeminate, impotent, or castrated individuals, inspire contempt, and not love. It is likewise a general law, that animals and vegetables which are too old, are dead to reproduction.

Organised beings are powerfully affected by propagation; animals become depressed and dejected, and plants are deflowered and often wither. The season of coupling with animals is a period of strife, and the most robust prevail, and maintain the vigour of the species. Animals are agitated and restless in the season of reproduction, their

cries and accents announce their wants, and they seek each other. It is also remarkable, that the amorous instinct of females of all animals, leads them to prefer the most vigorous males. The feebleness of the one aspires after the strength of the other, and the vigour and impetuosity of the passions announce the capability for generation. If we examine the human species, we find that physical beauty is generally preferred to other considerations, though there are many exceptions. It often leads our nobility, and indeed all classes of society, to contract unequal marriages. Nature directs the physical, moral, and intellectual faculties to the perfection of generation. The attachment of the world, the laws of society, human conventions, in fact, every consideration must yield to it, with very few exceptions.—"Love conquers all, and all must yield to it."

"Omnia vincit amor, et nos cedamus amori."

There is such a unison of sentiment, such a predilection between certain individuals, that they prefer each other to all the rest of the world. These relations of sympathy are the result of a harmony of age and character, and of the correspondence of the moral states of individuals. It is true that many other motives lead to conjugal alliances; but such unions are, for the most part, unhappy. The human species have, after the age of puberty, a presentiment of generation, even before they have a knowledge of its pleasures—*mentem Venus ipsa dedit.* The pleasure which nature joins to sexual union is an attraction so imperious and tyrannical as to be required as powerfully as any other want; and the inferior animals are impelled

to it by an instinct even stronger than life; *in furias ignesque ruunt, amor omnibus idem.* This is modified by education, as well as by customs of society in our species. Harvey observed that many birds, insects, and fishes, produce eggs without the intervention of the male, but these are infecund. Such animals are often affected with disease and perish. He continues to remark, that the human female, if deprived too long of the rights of Venus, may become affected with hysteria or nymphomania. "Omnia siquidem animalia, cupidinis œstro percita, ferociunt; et nisi se invicem fruantur, plurimum tandem à consuetis moribus recedunt. Ita mulieres quædam insaniunt præ desiderio consuescendi cum viris; et in nonnullis usque adeo sævit hoc malum, ut vel veneficio afflatæ, vel sideratæ, aut à cacodæmone obsessæ judicentur. Idque sæpius contingeret, nisi proba educatio, bonæ famæ reverentia, et innata huic sexui verecundia, inordinatos hosce animi impetus compescerent." (Op. cit. Exer. cit. v.) Every observant individual will assent to these conclusions, as daily observation must convince him of their accuracy. It is scarcely necessary to refer to duels, actions for divorce, and even murders caused by sexual impulse, which are of such frequent occurrence; so that the passion of love is often as imperious in our species, when the human mind is uncultivated or badly regulated, as in the inferior classes of animals. It gives rise to quarrels and dissensions among men, and has always done so, according to Horace:—

"Nam fuit ante Helenam * * * teterrima belli causa."

Other evidence might be adduced that women were the

cause of most sanguinary wars, and of strife and dissensions. Even in these days, actions for divorce, adultery, and prosecutions for the murder of husbands and wives, are by no means unfrequent in our courts of justice.

CHAPTER XIV.

GENERATION OF ORGANISED BEINGS — EFFECTS OF PHYSICAL POWER ON OFFSPRING—SONS OF GREAT MEN UNLIKE THEIR FATHERS.

THE moment of sexual union is preceded by caresses among apes, pigeons, doves, &c.; and some animals, as bats, apes, porcupines, whales, &c., copulate abdomen to abdomen, whilst others perform the function like quadrupeds. Dogs, wolves, and foxes, remain in close union, as the glans of the penis swells considerably, and is compressed by the contraction of the vagina, so that the male organ is arrested during the secretion and ejaculation of the semen ; and this adaptation is necessary in these animals, because they are deprived of seminal receptacles, secrete only during copulation, and their seed cannot be injected at once into the uterus, but drop by drop. If they are separated at the moment of this slow ejaculation, the female will not be impregnated. The moment of ejaculation in mammiferous animals is accompanied by universal excitement of the whole body, a kind of slight convulsion, which terminates in a comatose or ecstatic state. Coition has been compared to a fit of epilepsy, to an electrical shock ; it entirely engages the mind and body ; we neither

hear nor see; the soul is absorbed in love; and some persons have lost their lives in this crisis. It is for this reason that sexual intercourse has proved mortal after severe wounds, hæmorrhages, &c.; and when too often repeated, injures the whole economy. It is therefore wise to reflect and think before we engender, as we are about to impart life, and to shorten our own existence. If the whole mind is not absorbed in the act of generation, the products will be feeble and delicate, as we usually observe in the infants of men who make great mental or corporeal exertion. The sons of celebrated men are generally inferior to their fathers. We seldom, if ever, see great men engender great men. The sons of Socrates, Hippocrates, Chrysippus, Pericles, Thucydides, and Cicero, among the ancients; of Racine, La Fontaine, Henry IV, of France, Napoleon, John Hunter, Cullen, and a host of others that might be cited among the moderns, did not equal their fathers in talent.

Most of the men, on the contrary, who became illustrious by character, genius, or valour, were the fruit of ardent and vigorous, or illicit love, and the sons of parents who were only remarkable for physical strength. Many celebrated men were illegitimate, and were the sons of early and ardent love—fortes creantur fortibus—though there are exceptions when the strong are enfeebled or aged. Aristotle inquired why delicate offspring, deformities and monstrosities were more common in the human species than in other animals; and he believed the cause to be, that our species generally perform the act of generation negligently, and have their minds filled with other matters at the time; while the lower animals perform the function

more vigorously, and give themselves entirely to it. It is, perhaps, for this reason that unthinking rustics, or those residing in the country, who are generally robust and vigorous, beget the finest and strongest infants; because they follow nature's dictates more closely than the great people of the age, or the enfeebled citizens, who are depressed by passions, anxieties and troubles, and whose minds are absorbed in difficult affairs, or abstract studies. Few of the human species have the mind solely intent on reproduction, but on physical pleasure, or as Harvey observes, "Mas in generando, nec consilio nec intellectu utitur." (Exercit. L.) "Man in generating, neither uses deliberation nor intellect." It is believed by some, that if the mind is fixed on a certain individual during coition, the offspring will resemble such person. "Verum est quod si mulier sit juvenis cum in coitu sit memor sui vel viri, vel alterius et proprie diffundit generativum: genitus erit omnino similis et jam probatum millies et in animalibus." It was held by the ancients, that an adulterous infant may on this ground resemble its reputed father. It was for this reason, that some of the people of the Eastern nations caused their wives to look on pictures of athletic persons during the act of reproduction. These opinions have, however, been long exploded, although some importance is still attached by most persons to family resemblances. Dr. Gregory maintains, in his Conspectus Medicinæ Theoreticæ, that children often resemble their parents, and are certainly like them, not only in features, but in form, mind, virtues, and vices. Dr. John Gregory, the father of the last-named distinguished author, makes the fol-

lowing remarks in his Comparative View of the State and Faculties of Man with those of the Animal World :—

"Thus by a proper attention, we can preserve and improve the breed of horses, dogs, cattle, and indeed of all other animals. Yet it is amazing that this observation was never transferred to the human species, where it would be equally applicable. It is certain, that notwithstanding our promiscuous marriages, many families are distinguished by peculiar circumstances in their character. This family character, like a family face, will often be lost in one generation and appear again in the succeeding. Without doubt, education, habit, and emulation, may contribute greatly in many cases to preserve it; but it will be generally found, that, independent of these, nature has stamped an original impression on certain minds, which education may greatly alter or efface, but seldom so entirely as to prevent its traces from being seen by an accurate observer. How a certain character or constitution of mind can be transmitted from a parent to a child, is a question of more difficulty than importance. It is, indeed, equally difficult to account for the external resemblance of features, or for bodily diseases, being transmitted from a parent to a child. But we never dream of a difficulty in explaining any appearance of nature, which is exhibited to us every day. A proper attention to this subject would enable us to improve not only the constitutions, but the characters of our posterity. Yet, we every day see very sensible people, who are anxiously attentive to preserve or improve the breed of their horses, tainting the blood of their children, and entailing on them, not only the most loath-

some diseases of the body, but madness, folly, and the most unworthy dispositions; and this too when they cannot plead being stimulated by necessity, or impelled by passion."

It has been long observed, that men of genius were the first born, because the first love is in general the most ardent; and hence the Asiatics have always maintained that their greatest legislators were born of virgins, as Zoroaster, Confucius, Mahomet, Vistnou, Zacca, &c.; and we shall also presently observe, that others were engendered not in married state, but by the force of love alone. Such was a great number of the heroes of antiquity, who, for this reason, were said to be descended from the gods, as Hercules, Esculapius, Romulus, &c.; such also were other illustrious bastards, as Homer, Gallileo, Cardan, Erasmus, &c. Even the poets entertained this opinion, and Shakspeare thus alludes to it, when he makes Edmund say—

"Why brand they us
With base? with baseness? bastardy? base? base?
Who, in the lusty stealth of nature, take
More composition and fierce quality
Than doth, within a dull, stale, tired bed,
Go to the creating a whole tribe of fops,
Got 'tween sleep and wake."

William the Conqueror was named the Bastard, as he was the offspring of a left-handed marriage (pour un séjour) which allowed nobles to marry an inferior for a certain time, but to wed an equal for life. Prolonged continence produces analogous results to the preceding.

The father of Montaigne returned after thirty-two years from the wars of Italy, was during that period strictly continent, and begot his celebrated son. The father of J. J. Rousseau returned from Constantinople after a considerable absence, and brought to his spouse the reward of a long fidelity.

Persons of strong and sound constitutions beget healthful infants, while those who make excessive mental or corporeal exertions have generally feeble offspring. It is for this reason that simple, stupid villagers generally beget infants of high physical and moral powers; while men of the greatest genius, who over-exert their mental faculties, often engender only idiots or pusillanimous infants. Thus, by a protracted continence or a purity of morals, the species are improved and strengthened both in mind and body. Virtuous parents concentrate all the energy of their minds in abandoning themselves to the views of nature. They engender a posterity, by whose talents the pride and glory of their progenitors will be maintained. Thus it is that after many progressive and virtuous generations, we see families enoble themselves and flourish; but by a subsequent incontinence they fade and degenerate. The nobility of France, Spain, Portugal, and other nations, who intermarry among themselves, so as to maintain their caste, have long been remarkable for the degeneracy of their offspring, which often leads to adulterine bastardy. The Jews, who intermarry among themselves, are also remarkably degenerate. It is manifest that individuals resulting from a love which is languid, or in old age, or cold and enfeebled by anterior enjoyments, not only among men, but even among animals, are feeble and de-

bilitated, and without any remarkable faculties. The enervated productions of the aged bear the same evidence. M. Thierry remarked, that infants contaminated with syphilis, were less fecund, than those of a sound constitution. (Observ. de Physiq. et de Med. en Espagne. Paris, 1791). It is also well known that parents contaminated with ill-cured syphilis to a certain degree, often beget infants which are born dead and decomposed between the seventh and eighth month of pregnancy; and that the disease in question is a common cause of premature parturition. Several cases of this kind have fallen under my own treatment; and in some of these there was the greatest mental distress at the want of offspring. It does not, however, follow that every man infected with syphilis in a secondary or chronic form, begets infants that perish in the last months of pregnancy, for it requires a certain degree of contamination to cause this result; for when the taint is slighter, infants are born alive, but weak and delicate, and either covered with a copper or dark-coloured eruption about the genitals and thighs, at birth, or this appears soon afterwards. I have fully described this disease in infants, in my lectures on diseases of children already quoted.

Many animals are attracted by the odours they exhale at the time of rut or season of reproduction; some seek each other by their cries and songs, by which they express the violence of their amorous rage. Harvey has well described this fact: "Profecto dictu haud adeo pronum est, quomodo vel visu, vel auditu, vel olfactu, mares (etiam è longenquo) intelligant fœmellas cupidinis œstro percelli, coitumque appetere, Aliqui, etiamsi vocem illarum dun-

taxat audiant, vel locum in quo minxerint, aut vestigia solum olfaciant, statim, libidine acceduntur, easdemque ad coitum insectantur." (Op. cit. Exercit. VI.)

Love is more ardent among birds than among quadrupeds, on account of the warmth of their constitution and their extreme vivacity. Their coition is rapid and frequently repeated. A cock copulates with thirty hens in a short time. These birds have not a perfect penis, but a tubercle ; there is no penetration, but a simple affriction. Woodcocks and other birds fall into a kind of ecstacy during the season of love. Aristotle observes, " Aves morbo laborare, et interire, nisi parient." (Gen. Anim. 1. 3.) " Phasianias mas," observes Harvey, " in aviario detentus, adeo flagranti libidine æstuat; ut nisi complures fœmellas, (ad minimum sex) secum habuerit, eas iterato sæpius coitu mala mulctet, et fecunditatem impediat potius, quam promoveat. Vidi aliquando fœmellam phasianiam, à gallo simul concluso (quem nec occultando sese, neque aufugiendo, evitare poterat) adeo delassatam, dorsoque ob frequentiores ejus insultus deplumem, ut tandem miseris modis exagitata præ mœrore deficeret. In eadem tamen dissecta, ovorum ne rudimenta quidem inveni. Similiter fœmellæ aliquæ, in libidinem adeo proclives sunt, ut mares suos morsinculis, vellicent, (quasi in aurem veneris guadia insusurrarent) supersiliant, aliisque artibus ad coitum invitent; in quo numero sunt columbæ et passeres." (Op. cit. Exer. VI.)

The mewing of cats, the lowing of quadrupeds, and the cackling of birds, after they have laid their eggs, are familiar examples of solicitation of the male animals to reproduction.

It is well known that repeated coition within a short time—for example, a few hours—by the same male, is invariably infecund; and that offspring is produced when moderation and abstinence are observed.

Cold-blooded animals, as lizards, serpents, &c., have a slow copulation, and remain several days in it. They are in a state of stupor and insensibility; they neither eat nor stir during the time.

The genital organs of both sexes of animals become congested and hot during coition, and the temperature of these organs in plants is considerably augmented—a fact ascertainable by the thermometer.

The fervour of love is much greater in males when they have a greater number of females; and thus polygamous are more ardent than monogamous animals; but there is much reason to doubt this assertion, as the offspring is chiefly female. There is a kind of modesty in females which leads the males to search after them, and excites amorous impulse. The sexual unions of quadrupeds are generally vague, and the most vigorous males prefer the most vigorous females. Thus, we often observe small bitches in copulation with large males, as if instinct had much more regard to the perfection of the species, than to the pleasure of the individual. Monkeys are monogamous, but they do not always confine themselves to the same female. Ruminating animals often fight for their females. It has been remarked that sea-calves have their seraglios, which they stoutly defend against intruders.

The pairing and care of progeny of animals is beautifully described by Lord Kames in his Sketches of the History of Man.

Animals generally confine their amours to their own species—similia ex similibus, augeri necesse est—(Arist)., and do not copulate, except in the season of reproduction; and hence their unions are almost always fecund. The human species often abuse the function of generation, by attempting to engender at all times, and too frequently. In such cases, the semen is suddenly secreted, it is thin and watery; it is not allowed to accumulate for six or eight days in its receptacles, in which its thinner parts become absorbed, and then it is rendered prolific and properly elaborated. (Harvey, Exercit. L.) The spermatic fluid ought to remain for one or more days in its receptacles, to be prolific, and the longer it is retained, the more fecund will it become. "Item dicimus de coitu virtuoso et de generatione creaturæ, quod vir non debet coire recenter, neque mulier spatio octo dierum. Sciendum est, quod quanto magis sperma utriusque fuerit servatum tanto et producturæ; et si sperma ex bonis cibis fuerit generatum tanto magis erit digestum et viscosum et virtute plenum." Infecundity is often caused by a violation of this rule in young persons, and paternity established by its observance. There are, however, exceptions, for I have been informed that conception has happened after thirty-six hours abstinence; and much will depend on the age, temperament, habit, pursuit, and intellectual and physical states of individuals. But the ancient physiologists were right in their general rule—the longer parties abstain, the more quickly they generate; "Quod quanto plus uterque se abstinet à coitu, tanto citius generat postea coiens."

Swammerdam and Mr. Hunter concluded that the vesiculæ seminales were not seminal reservoirs, as their secre-

tion differs in colour and smell from that of the testes; that the former is yellowish and inodorous, while the seminal fluid is whitish, possessing a peculiar odour, similar to that of the orchis root or down of the chesnut. In a man who had but one testis, Mr. Hunter found the seminal vesicle at the opposite side filled with the same fluid as that of the other. The seminal vesicles are wanting in birds, dogs, and other animals, and the bulb of the urethra is said to perform their office in man, according to Mr. Hunter. This conclusion is opposed to the received opinion, and almost all physiologists now agree, that retention of the semen for some few days, or abstinence from coition, is necessary for generation. I might give the histories of many cases. of healthful individuals who have consulted me on account of want of family, which entirely arose from this cause. Such cases require great delicacy in their investigation; but it is not difficult to learn their nature, when science, caution, and sympathy are duly exerted. Conjugal, domestic, and social inconveniences, must be always avoided. I need scarcely observe, that excessive sexual enjoyment relaxes both parties.

The contractible power of the vagina and uterus obviate relaxation in the human subject, unless when the organs are relaxed by mucous and other discharges. In the latter cases, the male semen is often too much diluted and rendered unprolific. Most animals after impregnation refuse to admit the male, but mares, rabits, hares, &c., are exceptions. In many insects one copulation fecundates several eggs, which may engender nine successive generations, all of which are females, except the last, which contain males. Thus, an insect may be a mother and a virgin at

the same time. Jurine informs us that the *monoculus aphis* produces fifteen generations without copulation. It is also a fact, that in the *monoculus pulex*, the young in the summer months are propagated viviparously, or born alive, and in the autumnal or cooler months oviparously; some are winged, others have no wings, or even a distinction of sex.

Animals and plants which procreate from divisions, prolongations, or sprouts, have no need of fecundation.

There are great differences relative to generation in the various species of animals and plants. Most are fecund, but some are impotent, either on account of malformation or diseases of the organs, which prevent coition. Animals and plants follow the laws of nature, and are generally fruitful. The numerous causes of infecundity in the human species will be described hereafter.

It would far exceed the limits by which I am circumscribed in this work, were I to enter on the history of generation of the vegetable and animal kingdoms; and this is the less necessary as I have fully described it in my *Lectures on Midwifery*, published in the *London Medical and Surgical Journal*, 1836. Suffice it now to state, that a sexual system exists in the numerous classes of both kingdoms, and that the phenomena of reproduction is analogous in both. I have traced it from the lowest class of plants to the human species, and given a very full account of it as regards the latter in my Manual of Midwifery, 3rd edition, 1832. In that work will also be found the history of ovology, or the development of the embryo, from the moment of conception until it comes into the world and enjoys an independent existence; as well as the

management of natural and difficult parturitions, and the hygeiology of infants, with the nature and treatment of their diseases from birth until puberty or adolescence. I have also illustrated the subjects of Ovology as well as Natural and Difficult Parturitions by numerous engravings, in the form of an Atlas, which is the most comprehensive and complete delineation of obstetric medicine hitherto published in this country. The reader who may be desirous of obtaining information on this part of the physiology of generation will find it in the works to which I refer him.

I shall now briefly notice the reproduction of the vegetable kingdom, and pass from that to the mammiferæ, among which is the human species.

CHAPTER XV.

GENERATION OF THE VEGETABLE KINGDOM.

THE vegetable kingdom is one of the grand divisions of animated nature, without which animals would have been created in vain, as it affords food, shelter, shade, and comforts to all terrestrial beings. Vegetables are living or organised beings; but distinguished from animals by the want of nerves, muscles, and a digestive cavity; and consequently they have not the power of sensibility, unless contractility and irritability be so deemed; nor of motility nor true digestion. They possess no idea of their own existence, nor of that of those beings which surround them; they do not stand in need of the faculty of thought, like animals; they remain fixed in the same place during life in which they receive all substances necessary for their

life, growth, conservation, and multiplication. It is easy to distinguish a vegetable from an animal; but when we place certain organised beings of the extremes of the two kingdoms before us, as sponges, corals, &c., the difference is so slight in appearance, that the most celebrated naturalists have hesitated to which division to assign them; and they have often classed them in one group or the other.

Nevertheless, all naturalists now agree, that every being which possesses a digestive cavity, and enjoys voluntary motion, is really an animal; whilst that one is to be regarded as a vegetable which possesses certain movements, without an alimentary canal; such, for example, as the sensitive and other analogous plants. According to this conclusion, it is easy to fix the line of demarcation between vegetables and animals; thus, the coral is indubitably an animal, because it contracts itself by an act volition, and possesses an internal reservoir; but a creeping plant is a vegetable, because it has no internal cavity, and no degree of motility.

In all other respects the conformation of vegetables is the same as that of animals, except that they are deprived of nerves and muscles. Their bodies have a cellular tissue for a base, simple in a small number, and transformed into vessels and glands of various kinds, in the great majority.

It is also to be remembered, that the fundamental elements of animals are oxygen, nitrogen, and hydrogen, and of vegetables, oxygen, carbon, and hydrogen, with some others common to both kingdoms.

Vegetables possess the following parts—1. A root which connects them to the soil; 2. A stem which projects into

the air; 3. Leaves of different sizes; 4. A pistil or female, and a stamen or male organ of generation; 5. A calyx and corolla, to protect the organs of reproduction; and 6. The fruit which contains the germs of many new plants.

It follows from this arrangement of parts, that vegetables are destined to accomplish two great organic functions, nutrition or self preservation, and reproduction, or the perpetuation of species.

It is manifestly foreign to these pages, to prosecute vegetable physiology, and to describe the functions of this class of beings, such as nutrition—by roots, stems or branches, shoots, leaves or accessory organs;—absorption, elaboration by sap, assimilation, respiration, or transpiration; but I shall merely confine myself to a very succinct account of reproduction, which peculiarly appertains to the present subject.

There are male and female organs in plants, destined for reproduction, as well as in animals. With the exception of a very small number of plants, all vegetables have on the same stalk both male and female organs of reproduction —an admirable contrivance of nature, which thus furnishes to the plant the means of regeneration, as it is compelled to develope, increase, and die in the sun; whilst animals have a muscular system that enables them to move from place to place, (locomotion) and search out each other.

The flower is the part of the plant which contains the sexual organs. These may be separate, aud are sometimes united, and the union is called hermaphrodite.

There are certain plants in the 21, 22, and 23rd classes of Linnæus, whose flowers have male or female organs only. Monoicous plants have sometimes the sexual organs

situated at a greater or less distance on the same branch. Some, on the contrary, have the male organs on one flower, and the female on another, as in all the dioicous plants; these are termed unisexual, and male and female flowers.

Nature, ever wise in her works, has placed male and female plants sufficiently near to each other, that they may celebrate their amours, and sometimes even by the wings of the wind, or extraneous influences.

The winds transport the pollen to the female organs, as do bees, butterflies, and other winged insects in flying from flower to flower.

The reproduction and perpetuation of plants is not only curious and instructive, but illustrative of generation in the human species.

The flower, the most tender, beautiful, and remarkable on account of its form and variegated colours, is generally composed of four principal parts, of which two are essential to generation—the stamen and the pistil; two others which exist for ornament and protection against external bodies —the calyx and corolla. Such is the arrangement of these parts in proceeding from the exterior to the interior mechanism.

Reproduction of Vegetables—Sexual Organs of Plants. —The calyx is that part which surrounds the flower, which varies in colour, consistence, and the number of pieces which compose it, all of which are united at the base. It may consist of one, two, or three pieces, and these are called phyllæ.

The corolla is placed within the calyx, and forms the inner envelope of the stamen and pistil. Linnæus ingeniously compared this to the nuptial bed or the theatre of

the amours of plants. It varies in form and colour, and like the calyx consists of one or many pieces.

The stamen is the male sexual organ, is the third part of a flower which proceeds immediately from the corolla, and its use is to fecundate the pistil or female organ, which is placed in the centre of the flower. This organ is composed of the filet and anther. The filet is not always present, as it is not indispensible to fecundation, but its summit is the anther, without which fecundation cannot occur.

The anther consists of a fine membranous sac, in the interior of which is a very fine powder called pollen. The anther is compared to the glans or head of the male organ in animals, and the filet to the body of the same organ.

The pollen or seed, consists of very fine grains, in the centre of which there is a subtle fluid possessing a similar odour to the semen of the male animals, and causing fecundation, by its action on the pistil.

Flowers in general have several stamens, and fewer pistils, so that we may fairly conclude that plants are generally polyandrous, that is to say, there are many males or husbands for one female, as among certain animals, and even the human species in certain Eastern nations, and in a state of concubinage in all civilised countries.

Linnæus based his splendid classification of plants on the number of stamens or vegetable husbands. Thus, his first class is monandria, one stamen; his second, diandria, two stamens; and so on to the eleventh class, dodecandria, from eleven to nineteen stamens; the twelfth, icosandria, from twenty to a hundred stamens; the thirteenth, polyandria, from twenty to a hundred stamens, inserted at the

tube of the calyx, which is often united with the ovary; the fourteenth class, didynamia (two powers), four stamens, two of which are longer than the others; the fifteenth class, tetradynamia (four powers), six stamens, four of which surpass the other two in size.

The stamens, or male organs, are sometimes united in different bundles, which led the illustrious Swede to add four other classes. Sixteenth, monadelphia, one brother, when all the stamens are united in one; seventeenth class, diadelphia, two brothers; eighteenth class, polyadelphia, many brothers; nineteenth class, syngenesia, simultaneous generation, when many stamens are united by the anthers, and not by the filets, so as to form a tube which is freely traversed by the style of the pistil; the twentieth class is gynandria, which signifies woman and man, the female and the male—in which the stamens are attached to the pistils.

In fine, there are plants in which the sexual organs are not in the same flower, and these are divided into three classes. Twenty-first class, monœcia, one house or family; twenty-second, diœcia, two families; twenty-third class, polygamia, hermaphrodites in which the male and female organs are united or unisexual; lastly, there is the twenty-fourth class, in which the sexual organs escape detection with the eye, and these are called cryptogamia—hidden marriages.

The female organs of plants are the following:—

The pistil is in the centre of the flower, and is the female organ; it is composed of the ovary, the style, and the stigma. The ovary, derived from the word ovum or egg, because it contains small grains, germs, ovules, or rudi-

ments, is the inferior part of the pistil, which is supported by the receptacle or base of the calyx. When incised, or cut transversely, it is found to contain grains, ovules, or eggs.

The stigma is the superior part of the pistil, which transmits to the ovary, the pollen or fecundating powder, which contains the subtile fluid of the male organ.

The style, which does not always exist in all plants, is a thread-like canal, situated between the ovary and stigma, whose use is to transmit to the first the fecundating powder.

Though the stamens or male organs are much more numerous than the pistils or female organs, yet, in some plants, the latter exceed the former in number. The number of pistils has served Linnæus for a division of a certain number of these classes into orders.

First order, monogynia, one pistil; second order, digynia; third order, trigynia; fourth, tetragynia, four pistils, &c.

Reproduction—Amours of Plants.—Having succinctly described the reproductive organs of plants, let us now direct our attention to the mechanism of their functions, which have for their object the reproduction of the species.

The celebrated Linnæus first gave the physiology of the reproduction of plants. According to him, the flower forms the theatre of their amours; the calyx is considered the nuptial bed; the corolla the curtains; the anthers are the testicles; the pollen the fecundating fluid; the stigma of the pistil the external genital aperture; the style the vagina, or the conductor of the prolific seed; the ovary the womb; the reciprocal action of the stamens on the

pistil, the copulation or consummation of the sexual intercourse.

It is only at the period of floration, or the development of the flower, that the marvellous unions or marriages of plants are celebrated. The sexual organs of the male and female exhale a spermatic odour, while they become more sensitive, and acquire a degree of action visible to the naked eye. The functions of generation now commence, and are six in number. 1. Sexual approach; 2. Dehiscence or ejaculation of the male organ; 3. Absorption of the prolific pollen or fluid by the female organ; 4. Fecundation; 5. Gestation; and, 6. Dissemination or expulsion of the fruit from the ovary.

I. *Sexual Approach — Copulation — Coition.* — When the flower is developed and perfected, the sexual organs act on each other; the male organ (anther) becomes erected, and directs its summit or head towards the stigma (genital fissure) so as to shed on its surface the pollen or prolific fluid.

In some hermaphrodite flowers which have ten stamens, as the fraxinella, ruta, &c., each approaches the female organ, and having shed its seed, resumes its original position, to give way to the nine others, which alternately perform the same function.

The corolla contracts, in some flowers, so as to bring the stamens nearer the pistils; and in aquatic plants, the flowers elevate themselves above the surface of the water, while copulation is effected, and then they plunge again into their former element, and bring forth their fruit. Linnæus observed, that when the stamens were longer than the pistils, the flowers were vertical; when the pistils

were longer than the stamens, the flowers were inverted; and when both were equal in length, the flowers were pendent. In this manner sexual approach was facilitated, and insemination effected in all hermaphrodite flowers.

II. *Dehiscence, or Ejaculation of Pollen or Seed.*—The pollen of plants is the fecundating power, and consists of a number of small sacs, invisible to the naked eye, in which a fluid exists, which is analogous to the spermatic fluid in man and animals. The rupture of these sacs is to allow the escape of the pollen, termed dehiscence, and is similar to the emission of seed in animals.

The surface of the stigma (genital fissure in animals), presents a number of apertures, communicating with the ovary, or directly by the filiform (thread-like) canal called style, and which is analogous to the vagina in animals. The ovary in plants, like the uterus in animals, possesses a power of absorption or suction of the male fluid, which it communicates to the ovule or germ. It is the action by which the ovary draws to itself either the seed, or the vapour arising from it, *aura seminalis*, and which action is termed pollinic absorption. This is analogous to uterine absorption in female animals.

The physiology of human generation informs us that the womb absorbs or sucks in with avidity the spermatic fluid, and also that impregnation follows the slightest penetration of the virile member.

The stigmata of flowers, like the sexual organs of most animals, in the season of amours are bedewed with more or less humidity, acquire more heat, and even become odorous. The stigma in the sensitive plant, tulip, &c., becomes congested and contractile, not only after the ap-

plication of the fecundating powder, but when submitted to any kind of stimulation. The arum of Italy developed so much heat under the same circumstances, as to be appreciable by the thermometer. We see the female organ in the crown imperial, the laurel of St. Anthony, &c., depress itself towards the male organ, which it surpasses in length. We even observe tremblings in the Parnassus de Marais, when it receives the exciting impression of the fecundating pollen. Erante has beautifully described these phenomena in his delightful work, de Connubiis Florum.

" Dat pronubia signum.
Aurora exoriens; fila obriguere; dehiscunt
Folliculi; volat aura ferax tectoque reflexa
Præcipitat perque antra tubæ perque antra placentur;
Ova tument; guadet flos femina prole futura."

III. *Fecundation—Impregnation of the Germ—Conception.*—The seminal fluid of the pollen having been transmitted to the ovules or germs in the ovary, these rudiments of life acquire a new mode of vitality; they rapidly increase, and are transformed into real grains, which are capable of giving birth to new vegetable beings, whilst they are placed in a situation most favourable for germination. Such is fecundation in plants; and it does not differ from what we term conception in female animals.

So soon as fecundation is effected, both the male and female sexual organs of flowers, except the ovary, decay and die, as nature has accomplished her object, and left the elements of future generations for development. The ovary swells, and becomes filled with a fluid, which soon

acquires consistence, and finally becomes the fruit. This process is termed fructification. The sexual organs can no longer contribute to the perpetual renovation of the species.

"Reproduction," says Merat, "is the end of all the cares of nature, for which she has prepared the most perfect apparatus. The act being finished, all enter into repose, all fade, all vanish. Retard fecundation, impede it by any means, and the flower preserves the freshness of its calyx for a long time."

IV. *Development of the Ovules—Gestation—Pregnancy.*—The ovule remains a certain period, as in animals, until it developes, and is transformed into grains, which are capable of giving birth to new individual vegetables. We shall see, in studying the fruit, the processes employed by nature to effect this object.

V. *Dissemination — Dehiscence — Parturition.* — These terms are synonymous, and mean the escape of the grain from the fruit, and are analogous to parturition in woman and animals.

Fructification — Analysis of the Fruit. — The fruit is nothing else but the ovary arrived at perfect maturity. It is composed of two principal parts—the pericarpe and the grain.

The pericarpe is that part of the fruit which contains the grains, and the cavity of the pericarpe may be simple or multiplied, and the fruit may be like the ovary, unilocular, bilocular, or multilocular, according to the number of cavities it contains. It is composed of three other parts: 1. The epicarpe or external membrane, which covers the fruit externally; 2. The sarcocarpe, or pulpy part of the fruit, which is situated immediately under the epicarpe;

3. The endocarpe, or the membrane which lines the internal cavity of the fruit, and which is in direct contact with the grains. It is easy to understand this description by examining an apple.

There is also a communication between the seed and the pericarpe in some instances, which is termed trophosperme or placenta. We see this in the pod of a garden pea. The seed is covered by a membrane named episperme. There is also a small prolongation from the trophosperme to the grain, which is termed podosperme, which means the foot or root of the seed, and it establishes a means of communication between the ovules and the pericarpe. It is through this prolongation that the ovules have the nourishment necessary for their transformation into grains, like the umbilical cord in women and animals. The small cicatrix on the grain is called the umbilicus, as in man, and it results from the detachment of the podosperme or umbilical cord from the fruit. The examination of a pea affords a perfect view of all these parts.

Means for the Dissemination of Plants.—The means which nature employs to disseminate plants on the surface of the globe, and to prevent the extinction of the species, are worthy of attention. The chief of these means is dehiscence (parturition of a plant), which consists in the rupture of the pericarpe to allow the escape of the seeds. This operation, as in animals, does not take place until the germs have acquired all their maturity. Then the grains endeavour to escape, rupture the connections which retain them in the pericarpe, and escape on the surface of the earth, to produce new beings, as without this occurrence all vegetables would disappear on the surface of the globe.

Nature employs a number of means for the propagation of plants in different parts of the earth, and to prevent the extinction of the species; as the mode of dehiscence of certain fruits, the promptitude of germination in a number of grains, the power which others possess of remaining incorruptible for a great length of time, the winds and the waters, which transmit them to a great distance, the animals which swallow them entire and afterwards expel them, and lastly, their great fecundity. A few illustrations may be given of each of these wise contrivances, as all of them afford peculiarities, which are extremely curious to those desirous of examining and observing the propagation of vegetables.

Dehiscence or Dissemination.—There are some fruits whose pericarpe, at the period of maturity opens with such rapidity, that the grains are projected with an elastic force to a very considerable distance, and sometimes with an audible noise. We observe this in the willow, the fraxinella, &c., and it is familiar to all horticulturists.

Promptitude of Germination.—There is a vast number of plants which germinate with astonishing rapidity, some even in the short period of three days.

Incorruptibility.—Most grains, except the oleaginous, remain incorruptible; some have remained forty, fifty, a hundred, and even a thousand years. Some have been found between the bandages of Egyptian mummies, which retained their power of germination. Mr. Pettigrew mentioned facts of this kind in his lectures on Egyptian antiquities, delivered at Exeter Hall, 1837.

Winds and Waters.—A vast number of grains are so light that they may be transported to great distances by

the winds; others float in the air, and according to some botanists, have been transmitted from one country to another, and even from one continent to another. Thus, it is said that the erigeron of Canada, was transported by the winds from North America to Europe. In the same manner it is stated that rivers, torrents, the waters of the ocean, transport seeds to a great distance, from one island to another, and from one continent to another. The cocoa of Maldive islands is said to be conveyed by the ocean to the Sechelles. The coasts of Norway present fruits which were transported by the same means from America.

Germination.—When the seeds of plants are placed on the earth—and they are shed where they grow, because the season of ripening is also the natural season for sowing —they become covered with the fallen leaves, or by the treading of cattle or other influences, as by the rain, wind, &c. It is necessary for perfect germination, that there should be a free air, a moderate degree of moisture, and a temperature suitable to the kind of seed. The heat of the soil at seed time, whether in spring or autumn, in this climate, is from 40 to 50 degs. of Fahren.; and this is sufficient for corn and all other plants suited to the soil of Great Britain and Ireland. It is an axiom, that the most perfect and sound seed produces the most vigorous plants.

A certain degree of humidity softens the pericarpe, husk, or shell; the chemical constituents of air and water are absorbed, and with the excitement of a necessary degree of heat, the whole swells, the rostells or seminal points protrude through the integuments, some descend into the earth and the others ascend into the air and forms the

infant stem. The size of the seeds will determine the depth at which they ought to be placed from the surface of the soil. It is also a fact that defects and hereditary diseases are almost always as transmissible in vegetables, as in animals. If the parent had any peculiar manner of growth, either good or bad, the seed will generally inherit it. Although this is a general rule, it is not without exceptions. It is also observed that a frequent change of seed is a necessary expedient in cultivation in order to insure the best returns. The seed not only requires a change from one soil to another, but also from one country to another. The seed is the result of generation.

Intermarriages are also essential to the production of vigorous offspring and population; while marriages between near relatives are generally injurious.

CHAPTER XVI.

GENERATION OF THE ANIMAL KINGDOM.

In the preceding chapter, I described the function of reproduction in the lowest section of organised beings, namely, in plants, and now ascend to the first class in zoology, which many eminent naturalists have arranged with the former, but which recent and more accurate researches have determined to belong to the animal kingdom. In ascending from the lowest to the highest class in the zoological scale, we shall more clearly perceive the more perfect conservation of animals, and the varied species of their reproduction, all of which elucidate the mysterious

unction of generation in the human species. This was the plan pursued by all naturalists and physiologists, by Hippocrates, Aristotle, Harvey, Spallanzani, Cuvier, Virey, Mason Good, and a host of others.

Generation of Animals.—What a vast, sublime, and at the same time delightful field, is the study of the generative functions in this class of living beings, at the head of which stands the human species? What curious and varied phenomena, all tending to the same result! What an incalculable profusion of different reproductive processes nature employs for the propagation of the numerous species which she calls into life! And, nevertheless, what unity and what analogy of propagative actions among all the individuals of the same class, from the bramble heath on which we tread, to that proud being who is so eminently qualified to be prince of animals, and king of the universe.

Though the study of the generation of animals presents to the mind of the observer a host of subjects capable of vividly exciting the curiosity, it still furnishes a host of gifts of the deepest interest, whether we consider the advantages of the beings under our empire, whether to serve our comprehension and explication of the numerous phenomena of human generation, on the mechanism of which nature would appear, at first view, to have thrown an impenetrable veil.

A complete history of the generation of animals, and especially of the infinity of modifications in this mysterious process of perpetuating each species, would be an immense undertaking, to the elucidation of which the entire life of one man would be insufficient, and which is perhaps

beyond the comprehension of his natural faculties. What an infinite number of organizations and different species among the millions of living beings which the earth receives on its surface, which fly in the air, and which swim in the unfathomable ocean! What an immense number of others whose organization, and consequently whose mode of reproduction escape the eye, even assisted by the most powerful microscopes!

"How numerous are the springs," says Buffon, "the powers, the machines, and movements included in that small portion of matter which composes the body of an animal! What relations, harmony, and correspondence between the parts! How many combinations, arrangements, causes, effects, and principles, which concur to the same effect, and which we only know by the results, so difficult to be understood, and they have not ceased to be marvellous, but on account of our not reflecting upon them. But, however admirable does this work appear to us, it is not in the individual that the great wonder exists; it is in the succession, renovation, and duration of the species, that nature appears altogether inconceivable. The number of the species of animals is much greater than of plants, which amounts, it is said, to 56,000. There is, perhaps, a greater number of insects, most of which escape our observation. than there is of plants visible on the surface of the earth!"

I have described, in my Lectures on Midwifery and Diseases of Women and Children, published in the London Medical and Surgical Journal, 1836, the function of reproduction in all the classes in zoology, with a view of showing the analogy of all, and the consummate wisdom of the Creator in regenerating organised beings.

I there described the reproduction of zoophytes, insects, crustacea, worms, mollusca, fishes, reptiles, and birds, and gave the observations of the illustrious Harvey on the ovology of the gallinaceous egg, which led him to the investigation of embryology in many of the mammalia, and to his conclusions on human generation. He proved the identity of ovology in the gallinaceous egg, in the mammiferæ, and in the human species, and established the axiom both in the vegetable and animal kingdom—*omnia ex ovu.* It is a most remarkable fact that his descriptions of animal ovology are in strict accordance with those of the human being of the present period.—(See Velpeau's and Breschet's late works on Human Ovology, 1836.) Those who are desirous to peruse his experiments and observations, will find them in the lectures above referred to. The history of them would cause too great a digression in this work, which is confined to the reproduction of our species.

CHAPTER XVII.

ANCIENT AND MODERN THEORIES OF HUMAN GENERATION.

THE animation of the first of the human species presents a question of physiology full of interest, on which men of the greatest genius have commented, though they have completely failed to solve it. The continuation and reproduction of our species have also occupied the reflections and investigations of the greatest philosophers and physiologists of ancient and modern times, some of whom have proposed hypotheses and theories replete with the grossest

absurdities and errors. These hypotheses are about two hundred and fifty in number, and a brief notice of those which were best received, may not be uninteresting to the modern physiologist as well as general reader.

Plato thought that the reproduction of man, as well as of almost all organised beings, was effected by spectres and images extracted from the creative Divinity, which, by a harmonic movement, were arranged in certain numbers into perfect order. It was in the unity of the number three, that this great philosopher made the essence of all generation to consist. That which engendered, or the father, formed the first number; the being in which the conception was effected, the second number; and that which resulted, the offspring, the third number.

The opinion of Plato was, that all generation emanated from the Divinity himself, who, by a perpetual course of miracles, maintains and renews the living world; and, consequently, that man is, in the phenomena of reproduction, but an instrument of the consummate wisdom of power which govern the universe; and secondly, that generation can only be effected by a male who furnishes certain principles to a female, in whose womb the result or new being, is developed; and that this law equally governs the whole of the animal and vegetable kingdoms. This tripartite harmony was considered an image of that mysterious power, the Trinity in Unity, which created and perpetuates all organised beings.

Pythagoras supposed that a vapour descended from the brain and nerves during coition, and formed the embryo, which developed according to the laws of harmony. (Diogenes Laer. L. viii. ix.) Impressed with this idea, the

Scythians took blood from the veins behind the ears, to produce impotence and sterility—a practice still more recently recommended by Mr Shandy to his brother Toby, when his ass was kicking violently on the recollection of the Widow Wadman.

Epicurus held that the perpetuation of man was effected by a mixture of the fluids by both sexes, which were united in the sexual organs of the female, animated, developed, and changed into a being resembling those who furnished them.

Lucretius and a great number of ancient physiologists admitted this doctrine. That great poet considered that there was a mixture of fluids, and that the most vigorous determined the sex, which is now the general opinion. His words are :—

Et commiscendo, cum semen forte virile
Fœmina commulsit subita vi corripuitque,
* * * * *
Semper enim partus duplice de semine constat.
Atque utrique simile est magis id quodcunque creatur.

De Natura rerum, l. iv.

He explained the resemblance of infants to their parents in the following manner:—he thought that which ever parent furnished the most elaborated and abundant seminal fluid would impress the lineaments and form on the offspring—that the most vigorous parent who would possess most genital power, would determine the sex and physical characters of the infant, and, consequently, that the offspring would most resemble this parent, both in mind and body. But if the father and mother possessed equal power, the infant would resemble both.

Hippocrates and a vast number of his successors, as well as all modern physiologists, admit this doctrine.

Hippocrates, Pythagoras, Democritus, Aristotle, Anaxagores, Alcmeon, Parmenides, Empedocles, Epicurus, Galen, Avicenna, Zacutus Lusitanus, Decartes, Venette, Rousel, and Buffon, acknowledged the existence of a fecundating sperm in woman; while Zeno, the Stoics, Hippon, and Fallopius, with many other celebrated anatomists, denied it. It is important to observe in passing, that the mucous fluid which is generally, but not always, effused by the uterus and vagina, during copulation, is not seminal or prolific, nor does it contribute to the formation of the new being. It is furnished by the lacunæ and glands of the vagina and neck of the womb, and by the lining or mucous membrane of these organs, and the Fallopian or uterine tubes. This fluid may be more or less abundant; and according to Magendie and others, is not effused by some individuals, and by others only very sparingly. Moreover, it does not occur during the greatest excitement, which is during and immediately after the male emission.

Galen related the case of a hysterical woman, who on the slightest excitement of the genitals had a mucous evacuation, accompanied by voluptuousness, and this also happened during sleep. Sauvage mentions the case of a young girl of the most rigid chastity, who suffered from abundant vaginal discharges, even at the feet of a decrepid and disgusting confessor. (T. iii. p. 277.) Her disease was leucorrhœa or whites. Loyer-Villermay describes a similar occurrence at the access of hysteria. Such evacuations may also be induced by an excited imagination, by relaxation of the mucous membrane of the vagina, as in

leucorrhœa or vaginal debility, and they may also occur in those who are sterile from diseases of the womb or ovaries; so that they cannot be considered seminal or prolific.

The prolific fluid is supplied by a small vesicle or egg in the ovary, and is too trifling to be appreciated during coition, and scarcely even in the ovary on inspection after death. The ancient anatomists were therefore right, when they termed the ovaries, *testes muliebres*—the organs which secreted the seed in woman, as the testicles do in man. This fact is also attested by Divine authority. "I will place an irreconcilable bar between the seed of the woman and the seed of the serpent."

Hippocrates, who was unacquainted with human anatomy, supposed that the spermatic fluid of man was furnished by all parts of the body, and especially by the brain, as the principles of generation formed a new being, a miniature of our entire organisation. As to the opinion that the spermatic fluid was formed by the brain, that it descended along the spine to the loins and sexual organs, it is decidedly erroneous, for when the testicles which secrete it are removed, there is no seminal secretion. It is a remarkable fact, that the organ of love is now placed in the cerebellum by the followers of Gall and Spurzheim. For further information on this subject see my work on *Prostitution in London and Venereal Abuses*, 1839. The father of physic also entertained the opinion of Lucretius, that the resemblance of infants to either parent depended on a greater or less quantity of seed furnished by either. He held that a male resulted from a mixture of both seeds equally hot and elaborated; whilst a female was produced

when the father or mother supplied a weak fluid, or one which is suddenly secreted. He supposed that on the mixture of both seeds, the new being was formed in the womb. That this mixture absorbed heat, and passed from a state of fluidity to a certain consistence. Acted on by continued heat and vitality, the germ or new being, evolved a vapour which formed a round pellicle that enveloped it, and that it always received a new principle of life from the mother.

This pellicle or fine membrane formed an entire covering of the body, which finally was the skin, gave out a vapour which was condensed, and formed another membrane, and this part condensed a vapour into a fluid by which the embryo was surrounded. In fine, he held that one point of this sac attached itself to the womb by a spongy, vascular union, through which nutrition was derived and carried to the navel of the fœtus by means of the umbilical cord or navel-string.

It will appear hereafter, that this view of human ovology, though promulgated more than three centuries before the Christian era, does not differ essentially, as regards the connexion between the embryo and mother, though otherwise erroneous, from that of the latest writers on embryology.

Aristotle admitted the female ejaculation, but denied that it contributed to the new being, in which he was right; that the male alone furnished the principles, while the female supplied the necessary materials for their development, and these he considered, with Hippocrates, resided in the menstrual fluid. This was an error. The menstrual fluid is a natural secretion, the result of a

periodical determination of blood to the womb, which prepares it for conception, and when this happens, the fœtus is nourished by blood. He said that woman furnished the marble, man was the sculptor, and the embryo the statue. (De Generat. Animal.)

Averrhoes, Avicenna, and many others, adopted this doctrine; but the greatest number embraced the system of Hippocrates.

Galen held that the embryo was produced by the seed of man, and that the materials afforded by woman nourished it. Diogenes, Hippon, and the Stoics, concluded that the embryo was produced by the male seed alone, and that the mother only served for its development, as the earth does for the germination of grain.

Decartes supposed that the mixture of the two seeds produced a fermentation, in which the embryo was formed; while Pascal and other chemists held that the spermatic fluid of man was acid, and that of woman alkaline. (De Formatione Fœtus.)

Viussens maintained that both seeds contained spirits; and Van Helmont held that the female furnished seminal fluid, and the male a spirit or vital principle.

Maupertuis was of opinion that each seed contained an imperfect animal, or parts of an animal, which it finally resembled.

Empedocles had previously supposed, with Aristotle, that the embryo existed in separate parts, in the seeds of both sexes, which, on being united, formed a regular order and a perfect whole. (Delamethria. Inst. Boerhaave.)

Harvey concluded, after innumerable experiments, that the germ was in the ovary in animals and plants; and

was the first who maintained the doctrine now universally admitted as correct—Omnia ex ovo. He supposed impregnation was effected by a kind of magnetic influence. (Exercitationes de Generatione Animalium. Quibus accedunt quædam de Partu; de Membranis ac humoribus Uteri et de Conceptione. 1651.) J. Fabricius proposed the theory of the Aura Seminalis. (De Formatione Ovi, &c. 1625.)

De Graafe contended that all animals were produced from an egg, maintaining the opinion *omnia ex ovo*, that germs existed in the ovary in the form of small transparent vesicles or ovules. (De Mulier. Organis, &c. 1677.) This doctrine was also admitted by Steno, Van Horn, Swammerdam, Malphigi, Harvey, Valisnieri, Ploucquet, and many other celebrated physiologists, and is now generally received.

The next hypothesis was proposed by Hamme, and advocated by Hartsoecker, Leuwenhoeck, Boerhaave, Keil, Cheyne, Geoffroi, Cardinal de Polignac, Lieutaud, and a host of others, who maintained, that the germs existed in the seminal fluid of man, in the form of small living worms, which they called *animalcules;* that one drop of sperm contained millions of them, that projected into the cavity of the uterus during coition, one or more of them ascended into the uterine tube, arrived at the ovary, entered a vesicle, caused impregnation, and returned into the womb under the form of a small ovum or egg; and finally developed into an embryo. MM. Prevost and Dumas also maintain this doctrine in their recent work. They allege that in a vast number of artificial fecundations, they never effected vivification when the animalcules were

killed or destroyed. Spallanzani stated that he mixed three grains of the spermatic fluid of a frog with seventeen ounces of water, immersed the point of a fine needle in this fluid, and having applied it to the spawn of the female, caused impregnation. According to Pritchard's Microscopic Researches, 1834, a drop of fluid contains myriads of animalcules of different forms, which corroborates the former opinion. M Raspail contends that the animalcules are organic remains, or the product of the decomposition of the sperm. M. Virey regards them as bladders distended by a sort of pollen, which burst when they arrive in the organs of the other sex.

The objections against this doctrine are, the hybrid productions; as the mule, procreated by different animals; the procreations between the stallion and the ass, and the ass and the mare; and the error in supposing that only one of many million animalcules would be vivified and the rest destroyed. This would be contrary to the wisdom of the Author of nature. Nevertheless, it has been lately proposed by an anti-population American, that a woman who wishes to prevent conception, should inject the vagina immediately after coition, to destroy the animalcules. This recommendation displays great ignorance and still greater depravity; and it is as ineffectual as it is impracticable.

Vallisnieri supposed that man commenced his existence as a worm, which developed itself by degrees, as an insect metamorphoses itself. This hypothesis was also entertained by Bourguet, Woodward, Lyonnet Rai, Schelhammer, Paitoni, Launai, Duverney, Schlichting, Ploucquet, Hamberger, Senac, &c., and even Linnæus and Buffon

seemed inclined to adopt it. But Spallanzani has shown the falsity of this hypothesis by fecundating the ova or eggs of a frog without these spermatic worms.

The succeeding hypothesis was designated *epigenesis*, or the partial and successive formation of the fœtus, a system maintained by Aristotle and Galen, revived by Decartes, Harvey, Needham, Muller, &c. This was called essential power (vis essentialis) by Wolf, nisus formativus by Blumenbach, and plastic form by Cudworth, and is analogous to the attraction of parts and superstructure of organs proposed by Maupertuis. (Venus Physique, 1745.) Buffon almost revived this hypothesis. He held, that during the most vivid enjoyment a number of organic molecules was separated from every part of the bodies of both sexes, that they resembled the parts which supplied them, that when they arrived in the womb they approached each other and united; but that those supplied by the eye, the nose, the heart, &c. of man, could only unite with those supplied by the same organs in woman. Every one acquainted with anatomy knows, that there is no passage for such parts to the womb, and that this supposition is imaginary.

Bonnet, Spallanzani, and the Italian schools, maintained that the germs pre-existed and were created since the beginning of the world, and were successively transmitted through innumerable individuals. According to this doctrine, Eve, the mother of mankind, possessed all the germs of men born, and to be born on the face of the earth; and every species of animals and plants must possess the same power. Such is the system of evolution. MM. Virey and Velpeau object to this theory, on the grounds of the

infinite divisions of matter, that a grain of corn might reproduce until it covered the earth; and the latter concludes that the ovary secretes the germ, (Traité Elémentaire de l'Art des Accouchemens, &c., 1829), which is now the generally received opinion.

Sthal considered that the soul had the power of creating and organizing the fœtus; and Van Helmont admitted a formative spirit, a seminal being in the womb; and of the same genus of spirits as his Archæus in the stomach; both authors attributed marks and deformities to mental emotions. According to these authorities, the sperm is a living fluid, which transmits the soul and the moral and physical qualities of the father to the fœtus.

The ancients were of opinion, that the ovaries in women were analogous to the testicles in man, and supplied a seminal fluid proper for reproduction. This opinion prevailed until the time of Steno, a Danish anatomist, who first maintained that the vesicles in the ovary contained a liquid resembling that in the eggs of birds, were ova or eggs, which contained the design and lineaments of the embryo, which after having been fecundated by the seed of the male, swelled, burst, escaped into the uterine (Fallopian) tube, fell into the uterus, there to undergo all the development of which the new being was capable.

The experiments of Fabricus ab Aquapendente, on the eggs of pullets, those of Harvey on bitches, sheep, and deer, already described, confirmed the opinion, and left no doubt that viviparous animals were produced from an egg like oviparous. De Graafe, Malphigi, Haller, Bonnet, and Spallanzani, after an immense number of experiments, confirmed the opinion of the pre-existence of germs in the

ovaries. They concluded that the fecundation of the germ takes place in the ovary, and that the development of the product of fecundation is a simple evolution, and not an epigenesis, as formerly supposed. Harvey was the first who maintained that an ovum, egg, or vesicle, dropped from the ovary after impregnation, and De Graafe subsequently proved this fact by precise experiments. Dumas and Prevost have lately confirmed it by recent experiments. Brissiere saw this egg or ovule partly in the interior of the uterine tube, whilst it still adhered to the ovary. This is the received opinion of all modern physiologists.

Generation — Procreation of the Germs. — The mysterious function of reproduction is still involved in obscurity. The transmission of life by parents in the animal and vegetable kingdoms remains as incomprehensible as ever.

Fecundation is effected differently, in different animated beings. We have already observed that the generation in animals, insects, fishes, reptiles, birds, and vegetables, occurs from the existence of a germ or ovum, and hence the truth of the ancient axiom, omnia ex ovo—all generation is from an egg.

A question has been discussed, but not as yet satisfactorily determined, what is the seat of generation in the human subject; is it in the womb, is it in the oviduct or uterine tube, or is it in the ovary?

Almost all the ancients believed that the germs of the male and female came into contact in the womb, and formed the new being. Dr. Blundell, and many recent physiologists, suppose there is an electrical, or galvanic, or magnetic influence which effects generation.

"Has galvanism or electricity any share in the consideration of the Great Designer? Time, the discoverer of truth, may perhaps solve this important question!" (The Principles and Practice of Obstetricy, &c., by James Blundell, M.D., with notes and illustrations by Thomas Castle, M.D., 1834.) This was previously advanced in the French Encyclopædia, *Art.* Generation. The great majority of modern physiologists entertain the opinion that fecundation is effected in the ovary. Prevost and Dumas adopt the idea of Buffon, Maupertuis, Aristotle, and Hippocrates, that the cavity of the womb is the seat of fecundation. Dr. Blundell concludes that the rudiments (ovum) and fecundating fluid meet in the uterus. This is contrary to the received opinion; and would not account for tubal, ovarian, and extra-uterine, or abdominal pregnancies. He admits "that the secretions of our sex reach to the ovaries, that there can be no full formation of the fœtus without the mixture of the two substances (male and female.) And it is clear that in ovarian pregnancy such deep penetration must occur. Perhaps the over action of the genitals and the conveyance of the semen too far, may be the exciting cause on which extra-uterine pregnancy depends." I cannot assent to the last notion, for were it true, extra-uterine pregnancy would be of common and not of rare occurrence; and I agree with those who ascribe it to relaxation of the uterine tube, after impregnation in the ovary. Moreover, conception has followed the slightest possible penetration within the labia externa, even when the penis was not more than half an inch in length after amputation.

In support of this hypothesis, some allege that in

all their experiments, they never found the animalcules in the uterine tubes or ovaries, that they found them in the cavity of the womb, that ovules must be imbedded in mucus which is supplied by the tube while conveying the ovum to the uterus; that they never could artificially fecundate ovules taken directly from the ovary, though nothing was more easily done on those which had passed into the womb.

In refutation of this conclusion, it is only necessary to state, that Ruysch asserted, that he found the spermatic fluid in the uterine tube of a young woman who was caught in the act of adultery by her husband, and stabbed to death; and Haller discovered the fluid in the tubes of sheep after having been slaughtered. This was probably the mucous fluid supplied by the lining membrane of the uterus and uterine tubes. Recent cases of semen being found in the cavity of the womb, are open to the same objection.

M. Velpeau well observes, in commenting on the preceding statements, that it does not follow, because the ova of a frog could not be impregnated unless enveloped in mucus, the same thing happens to women. It was not to be expected that the removal of an ovum with an instrument could be effected without such violence as would injure it and unfit it for impregnation. We must also bear in mind the existence of ovarian, tubal, and extra-uterine pregnancies which clearly prove that fecundation occurs in the ovary and not in the uterus. Mr. Stanley recorded a case of ovarian pregnancy (Med. Trans. vol. vi.) and Dr. Granville another, in which the fœtus was four months old. (Phil. Trans. 1820.) M. Brissiere relates a case in which one half of the embryo was in the ovary and the

other in the uterine tube. Others attest the development of the fœtus in the ovary, tube, and abdomen, among whom are Verheyen, Cyprianus, Saint Maurice, Courtial, Littre, Haller, &c. Every woman and every female of the mammiferæ is barren, if deprived of both ovaries, or when these are completely disorganised or when the tubes are impervious or ligatures applied to them before impregnation.

The experiments of Nuck, Haighton, and Blundell, afford the most conclusive evidence in support of the opinion, that fecundation occurs in the ovary. Nuck applied a ligature round the tube between the womb and the ovary, immediately after copulation, he killed the animal a few days afterwards and found the ovum arrested by the thread. Dr. Haighton tied and also divided the tube in rabbits, and invariably observed that no fecundation occurred in the ovary on the side on which he operated (Phil. Trans. vol. lxxxvii). Dr Blundell's experiments are described in the Medico Chirurgical Transactions, in his work on Generation, and also in the edition of his Obstetricy, by Dr. Castle. He divided the uterus of a rabbit, so as to obliterate its cavity; and he also obliterated the upper part of the vagina. The animal recovered, and was subjected to the male, but no fecundation took place, though there was an attempt at it, for corpora lutea were developed, and a quantity of water found in the uterus! His experiments were numerous: and led him to the conclusion that the germs of male and female rabbits, and perhaps of all other animals, must come in contact to effect impregnation. From these experiments he infers, that corpora lutea may form in rabbits independently of the

full excitement of the genitals—that the mere absorption of the semen from the vagina by means of the lymphatics is insufficient for the purposes of formation. In one vaginal experiment, the access of the semen to the ovaries being interrupted, impregnation was not accomplished, though the animal admitted the male as many as fifty times, mostly at intervals of two or three days or more—a quantity of water was found in the uterus, as in the other experiments. In this case, the male fluid must have been frequently absorbed from the vagina.

The observations of Dr. Montgomery of Dublin, are directly opposed to the opinion, that corpora lutea exist without impregnation (*Cylcopædia of Practical Medicine*, Art. *Pregnancy*, *Treatise on Pregnancy*, 1837.) The theories of generation now maintained, are three :—1. The transmission of the spermatic fluid of the male through the uterus, uterine tube, or oviduct to the ovary, a vesicle, ovum, or egg of which is vivified and passes into the womb to be developed, until the expiration of the ninth month, when it is born and becomes an independent being ; 2. The transmission of a subtle vapour or effluvium from the male semen (*aura seminalis*) through the same parts to the ovary, the impregnated ovum passing into the uterus to be developed in the manner before stated ; 3. The absorption of the seminal fluid of the male from the surface of the vagina.

The transmission of the spermatic fluid through the uterus, uterine, tube, or oviduct to the ovary, a vesicle, ovum, or egg, is vivified or fecundated and passes into the womb to be developed until the expiration of the ninth

month or fortieth week, when it is born, and becomes an independent being. This is the general opinion.

During the act of copulation, the external and internal genital organs of both sexes, which are all supplied by nerves from the same source, are excited and stimulated, the vagina closes tightly on the penis, the uterine orifice is in close contact with the orifice of the male urethra, the tube or oviduct becomes straightened and erected, and its loose or floating extremity (corpus fimbriatum) seizes on the ovary, and allows the male fluid after its injection into the cavity of the womb, to advance through the tube to the ovary, by a species of vital attraction or suction. The moment the spermatic fluid arrives at the ovary, which is seized by the extremity of the uterine tube, it acts on and vivifies one or more ova or ovules, and forms the new being, or beings.

The fecundated ovule is now the seat of a new vitality, it becomes swollen, reddish, and finally bursts its membrane, and detaches itself from the ovary. The fimbriated extremity of the uterine or Fallopian tube is still in contact with the ovary, and favours the passage of the newly formed being, the embryo, into the uterus to be developed until the expiration of the ninth month, by a series of the most extraordinary changes. When the extremity of the tube loses its hold of the ovary, which may happen according to some writers, from excessive voluptuousness, fear, &c.; the ovule on bursting its covering will fall into the abdomen, there develope itself as an extra-uterine pregnancy, and finally destroy the patient unless relieved by gastrotomy or the first part of the Cæsarean operation. It

is, however, a fortunate circumstance that abdominal and tubal pregnancies are of very rare occurrence. A case of this kind was successfully treated in London, 1836.

Almost all physiologists are of opinion that the uterus possesses a power of suction and imbibes the semen after its ejaculation or a vapour arising from it. Ruysch, Haller, Lewenhoeck, Hartsoeker, Hunter, and others discriminated the spermatic fluid of the male in the uterus; a fact which is denied by others, and cases are on record in which the orifice of the womb was permanently fixed external to the genital aperture, through which fecundation happened. Dr. Ashwell and Mr. Kingdon mentioned cases of this kind at the Medical Society of London a few years since. I have also since seen cases of this description.

The Fallopian tube is said to become erected during the orgasm of coition, to embrace the ovary, which embracement was observed in different animals killed after coition, by Haller, De Graafe, and Cruikshank; in women, who died soon after coition, by Littre; and in a virgin, who died of hysteria, by Vallisnieri. The peristaltic and anti-peristaltic motion of the tube, the conveyance of the semen to the ovary, and the re-conveyance of the impregnated ovum to the womb, have been proved by ocular demonstration, by Beclard, De Graafe, Prevost, and Dumas, and by the experiments of Nuck and Duverney, who arrested the impregnated ovum or in the tube, by a ligature applied three days after coition; again by the tubular and abdominal pregnancy, in which the tube has allowed an ovule to escape (Lallemand). It is probable that the increased dilatation of the tube, after fecundation, is intended for the retention of the ovum for some time. How can we

explain the fact, that but one tube only is concerned in conception? What was the object of nature, in forming two tubes, two ovaries, two testes, two seminal receptacles, if one organ in each sex be sufficient for the propagation of the species? Or are the double organs in each sex intended for the formation of the distinct senses?

The same orgasm that effects the ovary and tube is said to render the womb vascular, and lightly congested (Harvey, Ruysch, Hunter and others). Its internal surface, thus irritated, secretes the albuminous concretion, called decidua, which becomes a membrane according to Hunter, and epichorion according to Chaussier. These effects are purely sympathetic, because they exist in extra uterine pregnancies; they are more perfect, however, when produced by the presence of the ovule.

The volume, form, and direction of the uterus are gradually changed after conception; its parieties are enormously thickened; its weight, at the completion of the term of gestation, is two or three pounds, and compared with that of a woman who has been a mother (two ounces), and with that of a virgin (half an ounce), we find it multiplied by nearly twelve and twenty-four. Its fibres are muscular (Lobstein); but not invariably so, as attested by Dr. Malins and myself, in a case we published (London Medical and Surgical Journal, January, 1831, vol. vi)

The opening through which the ovum or germ escapes becomes cicatrized, and is called *corpus luteum*; it is described by Fallopius, Malpighi, De Graafe, and Rœderer; and its development is not the effect of the male semen, but is a peculiar function of the ovary; it is an indispensable consequence of conception; though some

assert that it has been found in women who had not conceived, by Rœderer, and in virgins by Haighton, Vallisnieri, Santorini, Bertrandi, Sir E. Home, Brugnone, and Cruikshank; in mules, by Brugnone, and in animals whose Fallopian tubes were tied before coition, by Haighton. Dr. Montgomery has lately proved, that the true corpus luteum is never found unless after conception. The male semen is said to be carried by absorption, or by a peristaltic motion of the womb and tubes (Galen, Fallopius, Morgagni, Hunter, Magendie, Richerand, Blumenbach, and Ruysch.)

The transmission of a subtile vapour or effluvium from the male semen (aura seminalis) through the womb, one of its tubes, to the ovary which impregnates an ovum, egg, or vesicle, which passes through the tube into the womb and is there developed, is a disputed theory.

The illustrious Harvey made a vast number of dissections of hinds after copulation, and never discovered the male fluid in the womb; hence the opinion was confirmed, that a vapour arose from it—aura seminalis—which passed through the womb and tube to the ovary, one of whose ova or vesicles it impregnated; and that the ovule was conveyed through the tube into the womb to be nourished.

In support of this theory it is urged that impregnation has happened though the hymen was perfect, and closed up the orifice of the vagina, except at the upper part, when no penetration of the male, further than between the external labia, took place. There are many cases of this kind on record; and a most remarkable one was lately described by Dr. Kennedy, of Dublin: I have also been consulted in similar examples. The penis does not enter

the orifice of the womb, which is not much larger, in the unimpregnated state, than that of the male urethra. I have known several instances in which the application of the male fluid between the external labia caused impregnation; a fact also attested by Dr. Blundell in his lectures in the Lancet, "I know three cases in which the male organ was not suffered to enter the vagina at all, and where, nevertheless, I suppose, from the mere deposition of the semen, upon the labia, impregnation took place. I have known women astonished to find themselves pregnant, being persuaded that impregnation was impossible, until, to their sorrow the unwelcome truth was unfolded. In a word, from several facts of this kind, too delicate for a fuller disclosure, I am satisfied that very small quantities of the semen introduced into the lower part of the vagina, where there is an aptitude to become pregnant, will give rise to the new structure." (Principles and Practice of Obstetricy, &c. 1834). I have also recorded cases of imperfect penetration and prolific connexions, when the penis was so destroyed by disease that it was no more than half an inch in length.

I have been confidently assured by a gentleman of veracity, that he impregnated a woman although he barely penetrated the vagina; his paramour consulted me perfectly unconscious of what had happened, for she was inebriated at the time, and she most positively denied, when I stated she was pregnant, that it was possible, as she had never known man. My opinion was, however, unaltered, and I advised her to consult other obstetricians as to her condition. Several eminent obstetricians told her she was not pregnant; she called on me again and again, and every

time, the womb was more developed, and at last she felt the motion of the fœtus. Her paramour at length made the above confession; she recollected the circumstance of their having been together, and of his having induced her to take too much wine; and at the end of the ninth month, I delivered her of a healthful full-grown infant. Her case attests a fact I have stated in my work on Medical Jurisprudence,—that a healthful woman may be impregnated unconsciously, during inebriation, narcotism, catalepsy, and profound sleep. I have also known cases in which the greater part of the penis was destroyed by disease, or amputated close to the pubis, and yet persons so mutilated continued to propagate. In such cases, there can be but very imperfect penetration, but it is to be remembered that the expulsive power of the ejaculatory muscles of the penis remains in its natural condition. These and similar cases prove that perfect or deep penetration is not necessary for procreation, and they also favour the third theory of absorption of the semen from the vagina.

These cases show that it is not necessary that the male semen should be injected into the womb. Dr. Blundell supposes that, when there is a deposition on the vulva, generation depends on the admixture of the male fluid with the secretions of the female: "for dilution does not destroy the fecundating power. If a glass of a certain height were filled with water, should sugar be thrown into the bottom of it, this, on solution, might soon be perceived in the upper part of the fluid, especially if agitation occurred; so the fecundating secretion may, by admixture,

have penetrated to the inmost recesses of the genitals, more especially if the secretion of the genital surface be copious." He goes on to observe, that children are sometimes not procreated for want of sufficient penetrative power in the male organ, which I very much question for the reasons just stated. He alludes to the experiments of Spallanzani, who found that three grains of the semen of a frog dissolved in two pints of water, were sufficient to give it a fecundating power; even that small quantity taken upon the point of a fine needle, from which Dr. Blundell infers, " if the female genitals be apt for conception, the requisite quantity of the male material is small," p. 67.

In reviewing Dr. Blundell's opinions, I am bound by the many facts I have adduced in this chapter, to observe, that they are, in my opinion, liable to many unanswerable objections. The results of repeated consultations enable me to state, that a complete emission of the male fluid at the interval of twenty-four hours, will rarely, if ever, cause impregnation: nor do I comprehend the possibility of the germ or ovarian fluid passing into the womb to mix with the spermatic fluid of the male; and, therefore, the requisite quantity of the male material for impregnation is not so small as is above supposed. Neither can I perceive any analogy between the mixture of sugar and water and the spermatic and ovarian fluids; nor do I believe that children are sometimes not procreated for want of sufficient penetrative power in the male organ. The orifice of the uterus is generally within two inches or two inches and a half of the external genital aperture, though it may be more distant, or be elevated under certain circumstances,

and the slightest penetration, in the opinion of all physiologists, when the semen is elaborate, is sufficient for impregnation.

Lastly, it is to be recollected that the conclusions of Spallanzani refer to frogs, and not to human species, and therefore it does not follow that such extreme dilution, as in the former cases, can ever happen in the latter, though there is generally, but not always, some dilution of the male fluid. If this were the fact, the male material would be always prolific; but this is not the case, unless it has remained in the seminal receptacles for some hours, as observed by Harvey and others. Many proofs of this fact have fallen under my own consideration.

The mucus of the seminal receptacles, the prostatic fluid and urethral mucus dilute the male fluid, as well as the vaginal and uterine mucus, in most cases during the seminal emission; but this last dilution does not always happen.

The case mentioned by Mr. Hunter, in which his patient injected semen into the vagina and caused impregnation, appears to me open to serious objection; and I should be very much disposed to think there was a more legitimate cause for the procreation.

On a careful review of all the theories of human generation, we can only arrive at a conclusion admitted by all, that a union of the sexes is necessary, that both should be in good or tolerably good health, and that the function ought only to be performed when dictated by nature.

There is a vast deal of injury done to health and public morals by the excesses and abuses of the reproductive functions, some of which I have slightly alluded to in my

works on *Midwifery, Jurisprudence,* and on the *Comparative State of Prostitution, &c.* The primitive fathers and physicians have duly noticed the evils to which I allude; and every experienced medical practitioner can prove their frequent occurrence. It is all well for sentimentalists and the mock-modest to declaim about a notice of them; but nature, justice, morality, and the preservation of health, as well as the perpetuation of the human race, demand it. Such, however, is the hypocrisy of the day, that even a notice in a dead language is abused and condemned by ignorant intolerant bigots and fools, who are unable to appreciate the importance of the subject.

It would occupy too much space in this little work, were I to introduce the history of comparative and human ovology, or the development of the impregnated ovum from the instant of conception to the period of delivery, which I have already done in my work on *Obstetricy,* and in my *Lectures on Midwifery and Diseases of Women and Children,* published in the *London Medical and Surgical Journal,* 1836, and to which I must refer the reader. I shall now content myself with describing the influence of the maternal imagination on the fœtus in the womb; the hygiology of women during pregnancy, parturition, the puerperal state, and lactation or suckling, and conclude the physiology of generation with an account of the function of parturition, the assistance required during that process, and offer a few hints for the physical education or management of the new born infant.

Fœtus in the Womb.—All obstetric writers agree that the circulation between the mother and the infant is interrupted by the placenta or after-birth, and also that there

is not a direct nervous connexion between them. Nerves have never been discovered in the placenta or its continuation, the navel cord, which passes into the infantine abdomen. The mind of the mother, therefore, cannot have a direct influence upon the fœtus, no more than the circulation of her blood. The pulse of the mother is about 70, that of the fœtus in the womb 120—140. Mental and corporeal excitement may derange the function of the brain, nervous system, heart, and digestive apparatus of the mother; but such derangements have only an indirect effect upon the fœtus in utero. It therefore follows that the imagination of the mother cannot mark or deform the offspring, for if it could, no infant would be perfect; because there never, perhaps, was a pregnant woman who was not more or less frightened, or who was free from longings during her condition; and yet how few deformed or disfigured infants are born. The imagination is excited in every case of pregnancy, there is a constant cause, but very rarely an effect. This is bad philosophy; for every obstetrician engaged in practice has repeatedly known pregnant women who had ungratified longings, who had been frightened by dismal objects, or had met with dreadful accidents or misfortunes, and yet their infants were perfect. We see this fact illustrated every day in this metropolis. Nevertheless, the belief is general among the middle and lower classes, and even among some medical practitioners, that the frights, longings, and imaginations of the mother can mark and deform the offspring; but this opinion is contrary to nature, reason, common observation, and medical science. I have known hundreds of instances in which women feared that their infants would be marked;

but I never met with one case in which such anticipation was confirmed. The belief in this error is, however, of great antiquity. I have given a full refutation of the incredible fables reported as illustrations, in my work on *Midwifery*.

All these monstrous facts occurred in the sixteenth and seventeenth centuries, which were remarkable for superstition, ignorance, and credulity. A most singular illustration of the credulity of that era, is afforded by a writer named Goftr. (Hegenitii Itinerarum, &c., 1630). This traveller states that he saw a tablet in the church at Leusdown (Lausdunum), about five miles from the Hague, with an inscription to the following effect:—that a certain illustrious countess, whose name and family he gives, in the fortieth year of her age, brought forth, at one birth, in the year 1276, three hundred and sixty-five infants! all of whom were baptized by Guido the suffragan, who called the males "John," and the females "Elizabeth," all of whom, with their mother, died on the same day, and were buried together in the above temple. This case was said to have happened on account of a poor woman who carried twins in her arms, which the countess declared were not the offspring of one man, and this so incensed the mother, that she prayed that her insulter might have, at one birth, the same number of children as there were days in the year. No rational individual can credit this story, though it is said to be attested by a tablet in a church.

CHAPTER XVIII.

HYGIOLOGY, OR RULES FOR THE MANAGEMENT OF WOMEN DURING PREGNANCY, PARTURITION, AFTER DELIVERY, AND DURING LACTATION OR SUCKLING.

Hygienic cares relative to Pregnancy.—The first fifteen days after menstruation, appear to be the time most favourable for conception. When this occurs, there ought to be repose and tranquillity of mind for hours, and even days, afterwards.

There can be no doubt that the mode of life of the mother, the state of her mind, health, diet, and exercise, will indirectly affect the embryo in the first days of its existence. Some women experience a train of new sensations from the instant of conception, though this very rarely happens,—not perhaps in one instance in ten thousand. But pregnant women in general are more excitable and sensitive than usual, and often suffer from innumerable nervous and anomalous symptoms. Some are exhilarated, others depressed; some become excessively nervous, bilious, or hysterical; others enjoy much better health than at any former period of life. Some, who are naturally gay and amiable, become sad, melancholic, and unsociable; while others enjoy the highest spirits.

The appetite and taste are generally altered by pregnancy. The vulgar attach great importance to the different tastes and longings; aud these, as a general rule, may be gratified whenever wholesome aliments are desired, but

not otherwise. Thus, it would be wrong for a pregnant woman to eat crude vegetables, turnips, carrots, and similar foods, without culinary preparation.

A voracious appetite will require a greater quantity of aliments than ordinary, but never so much as to be injurious; a variable appetite will be satisfied by frequent slight repasts; and a diminished appetite will be stimulated by such foods as the woman desires. It is not necessary for the growth of the fœtus that the mother should take more food than usual; she may take it to satiety. Every description of high seasoned foods, and the *excessive* use of wines, spirituous or fermented liquors, brandy, whiskey, gin, rum, ale, porter, stout, &c., tea, coffee, chocolate, are highly injurious both to the mother and infant. These liquors injure the pregnant woman, and expose her to danger during parturition, and to fever or inflammation afterwards, while they arrest the growth and destroy the health of the infant. It is impossible to lay down rules for the quantity of diet or drink, but nature is the best guide.

The mind should be kept tranquil, there should be no fear entertained about delivery, because women, as well as all animals in general, do well; our domestic animals invariably do well, and so do women, when they attend to the rules laid down for the preservation of the general health. Parturition is a natural process in a state of health; and bad labours are comparatively few in number, as appears by the reports of all the lying-in hospitals in the civilised world. Depression of mind as to delivery may cause convulsions or mania during pregnancy, labour, or after parturition.

The dress of a pregnant woman should be suited to the season, and always loose. Tight lacing is highly injurious, as it impedes the breathing, prevents the development of the abdomen and breasts, arrests the growth of the infant, and inevitably ensures inflamed breasts and sore nipples after delivery, thereby subjecting the mother to great suffering, and depriving the infant of the aliment which nature intended for it. There is no objection to the proper use of stays or corsets during the first five or six months of pregnancy; but after that period they should be worn loosely.

The simple aliments, of the easiest digestion, and containing most nutriment in a small volume, are those most appropriate for pregnant women. They should take slight repasts, and never overload the stomach. The vulgar prejudice of advising them to take more food than in a state of health, is highly pernicious, and induces indigestion, flatulency, spasm, diarrhœa, vomiting, &c. The appetite is capricious, and hence the woman often fancies foods she disliked before conception, and dislikes those she always preferred. Thus, the sight of animal food often disgust some women for some months. The diet should consist in wholesome aliments, such as beef, mutton, lamb, fowl, &c., roasted or boiled, in preference to broiled, baked, &c.; and all salted, spiced, or smoked aliments ought to be taken sparingly, if at all, as they generally derange the stomach. The flesh of young animals, as veal, lamb, kid, chicken, and certain kinds of fish, are less nutricious than the former, but do not excite the stomach so much, and are therefore considered lighter. Fatty aliments, as pork, duck, eel, butter, oil, &c., are

easily digested; but generally disagree with nervous, bilious, dyspeptic persons, those who suffer from indigestion, flatulency, lowness of spirits, and especially during pregnancy, when there is generally more or less nausea or tendency to vomiting. Farinaceous foods, as bread, rice, potatoe, peas, beans, sago, arrow-root, tapioca, tous les mois, and salep, are highly nutricious, though they may, in some cases, induce heartburn, flatulency, and indigestion. Mucilaginous aliments, as carrots, turnips, parsneps, cabbages, asparagus, ought to be taken sparingly by pregnant women, and those who suckle their infants; and either black or red pepper should be used with them. Sweet foods, as sugar, figs, dates, fruits, &c., should be used in moderation. A moderate use of wines, ales, porter, &c., is advisable. As the stomach is irritable and delicate in most pregnant women in the first months of their condition, it is highly necessary that the food should be well masticated or divided with the teeth, to render it more fitted to be acted upon by the stomach; and drink should be used sparingly, for if the gastric fluid be too much diluted, it cannot act on the food in an efficient manner. These precepts apply to all persons, but more particularly to pregnant and suckling women.

Tight lacing in the advanced stage of pregnancy will induce many painful and dangerous diseases, obstinate coughs, spitting of blood, palpitation of the heart, swelling of the lower limbs, enlargement of their veins; piles, costiveness, heat, and scalding in evacuating the bladder, &c.

The pregnant woman should sleep in a capacious and airy apartment, and take tranquil repose for seven or eight hours. She ought to retire to bed at an early hour.

Moderate exercise is proper during the whole period of pregnancy, but should never be taken to fatigue. Walking is the best kind of exercise. Women living in the country, or of the lower ranks of life, bear great exertion and labour, and have the easiest deliveries; but it is to be recollected they are accustomed to exercise from their infancy. The motion of carriages badly hung, or riding on horseback, long journeys, walks, running, dancing, raising or carrying heavy weights, falls, slips, and blows are the commonest causes of hernia or rupture, uterine hæmorrhage or flooding, miscarriage, or pramature labour. Moderate carriage exercise, or sailing, may be used with safety. As the period of parturition approaches, women have more occasion for rest or repose, and should therefore take less exercise, especially those who are liable to, or threatened with, abortion; and sometimes they should be confined to their apartment, placed on a couch, or even keep their bed for days, weeks, or months to prevent it.

Abortion or miscariage is much more injurious to health than parturition; as the loss of blood and the debility induced are generally greater. When miscarriage happens once, it is difficult to prevent its recurrence on future occasions; and therefore medical practitioners judiciously consider it a most dangerous disease.

Most women, in general, think too lightly of it. This is a grievous mistake. I have known several instances in which life was destroyed on account of this opinion; one lady had five abortions in fifteen months after marriage; she was told by her nurses she had nothing to fear, she died of consumption. She was previously one of the most healthful individuals that could be supposed. Some

women miscarry about three or more times a year, and others for eight or ten years in succession. In other cases the general health suffers, consumption, liver disease, or some other malady sooner or later supervenes and destroys health and life. Abortion, in most instances, is a dangerous disease, and requires immediate medical aid for its prevention or treatment—(See the Cyclopædia of Surgery, 1837—*Art.* Abortion, by M. Ryan, M.D.)

Balls, theatres, crowded assemblies, all public sights, exhibitions, and seeming dangers, should be avoided by pregnant women; as in all crowded meetings the air is heated and impure. Long watchings, or want of rest, as well as powerful mental emotions, excite the nervous system, impair the strength, and derange the whole functions of the body. Violent passions are always injurious during pregnancy. I have already stated, that frights, longings, and despondency may retard the growth of certain parts of the infant during the early period of its existence; but this cannot happen after the second month, when it is completely formed. Lastly, pregnant women should indulge in nuptial commerce with reserve and with caution, as it may sometimes disturb the womb and bring on abortion. The lower animals avoid copulation after the female is with young. The womb is easily disturbed in the first and last months of pregnancy. It is imperfectly closed soon after conception, and is very much distended in the last months of pregnancy, so that the slightest causes may excite it to expel its contents, or induce abortion or premature labour.

Of all the precepts for the preservation of health that of regulating the bowels or procuring an evacuation daily, is

perhaps the most important. No person, male or female, can be in perfect health who has not an alvine evacuation daily. This statement would appear incorrect to non-professional persons, but no physiologist can dispute it. Those whose bowels do not act daily, suffer from some degree of indigestion or hysteria, or a thousand other incipient diseases. Regulation of the bowels during pregnancy preserves the health, prevents a vast number of disorders incidental to this condition, ensures a natural and safe delivery, a "good getting up," and an immunity from the fevers and inflammations consequent on parturition and the puerperal state, and lastly, a healthful vigorous infant. The medicines usually employed as aperients, during utero-gestation or pregnancy, are castor oil, lenitive electuary, Epsom salts, or mild clysters; but the following pills are much better. ℞ Ext. colocynth. c. ℈ ij; ext. hyoscyami, ℈ j; hydrarg. subm. gr. xij—xv; olei menth. pip. ♏ v; in pilulas xv. divide, ex quibus sumat unam vel duas hora somni, pro re nata. One or two of these pills taken at bed-time, occasionally, or as often as may be necessary, will act mildly, safely, and efficiently. They should be used during the last three months of pregnancy, two or three times a week, or as often as necessary, because the pressure of the enlarged womb, at this period, on the lower bowels, generally causes obstinate costiveness, piles, swelling of the limbs, enlarged or varicose veins, derangement of the stomach and intestines, heart-burn, water-brash, spasm, &c., all of which will be prevented by proper attention to the bowels.

As a general rule, pregnant women should avoid all causes of irritation, mental, corporeal, and mechanical, as

these will increase the determination of blood to the womb, or provoke abortion or premature labour. If robust and vigorous women pursue their ordinary avocations with safety, it does not follow that nervous or delicate persons can do so. Even the first should moderate their avocations or exertions, their aliments, exercise, and pleasures; but the greatest management is necessary for the latter to preserve their offspring until the time of parturition, and to keep themselves in good health.

Pregnant women ought to avoid air that is too hot or too cold, or such as is charged with odoriferous exhalations. All substances that confine or derange the bowels, such as certain aliments, or medicines, opium, laudanum, chalk, &c.; all severe study, night watching, too long indulgence in bed, are injurious. They ought not to be alarmed about frights, marks, or future consequences, or at those false and frightful tales told about parturition, which are scarcely ever true, and generally exaggerated by interested narrators, to show their pretended knowledge and experience. Young, healthful, well-formed women, who are pregnant for the first time, should entertain no fears, as it rarely ever happens at present, that a woman dies in labour, and never afterwards, without imprudence on her own part, or ignorance or mismanagement on the part of her male or female attendant. Besides, there is now no case of labour which can possibly happen but may be managed, and the woman's life preserved. It is really lamentable to listen to the expression of the fears and apprehensions of young pregnant women, which are generally excited in their minds by ignorant midwives, domestics, and the credulous, and, indeed, I may add, very generally by

mothers and acquaintances. But we cannot be surprised at this, as there is no work in our language for the instruction of the other sex, as regards parturition, pregnancy, confinement after delivery, or the management of new born infants. All their information is derived from medical practitioners and nurses; and the majority of both classes of advisers have been hitherto extremely incompetent. That there are as able and as scientific practitioners in this as in any other country cannot be questioned for a moment; but the study of obstetric medicine was only enforced in 1828 in this section of the United Kingdom, and therefore was previously neglected by a preponderating proportion of the profession. Even now, the injuries that are daily inflicted upon women in child-bed and their helpless offspring, by incompetent practitioners and ignorant midwives, are truly frightful. It is an indelible disgrace to the medical corporations of this kingdom, to have so long excluded the study of midwifery from the course of medical education, and as yet to allow ignorant persons, both male and female, to practise so difficult and dangerous a department of medicine.

Hygienic cares relative to Parturition.—The pregnant woman should, therefore, procure the best medical aid for the period of delivery that circumstances will permit; and she should never employ a midwife, if she can procure a medical practitioner. The presence of a medical practitioner, and his confident assurance of her safety, will inspire hope, and expedite delivery; and should any untoward event occur, a midwife who has not received medical instruction, and few in this kingdom have, is of no use whatever. Let the parturient woman place the fullest

confidence in the advice of her medical attendant, strictly follow his directions, have no opinion of her own, and pay no attention to any contrary advice that may be proposed by her nurse. During labour, she must always remember that time and patience are necessary for her delivery. If her medical attendant assures her that she is safe, she must have patience, and avoid gusts of passion, which render labour tedious, and often induce fatal convulsions, or even mania. Fortunately for humanity, the medical practitioner can now abridge labour, and save an immensity of suffering, without any operation, but merely by the exhibition of medicine. A midwife can afford no relief whatever, and generally does harm by her interference. I never knew a woman who was attended by a medical practitioner, who on any future parturition would admit a midwife. I have often heard women remark how very differently they were treated by their female and their medical attendants; and that females are much more unfeeling than those of the other sex. Yet midwives have great influence over the lives of mothers and their infants, and they either preserve the human species by their knowledge, or destroy it by their ignorance. This position was admitted in France nearly a century ago, and led the government of that kingdom to order all midwives to receive medical instruction; and not to practise without it under a heavy penalty.

The qualifications of midwives ought to be generally known and required.

They should be decent, modest, moral, religious, sober, regular, and humane in their conduct, and on no account commence practice without having received medical in-

struction. They should attend as speedily as possible in all cases, regulate the apartment, bedding, dress intended for the woman and infant, and prepare the appropriate food. They should never attempt to dilate the genital fissure, "to make room for the infant," they should sit quietly and observe nature. They ought to refrain from telling frightful tales, and likewise from administering strong liquors which are not necessary in one case in a thousand, unless where the patient is delicate or has suffered a long time; and she ought to recollect that the inferior animals do well in labour without wines, spirits, ales, porter, &c. When the infant is passing into the world, its head should be supported by pressing it upwards towards the abdomen of the parent, while its body is being expelled; and so soon as it is born and breathes, the navel string should be firmly tied with some strong plait or thread, within an inch and a half of the abdomen, a double knot placed, and the navel cord cut with a pair of scissors. The infant ought to be enveloped in a piece of flannel, called a receiver, and a warm napkin applied to the mother.

The patient may now have a little brandy, or other spirit, or wine and water, additional bed covering put on to prevent cold shivering which often occurs, the wet clothes drawn from under her, and she left quiet. In general the placenta, or after-birth, comes off in half an hour or an hour after the birth of the infant. The woman should not be disturbed for an hour after delivery, or, in other words, the bed adjusted: or as the phrase is among midwives, "put to bed." During this hour, the infant should be washed and dressed in the manner to be de-

scribed hereafter, in an adjoining apartment. The mother should on no account sit up while her bed is being arranged, but be raised in the under sheet between persons, or shifted on a couch, or on chairs covered with bed-clothes. If she sits up, she may be seized with flooding, fainting, or falling down of the womb,—the prolapsus uteri of writers. When the placenta, or after-birth, comes away, or is expelled, a warm napkin should be applied to the patient, and a bandage placed round the abdomen. Her head and shoulders should be raised, so as to facilitate the escape of the lochial discharge. The external genitals should be washed daily with warm milk and water.

Hygienic Cares relative to the Puerperal or Child-bed State.—On the fourth or fifth day the bed may be arranged, or "made," and the patient should be placed on her side, as before stated.

The diet of a puerperal or lying-in woman should be mild and unirritating, as gruel, arrow-root, sago, tapioca, prepared barley, barley-water, weak tea, coffee, &c.; and all sorts of animal food, as well as every description of spirituous or fermented liquors, plain or spiced, are highly improper, in most cases, though sometimes necessary, and may produce dangerous fevers, or inflammations. Stimulating liquors are administered in very small quantities, even by the faculty, and are seldom necessary.

No broths, meats, eggs, or fish, are to be allowed until the fourth or fifth day after delivery, unless in cases attended with debility, as when the patient labours under consumption, liver complaint, or any other chronic disease. The lower classes, especially in the country, do well, as

also the inferior animals, without high seasoned foods, spirituous or stimulating liquids.

On the fifth day after delivery a little beef tea, chicken-broth, calves'-feet jelly, fresh eggs, light puddings, &c., may be given in small and repeated quantities; but should headache, flushed face, or rapid pulse be caused by any one of these, it must be immediately discontinued. Delicate women may take animal food immediately after delivery, but this is an exception to the general rule, and very rarely to be adopted.

When the mother has breast milk, it is unnecessary to give the infant castor oil, molasses, syrup of violets, oil of almonds, or butter and sugar, as the bowels will be purged by the first milk, or often without it; but should they not be opened in twenty-four hours, half a tea-spoonful of castor oil may be exhibited, and repeated in four or six hours if necessary. Manna is also an excellent aperient for infants.

If the infant does not pass urine, some hours after its birth, the lower part of its abdomen should be fomented with warm water, or decoction of poppies, and the genitals examined, lest there be any unnatural formation.

It often happens, that the breast milk is not supplied at the time of delivery, and in such cases, the best substitute for the natural food is five parts of cream, or sweet milk, with one of boiling water, properly sweetened with loaf sugar. The cream, or milk, should not be boiled, but warmed when required, by placing the vessel that contains t in warm water. The frequency of giving food, and the varieties of diet, will be described hereafter.

The woman may sit up on the fifth or sixth day after

delivery, if she feels able, and is of a strong constiution; but if delicate not before the ninth, twelfth, or even twentieth day. She may feel giddiness on sitting up for the first time, pains in the back, loins, and lower extremities, which may continue for several days, but these will gradually disappear in most cases. She should not attempt to walk about her apartment sooner than the ninth day, or as long as the uterine discharge continues. This may be very much increased by sitting up, or attempting to walk; and the woman should not go into the open air or take exercise until it has entirely ceased, which may not be for a fortnight or a month. She should remain in bed or on a sofa for the greater part of the time while it continues. It is difficult to lay down rigid rules on this head, as constitutions differ so much. One woman will be pursuing her usual avocations on the fourth, sixth, or eighth day, and another not at the end of a month. It is well known that there is great liability to fevers and inflammations of the most fatal description after delivery, for two or three weeks afterwards: and therefore the preceding precepts ought to be strictly attended to. The bowels may be opened with a table-spoonful of castor oil, or any other mild aperient, on the second or third day after delivery, provided there is a supply of breast milk, or that the breasts are swollen; but if the milk has not formed, and the bosom remains flaccid, any aperient will impede the former, by causing a determination of blood from the breasts to the abdomen. When it is desirable to prevent the secretion of milk, in cases when the infant is born dead, we do so by opening the bowels freely and repeatedly.

All strong liquors, exposure to cold, or too much heat, or sitting up too soon, ought to be carefully avoided, as they may induce fevers or inflammations at any time during the first nine days after delivery, and sometimes as late as the second week. The chamber should be properly ventilated, the temperature regulated according to the season, and the bed clothes should be sufficient to cause comfortable warmth, but not too warm, as then both miliary fever and a superabundant lochial discharge would be induced.

When the breasts become hot, swollen, and painful they should be fomented with a warm decoction of poppies, and chamomile, and then drawn with a proper glass, or by the infant, or by an older child, or an adult. This subject I shall notice more fully hereafter. The woman should not rise from bed until the lochial, or child-bed evacuation has ceased, for while it continues the womb is not reduced to its ordinary size in the unimpregnated state, and therefore all bodily exertion will disturb it, render the discharge excessive, and cause a sense of bearing down, or falling of the womb, as it is termed, which is extremely distressing and very common among the lower classes who, in general, sit up too soon.

Most women are extremely sensitive after delivery, and hence they should be kept perfectly quiet, all noise, and strong mental emotions, or improper aliments, either solids or fluids, being highly injurious; so great is the nervousness after delivery, that any cause of alarm may induce convulsions or mania, and any kind of improper food or drink, or exposure to cold, excite dangerous fevers or inflammations. It is an axiom with medical

practitioners, that more women die after delivery than during pregnancy and parturition.

It generally happens that the breasts become hot, swollen, and painful in a day or two after delivery, or later, in consequence of the determination of blood from the womb to these organs, for the purpose of causing the secretion of milk. Warm fomentations, as already mentioned, and afterwards the application of almond or olive oil are usually employed, aud then natural or artificial suction. There is sometimes a slight fever for twenty-four hours, which is by no means dangerous, and is designated milk fever. A mild aperient and the ordinary fever medicines remove it.

Hygienic Rules relative to Lactation or Suckling.— The secretion of milk, or lactation, is a part of the process of reproduction, and is essential to the well-being of the parent and offspring. It preserves the mother from febrile and inflammatory diseases, and it affords the aliment intended by nature for her infant. Every woman whose constitution and health are good, ought to suckle her infant, but every one who is delicate, affected with chronic disease, or has little breast milk, should avoid it.

When the nipple is too short for the infant to seize it, artificial suction will be necessary, and this is effected by means of breast bottles, or various other contrivances. The nurse, or some child, or some adult, must effect it in many cases ; and in former times a young dog was applied for the purpose. Unless the tumefied breasts are relieved, they are extremely liable to become inflamed. Artificial nipples, prepared teats, shields of wood, gum elastic, glass, and metal were tried, but of these, the wood, covered with

a prepared teat, is the best. Even this is liable to injure the infant's mouth, and should be laid aside as soon as the nipple is sufficiently elongated to be grasped by the infant.

During lactation or suckling, the nurse should take nutritious aliments, such as described when speaking of pregnancy; she should avoid ardent liquors and acids, as vinegar, oranges, lemons, &c., the depressing or violent passions, which deteriorate the milk, and she should scarcely expose herself to the development of a new pregnancy, and for ten or twelve months after delivery, conjugal intimacy diminishes the secretion of milk, by exciting the womb and determining blood to it. Many women suckle for fourteen or twenty months to prevent pregnancy, and I have known those who continued wet-nurses for three years for this purpose. Nevertheless, many women who are anxious for family, employ wet nurses, so that conception may speedily happen year after year; while the poor, on the contrary, suckle theirs for one, two, or three years to prevent its recurrence.

The infant ought to be applied to the breast every two hours, and even oftener when it is feeble, but after some weeks at the interval of three hours. It should be successively applied to each breast on every occasion, unless it is satiated with either; but some advise that one breast should be reserved for the next application. As often as the infant wakes, and evinces a desire for food by moving its lips, or crying, it should be applied to the breast, or have food, however frequent, for its whole time is passed at first, in eating and sleeping. (See end of this Chapter.) Regurgitations, or vomitings, with hiccup are easily

relieved by dill, fennel, or aniseed water sweetened. It should be always remembered, that the breast milk will be affected by the food and medicine taken by the person who supplies it, and likewise that it may be better in one breast than in the other. It may be superabundant with some women, and sparing or entirely absent in others. In the last cases mercenary or artificial lactation will be necessary, and these I shall consider when describing the physical management proper for infants, at the end of the next chapter. On the present occasion I notice the general rules, relative to pregnancy, parturition, the puerperal state, and lactation, which are most conducive to the preservation and development of the infant before and after birth.

It is manifest to every one conversant with medical science, that unless the health of a woman, from the time of conception to the period of ablactation, or weaning, be good, the growth and health of her offspring will be affected. Every obstetrician, engaged in practice, must acknowledge, that some infants are born so feeble and delicate, that many of them expire immediately after birth, others in a few hours or days, several are reared with the greatest difficulty, and most of these are generally destroyed by the numerous diseases incidental to childhood.

It therefore follows, that the consideration of the rules for the preservation of the health of pregnant women during labour and in childbed, as well as nurses, is essential to the conservation and vigour of infants, as well as to the increase of population.

CHAPTER XIX.

PARTURITION — ASSISTANCE TO BE AFFORDED BY MALE AND FEMALE OBSTETRICIANS—DUTIES OF ACCOUCHEURS AND MIDWIVES.

HAPPILY for humanity, the process of labour is safe and free from danger, in a vast majority of cases, especially where females live according to nature's primitive laws; but among the higher and middle, indeed all classes, among whom these laws are violated or forgotten, or when the constitution is impaired by the luxury and dissipation of modern times, the process of child-bearing is attended with considerable danger, both before and after it is completed. These observations are equally applicable to the lower classes in our cities, whose customs, habits, pursuits, and frequent inebriation, render them liable to many accidents during parturition, and to a vast number of inflammatory and febrile diseases after delivery. The universal testimony of all unprejudiced medical men confirms the truth of this assertion. It is however well for suffering humanity, that the process of parturition, may be greatly accelerated, and the greatest of mortal suffering relieved by the kind advice and skilful exertions of the obstetrician, and with the most perfect safety to the parent and offspring. It is well known that the very presence of a medical practitioner will often afford relief, without the performance of any manual operation whatever. The confident assurance to the patient of her safety will inspire

that balmy hope, which will hasten delivery much better than any other means. On this account there are few intelligent females who do not prefer medical attendance, during labour, to that of any other description. This is the case in every civilized country, as women are well aware of the superior knowledge which medical practitioners possess of their constitutions; and hence, in modern times, we observe a wise and judicious preference given to male obstetricians, and midwives are scarcely ever exclusively employed, unless among the ignorant or lower classes.

Fruitless attempts have been made from time to time to calumniate medical practitioners, and to deter husbands from allowing such persons to afford aid at the fearful and painful function of parturition. Such attempts were as wicked as fruitless, for every husband, or every man of common understanding, well-knows, that passion and pain seldom co-exist, and that the awful responsibility of the attendant at the nativity of the human species, as well as his moral, social, and domestic obligations, obliterate every improper sentiment, impress his mind with the duties he owes to his Creator and his neighbour, and excite fear and pity instead of any other emotion. He, too, is a husband, a father, and citizen, his professional reputation is always at stake in such cases; and his mind is influenced by the wonders of Providence in all cases, natural or preternatural, and he is always most anxious for the preservation of the lives of two of his fellow creatures, as well as for the rights of justice, humanity, and religion. It is a most unfounded libel to suspect him of unworthy motives—it is false from beginning to end—it is the idea of abandoned,

profligate, wretched libertines or debauchees—it is not tolerated by society, and is as contrary to reason and common sense, as it is to justice and religion. Were the unfounded accusation or insinuation ever true, the annals of our different courts of justice would afford some solitary illustration.

What, I beg to ask, does an ignorant midwife know about the mechanism of human nativity, or the difficulties that attend it? As much as an unborn babe. Is not the mortality immense among all classes, unattended by medical practitioners? No medical practitioner, duly educated, can deny it. In fine, I venture to assert, that were it practicable or prudent to address a public assembly composed of all ranks of society, I would undertake to prove, and demonstrate to the conviction of every individual present, the propriety, superiority, and humanity of preferring medical to other aid during the process of human parturition or child-birth.

I shall now subjoin, from my *Obstetric Aphorisms*, an account of the duties of the male or female obstetrician, during natural parturition; the cares necessary in the puerperal state or after delivery, and the management of the newly-born infant, with rules for its physical education.

Every medical obstetrician should have, in a small pocket case, a female catheter, a tracheal pipe, a lancet, some morpnia or opium, ergota, and a pair of scissors. He should also have a set of obstetric instruments, in a leather case, consisting of a forceps, lever, blunt-hook, perforator, craniotomy forceps, crotchet, and an osteotome, which he should take with him; but these are never to be used until positively required.

The morphia or opium will be necessary to subdue false or useless pains, and to allay excessive irritability, and is always necessary after delivery.

The female catheter may be required to evacuate the bladder in some cases.

The tracheal pipe enables the practitioner to inflate the lungs, when the infant is still-born, though he may dispense with it and employ other means.

Blood-letting may be necessary when the woman is young, robust, plethoric, and when the external genitals are rigid, as in most persons beyond the age of thirty years, in first confinements.

The ergota will be required when labour pains are inefficient, and the pelvis and presentation are natural. It should never be administered unless by a medical practitioner.

When requested to attend a parturient woman, the obstetrician should visit her as soon as possible.

He ought to be distinguished for suavity of manners, politeness, delicacy, humanity, sympathy, patience, and never evince anger. He ought to possess perfect self-command and confidence.

First Inquiries.—On his arrival at the patient's residence, he should make all delicate inquiries from the midwife or other female attendant, before he sees his patient, unless already known to her.

He is to ascertain the history of the case, including the age of the patient; the term of the pregnancy; whether it is a first or future labour; the state of the bowels and bladder; whether lately evacuated, or not; the description of the labour pains, whether regular, gradually increasing,

propulsive, or slight and inefficient, and, if the patient be already a mother, the character of her former parturitions.

Precursory Signs of Parturition.—When the woman has arrived at the completion of pregnancy; has had a sense of weight in the lower part of the abdomen for a day or two, with pains in the loins, a frequent desire to evacuate the bladder or bowels, and a glairy mucous discharge from the vagina, called "shows;" the bowels regular, and the labour pains recurring, at first every half hour, then every twenty-five, twenty, fifteen, ten, or five minutes, and finally every minute, or doubling upon each other, and becoming stronger and more propulsive; the function of parturition is about to be performed, and the sooner the obstetrician can see his patient the better, as it is most essential to institute an early examination of her actual condition.

The nurse, or some female friend, should announce the arrival of the obstetrician, and after as short a time as possible, obtain an interview for him with his patient.

On entering the patient's chamber, he should express sympathy for her condition, and inspire her with confidence as to a favourable termination of her delivery; and assure her, when the case is favourable, that, from all he has heard from the female attendant, it is certain that she shall do well.

He is next to take a seat near the bed, to enter into conversation with the patient and nurse, to learn the history of the case, and to observe the appearance of the abdomen.

As soon as the first or second pain has ceased, he may place his hand over the bed or ordinary clothing, on the

abdomen, so as to ascertain whether it possesses the appearance and solidity as in the last month of pregnancy.

This external examination is necessary, for labour has often been supposed to have commenced, when there was no pregnancy. I have been called to such cases, even to perform the Cæsarian operation.

An internal examination only can enable the obstetrician to conclude whether the woman be really in labour, whether the labour will be natural or preternatural, and whether she is likely to be speedily or slowly delivered.

Proposing Internal Examination.—The importance of this examination should be dwelt upon by the nurse, female friend, and medical practitioner, and it ought to be proposed and made as soon as possible.

It is popularly termed, "taking a pain," and by the French, "the touch;" but it can as well be made in the absence of pain.

The obstetric position is the left or right side, or the back, the left side being generally preferred by British obstetricians, as it enables the practitioner to use the right hand.

The patient should lie on her left or right side, on a bed or couch, the knees being bent and raised towards the abdomen, and the bosom depressed towards the knees, the hips placed near the edge of the bed, and a counterpane or coverlet thrown over her.

The nurse, or some other female, ought to be in the apartment during the examination, the bed curtains closed, and light excluded.

The obstetrician is to sit on a chair, close to the hips of the patient.

He places a napkin on his knees, another near him, and after turning back the sleeves of his coat, desires the nurse to pin another napkin round each arm.

He next lubricates the index and middle finger of the left or right hand, according to the position of the bed may require, with pomatum, lard, fresh butter, or olive oil, which the female attendant has in readiness for him, the nails of these fingers having been previously cut closely.

Vaginal Examination.—So soon as the next labour pain returns, he passes the hand from the knees along the thighs, to the external genital aperture, separates the labia pudendi, introduces the two lubricated fingers into the vagina, and directs them downwards and backwards towards the sacrum, or lowest bone of the back, within an inch of which will be found the os uteri, or orifice of the womb, in a majority of cases.

The uterine orifice is pushed down into the pelvis, and contracted during the labour pain, and at the commencement of parturition, is about the size of the disc of a sixpence. As soon as the pain ceases, the orifice dilates to the size of a shilling, or larger, and the vaginal mucus is increased. The fingers should now be passed round the inferior part of the uterus, so as to ascertain the presenting part of the infant, which can be often accomplished even at this early period ; next over the internal surface of the bones of the pelvis, to determine whether they afford sufficient space for the birth of the infant, or whether there are any solid tumours which narrow the vaginal passage, or whether this last part is dry or lubricated. When all these points are ascertained, the fingers are to be with-

drawn from the vagina, and wiped under the bed clothes with the napkin set aside for that purpose.

This examination enables the obstetric practitioner to determine, whether the woman be or be not in labour—that the labour is natural or preternatural—that it will be quick or slow—that the cavity of the pelvis is natural, capacious, or contracted, and whether any manual or instrumental operation will be necessary.

An early examination is indispensable, as it may save the parturient woman a vast deal of useless suffering, for if the labour is preternatural, and requires an operation, this can be performed much easier in certain cases, as in version, before the labour is advanced, and the patient has suffered severely for hours or days, and her strength become exhausted, or her life endangered.

The introduction of the fingers ought to be effected as gently and speedily as possible, and with the greatest delicacy and modesty. This examination ought not to produce the slightest pain, if judiciously made, and it removes the dread which many women entertain regarding medical assistance, and also the fear of the obstetrician.

The presenting part of the infant cannot always be determined by a vaginal examination at the commencement of labour, before the dilatation of the orifice or mouth of the womb. But as a general rule it may be said, that the head may be distinguished by its roundness, firmness, bulk, and sutures; the breach by the cleft between the thighs, the genitals, and by the discharge of the meconium; the foot by its length, the heel, the shortness of the toes; the hand by its flatness, by the thumb, and the length of the fingers; the chest, abdomen, hip, navel-cord, back,

shoulders, neck, face, &c, by their peculiarities. It is, however, much easier to determine the presentation after the escape of the liquor amnii, or "waters," when the descending part is pushed much lower by the contraction of the womb, or the labour pain, the orifice being now much more dilated.

Signs of Parturition.—When the woman, for some time previous to the accession of labour, has suffered from restlessness at night, and has found the uterus and abdomen subside, the sense of weight of the infant lower down in the pelvis than usual, a mucous vaginal secretion, at first glairy, and afterwards mixed with blood, (the shows), a frequent desire to evacuate the bladder and bowels, the pains regular, and recurring at diminished intervals, grinding and bearing down, the vagina relaxed, and when the os uteri is dilated, with tension and relaxation of the membranes, or the liquor amnii (waters) discharged; the vertex, or crown of the head, the presenting part, advancing during a pain and receding afterwards, the orifice of the womb becoming more and more dilated, the bones of the maternal pelvis natural, the function of parturition is about to be performed, and the labour is natural.

False or spurious pains are slight, short, and unpropulsive, recurring at irregular intervals, and attacking different parts of the bowels and abdomen. They arise from some intestinal irritation or spasm of the womb, are not bearing down, do not affect or dilate the uterine orifice, and are generally removed by opening the bowels, and by a sedative. They may otherwise continue for several days, though

labour has not commenced, or even when there is no pregnancy.

I have repeatedly known women who considered themselves in labour for three, five, ten, and fourteen days before the process had actually commenced.

Information for the Patient or Friends.—As soon as the vaginal examination is completed, the obstetrician ought to inform the patient or her friends of the kind of labour, whether it will be easy or difficult, as this enables them to procure additional advice or assistance if they think proper, which is their undoubted right to do; but it is not prudent to apprise the woman of danger. She ought to be cheered and comforted in the worst cases, and her real condition only communicated, in another apartment, to the nurse or her nearest friends.

A confident assurance that no operation will be necessary, and that the woman will do well, has the most beneficial effect in quieting the mind and expediting delivery. It is, however, impossible to state with certainty when a labour will be over or terminated, as some women are delivered in a few seconds, and others not before the lapse of hours or days.

The most experienced obstetrician cannot determine the exact time of delivery; and if at a promised hour there is no sign of it, the woman becomes dejected, supposes there is something wrong, and loses confidence in her medical attendant.

Treatment at this Period.—If the bowels are confined, a dose of castor oil, or some mild aperient, ought to be prescribed; and if griping pains be urgent or distressing

twenty or thirty drops of the solution of muriate of morphia or liquor opii, or common laudanum, may be given, and repeated if necessary. The woman ought to remain quiet, and have some gruel, tea, &c.

She may walk about until the discharge of the amniotic fluid or breaking of the waters, and after that occurrence she should be confined to bed, as delivery may be suddenly accomplished.

The state of the Apartment.—The dress and bedding of the patient, and the state of her chamber, ought to be attended to.

The apartment ought to be well ventilated, and no more than one or two persons allowed to remain in it. A fire ought to be excluded in summer.

All frightful stories ought to be studiously avoided, as they generally depress the patient, and retard the progress of her labour. The bedding is arranged differently in the different countries and ranks of life.

In general, the woman is delivered on a mattress, with a folded sheet or blanket, and a skin of basil leather placed under the hips to absorb the moisture, and to be removed when parturition is completed. In London, the nurses turn the lower half of the bed pallet upon the upper, and place the folded blanket and skin upon the bare mattress or sacken bottom of the bed. The feather or other bed is removed among the upper classes of society.

Appropriate position.—When the waters escape, the woman ought to be confined to bed as delivery may be rapid or instantaneous, her body bent, the knees drawn towards the abdomen, and the feet pushed against the bed-post or foot-board during each pain, a long towel

or shawl is passed round the bed-post, so that the patient may pull by this during each pain, and not lay hold of the obstetrician, and prevent him from assisting her.

When the pain comes on, the woman ought to force or bear downwards, as if evacuating the bowels or bladder; and she should not hold in her breath or cover her mouth with the bed-pillow, practices recommended by women and nurses, as the result would be flushing of the face, head-ache, impeded respiration, retarded labour, convulsions, apoplexy, &c.

The patient ought to wear her night-dress, the chemise being folded above the hips, and its place supplied by a flannel petticoat.

A loose dress favours the free action of respiration and of the abdominal muscles; whilst a tight dress or stays impedes the breathing and action of these muscles, induces flushing of the countenance, head-ache, convulsions, or apoplexy, and retards the progress of labour.

The female attendant should procure some white sewing thread, a pair of sharp scissors, some pomatum, lard, fresh butter, or olive oil, which are to be placed on a table. She should also provide a piece of new flannel to receive the infant, called a receiver, some napkins, and a broad, calico or linen roller, to be applied round the abdomen of the woman after delivery.

The obstetrician is to prepare the ligature for tying the navel-cord, and takes three or four threads, knots them at both ends, divides them in the middle, knots the ends, and thus prepares them for tying the umbilical cord or navel-string as soon as the infant is born and has respired or cried.

Natural Parturition.—Natural parturition is divided into three stages.

First Stage.—The dilatation or opening of the orifice of the womb, the tension, relaxation, and rupture of the membranes, and the escape of the liquor amnii, or waters.

Duties of the Obstetrician in the First Stage of Labour.—Three vaginal examinations are sufficient during the first stage of labour, and they are made to ascertain the progress of the dilatation of the orifice of the womb and the descent of the infant's head. This stage may be completed in a minute, but generally continues for twelve or even twenty-four hours. The practitioner cannot afford assistance until it is completed, or in other words, until the orifice of the womb is dilated, the membranes burst, and the head of the infant has descended into the cavity, or low down into the pelvis. He may therefore leave the woman for an hour or two to visit others, when the pains are slight, the uterine orifice thin and smooth, but not when this part is thick as the delivery is generally rapid ; and should he remain, he ought to absent himself from the apartment occasionally, to allow the patient an opportunity of evacuating the bladder and bowels, on which pressure is made by the descent of the infant's head.

In addition to the precursory and real signs of parturition already mentioned, the patient complains of pain in the loins, abdomen, and inferior extremities, the labour continues, and the orifice of the womb is at length sufficiently dilated ; in some cases there is drowsiness, sleep, vomiting, pain in the back, cramp in one leg, which are favourable symptoms.

State of the Membranes which line the Uterus—The

membranes become tense during each pain in the first stage of labour, within the circle of the os uteri, and feel as if the finger was applied to the extremity of an inflated calf's bladder; and when the pain ceases they are again relaxed.

This tension arises from the pressure of the liquor amnii on the membranes over the orifice of the womb, caused by the contraction of the latter organ, and these form a soft wedge which gradually dilates the uterine aperture and finally rupture.

Rupture of the Membranes.—When labour pains continue, the tension becomes greater, the orifice of the womb more and more dilated, and finally, the membranes are burst by the contractions of the womb, the water is effused, and the first stage of labour is completed. It is a general rule that the membranes ought not to be ruptured in a natural labour, unless they are so thick as to oppose the dilatation of the orifice of the womb, and descend to the external genital aperture, which rarely happens. During this stage of labour, the practitioner has only to institute three vaginal examinations to ascertain the extent of the opening of the mouth of the womb, and now he ought to sit by and watch the process of nature.

The woman may walk about her chamber, or recline on a bed or sofa, until the rupture of the membranes and escape of the waters, as the womb is not fully dilated before this occurrence, and the infant cannot possibly be born; but after it has happened, the infant's head descends low in the cavity of the pelvis, and the patient ought to go to bed, as the delivery may be instantaneous.

During the first stage of labour, the diet ought to con-

sist of farinaceous aliment, as gruel, arrow-root, sago, &c., but no wine or spirit, unless the health is bad, or the labour tedious. It is to be recollected that the inferior animals take no stimulants during their deliveries.

When the labour pains are slight and teazing, or are spurious, a dose of morphia, sedative liquor of opium, laudanum, or solid opium will relieve them, and procure sleep, after which strong labour pains generally occur.

Frequent vaginal examinations excite irritation, and convert a natural into a tedious or difficult labour. It is an excellent axiom that " A meddlesome midwifery is bad." No attempt should ever be made to dilate the orifice of the womb, the vagina, or external general aperture, in ordinary cases.

When the first stage of labour is slow, the patient young and plethoric, and the soft parts rigid, venesection from a free orifice to the approach of fainting is the best means of inducing relaxation of the genital organs as well as their dilatation.

When the patient is delicate, nervous, or hysterical, a starch and opiate clyster is the best remedy to suspend useless pains, procure rest, and afterwards a dilatation of the womb. In these cases, wine or spirit and water may be administered in moderate quantity.

Second Stage.—The descent of the vertex or crown of the infant's head, the dilatation of the external genital aperture, the expulsion or birth of the infant, and its separation from the parent, after the ligature or tying of the umbilical cord.

Duties of the Obstetrician in the Second Stage of Labour.—Descent of the Infant's Head.—As soon as the

waters escape, the labour pains become severe and bearing down, as the bones of the infant's head are now pressed against the soft parts (womb, vagina, or perineum of the mother), the woman usually draws in her breath, bears down forcibly, and exerts the diaphragm, the muscles of the abdomen, thorax, and extremities.

The presentation of the infant's head in natural parturition is the vertex or crown, the face is at first turned obliquely or to the back part of the hip; the occiput is opposite to the acetabulum or lower and thick part of the hip, and the chin rests on the chest. The forehead is turned to the sacro-iliac symphysis, and the occiput to the opposite acetabulum or cotyloid foramen, and the head is in an oblique direction relative to the brim or upper entrance of the maternal pelvis; when it descends low into the cavity of the pelvis it turns so that the face finally arrives in the concavity of the sacrum, and the occiput comes under the pubis.

Three vaginal examinations may now be made during the descent of the head, to ascertain its progress, which can be effected by nature only; and the fingers ought to be lubricated before each examination, as already described. Frequent examinations cause irritation, predispose to inflammation, and very generally convert a natural into a tedious or difficult labour. When the patient complains of severe pain in the small of the back, it may be relieved by strong pressure made with the palm of the nurse's hand over the affected part.

The pressure of the head when descending into the pelvis on the nerves causes cramp in the thigh or leg, which in general will be speedily abated or relieved by tying a handkerchief tightly above the knee of the affected

limb. Cramp is a favourable sign of the natural progress of labour, or descent of the head.

The woman may now lie on either side, or on the back during her pains, until the head presses on the external parts, when the left side is preferred, as the obstetrician can generally use the right hand with most dexterity in rendering assistance.

It is unnecessary to confine the woman to the left side during the twelve or twenty-four hours occupied by the first stage of labour, and she may bear her pains in any position she pleases, until the head is about to protrude through the external genital aperture.

Even in this last case the woman may be delivered on the right side or back as well as on her left side, and no scientific reason can be urged to the contrary. It is cruel and absurd to confine a lying-in woman for hours or days to the left side when tiresome to her, as delivery can be accomplished on either side, on the back, in the erect position, the sitting posture, on the knees, and even in other positions.

When the head has arrived so low in the pelvis, as to press on the external parts, these will sooner or later dilate according to their natural rigidity, their dilatibility, the force and frequency of the pains, and the number of infants the woman has already borne.

The dilatation is generally slow in very young or aged persons, or after the age of thirty or thirty-five years, and more especially in first labours, in which there is usually great suffering, and the long continued pressure destroys the infant. When the head comes in contact with the soft parts it is pressed against them during each pain, and

gradually dilates them ; and when the pain ceases the head recedes into the pelvis. Sooner or later the perineum or the soft parts between the genital fissure and anus, become distended by the head, and this is termed the perineal tumour, and then the obstetrician should support it with his naked hand (Hamilton), or covered with a napkin (Denman) and press it towards the pubes, or abdomen of the mother, as the pressure on the head, during natural labour, is directed from below upwards in this direction.

The hand should be applied across the genital aperture.

Many modern obstetricians consider supporting the perineum not only useless but injurious, yet the contrary is the general opinion. At this period there is considerable pressure on the rectum and bladder, the woman expresses a strong desire to evacuate them, but there is no real necessity, and she ought not to rise from her bed, as the infant may be suddenly born.

The pains now become severe, there may be shiverings, vomiting, and cramp, in either lower limb, and these are to be relieved by warm drinks, a small quantity of wine or spirit and water, additional bed clothes, and tight pressure above the knee of the affected extremity.

The sense of bearing down now becomes great, and often induces irritable nervous women to make strong expulsive efforts in the absence of real labour pain, which force down the head into a passage not as yet sufficiently dilated to receive it, retard labour, or lacerate the soft parts, and cause a most loathsome and distressing disease. In such cases the obstetrician must be most attentive to the support of the perineum, and strongly advise the patient to allow labour pains alone to expel the infant.

Again, when the infant is expelled by artificial forcing, there will be danger of the irregular contraction of the womb, obstetrically termed "hour-glass contraction," retention of the placenta, necessity of passing the entire hand and arm into the uterus to extract the latter, and great danger of hemorrhage.

These accidents may be also induced by the male or female obstetrician rapidly extracting the body after the expulsion of the head, in the absence of labour pains. So far from the patient bearing down, or the obstetrician extracting the body after the birth of the head, in the absence of labour pain, the woman should remain quiet, and the medical practitioner or midwife, press on the neck of the infant with one hand, and on the abdomen of the mother with the other, to prevent the descent of the shoulders, and to excite proper labour pains, or pressure should be made on the uterus by rubbing the abdomen and pushing the body and limbs of the infant against it. In some cases there are pains which do not expel the infant, in consequence of the navel cord being twisted round the neck, and this is to be loosened and passed over the head, if possible, and in some cases it must be tied and cut.

When true labour pains are excited after the passage of the head, the one that expels the body of the infant, may also expel the placenta or after birth, and membranes. In a perfectly natural labour, the pain which expels the head is rapidly succeeded by another, which expels the shoulders and body of the infant, and by another which throws off the secundines, and terminates the function of parturition.

When the shoulders are being passed the one is turned by nature towards the abdomen of the mother, the other to the back, and the lower one presses on the perineum, and this part ought to be supported in the same manner as when the head was expanding it, as already stated, while at the same time the head, neck, and lower shoulder should be raised towards the maternal abdomen, that is, in that curved line from below upwards, from the back of the woman towards the abdomen, in which the head passes in natural parturition.

As soon as the shoulders are extricated the body of the infant ought to be turned obliquely as regards the external genital fissure, as this position will turn one infantine hip towards the sacroiliac symphysis, and the other towards the opposite ascetabulum in the long diameter of the brim of the pelvis. The infantine hips now rapidly descend into the cavity and outlet, and one is turned towards the abdomen, and the other to the back of the mother, or in the long diameter of the outlet of the pelvis, and during the pain, the body and lower hip ought to be raised towards the abdomen of the mother. The hips of the infant speedily pass through the genital fissure, the limbs follow, and the head being elevated, the infant ought to be placed in the sitting posture, its back towards the genital aperture of the mother, as there is often a gush of water or blood from the womb that might suffocate the infant, when it begins to respire.

I have fully delineated the mechanism of natural and difficult labours, in my *Atlas of Obstetricy*.

As soon as the infant is born, the obstetrician should place his hand upon the maternal abdomen, to ascertain

whether there is contraction of the uterus, which, if present, will resemble the size of an infant's head below and beneath the navel, and also to detect the presence or absence of a second infant.

This uterine tumour existing after natural labour, is a proof that the womb has properly contracted, and there is no danger of hemorrhage, and no second infant in the cavity.

Some warm drink is now given to the woman, and she may have a table-spoonful or two of wine or spirit and warm water, according to her preference.

Separation of the Infant from the Mother.—As soon as the infant is born, and fully respires, the circulation in the funis umbilicalis or navel string is no longer necessary to its existence, and speedily ceases. One of the short thread ligatures already prepared is to be applied round the navel cord within two inches and a half of the infantine abdomen, and tied firmly with a double knot, and the ends of it cut off closely. The second ligature is then placed on the cord two inches nearer to the mother, with a single knot, and the navel string is cut close across to the first one, with a pair of sharp scissors, and the infant is given to the midwife or other careful attendant, who envelopes it in a piece of new warmed flannel, called a receiver. The nurse sometimes puts on a flannel cap which is unnecessary unless in cold weather.

When the infant is separated from the mother, a warm napkin is folded and applied to the external genital aperture. This completes the second stage of parturition.

Third Stage.—The expulsion of the placenta or afterbirth with the membranes.

In ten or twenty minutes, or sooner or later, after the birth of the infant, the labour pains return and expel the placenta; these are called after-pains. The remainder of the navel cord which is protruded through the external genital fissure is to be twisted round two fingers of the left hand, and the cord put upon the stretch, and two fingers of the right passed along it into the vagina, and if the root or insertion of it in the placenta can be felt, the placenta is separated from the womb and lodged in the vagina.

The woman should now cough, bear down, "blow on the back of her hand," or sneeze, by taking snuff, or take some warm tea or other fluid, and the placenta will be expelled; but should this not happen, the practitioner should seize its edge with two fingers of the right hand and draw it through the centre of the vagina towards the abdomen of the woman, that is, in the axis of the outlet of the pelvis.

The placenta ought to be twisted round when passing through the external genital aperture, so as to extract the membrane attached to its circumference, which contained the infant; and this ought to be drawn down between the finger and thumb, when it will feel like fresh intestine. Unless this last precaution be adopted, great alarm will be often excited on the passage of shreds of membrane after the practitioner has retired.

When the pains do not occur in half an hour or an hour after the birth of the infant, gentle friction ought to be made on the lower part of the abdomen, over the uterus, for the purpose of exciting contraction of the organ, the patient is to bear down, cough, laugh, &c.

The patient or midwife ought never forcibly to pull the navel string to extract the after-birth, it will generally escape externally on the woman bearing down, as if evacuating the bowels.

When the placenta has passed, it ought to be placed on a napkin, in a basin, or other vessel, and both its surfaces examined, so as to ascertain if the whole of it has been expelled.

It is then to be deposited in a basin or chamber utensil, and the woman ought to have some warm wine or spirit and water.

The parturition is now completed.

The wet cloths and skin of leather are now to be removed from under the hips, a warm napkin applied to the genital fissure, the woman made comfortable, and additional bed clothes put on if she feels chilliness. A broad long bandage or binder ought to be applied round the abdomen, and brought between the limbs, so as to press constantly upon the abdomen and womb.

The binder is used during all the stages of labour by some obstetricians, and gradually tightened during the pains, but most women do well without it.

The binder is sometimes useful when the woman is delicate, or the womb inordinately distended, as in such cases there is danger of fainting after delivery.

An anodyne draught or an opiate ought to be administered in an hour after the expulsion of the placenta, or as soon as the after pains become troublesome. The bed ought not to be adjusted for an hour after delivery, and the woman should on no account sit up while it is being done. She may be moved on one side of the bed

while the other is arranged, or she may be raised by women on a sofa, in a horizontal or lying position, or on chairs in the humble ranks of life, covered with a blanket. If she sits up while the bed is being made, fainting, flooding, or falling down of the womb may be induced.

The apartment should be kept quiet, cool, and well ventilated, the patient speak as little as possible, and all visitors excluded for four or five days.

The diet ought to be water gruel, arrow-root, tea, coffee, when the woman is strong and in good health; but when delicate, she may be allowed a moderate quantity of wine, or spirit and water, or either of these, as well as beef tea, animal jellies, broths, and nutritious aliments.

The function of parturition, when natural, and when the woman's health is good, requires no more attention than that of digestion, respiration, &c. But in all civilized countries, there is scarcely one woman in twenty in good health; and hence, the necessity of care and caution during labour and the puerperal or child-bed condition.

Management of the New-born Infant. — Washing the Infant.—There is a whitish unctious substance on the whole or many parts of the body of the infant at birth, which ought to be removed by means of a soft sponge or piece of flannel with warm water and white soap.

A lather of mild white or palm soap should be applied to the head, due care being taken not to allow the eyes to be irritated.

Ardent spirit of any kind, as brandy, &c., ought not to be applied to the head unless swollen, as it is unnecessary and injurious.

The neck, body, limbs, and all creases should be well

washed, dried with a soft old napkin, and then all the creases powdered with hair powder, as those behind the ears, in the neck, under the arms, and between the thighs.

During the washing of the infant, all hasty or violent movements of it ought to be avoided. The remainder of the navel string is to be wrapped in a piece of old soft linen, then turned towards the chest on the abdomen, and secured in this situation with a small flannel bandage. Burnt rag is commonly applied to the navel string by nurses, but this is a useless and objectionable remedy.

The dress of a new-born infant ought to be warm and loose and never impede the respiration, or induce redness or lividity of the face. It should be open at the back, and secured with buttons or tapes, and not with pins.

The infant should be at ease, and enjoy perfect freedom of motion in every part of the body.

The napkin applied over the lower part of the abdomen and over the genitals and anus ought to be loose, so as to allow a free movement of the lower limbs. The first clothes are generally too long, they become twisted about the legs, and impede their movement and growth. This dress need not be worn longer than three or four months in warm weather.

It is a useless practice, when there is breast milk, to exhibit butter and sugar, molasses, manna, castor oil, syrup of violets, &c. to a new-born infant, as the first milk of the mother will purge it efficiently. The inferior animals do well without aperients.

All healthful women ought to suckle their infants, as the breast of the mother affords the most natural aliment.

But when there is no breast milk, the best substitute is fresh or new cow's milk, with a sixth part of tepid water, and some loaf sugar; and the quantity for each repast, which ought to be given from a sucking bottle, is about three table-spoonsful. Gruel, arrow-root, or pap, and all farinaceous aliments, are inferior to milk, as this is the food intended by nature, although they are very generally administered.

The infant will require food every two hours for the first month or two. After each repast, the infant ought to be placed on its right side in bed with the mother, or in a warm cot, when it will fall asleep. This position is most favourable for the passage of the food from the stomach into the bowels. It generally wakes every two or three hours to take food, and after it is supplied the nurse should examine whether it is wetted or soiled, and in either case, remove its napkin, wash it with tepid water, wipe it dry and powder it, and apply another napkin. When the bowels do not act for some hours after birth, half a tea-spoonful of castor oil, or a drachm of manna, may be administered.

When the infant is still born it may be recovered by the following means. Artificial respiration ought to be induced by closing the nostrils, pressing the windpipe against the œsophagus and spine, and then blowing into the mouth. As soon as the lungs are inflated, pressure is to be made on the ribs with the hands, so as to expel the air, and the inflation is to be speedily repeated. The process of artificial respiration ought to be continued for an hour, during which period the infant is immersed

in warm water, and ardent spirit or sal volatile rubbed over its cheeks, neck, and chest, to excite the respiratory nerves of these parts.

When the face is dark or purplish, there is congestion of the brain, and the navel-cord may be allowed to bleed a tea-spoonful or two, during the artificial inflation of the lungs.

The tracheal pipe is used as follows:—the obstetrician passes the fore-finger of the left hand into the infant's mouth, depresses the tongue, and feels the opening of the glottis at the top of the windpipe. The tube is now passed along the finger into the windpipe, the finger is then carefully withdrawn, the nostrils and lips closed, and inflation of the lungs commenced. When the lungs are distended with air, pressure should be made on the chest in the manner already described, and the inflation continued for an hour or an hour-and-a-half. The warm bath, and application of ardent spirit or sal volatile to the face and spine are to be used at the same time.

It is necessary to be cautious with the tracheal pipe, and not to injure the larynx.

The first sign of resuscitation, is the pulsation of the heart, which is soon followed by respiration, but recovery does not always happen.

Management of the Mother after delivery.—The obstetrician ought to visit a puerperal woman about twelve hours after delivery, and inquire how she has slept, ascertain the state of the pulse, lochial discharge, the milk, bowels, and bladder.

" If the pulse is under one hundred, and if the woman has slept well, has the lochial discharge moderate, has

evacuated the bladder and bowels, has milk or the breasts distended, the after-pains trifling or absent, she is going on well, or to use a popular phrase, "she is as well as can be expected."

But when the bladder has not been evacuated, the lower part of the abdomen ought to be fomented with warm water or a decoction of poppy-heads or chamomile, by means of a piece of flannel, and should this fail, the use of the catheter will be necessary in a few hours.

The bowels should not be open until the secretion of milk has commenced, which may be a day or two after delivery.

The exhibition of a purgative within twenty-four hours after delivery, before the breasts are distended, and the milk is secreted, causes determination of blood to the intestines, prevents it from going to the breasts as nature intended, and retards or prevents the secretion of milk.

It is for this reason that when the infant is dead, brisk purgatives are given immediately after delivery, which prevent the secretion of milk, or speedily suppress it.

Moreover, a judicious obstetrician will have ordered the bowels to be regulated before delivery, as already stated; and the nutritious diet of the woman during and after labour, forms very little excrementitious or fæcal matter.

When the woman proposes to nurse her infant, she may have moderate quantities of water-gruel, tea, coffee, arrow-root, and toast for breakfast; weak beef or chicken broth, and light pudding for dinner, and gruel, arrow-root, or any mild vegetable jelly for supper. She may also have a small quantity of malt liquor, with the chill off in winter, though this is not necessary for a healthful woman.

When the woman is delicate, she may have animal jellies, chicken, and a moderate quantity of wine, diluted spirit, or porter, or ale, the day after delivery. A healthful woman may take chicken, rabbit, fresh fish, lamb or mutton chop, on the fifth day after her confinement.

Wine, spirit, and fermented liquors are not necessary for a woman in good health, during or after delivery, though she may use them in moderate quantity, but when taken freely, they predispose her to dangerous fevers and inflammations.

If the after-pains are troublesome, they arise from clots of blood in the womb, and the sedative draught ought to be repeated. When this fails to afford relief, the finger should be passed into the vagina or orifice of the womb, to remove the clots or pieces of membrane; or a mild aperient may be exhibited, and the action of the abdominal muscles during its operation will cause their expulsion. The patient should not be allowed to rise to have her bed made sooner than the fourth or fifth day; and even then she ought not to sit up, but lay on a sofa drawn close to the hedge of the bed, or on chairs, while the latter is being adjusted.

She ought never to sit up or walk about before the lochial discharge has nearly ceased, or is very trifling in quantity, and that is about the ninth or twelfth day after delivery, and sometimes much later.

At first she ought to sit up for two or three hours only, and she should be careful to guard against the extremes of heat and cold.

At the expiration of three or four weeks, but generally sooner, when the lochia has ceased, she may join her family

circle, and take an airing in a carriage, or other vehicle, in favourable weather.

Women in the lower rank of life, and those in good health, rise from bed and walk about much sooner than the period now advised; and they often do well, but more commonly suffer from prolapsus, or falling down of the womb, repeated hemorrhage, nervousness, lowness of spirits, despondency, dyspepsia, leucorrhœa or whites, hysteria, and various other complaints. As a general rule, no woman ought to rise from her bed, or even sit up, until the lochial discharge has nearly ceased; for while it continues, the womb is enlarged, and will fall into the pelvis or bear down during sitting, walking, or standing, and lay the foundation of a most troublesome disease.

The poor, who cannot follow this advice, and who sit up and exert themselves on the fourth or fifth day after delivery, generally have some one or more of the complaints just mentioned.

During the first month, the infant is to be applied to the breast every two hours, or as often as it awakes from sleep during the day or night; and if the milk is good, and the nurse in health, it will require no artificial food, and *vice versâ*.

When labour is tedious or difficult, when any part of the infant presents or descends, besides the crown of the head, or if there is flooding, convulsions, fainting, or any other untoward event, a midwife cannot render any beneficial assistance, and a medical practitioner should be summoned as soon as possible. The mother and infant may be lost in a few minutes, and an immense number of both are

annually destroyed in this kingdom for want of proper medical attendance. Midwives are useful to tie and divide the navel cord, and to remove the after-birth when expelled; but they are of no other use during labour. Those few who are taught by physicians, are often competent to discover a difficult or preternatural labour, and to summon medical assistance, but further than this they can render no efficient assistance, either to mother or infant. It is, therefore, manifest that medical aid ought to be preferred whenever it can be procured; it is now afforded by an enlightened public, to the poor, from hospitals, dispensaries, and workhouses, and was never denied by the members of the noble profession of medicine.

It is worthy of remark, that no midwife is allowed to practise in France, or in most of the other European nations, unless instructed by a qualified medical practitioner; a regulation which ought to have been long since enforced in this country, for though medical practitioners are now generally employed, yet there is a large number of lying-in women among the poor, and in the provinces, still attended by ignorant midwives. I have published a summary of obstetric duties in every case of labour which can occur, in a cheap and popular form, entitled *Obstetric Aphorisms*, 1837.

Hints for the Physical Management of Infants. — The new-born infant, while it is being washed and dressed, may have some butter and sugar given to it, though this food is by no means absolutely necessary, unless the infant cries, and it may be applied to the breast, when there is milk, in half an hour or an hour after delivery, or, so soon as the mother has recovered from the fatigues of parturition.

The infant ought to be applied to the breast every two hours, or as often as it awakes from sleep.

Lactation or suckling generally prevents sore breasts and nipples.

A wet nurse ought to avoid spiced, salted, smoked, and oily animal substances, and also crude vegetables, pickles, unripe fruit, and spirituous or vinous liquors, unless when delicate.

Light broths, milk, whey, coffee, home-brewed ale, stout, or porter are the best drinks, and a pint or a pint and a half of the two last is sufficient during twenty-four hours.

Tea and coffee may be used moderately.

A wet nurse ought to attend, most closely, to the infant committed to her care, and avoid all crowded assemblies, balls, theatres, &c.

A hired wet nurse ought to be healthful, good-tempered, careful, fond of children, watchful at night, patient, sprightly, cheerful, active, have a good supply of milk, and a healthful infant of her own.

She ought to be treated most kindly by parents, who entrust their infant to her care.

The best substitute for human milk is, that of the ass or cow, with a sixth part of tepid water, and some loaf sugar. Three table-spoonsful are sufficient for each repast for a new-born infant. Asses' milk has a decidedly sedative effect.

The milk should not be boiled, or repeatedly heated.

The inferior animals of the mammiferæ are nourished with milk only,

The infant ought to be kept warm, clean, and changed whenever it wets or soils itself, and in such cases dried or washed, and powdered, and a clean napkin applied.

John Hunter well observed, "give children plenty of milk, plenty of sleep, and plenty of flannel."

Farinaceous aliments ought to be used sparingly at first, and mixed with milk. They are most appropriate before the time of weaning.

Ablactation or weaning may be accomplished when the infant is vigorous, after the appearance of the milk-teeth, which varies from the sixth to the twelfth month.

Weaning ought not to be attempted when the infant is delicate, teething, or labouring under any severe disease, as the breast is the best sedative for infants, even if the milk is deteriorated. It ought not to be commenced during winter.

Weaning should be commenced gradually, and not suddenly, the infant being first accustomed to ordinary food; for in the last case, it becomes fretful, peevish, and rapidly out of health.

Children have their likes and dislikes as well as adults, and ought not to be compelled to use any food which they disrelish. Light puddings, eggs, fresh fish, gravies, soups, or broths mixed with arrow-root, mealy potato, bread-crumb; ripe fruits, such as apples, pears, oranges, strawberries, grapes, &c., the pips or seeds being removed, may be used in moderation by infants from the second to the fifth year.

Boiled or roasted meats are best for children; fried, broiled, stewed, or minced, are less proper.

The drink ought to consist of milk, milk and water, barley or common water, tea, coffee, toast and water, a small quantity of ale or porter, as half a wine-glassful; a tea-spoonful of sherry diluted with water, when the infant is delicate.

Solid animal food is improper for young children, as they do not sufficiently masticate it, and it produces irritation in the stomach and bowels. Too much food is generally given to infants, but they ought to be left to their own discretion or inclination as to the quantity.

The infant ought to be allowed to sleep and wake whenever it pleases. All violent rocking in chairs, cots, or cradles, is injurious to the brain and to the general health.

It should be kept warm, and so placed that it cannot possibly slip or fall out of bed.

It ought to be placed on the right side in bed, to facilitate the passage of the milk or food from the stomach into the bowels. It may also be turned on the left side, and of all positions, the back or face is the worst.

The clothing should always be suited to the season, so that exposure to cold and damp should be avoided. Exposure to cold and improper food, are the most prolific causes of diseases of infants.

It is computed that half mankind perish from cold before the end of the third year.

Air and exercise in the nurse's arms, or in a carriage, or on foot, are as necessary for children as for adults.

An infant is exercised by being carried in the arms, rocked in a cot or cradle, by rubbing its body or limbs at the time of dressing or stripping, by dandling, by its laughing and crying, by riding in a carriage, by crawling, walking, jumping, running, dancing, &c.

The infant finally acquires power to assume the erect position, to stand alone, walk along chairs, &c., when it ought to be carefully watched and assisted.

It ought to be placed on the carpet, with its toys about it, when it will move about to collect them.

It is now exposed to falls and injuries, which often destroy its life.

All soothing syrups ought to be prescribed by medical practitioners only, unless when these cannot be procured.

Cleanliness and bathing are essential to infants. Frequent washing with tepid water, either locally or generally, is highly beneficial. This is beneficial at all times, and indispensable in cold weather.

Cold bathing is now universally condemned for delicate or feeble children.

Exposure to the air is necessary, but hardening, as it is popularly termed, is most injurious, and often induces fatal inflammations of the respiratory organs. The clothing should *always* prevent the bad effects of the weather.

Dentition or teething is a natural process, and unaccompanied by pain when the infant is in perfect health, and properly managed, as regards diet, clothing, cleanliness, sleep, air, exercise, &c.

But it is in general a painful process, as few infants are properly managed or brought up by mothers or nurses, and very few are in good health.

Incision of the gum over a projecting tooth is highly beneficial. Other diseases, which are sympathetically excited by teething, as cough, diarrhœa, &c. are to be treated on ordinary principles.

Every healthful infant ought to be vaccinated after the sixth week, to prevent the danger and mutilations caused by small-pox, and too often death itself.

Children ought to be treated with kindness, and all

corporeal chastisement avoided until reason is developed. "Spare the rod and spoil the child," is now an obsolete maxim. Moral management is universally preferred by all enlightened individuals.

Severity towards children is cruel and most injudicious. When correction is necessary, it should be inflicted with regret and gentleness, and never with a display of anger.

A feeling of jealousy ought never to be allowed to exist between children, there should be no marked preference.

The infantile constitution is frail, and easily injured by external agents, and hence the frequency of diseases.

The diagnosis of these complaints is difficult, as the sufferer cannot, in some cases, give any, and, in others, a proper account of the symptoms.

Literary education ought not to be commenced until the age of six or seven years; but the nature and uses of external objects should be always explained to children.

Infant schools are very superior to the old-fashioned establishments, as they combine exercise, amusement, and competition with instruction.

Much knowledge may be communicated by the representations of pictures or figures of birds, beasts, fishes, insects, herbs, trees, fruits, and mechanical inventions.

The utmost regard for truth, and abhorrence of falsehood, should be always inculcated.

An open and candid disposition ought to be applauded, and an acknowledged fault rebuked with mildness, and then forgiven.

All questions put by children ought to be clearly answered, and the nature of surrounding objects explained to them correctly.

An affable, modest, and polite behaviour, should be cultivated and applauded.

The memory and intelligence must not be too much excited, as disease of the brain and bad health may be rapidly induced.

Children who are prodigies in learning, music, and other pursuits, are generally destroyed by premature disease in the brain, water in the head, and many other complaints.

They should be taught to maintain a lively and cheerful countenance.

Attention should be paid to a correct articulation and pronunciation.

They ought to be constantly cautioned against hurting themselves with surrounding objects, and the danger, pain, and bad consequences explained to them.

The greatest judgment is required in treating the diseases of children, and medical aid ought to be procured whenever it can be obtained.

The science and practice of infantile medicine, require deep study and extensive observation.

Large volumes have been written on the subject, and a long course of lectures is necessary to comprehend it (see Author's Lectures already quoted.)

The delicacy, peculiarity, and sensibility of constitution, the predisposition to a vast number of diseases, the want of speech and of reason, the difficulty of detecting disease and fixing appropriate doses of medicine, render the study and knowledge of infantine medicine much more difficult than is generally imagined.

It would be foreign to the nature of this work to

describe the management of the various forms of difficult and dangerous parturitions, and these will be found in my *Manual of Midwifery, 3rd edition;* in my *Obstetric Aphorisms, and Atlas of Obstetricy.* They are concisely described in the Aphorisms, and fully in the Manual. I have also given the history of diseases of women and children in the first-mentioned, and shall confine myself in the present one, to the consideration of those maladies or malformations of both sexes, which disqualify for marriage, cause impotence and sterility, and injure, deteriorate, or destroy the offspring.

CHAPTER XX.

PATHOLOGY OF THE GENERATIVE ORGANS—MALFORMATIONS AND DISEASES OF BOTH SEXES, WHICH DISQUALIFY FOR MARRIAGE, CAUSE IMPOTENCE AND STERILITY, OR WHICH INJURE OR DESTROY THE OFFSPRING.

Some complaints are aggravated by marriage, such as inveterate scrofula, epilepsy, confirmed phthisis, caries of the vertebræ, distortion of the spine, diseases of the heart and large vessels, &c. The deformity of the bones, termed rickets or rachitis, is often transmitted to infants; and this predisposition in the female exposes her to spinal and pelvic deviations; and it too often happens, in such cases, that the very moment she hopes to become a mother, she is consigned to the tomb. Fodère says, marriage should be interdicted when the sacro-pubic diameter of the entrance to the pelvis is less than four inches; Orfila,

when it is less than three inches; but contractions of the outlet or perineal aperture are as strong objections. When the deformity is such, that an infant cannot be born through the natural passage, but must be dismembered, or extracted by the Cæsarian operation, marriage ought to be interdicted, according to theologians and physicians. Mania, and other forms of mental imbecility, are impediments to the marriage contract, because it is necessary for the proper formation of this compact, that there should be capacity to contract, and the consent of both parties.

It is well known to all practical obstetricians, that women who become mothers at an early age, purchase the honour of maternity at a very dear rate. Such persons are liable to numerous disorders during pregnancy; the pelvis is badly able to support the gravid uterus—it is too small for the passage of the infant; consequently, parturition will be laborious and protracted, and must frequently be completed by artificial means; while the degree of pressure produced by this process on the important organs, or soft parts, covering the bones, as the bladder, vagina, and rectum, causes great suffering and danger to the woman, inflammation, gangrene, or sloughing, and may be followed by deplorable diseases, which prevent cohabitation, and even cause death itself.

It is also generally admitted, by the most eminent modern writers, that the present mode of female education is highly injurious to health, predisposes to spinal curvature, and, consequently, to deformity of the hip and other bones, thereby often rendering parturition highly dangerous and fatal. Authors on spinal diseases have very fully illustrated this position, and I have done so in my *Lectures*

on Diseases of Children, London Medical and Surgical Journal, 1834, 35, 36.

Again, great injury is inflicted on the natural development of children and young females, by the foolish custom of tight lacing, which impedes the functions of the thoracic and abdominal viscera, prevents the development of the breasts and nipples; for these organs are considerably absorbed from pressure—the lactiferous ducts are almost obliterated—the nipples will be undeveloped at the end of pregnancy—lactation will be impeded or absent after delivery—the natural food of the offspring greatly diminished—while the mother will be affected with inflamed breasts, or sore nipples, which may lay the foundation of cancer. It has been already observed, that the human female is unfit to co-operate in the function of procreation until after the twelfth or fourteenth year in this climate, or until menstruation is established; for, at an earlier age, the sexual organs are imperfectly developed; there is no venereal desire; and sexual intercourse is extremely painful. Hence the cruelty and barbarity of violating female children of a tender age.

The male is also incapable of performing his part in the mysterious process of reproduction until after puberty, and, according to the law of this country, before the fourteenth year. There are, however, some few exceptions, as will appear hereafter.

There is no subject which distresses most married persons so severely, as want of offspring, or which leads to so much domestic unhappiness, or so often to infidelity. It is therefore necessary for the medical practitioner to be well informed on all the causes which prevent both sexes

from accomplishing the act of procreation. Indeed this knowledge is valuable to all classes of society. Impotence may be urged to obtain a divorce, or to repel a charge of bastardy or rape, and also in disputed cases of paternity, legitimacy, or right to succession. The multiplication of the species being the real end of marriage, the laws of many countries allowed a divorce in case of incurable impotence in either party, at the time of marriage. The existence of this state must be proved by medical witnesses, and matrons are also appointed to investigate it in women. Marriage is not dissolved when sexual imbecility occurs after the ceremonial, because the contract was fair and just between the parties. Divorce is never granted at present, in this country, but on the grounds of adultery or maltreatment. Nevertheless, it is important to those about to form matrimonial alliances, to know the causes of impotence and sterility.

All disqualifications for matrimonial union may be divided into two classes. First, those caused by defect of mental power; and secondly, those caused by defect of sexual organisation. The disqualifications are, therefore, moral and physical, and are usually expressed by the terms impotence and sterility. These terms are often used synonymously, though widely different. *Impotence* consists in the incapacity for copulation, or in the impossibility of exercising the venereal act; *sterility* consists in the aptitude of the organs for procreation, without the power of reproduction. Thus a person may be impotent but not sterile, and *vice versâ*. Some writers apply the term impotence to the male; but such a distinction is arbitrary and unscientific. The female may be impotent from

malformation, and the male sterile from excessive venery, onanism, self-pollution, and diseases of the testicles. A man who is impotent is necessarily sterile; but a woman may be impotent and not sterile. I need scarcely remark, that sterility does not afford a just plea for the nullity of marriage. The manifest causes of impotence, in both sexes, may be divided into physical and moral.

Physical, manifest, natural, or accidental impotence of the male.—The causes of manifest impotence of the male, are absence of the penis or testicles. There must be total loss of the penis, as the slightest penetration into the vagina is sufficient for procreation. (Blundell, Richerand, Sedillot, Manuel de Med. Legale, 1836, and others.) There may be congenital want of the penis (Shenck and Catier), or it may be partially lost by accident, as by the bites of animals, burns, wounds, or surgical operations. It may be removed close to the pubes, yet the ejaculatory muscles retain their power, and will propel the semen with sufficient, indeed the natural force, so that it may effect impregnation. A case was published a short time since, in our public police reports, of a young woman who was jealous, and who concealed a razor, with which she removed the penis, while in the sexual act, close to the pubes. The mutilated husband recovered, notwithstanding the hemorrhage, and went to cohabit with another woman, whom he illegally married. His first wife ascertained that his second was pregnant, expressed great sorrow for her act, and induced him to return to her. He did so, and then the second wife appeared before a magistrate to swear or affiliate the infant to him, of which she was pregnant. In this case the ejaculatory power remained perfect, though a

large portion of the penis was removed, and I have known other cases in point.

The absence of one or both the testicles from the scrotum, is no proof of their non-existence in the abdomen; unless the penis be small, the voice puerile, the beard absent, the form delicate, and the whole physical and moral constitution feminine. It is well known, that the testicles may not descend into the scrotum, though they may be fully developed in the abdomen, and perform their functions perfectly; indeed, according to some writers, much better than in the natural situation, but this is questionable.

Rolfinck relates the case of a libertine who was executed, and in whose abdomen the testicles were found fully developed. This author advised a young man in a similar situation to marry, and a numerous offspring proved the correctness of the advice (Mahon.) It is stated by Bichat, on the authority of Roux, that the testes do not descend in some of the natives of Hungary, until some months, or even years, after birth (Brewster's Enc.) Pope Sextus V. decreed, in 1587, in a letter to his Nuncio in Spain, that those destitute of them in the usual situation, should remain unmarried; and Philip II. confirmed the order, which affected many in that kingdom. The Parliament of Paris made a similar law in 1665 (Mahon.) I was once consulted by a robust and healthful young gentleman, aged twenty-six years, who had but one testicle in the usual situation, as to the propriety of his marrying a young lady, whose fortune was 70,000*l*. There was no cicatrix on the vacant portion of the scrotum, the other testicle had never descended; and he was otherwise well

developed. I advised him to marry. He did so, and has had children. Simon states, that he knew a soldier who had no testicles in the scrotum, though he had children, and very much disappointed his paramours. (Rolfinck.)

The destruction of one testicle by castration or disease is no impediment to procreation, no more than the loss of one eye is to vision. (Sir A. Cooper, Marc. Dict. des Sc. Med. Mahon.) But when both testicles are completely diseased, their secretion is injured or suppressed, and incurable sterility is the consequence. Frequent seminal emissions, or the sudden secretion of semen during coition, is generally an effectual bar to reproduction. The secreting power of the testes may be very much increased or diminished. The more fluid parts of the spermatic fluid must be absorbed, and the semen must be retained some hours, to effect procreation. Both parties must also have been for some time continent, and likewise in good health.

Both testicles may be removed by castration, yet procreation may be accomplished, as the vesiculæ seminales, or seminal receptacles, may contain at the time of the operation, a sufficient quantity of semen for one or two prolific emissions, after which the person will be sterile, but not impotent. Baron Boyer was consulted by a man whose testicles were removed in consequence of scirrhous enlargement. He afterwards knew his wife, and she became pregnant. He feared that he was not the father of the infant she carried; but M. Boyer assured him that he might be, and if so, this would be his last infant. (Sedillot, Manuel de Med. Leg.) It is scarcely necessary to observe that dogs, swine, horses, bullocks, &c., generate with one testicle. Even eunuchs have erections and emissions, but

the latter consist of the prostatic fluid, the mucus of the seminal vesicles and urethra, and are unprolific.

Mahon, and many other medical jurists, contended that individuals were impotent who were affected with hypospadias; that is, when the urethra opens through any part of its course from its orifice to the scrotum. But it is now proved, that if the opening is so placed that it can enter the vagina, impregnation may follow. Frank relates a case in point. He knew a father so affected transmit the malformation to his son, and even to three generations. Another individual had three sons. (Bull. de la Faculté de Médecine, 1810.) Morgagni, Petit-Radel, Sabatier, Gauthier, and Richerand, have observed analagous facts (Dict. de Sc. Med. *art.* Hypospadias.)

Fodère saw a young soldier, in whom there was a fleshy excresence in place of the penis, in which the ureters terminated; and the testicles were healthy. The penis is sometimes impervious at the extremity, and the urethra may open superiorly, inferiorly, or laterally. I have treated such cases in children. Belloc knew a man in whom the ureters terminated at the bottom of the frœnum, and who had four children resembling him; two of whom had the same malformation. Zacchias and Francis of New York, describe similar cases; and the individuals who were the subjects of them had offspring.

Dr. Simeons, of Offenbach, mentions eight cases of hypospadias; two of the individuals were known to him. One had six children, and the other four. The third and fourth were brothers, and the fifth and sixth the sons of the first. In all, the orifice of the urethra was situated in the glans.

The celebrated John Hunter advised a man whose urethra opened in the perineum to collect the seminal fluid when effused, under the scrotum, and inject it into the vagina with a syringe. Impregnation was said to have followed; an individual was born, whose grand-daughter is now living in London. I very much doubt the authenticity of this case, and do not believe it; because the emission should be very profuse before it could be drawn into a syringe, and even in such case, when cooled by the instrument, could scarcely be prolific.

It is certain, however, that animals have been impregnated by injecting the male sperm into the vagina.

The urethra sometimes opens along the dorsum penis; and constitutes epispadias. It is evident that the conclusion in the preceding case applies to this. The urethra may also end in a cul de sac (Goupil, Cloquet, &c.); or open on the side of the penis (pleurospadias.)

The dimensions of the penis, such as extraordinary thickness and length, are considered by some writers as causes of impotence. Fodère is of opinion, that the respective sexual organs may be so disproportionate as never to be adapted to each other; and the physical inconveniences are such as to expose the female to great injury and danger to her health. A case lately occurred in this metropolis, the particulars of which were, that though the female was of ordinary stature and well formed, the marriage could not be consummated. The case was mentioned to me by a medical friend, but he could not state whether any malformation or disease existed. The husband received her fortune, and refused to restore any part of it, though the woman returned to her family. There was a

model of the genital aperture of this individual in the collection of the late Mr. Miller, of Theobald's Road. There was a fleshy growth projecting at the vulva, which nearly closed it, and would not admit a goose-quill.

"It must be admitted however," M. Fodère observes, "that thickness of the penis, which excites great pain in some women, procures voluptuous sensations in others, and that the vagina is capable of great dilatation, which may be effected by gentle and gradual efforts, and reduced to a state capable of receiving the virile member. "Though extreme length of the penis," he continues, "may produce contusion of the os and cervix uteri, it cannot be deemed a just cause of impotence, because, by certain precautions, this danger may be avoided, unless there is great difference between the age of the parties."

A woman, aged thirty-eight, was a patient of mine, at the Western Dispensary, Westminster, in the summer of 1835; and is now under my care in the Metropolitan Free Hospital, 1839; who gives the following history of her condition. She is married eighteen years, but never menstruated. She suffered great pain after marriage, and consummation could not be effected. Dr. Elliotson examined her at St. Thomas's Hospital, and referred her to the late Mr. Cline, who operated upon her, and told her the passage (vagina) was contracted. Four years afterwards Mr. White, of Parliament Street, operated on her, and told her that the mouth of the womb was closed, and turned "the wrong way." Her husband has repeatedly said to her, that she differs from other women. On examination, I discovered the vagina about an inch in length, and no trace whatever of the orifice of the womb. She

states, that she suffers great pain during conjugal intimacy, unless her husband is cautious. She suffers severe pain in the pelvis every month, which is relieved by opium. Joan of Arc was in a similar condition. I have known three cases of vesico-vaginal fistula, in which the vagina was so contracted, by inflammation and its consequences, that sexual congress was impracticable.

Diminutiveness or shortness of the penis is no proof of impotence, as the slightest penetration and emission are sufficient for impregnation. I have known several cases of this description, in which the greater part of the organ had been destroyed by sloughing.

Obliquity, tortuosity, or bifurcation of the penis, bad stricture of the urethra, phymosis, paraphymosis, warts, chordee, chancres, or excessive length of the frœnum, cannot be considered absolute causes of impotence, as they can be remedied by surgical operations.

Skenck, Weikard, Badinger, Marc, and Richerand, describe examples of individuals with a double penis (?). M. Peyronie relates several examples of a varicose and other indurations of the corpora cavernosa, which constitute the body of the penis. He states that if a hard tumour is in the middle of the right corpus cavernosum, the penis when erected forms an arch, the curvature of which is to the right side; and the curve is reversed when the left is arched. I have met with one case of this kind. When the induration is in the portion of the penis in the perineum, the organ is curved downwards; and when near the pubes, it is curved upwards. (Mem. de l'Acad. Royale de Chirurgerie. T. 1.)

Bad stricture, which nearly closes the canal of the

urethra, enlargement of the verumontanum, or prostate gland, may prevent the emission of the semen, and cause temporary or permanent sterility. I have been consulted in several cases of the first and second disease. In two of prostatic disease, the sperm was emitted drop by drop; and in three, both it and the urine were scattered during emission. Nevertheless all the individuals had offspring.

Large scrotal herniæ cause recession of the penis, and may render coition impracticable; but in some cases relief may be afforded. The Western College of Prussia declared this a ground for divorce.

The same observations apply to large hydrocele. Sarcocele or scirrhus of the testicle does not cause absolute impotence, as it may be removed by operation; and one testicle remaining is sufficient for procreation. The testicles may disappear by disease (R. Hamilton, Larrey, Fodère) or by the abuse of iodine. But Dr. Hood, of Brighton, has published a case in the *London Medical and Surgical Journal*, in which he reduced the size of an enlarged testis with iodine, used both internally and externally, while the other, which was flabby and atrophied, enlarged, and regained its functions.—(Vol. i. 1832, p. 403.) Dr. Robert Hamilton knew a man with one testicle, the other having wasted, who had five children. M. Lugol has not mentioned that absorption of the testes occurred among his numerous patients, and this may be accounted for by his using chemical combinations of iodine. I have never known an instance of diminution of the female breast or of the testicle result from a judicious use of the preparations of iodine, though I prescribe them daily in

several cases, both in hospital, dispensary, and private practice.

Three conditions are necessary on the part of the male for copulation—*erectio, et intromissio penis, cum seminis emissione.* Impotence in men depends on defect of some one or more of these conditions; erection, intromission, and ejaculation of the spermatic fluid. The causes of impotence are more commonly observed in man than in the other sex; and this is easily accounted for, by the greater part the male has to perform in nuptial congress. This is evident from the phenomena which give the virile member the form and disposition proper for erection, the introduction of the organ, and the ejaculation of the semen, which are effected by a violent and complicated action, which requires a concurrence of many indispensable conditions, as the organs not only contract spasmodically to effect the expulsion of the male fluid, but all the body participates in this convulsion at the moment of emission, as if nature at this instant forgot every other function. The causes of impotence in man arise from two sources, from malformation of the genitals, or from want of action in them; but in females, impotence can only depend on malformation, either natural or acquired.

The causes of want of erection may be divided into physical and moral. The physical causes depend on defects of the body, as paralysis of the penis, curvature of the spine, frigid and apathetic temperament. The moral causes are such as act powerfully on the imagination, and suddenly produce an atony of the genitals, or induce an inactivity in organs properly developed. "The genital organs," says M. Virey, "offer two states in the young

and old, which are the frozen zones of existence; the intermediate state is the torrid zone of life. The infant has nothing to give, the old has lost all." Immaturity of age, and senescence are often causes of want of erection. This doctrine, though generally correct, admits of exceptions, as children have been precociously developed even before the fourth year, examples of which have often been cited; and this celebrated author describes a boy, aged seven years, a native of the department of Lot, who was as fully developed as an adult, and who made the most comically furious attacks on his female acquaintance, and absolutely deprived one of them of that which she could never regain. It is also stated, that a boy of ten years of age became a father during the excitement of the French revolution. Among the causes of want of erection we must reckon a frigid or apathetic constitution, a total insensibility to sexual desire, and this is said to be of a profound lymphatic temperament. Descourlitz describes persons of this temperament in these words:—"The hair is white, fair, and thin, no beard, countenance pale, flesh soft and without hair, voice clear, sharp, and piercing; the eyes sorrowful and dull, the form round, the shoulders straight, perspiration acid, testicles small, withered, pendulous, and soft, the spermatic cords small, the scrotum flaccid, the glands of the testicle insensible, no capillary growth on the pubes, a moral apathy, pusillanimity and fear on the least occasion, are symptoms of anaphrodisia, or impotence, or sterility; and any one having the majority of these signs is incapable of copulation or generation." (*Propositions sur l'Anaphrodisie.*)

A habitude of chastity is another opponent to erection,

such as characterised the ancient fathers of the desert, and those who, by fasting and other forms of church discipline, generally, but not always, extinguish certain desires implanted by nature, but in their opinion, contrary to that purity which should distinguish those who have made vows of chastity. The sexual organs of such persons decay, like all other organs whose functions are not exerted. Long continued debauchery, whether with women or by masturbation, will also cause impotence. "The impotence," says Pinel, "caused by the latter excess, reduces youth to the nullity of old age, and is too often incurable." Impotence is often caused by debility of the genital organs, induced by precocious venereal enjoyments; or by the abuse of the sexual function by solitary indulgence or masturbation. In these cases, there is often want of erection, and should a seminal emission take place, the semen does not possess its prolific power. This form of impotence is often irremediable, though I have cured many persons of it, who had several involuntary emissions of the spermatic fluid daily, with and without erections or amorous impulse. One of these patients was treated by Professor Colles of Dublin, and myself. I could give the histories of several cases of this description, did not delicacy forbid it. This is the disease termed *seminal weakness*, or debility by advertising empirics, and is accurately described in a late number of the Medical Gazette of Paris, by Professor Lallemand of Montpellier; M. Tissot on onanism and the diseases caused by masturbation, or self-pollution; and M. Desglandes on onanism and the other venereal abuses, in their relations to health, 1835—(in p. 12.) I have also given a full account of it in my work on *Pros-*

titution in London, 1839. It is for the cure of this disease that so many nostrums are advertised, such as the Balms of Gilead, Columbo, Rakasiri, &c. &c., which are all perfectly useless, although the unprincipled proprietors of these and most other patent medicines, extract many thousands annually from a deluded public, and amass large fortunes under false pretences, and by constant advertisements in the newspapers. The princely mansion and the immense wealth of the late Solomon near Liverpool, confirm the truth of this statement. The Morisons and homœopathists are the latest infallibles.

The treatment of this form of disease consists in avoiding its causes, in restoring the general health, and in invigorating the affected organs by the internal and external use of such remedies as have a direct influence upon them. It is important to state here, that there is no particular medicine efficacious in different constitutions, either in this or any other malady; and that those who maintain the contrary are ignorant of the economy of the human body.

It would be contrary to the national taste and propriety to give a detail of the numerous diseases caused by the abuse of the reproductive function, or to indite the frightful accounts recorded by Tissot, which are daily attested by numerous cases which come before us. It is sufficient to insert, in a consecutive form, the general symptoms caused by venereal excesses, of whatever kind; and these have been repeatedly witnessed and recorded by the most eminent medical authors.

The principal diseases which result from the abuse of the generative function are the following, though a much greater number might be added: emaciation, debility,

derangement of the digestive functions, nervousness, hypochondriasis, hysteria, despondency, melancholy, idiotcy, temporary insanity, which leads to suicide, imperfection or loss of vision, hearing, smell, and partially of touch; apoplexy, and other diseases of the brain, cerebellum, spinal marrow, epilepsy, chorea or St. Vitus's dance, mental alienations, neuralgic pains in different parts of the body; rheumatism, gout, hæmorrhoids or piles, scrofula, pulmonary tubercles or consumption, asthma, diseases of the heart and large vessels, ratchitism or rickets, friability or brittleness of the bones, low continued fevers, such as typhus, nervous, bilious, and hectic fevers, satyriasis and nymphomania, uterine nervous pains, or neuralgia, which may extend to the ovaries, lower part of the back, and one or both inferior limbs, shoulders, arms, and different parts of the body, priapism or constant erections of the penis, insensibility and impotence of the generative organs, introductions of foreign bodies into the urethra and vagina, mutilations of the male organs, incarceration of the penis in foreign bodies, paraphymosis, herpes preputialis, discharge from the glans penis, termed balanitis, incontinence of urine, spermatorrhœa, pollutions, nocturnal and diurnal, diseases of the testicles and spermatic cords, as hydrocele, varicocele, circocele; diseases of the clitoris, nymphæ, labia, inflammation of the vulvo-vaginal mucous membrane, called leucorrhœa or whites, female pollutions, prolapsus or descent of the womb, scirrhus, and cancer of the womb and surrounding parts, uterine hæmorrhage, sterility, and deterioration of the offspring. I might give several illustrations of each of these diseases which have fallen under my own observation and treatment; but I shall content

myself by stating that the chief indication of prevention, is the suppression of amorous desire the moment it arises in the mind, unless when it may be indulged in according to the dictates of nature. This is to be accomplished by proper attention to a religious, moral, intellectual, and physical education, and by constant occupation of both mind and body. In all cases, the general health ought to be improved, and urgent diseases combatted by appropriate remedies. The application of cold to the genitals and perineum is often of great advantage, and counter-irritation on the perineum and sacrum are also effectual remedies. Sedative plasters are likewise beneficial. The frequent use of bougies are advantageous in some cases. Tonics and chalybeates are highly useful. Compression of the penis by a bandage or other means on retiring to rest will frequently awaken the individual when an erection occurs, and prevent nocturnal emissions. These remedies, with moral controul, will generally effect a cure.

In some cases, the sexual system is excited at night or when the body is heated, by insects peculiar to the pubes. These are readily destroyed by applying strong mercurial ointment, or the solution of the oxymuriate of mercury, and then washing the part with soap and warm water. As a general rule, every cause whether mental, physical or mechanical which excites the organs ought to be avoided.

Tissot, in his Treatise on Literary Men, mentions some curious examples of the bad effects of severe study on the generative functions. Peyrilhe reports the following case: —A mathematician, profoundly occupied with some pro-

blems which he could not resolve, was so affected when he caressed his spouse, he could not ejaculate. His wife consulted the narrator of this case, who advised her to cause an amorous joyous excitement in her husband, and to seize this moment to receive his caresses. She rigorously followed the advice, and her husband regained his powers. (Maur. Thesis, Paris, 1835. Marc. Dict. des Sciences Med. *Impuissance.*) Excessive desire or love may cause impotence. A man, aged thirty-six years, of a good constitution, was married to a healthful woman, aged twenty-six. Both were in good health, and extremely desirous of having children; but the husband could not ejaculate on account of the vigour of erection and rigidity of the penis, and he was forced to retire before the consummation of the act. This circumstance was the more remarkable, as he had experienced no difficulty with other women, and had children by his first wife. *Gazette Med.* 1785.

There is a similar case recorded in the Edinburgh Medical Essays. Dr. Cockburn ascribed the want of emission in the subject of this case to the excessive vigour of the erection, which entirely closed the urethra. Slight evacuations and refrigerants effected a cure.

I have also been consulted in many similar cases.

Every exciting or depressing passion which operates during the act of reproduction, may be a temporary cause of impotence. All causes of debility, whether moral or physical, impede the function of generation. Priapism and satyriasis impede seminal emission, and may be causes of impotence and sterility.

Dr. Gall observed in his lectures, that such clergymen

of the Roman Catholic church, as were considered in the odour of sanctity, were remarkable for atrophy of the genital organs. No medical man can deny it.

Monstrous enlargements of the penis and scrotum, constant priapism, induced by local or constitutional irritation in some persons, but most frequently the result of a long course of dissipation and libertinism, cause impotence. The late Mr. Norris, of the Old Jewry, who was one of the examiners at the Royal College of Surgeons in this metropolis, published a case in the *London Medical and Physical Journal*, of a man affected with priapism, who peformed the generative act fifteen times in one night; but it is not mentioned whether impregnation followed or not. Similar cases are recorded.

Many debilitating diseases, such as typhus fever, purpura hemorrhagica, anasarca, infiltration of the penis and scrotum, falls and blows on the head or spine, are also causes of impotence.

It is known to every well-developed adult, that the influence of the mind is very great on the generative function, and may wholly prevent the completion of the act. If the imagination wanders from the real object of desiring species, impregnation is often, but not always impeded, and issue seldom follows. Sterne has happily commented on this point, in the first chapter of one of his most popular works; and his views are strictly physiological. When the one party entertains dislike or disgust to the other, or when either allows the mind to be occupied with the image of another individual, the act of generation may be duly performed, and the offspring will bear a strong resemblance to the person who occupied the imagination of

the party. Dr. A. T. Thomson gives a remarkable example of this kind in his Lectures on Medical Jurisprudence, published in the *London Medical and Surgical Journal*, 1834.

There are many cases in which impotence is caused by the hatred and disgust of the husband towards his wife, though he is capable of cohabiting with other women. The histories of profligate men have often demonstrated, that a man may be impotent with one woman, but a new and more attractive object arouses his corporeal energies, and assists the completion of the sexual function. This position is well illustrated by the case of the Earl of Essex, and Lady Frances Howard, which occurred in 1613, in which the marriage was declared void by the king, though the Archbishop of Canterbury was against granting a divorce. The earl admitted he was impotent with his wife, but not so with other women. The following are the particulars of the case :—

The countess transferred her affections to the royal favourite Carr, Viscount Rochester, (afterwards Earl of Somerset), and being desirous of a divorce, complained that her husband was impotent. She deposed, that for the space of three years they had lain together, and during that time he had repeatedly attempted to have connexion with her without success. She also stated, that she was still a virgin, and several peeresses and matrons, who were directed to examine her, corroborated this statement, although it is mentioned that she substituted a young female of her own age and stature in her place during the examination. She was also pronounced to be well fitted for having children. The earl, in his answer, admitted

his inability to know her, while he denied his impotence as to other females, and insinuated his belief of her incompetency for copulation. After the examination of numerous witnesses, objections were raised by Abbot, the Archbishop of Canterbury, and one of the king's delegates on this trial, to the propriety of dissolving the marriage on such grounds; to which the king vouchsafed an angry reply. It was finally decided by the vote of seven delegates (five being absent, and not consenting,) that the marriage should be dissolved, and the parties allowed to contract new marriage ties. Hargrave's State Trials, vol. i. p. 315. See also No. 1, in the Appendix to vol. viii., being a narrative of the proceedings on the trial, drawn up by the Archbishop of Canterbury. In the speech which he intended to have delivered on giving his opinion, he related the case of one Bury, who was tried in 1561. His wife cited him before the ecclesiastical court on the ground of impotence, and the physicians deposed that he had but one testicle, and that not larger than a bean. The want of access was also proved. A sentence of divorce accordingly passed. After some time, Bury married again, and had a son by his second wife. A question arose after the lapse of some years, whether his offspring was legitimate, and it was decided that the *second marriage was utterly void*, because the ecclesiastical court had been deceived in the opinion they had given on the impotency of Bury. (Page 23 of the Appendix.)

A case somewhat similar occurred in France, 1653. The Marquis of Langey, aged 25 years, married a lady between thirteen and fourteen years of age. They lived happily

as man and wife for four years : and a short absence from home, induced the marchioness to express great anxiety and tenderness of affection for the return of the marquis. Soon after this, the wife accused the husband of impotence, and declared herself a virgin. The marquis, piqued at this, demanded the custom then sanctioned by the laws of his country—trial by congress. The judge ordered it; the lady appealed; but the decree was confirmed. A jury of five physicians, five surgeons, and five matrons, was empanneled. They filled their reports with the most obscene details, and gave their decision against the marquis. The marriage was declared to be void, on the 8th of February, 1659, the husband decreed to pay all costs ; to return the fortune he received; and he was ordered not to marry, while the marchioness, now Madlle. de St. Simon was left at liberty to do so.

The marquis submitted a legal protest against the decision that he was impotent, and declared his intention to marry. The lady married the Marquis of Boisle, by whom she had three daughters. The marquis likewise married and had seven children.

In fine, the Marchioness of Boisle, explained, on her death bed, the stratagem which she employed to annul the marriage. The minister of public justice seized upon this declaration, and brought in a law which abolished, for ever, the indecent and useless proof of virility, of trial by congress. It may be stated, that it had been abolished by Justinian, about the fifth century, as an outrage on the purity of the Christian religion.

There are many other causes of impotence besides those already mentioned, which may be briefly noticed. Long

watching, great fatigue, mental or corporeal, want of nutriment, excessive evacuations, sanguineous or otherwise of blood, bile, fæces, saliva, menses, scorbutus, scurvy, cachexia, marasmus, peripneumonys, hydrothorax, anasarca, malignant fevers, diseases of the brain and spinal marrow, whether from external injuries or poisons, and numerous other diseases, are temporary causes of impotence. Sexual desire is suppressed by acute diseases, and usually returns after convalescence. Zacchias and Beck relate numerous cases in proof of this position. We see this further illustrated during the commencement of convalescence after fevers, when erection is frequently observed. Some diseases stimulate the generative organs, as calculus in the kidneys or bladder, stricture of the urethra, diseases of the prostate gland, as well as gout, rheumatism, consumption, piles, mania, itch, leprosy, and other cutaneous affections.

Other complaints may diminish or suppress venereal desire for days, weeks, months, or years, and then the function may be restored. (Zacchias).

Excessive venery is a frequent cause of want of erection and impotence. I have been consulted in several cases of this description. This is a frequent cause of want of offspring in young married persons, as well as in those who indulge in a solitary vice. In these cases, the semen may escape without the aid of the ejaculatory muscles, is imperfect in quality, and devoid of prolific power until the health is improved. There is generally inflammation of the seminal vesicles in these cases, and seminal debility or spermatorrhœa.

The abuses of narcotics, saline refrigerants, acids, acid

fruits, iodine, camphor, and nitre, are causes of impotence, as they reduce the muscular power below the ordinary state. Of all causes, cold is the most powerful. Thus, in the Polar regions, there is neither love nor jealousy.

"The diseases," says Beck, "which we may rationally suppose will prevent cohabitation, are the following:—A mutilation, or severe wounds of the sexual organs, cancer of the testicles or penis, gangrene of the lower extremities, immoderate evacuations of blood or bile, or of the fæces, scorbutic cachexia, marasmus, peripneumony, and hydrothorax, anasarca in its perfect state, particularly if accompanied with an infiltration into the sexual organs; nervous and malignant fevers, particularly if they affect the brain, and are accompanied with great debility and loss of memory; all affections of the head and spinal marrow, whether from a fall, blow, wound, or poison; or from external causes, as apoplexy, palsy, or other comatose diseases. If the infant is conceived whilst the husband has been known to have laboured under any of these maladies, the presumption is certainly against its legitimacy. So, also, if he be affected with leprosy, venereal ozœna, severe cutaneous disease, or insanity, we may reasonably doubt the fact of cohabitation, from the fear that we may suppose the female has experienced, lest she should be contaminated, or from the dread that she has entertained of having communicated with the individual."

Moral Causes.—There are no facts which so evidently prove the influence of the moral over the physical state of man as the phenomena of erection. A lascivious idea will arise in the midst of our gravest meditations; the virile organ will answer to its appeal, and will become erected,

and fit for the function which nature has confided to it; but another thought arising, will instantaneously extinguish, with the most frigid indifference, all amorous transport.

This statement is well exemplified by the effects of the passions. Chagrin, inquietude, and debilitating passions influence the whole economy; jealousy, and profound meditation, impede the faculty of procreation. Thus, at the very moment when enjoyment is about to be commenced, too eager desire, the excess of love, the fear of not being loved, timidity, respect, doubt of capability, the fear of being surprised, the shame of excessive modesty on being in the presence of witnesses, antipathy, the ecstasy on beholding the attractions of a beloved or fine woman, the continence imposed by real and true love, the sudden knowledge of some physical defect in the female, aversion from filth, odour, and pre-occupations of the mind, are sufficient to oppose erection, and to abate it most suddenly. But who can enumerate all the moral causes capable of impeding or abating erection? A sigh, doubtfully interpreted; a recollection, an equivocal word, are sufficient to destroy the illusion, and congeal the most violent passion. A newly married man has become suddenly impotent, on discovering his wife to be without a hymen, though the absence of this membrane is no proof of unchastity; and a debauchee has as suddenly become impotent, on finding the membrane perfect.—(Dict. de Sc. Medicales.) It is thus with a literary man, a philosopher, or all those who have a ruling idea, which excites the brain more than the sexual organs. Nevertheless such individuals are often excessively amorous. Great nervousness, frigidity,

a defect in the moral or physical condition render the act of procreation infecund, and often impossible. The fear of being impotent is by far the most frequent and powerful cause of this condition. Many individuals suppose there is no physical power when the moral state destroys their desires, and they are impotent as long as they suppose themselves so. Such is the power of the moral over the physical state of man. Many impotent persons of this class were cured by Hunter; and many are annually cured by quieting the imagination and strengthening the constitution, as I have also observed in numerous instances. Some persons labour under moral or temporary, and not under physical or persistent impotence, and are cured by invigorating the general health and the genital organs. In remote ages men are said to have allowed the illusions of the imagination to have had a most extraordinary power over their minds and bodies. This was very remarkable in the subject before us. Nero and Amesis are reported to have been rendered impotent by incantations, made at the suggestions of their concubines.

We cannot now easily comprehend how the power of rue, or St. John's wort, could prevent a man, properly developed, and in good health, from performing his nuptial duties on his bridal night; or how the pronunciation of a few obscure and unintelligible words, could have a similar effect. These words were written on paper with the blood of a bat, sewed up with a needle which was used in making the shrouds of the dead, and then the charm was tied round the neck of the new married man (Venette; also Les Secrets du Petit Albert,) or merely pronounced. To cure this enchantment, the church pre-

scribed prayers, the doctors physic, and the laws severe punishment. Bacon observes in his Natural History, that it was prevalent in Germany and France; and in the latter country it was designated *nouer l'eguilette*, or tying the point. Mr. Hunter ordered timid bridegrooms, and those whose impotence was imaginary, to refrain from sexual intercourse for a week, no matter what might be their desires, and then to try their powers. They usually took some mild form of medicine, and a few drops of tincture of opium each night, during the period of preparation. On a future attempt, the mind was not to be pre-occupied, but wholly intent on the act. This plan of treatment was most judicious, and I have tried it in several cases with success. I have also given quinine to improve the appetite and strength.

The accumulation of the seminal fluid for a week generally excites strong desire, while the opium, acting on the brain, changes the train of ideas, and prevents nocturnal emissions, so that at the end of the prescribed period there is no doubt of success. This mode of cure was found effectual, and many of Mr. Hunter's patients succeeded sufficiently to remove all unfavourable impressions of impotence ever afterwards.

Impotence, natural, manifest, or incidental in woman.—It has been long held, I think erroneously, that the generative organs of the human female are more complicated than those of the male, and therefore that the causes of impotence are more numerous and less apparent than in the other sex. If we examine the genital organs of both sexes anatomically, we shall find them equally complicated, and possessing an equal adaptation or arrange-

ment of parts, as well as an identity of structure. Thus we find the structure of the penis very similar to that of the external genital orifice and vagina, the fold of the prepuce, the erectile tissue, the openings of the vesiculæ seminales and uterine tubes, the vesiculæ seminales and uterus, the testes and ovaries, the spermatic cords and the uterine tubes. (See Dr. Quain's Anatomy.) We also find the diseases of one sex as numerous as those of the other: and those who doubt the assertion, need only refer to standard works on diseases of the genito-urinary organs of the male, for ample proof of this position. I need scarcely observe that diseases of the vasa deferentia, vesiculæ seminales, the pressure of tumours, hydatids, &c., on these parts, diseases of the prostate gland, urinary calculi, diseases of the urethra, fistulæ in perineo, diseases of the bladder, penis, and scrotum, will be found as numerous as those of the generative system of the other sex. (See my work on *Prostitution in London.*) Besides, it would be inconsistent with the wisdom and conformity displayed in all the works of Providence, that one sex should have more organs for the perpetuation of the species than the other.

The causes of impotence in women are malformations or diseases of the sexual organs. Some of these causes are apparent, others obscure. The apparent causes are, obliteration of the external sexual organs, both soft and bony, absence of the vagina and uterus, and great deformity of the pelvis, with numerous diseases of the external and internal genitals. The vagina and uterus have been found to consist of a dense, fleshy substance, (Morgagni, Mott' Fodère.) And the vagina has been partially closed by a

similar growth. (Parè, Ruysch, Fabricius, Physick, Fodère.) It may be absent (Haller, Vicq, d'Asyr, Journ. des Savans, Boyer, Caillot, and Willaume,) unusually small, impervious from adhesion, tumours, or a frœmum passing across above the hymen, or it may be filled with a fleshy production. If too narrow, it may be dilated with a bougie, or a sponge tent, and when unattended to, must be divided by incision, to admit of coition, or the passage of the infant. The orifice may cohere after conception. There is sometimes a great congenital confusion of parts, so much so, that it would be tedious to describe them. In cases of extreme narrowness, impregnation may take place, and the canal be gradually dilated during pregnancy or parturition. I have seen eight cases of cohesion of the labia externa, at the age of puberty, so complete, that only a small probe could be introduced at the superior commissure. The vaginal canal may be totally or partially obliterated, and in such cases an operation is impracticable, and impotence absolute. The vagina has opened into the bladder (Sue), into rectum, on the anterior parieties of the abdomen, and pregnancy has occurred in the two latter cases. Morgagni attests that of the abdomen, lib. v. epist. 67; and the other is given in the Annales de Med. de Montpellier, which led the celebrated Louis to propose the following question to the casuists:—"An uxore sic disposita uti fas vel non, judicent theologi morales?" Barbaut cites two examples of pregnancy of this kind. (Dict. des Sc. Med., *Art.* Impuissance.) Orfila contends, such malformation is a cause of impotence; for though coition is not physically impossible, it is contrary to the laws of morals and of nature. The royal court of Treves annulled

a marriage in such a case. Dupuytren, and others, have lately described cases in which the infant passed through the rectum, and without laceration of the sphincter ani. Mr. Lawrence introduced his hand into the rectum of a patient in St. Bartholomew's Hospital on one occasion, to extract a phial which had been passed into that bowel. In cases of vesico-vaginal, recto-vaginal fistulæ, and amplification of the vagina from laceration of the perineum, inflammation and ulceration may occur and impede sexual intercourse; but such cases could not warrant a divorce, when they occur after marriage. Excessive straitness, or partial occlusion of the vagina, are not impediments to procreation, as fecundation may occur, if the spermatic fluid be applied inside the external labia, as already mentioned. It is also to be recollected that, fecundation has happened, and the hymen perfect. (Ruysch, Parè, Smellie, Hildanus, Mauriceau, Boudelocque, Nægele, Nysten, Journ. de Med. de Corvisart, and Leroux.) Prolapsus, and some forms of ulceration of the vagina, are only temporary causes of impotence. Cauliflower tumours of the clitoris or nymphæ may be temporary causes of impotence, as also tumours in the vagina. (Burns, Trans. Dublin College of Phys. 1824, vol. iv.; Edinburgh Med. and Surg. Journ., 1805.) Leucorrhœa or vaginal discharge (whites) is one of the most common causes of temporary sterility.

A remarkable case occurred at the Obstetric Hospital at Turin, of a woman whose external genital aperture was impervious. She appeared to be in labour; a tumour pressed on the perineum, and Professor Rossi was summoned to attend. He distinguished the head of the infant, cut over it, and parturition was speedily completed. He

inquired how conception had been accomplished, and he was informed, that the husband, not finding what he desired, took the opposite route. On examination, there was found a congenital recto-vaginal fistula. Dict. des Sciences Medicales. *Art. Impuissance.*

When recto-vaginal fistula is the result of disease, it is accompanied by inflammation or ulceration, it is scarcely possible to suppose that coition could be accomplished. M. Marc attended a prostitute affected with recto-vaginal fistula, who continued her mode of life, and became the mother of two infants. He does not state whether the aperture was congenital or accidental. Dr. A. T. Thomson attests a similar fact in his Lectures on Medical Jurisprudence, published in the *London Medical and Surgical Journal,* 1834 and 1835, vol. vi.

Another remarkable case of impotence is mentioned by Van Swieten, who quotes Benevoli. In this case, the vagina was no larger than a goose-quill, in all its extent. The woman was married, and all the efforts of a vigorous husband were useless. The vagina was scirrhous. Fomentations were employed, and pessaries of different sizes successively introduced, and, after some time, the woman was rendered capable of cohabiting with her husband.

I have attended a similar case, with Mr. Brady, of Blackfriars, in 1837. The vaginal contraction would scarcely admit the point of the finger, and it occurred after a tedious and instrumental delivery. Cohabitation was then impossible, but a cure has since been accomplished.

Fodère relates a case nearly similar to the last. It was

that of a girl of sixteen who married, and whose vagina could scarcely admit a goose-quill. She suffered great pain during each menstrual period, accompanied by distension of the womb, and the menses escaped at the superior part of the aperture. A young and vigorous husband employed his powers in vain, and the medical advisers declared copulation impracticable. Nevertheless, after the lapse of eleven years, the woman became pregnant, though the vagina remained as small as before. It was feared that parturition could not take place; but, after the fifth month of pregnancy, the vagina began to dilate, and, towards the end of the ninth month, allowed the passage of the infant.—Mem. Acad. des Sc. Paris, 1712. Fodère, T. 1.

In such cases the use of bougies, before or after incision, would, in general, effect a cure, and certain theologians decide that the woman ought to submit to either or both.

In proof of the dilatability of mucous canals, the following case may be cited. It is related by M. Latour, in a medical journal published at Orleans. A peasant, whose wife was sterile, substituted the urethra for the vagina. He dilated the former by mechanical means, progressively employed, until he accomplished his object. The result was incontinence of urine, which led the woman to apply for medical advice, when the cause of her complaint was ascertained.—Marc. *op. cit.*

I have given the history of a case, which is somewhat similar to the preceding ones, the first part of which will be found in my *Manual of Midwifery*, p. 512. The woman was affected with vesico-vaginal, and recto-vaginal fistulæ, both of which I succeeded in closing without any cutting operation. A ligamentous band so diminished the

calibre of the vagina, that the top of the fore-finger could be introduced with difficulty. I proposed to incise it, but the patient refused. She returned to her husband, and in a year he succeeded in partially dilating the vagina; but so firm was the band, and so opposed to coition, that he re-opened the vesico-vaginal fistula. Inflammation and ulceration followed—a large calculus or stone formed in the opening, which I extracted; sedative injections and other appropriate means were employed; in some time afterwards the health was restored, and the woman became pregnant. Several students saw this patient at the Western Dispensary, Westminster, in 1835. In this case the vagina finally dilated during pregnancy, and there was prolapsus of the bladder during labour, which required the operation of craniotomy. Dr. Ashwell saw this case with me in 1836.

The celebrated Pucelle, Joan of Arc, was examined by two physicians, who found the vagina so contracted, that coition was impracticable. Dr. A. T. Thomsom attended a lady, who also had consulted Sir Charles Clarke, for whom various means were employed to allay irritation, and effect dilatation in vain, and she would have applied for a divorce, unless she had been allowed to retain her fortune, which was considerable.

The uterus may be absent. (Columbus, Schlegel, Morgagni, Meyer, Renauldin, Hamilton, Bosquet, Theden, Engel, Lieutaud, Caillot, Ford, and Breschet.) I might quote numerous writers who describe the cavity of the uterus divided by a septum, but they do not state whether or not procreation was impeded. Many authors have also described partial or total obliteration of the uterine cavity,

among whom are Bichat, Lallemand, Segard, Gardien, &c. The uterus may be double, that is, there may be two uteri. (Haller, Purcell, Med. Facts, vol. iii. Mem. Med. Science, vol. iv. Lond. Med. Journal, 1782, vol. iii. Dict. des Sc. Med. Medical Transactions, vol. vi. Dugès, Journal de Proges, vol. xxii.) A vicious direction of the os and cervix uteri, or complete occlusion of the former, are irremediable causes of impotence and sterility. I have met with cases of these kinds both before and after death. The whole of the causes of impotence and sterility in women may be arranged under three classes :

1. Those depending on the organs which receive the male fluid, namely, the external genital fissure, the vagina, and uterus.

2. Malformation, or diseases of the organs that transmit it to the ovaries, and convey the embryo to the uterus, and these are the Fallopian or uterine tubes.

3. The malformation, or diseases of the ovaries, or organs which supply the germs for fecundation.

Inflammation, ulceration, scirrhus, cancer, ossification, calcareous deposit, or tumours in any of these organs, may be the cause of sterility. In fact, any disease of the female genitals, attended with much constitutional disturbance, may be considered a temporary cause of sterility. Tumours of various kinds, callosities, cicatrices, adhesions, from disease or mechanical violence, displacement of the uterus, prolapsus, procidentia, retroversion, antiversion, lateral obliquity, and the various disorganizations incident to muscular, serous, and mucous tissues, when present in the female organs, are causes of infecundity. Among the temporary causes of female impotence, are excessive

dimensions of the clitoris and nymphæ; but these are removable by operation.

Some authors are of opinion, that the cavity and outlet of the pelvis may be so deformed, or diminished by soft or bony tumours, as to prevent coition; while others maintain the contrary. When the pelvis is so greatly deformed that the lives of the fœtus and of the mother may be endangered or destroyed during parturition, moralists advise celibacy.

Morgagni relates a case, in which M. Gianella was called to deliver a woman aged forty years, in whom the vagina opened through the anterior wall of the abdomen, and the aperture was dilated to admit the passage of the infant.

In the *London Medical and Surgical Journal*, 1830, vol. iv. is an account of two singular cases of procidentia uteri; in both of which impregnation was effected through the uterine orifice, though permanently fixed for years several inches external to the genital aperture. I have been consulted in the case of a woman four months pregnant, whose womb came externally on her assuming the erect position; and I have now another under my care, who is six weeks pregnant. I have also published cases of dysmenorrhœa, or painful menstruation, in which pregnancy occurred. In the disease called irritable uterus, so well described by Gooch and others, a cure may be effected. In the absence of the ovaries and uterine tubes, there can be no conception; or in dropsy, or enlargement of both ovaries, when their whole tissue is diseased; or in occlusion or adhesion of the tubes to the uterus or adjoining parts. There are some cases of constitutional sterility which

are inexplicable, unless referrible to mental influence ; for example, those in which a woman has had no family for years, and at length becomes a mother.

The principal moral causes of female sterility, are hatred, disgust, fear, timidity, an excessive ardour of desire, divers ramblings of the imagination ; in a word, passion strongly excited ; that is to say, all cerebral action so strong as to diminish that of the genital organs, which require for coition great exaltation. It is well known, that complaisance, tranquillity, silence, and secresy, are necessary for a prolific coition ; it is arrested, as if by enchantment, by noise, dread, fear, publicity, jealousy, contempt, repugnance, slovenliness, by too much respect, and by every thing that can excite or depress the imagination. Most of the causes of impotence in both sexes may be removed, but some are beyond the reach of art.

Excessive venery is a common cause of sterility in women. The debility of the uterine system by promiscuous and too frequent intercourse, is the cause of infecundity in prostitutes and others. But when these persons reform and marry, and confine themselves to one individual, the uterus gradually regains its power, and conception occurs often. Many proofs of this were given by prostitutes, who were transported to Van Dieman's Land, and there became mothers.

The constitution may undergo changes favourable to fecundity. Thus we often see women who bear children, after having been barren for ten or twenty years. Others have a family without experiencing any enjoyment, according to their account, during intercourse ; and some

who suffer the embraces of their husbands with pain or even disgust.

Besides the numerous diseases of the genital organs which are absolutely opposed to marriage, the following must be included :—

1. The different degrees of imbecility or fatuity, although this state may not be absolute ; mania, even with long lucid intervals, which may induce a husband to lay violent hands on his wife or infants, or even murder them.

2. Epilepsy, which has continued after puberty, and has not yielded to medicines. This disease is often caused as well as aggravated by sexual pleasure, and may end in mania, or in idiocy, or apoplexy ; it not only passes from generation to generation, but may be excited in others by terror, or by intimidation in schools.

3. Hæmoptysis, or spitting of blood, certain diseases of the heart, and consumption, are aggravated by venery ; and those affected with the latter disease are much inclined to this pleasure, as if nature wished to continue the species before the destruction of the parent.

4. Syphilis, scrofula, and leprosy, which may be transmitted to offspring.

When persons have no sexual desire, or when there are physical defects of their organs which cannot be remedied by surgical operation, they commit a great moral offence on entering into the marriage state, by depriving another individual of those conjugal rights which nature has established.

From the numerous statements in the works now referred to, we may, I think, deduce the following general principles :—

First. To declare either sex impotent, it is necessary that certain physical causes be permanent, malformations, or accidental lesions, and be evident to our senses, which art cannot remedy, and which prevent the faculty of exercising a fecundating coition.

Secondly. These causes, when rigorously examined, are few in number.

Thirdly. The moral causes of impotence ought not to be taken into consideration, unless with due caution, as they would serve as an excuse for an individual accused of impotence.

Fourthly. That if there is the slightest penetration into the vagina, it is sufficient to excite in the other sex a degree of erethism or excitement necessary to fecundation; or if the spermatic fluid is applied at the entrance of the vagina, verile impotence cannot be admitted.

In this country, the medical witness is now seldom required to decide questions of impotence or sterility in our courts of justice; but every medical practitioner may be consulted in private practice, either before or after matrimonial engagements. He may therefore be the cause of great domestic trouble, and may embitter the life of male or female. He should be exceedingly cautious in fixing the stigma of impotence or sterility on either party. In other cases, the legitimacy of children may be contested on a plea of impotence, and such a plea may be offered by a man accused of a rape. It is therefore evident that a proper knowledge of the subject is necessary to the medical practitioner, the lawyer, the juror, as well as to every class of the community.

Ambiguity of Sex.—Hermaphrodites.—There may be

malformation of the genitals in both sexes, but there is no example on record of one individual possessing perfect male and female organs. Again, the organs may not resemble those of either sex. There is no truth in the ancient statements, that hermaphrodites have married and propagated, for the scientific obstetrician is aware of the physical impossibility of a full-grown infant passing through the male pelvis. It is evident that hermaphrodites, whose organs are defective, must be impotent and sterile. Some of the ancients were of opinion that such persons might propagate ; even a canonist went so far as to maintain, that one individual could propagate within himself or herself—" tanquam mas generare ex alio, et tanquam fœmina generare in se ipsa." There is no case on record, so far as my researches enable me to state, of a perfect hermaphrodite, and no truth whatever in the assertion that such class of beings can propagate the human species. It is true, however, that hermaphrodite plants possess the power of reproduction.

I can see no difficulty in supposing that persons of both sexes, with great malformation of the genital organs, may marry, as many do, when I recollect the curious and well-attested case of a female who dressed in male attire, and assumed the name of James Allen, married another female, and lived as a husband for several years without detection. This case happened in London in 1829, and was discovered when Allen died ; and on exposing the body in Guy's Hospital, it was found to be that of a well formed female. Allen was a husband for eleven years without suspicion or detection. I know a clergyman of the established church, whose wife was previously married for five years without

consummation, or any attempt at, having been made during the period.

Blackstone says, "a monster having deformity in any part of its body, yet if it hath human shape, may inherit; and every heir is male or female, or hermaphrodite; that is, both male and female; and shall be heir according to that kind of sex which doth prevail, and accordingly it ought to be baptized. The same is observed in cases concerning tenants by courtesy. Such individuals cannot be admitted into holy orders, or become judges."

It is worthy of remark, that, until the commencement of the eighteenth century, it was believed by some very eminent medical authors, that monsters were formed by a demon. (Licetus, in his Treatise on Monsters, 1616) Riolan, one of the most distinguished writers of the seventeenth century, was also of this opinion:—"As to monsters made after the image of the devil, if allowed to live, they ought to be confined in a close dark chamber. In fine, those who are half human and half animal, they ought to be put to death. This was also the law of the Twelve Tables at Rome, and even of the Athenians. It is scarcely necessary to remark, that there never was, nor never can be, a body "half human and half animal." It is a physical impossibility. Even the celebrated Ambrose Paré considered that the birth of a monster was the sign of some approaching misfortune. These writers knew nothing of Teratology, which treats of the arrest, retardment, or excess of development, so luminously described by the illustrious M. Isodore Geoffroy Saint Hilaire; and which clearly proves that monsters, or deformed animals, are to be ascribed to natural causes.

As the brain is generally perfect in monsters, and the mind sound, it is clear that such persons ought to inherit property. When two perfect bodies are united at the chest or back, such as the Siamese twins and Hungarian sisters:

Non duo sunt, sed forma duplex; nec fœmina dici,
Nec puer ut possit, neutrumque et utrumque videtur.

OVID.

Treatment of Impotence.—The treatment of impotence must vary according to the causes of the disease. Every cause, both moral and physical, requires a modification of treatment, and there is no single remedy, or combination of remedies, which can remove all the causes of this distressing malady. The indications of treatment are—1. To remove or remedy physical defects; 2. To strengthen the system when there is atony or debility; 3. To regulate the whole functions when deranged; 4. To excite or diminish, by proper means, the action of the genital apparatus; and 5. To tranquillize the imagination and mind.

When impotence is caused by moral or physical irritation, as that induced by opiates, cantharides, &c., refrigerants, aperients, low diet, exercise, and the abstraction of the imagination from reflecting on all objects capable of exciting amorous impulse, are the best means to be employed. Exercise in the open air, and constant attention to business, are highly useful in the cure. Idleness and luxuriousness ought to be carefully avoided.

Otia si tollas, periêre Cupidinis arcus.—OVID.

"When there is want of power in the genital organs,

we advise the society of women, erotic discourses, the inspection of voluptuous paintings or pictures, as the means of exciting the imagination. In such cases musk has great influence, as also the nudity of the other sex. La société d'une belle femme, les nudites, dit M. Chaumenton, sont souvent capables de ranimer des organes que les plus tendres caresses n'avaient point emus." (Dict. des Sciences Med. Art. *Impuissance.*) The cold bath, invigorating diet, and a moderate use of wine and spirituous liquors, is also necessary. It is likewise supposed that fomentations of certain aromatic herbs, and dashing cold water over the genitals, strengthen these organs. (Marc and others.) Frictions on the loins, inside of the thighs, with stimulating liniments, galvanism and electricity applied to these parts, are considered valuable remedies. M. Mazard cured several impotent persons by means of electricity, whose disease was induced by a shameful vice, in which they indulged alone, or by excess with women. Some of these had involuntary emissions, and gleets after gonorrhœa, and all were not only cured, but fell into flesh and enjoyed excellent health and virile power. (Encyclop. Method. met. *Electricité.*) He employed the electricity, and elicited sparks from the perineum, spinal marrow, and sacrum, and directed the electric fluid through these parts. Others have advised urtication, flagellation, and friction.

If the disease is caused by excess of enjoyment, abstinence, with a milk and vegetable diet, are the best remedies.

When it arises from moral causes, as timidity, respect, disgust, antipathy, &c., the cure entirely is to be effected by moral resources and the removal of the causes.

Should the disease depend upon want of proper development at puberty, every means of improving the general health ought to be employed.

If old age be the cause, there is no remedy.

The loss of both testicles renders sterility absolute, permanent, and incurable.

The resources of art may often correct vicious conformations of the sexual organs, and the operations must be varied according to the nature of the malformation or disease. These have been described in preceding pages.

Having now enumerated the different causes of impotence, and the general principles of treatment, it must be manifest that the remedial means for combatting the disease, must be numerous and varied. There is, nevertheless, a class of medicines which particularly influence the functions of the genital organs. These medicines, when they excite the organs, are denominated spermatopia and aphrodisiac, and when they weaken or moderate the activity of the genital organs, they are called hypnotics.

In the first class are included tonics, aromatics, odoriferous gums, balsams, resins, essential and volatile oils, perfumes, musk, phosphorus, opium combined with aromatics; and among the second, are camphor, nitrate of potass, neutral salts, agnus castus, nymphœa, &c., diuretics and emmenagogues. Cullen was of opinion that there were no aphrodisiac remedies, but later writers maintain that there are several. I have enumerated these, and the mode of employing them, in another work. (*The Universal Pharmacopœia, or Formulary of European and American Hospitals, 3d edition,* 1839.)

Cantharides have long had the preference of all known aphrodisiac remedies. They form the chief ingredients in the Venetian lozenges and amorous philters prepared in Turkey and in Italy. But the incautious use of this medicine produces stranguary, inflammation of the bladder, ureters, and kidneys, and often death; though when properly employed, there is no donbt of its aphrodisiac effect. Chaumenton was consulted by many young libertines, who, contrary to his advice, continued to use freely this remedy, and who afterwards terminated their existence amidst a thousand torments. (*Dict. des Sciences Medicales,* Art. *Aphrodisiaque.*) Weickard states that he roused the genital organs of a man nearly eighty with musk. (Chaumenton, *op. cit.*)

Ambergris and musk have also a special action on the genital organs. Borelli (Gent. 2.) says he knew a man who rubbed the virile member with musk before intercourse, and remained so united to his wife, that it was necessary to use lavements to separate them. This case is, in my opinion, totally unworthy of credit, more especially when we recollect the dilatibility of the vagina.

" Borelli dit avoir connu un homme qui se frotta de membre viril de musc avant le coit, il l'exerca et resta uni a sa femme, comme les chiens le sont à leur femelles. Il fallut lui donner quantité des lavemens; afin de ramollir les parties, et obtenir la separation des deux individus."

Another very dangerous medicine, is phosphorus, which acts as a most violent poison. It was dissolved in ether, in the proportion of half a grain to forty of the latter, in a proper vehicle. This remedy is highly dangerous, but is now introduced into the London Pharmacopœia, 1836.

When used incautiously, it has been observed to produce the most rapid and painful death. M. Magendie dissolves it in oil in the following proportions,—phosphorus, ʒj; oil of sweet almonds, ℥ij; dose, ♏ xx—xxx in an emulsive mixture. (Formulary, Eighth edition, 1835, see also my Universal Pharmacopœia already quoted, and the London Pharmacopœia, 1839.) In the last work, the dose of diluted phosphoric acid is ♏ xx—ʒj.: opium combined with musk, amber, and other aromatics form the remedy of magnanimity of Kœmper, its inventor. It is very much employed in eastern nations, and is said to cause a delicious intoxication which vividly excites the pleasures of love; but in a few hours afterwards is succeeded by timidity and sadness; and the habitual use of it induces debility, stupor, and precocious old age. Saffron, oil of worms, of palma christa, of ants, the root of the satyrion, sarrasina, &c., have also been lauded, but found inefficacious.

It is stated in the Mem. de la Soc. Roy. Med., 1776, that the corn called sarrazin, which is the aliment of the people of Sologne, excites such lechery that children of seven and eight years old have commerce together, and that the women are still more salacious, and very fecund.

Many alimentary substances excite the genital organs, and their effects will vary according to peculiarity of constitution. Among these are animal jellies, eggs, oysters, and other crustacea; crabs, mushrooms, truffles; farinaceous substances, generous wines, a moderate use of ardent liquors, fish, &c.

Some persons have their amorous propensities excited by wine, others by dilute spirit, more by eggs, oysters, and

even milk. The moderate use of spirituous drinks, of wine, cyder, &c., contributes to fecundity, although their abuse is extremely pernicious. Credulous authors of former times were of opinion that among the best aphrodisiacs are the menstrual evacuation, (I attended a labourer who took a few drops of the uterine secretion in porter. I mention the details of his case in my Manual of Midwifery,) human sperm, (Turnbull informs us, in his voyage round the world, 1807, that some of the inhabitants of the Island of Otaheite were reduced the to effeminacy of women. They had resource to a method of cure which I must describe in the Latin language.—"Penem adrigentem aliorum virorum exsugunt, ita ut in ejaculatione, semen avide deglutiant. Putant enim, per hanc spermatis, absorptionem, robur virile, vigoremque sexûs quo privati sunt, recipere"—that of the stag, the hedge-hog in heat, of the vulva of the sow, of the uterus of the hyena, wolf, &c. Those who desire more extended details may consult the Memoir of M. Virey, in the Bulletin de Pharmacie, 1813.

Hypnotics repress amorous impulse, such as nenuphar, agnus castus, camphor, and nitrate of potass. These were strongly recommended by religious persons who wished to mortify the flesh. It was an axiom at the school of Salernum,

"Camphora per nares castrat odore mares."

The application of these and the oleraceous plants, to the genital organs, are said to produce a complete inertness and eunuchism.

In fine, the best means for curing impotence, are to remove its causes, to avoid excesses, to calm an alarmed

imagination, to repair enfeebled powers. Instead of having recourse to aphrodisiac medicines, we first improve digestion, and advise a nutritious diet, fresh animal food, jellies, milk, eggs, &c.; wine, spirituous liquors in moderation, coffee, chocolate, cocoa, and aromatics.

When the disease depends upon the imagination, which is most generally the case with young persons who have abused the generative function by vicious practices, or in the natural way, but whose organs are properly developed, a nutritious diet, with a judicious use of aphrodisiac remedies, will in most cases effect a cure.

I have given a full account of venereal abuses in relation to health, reproduction, and disease,—of the numerous local and general diseases in the head, chest, lungs, heart, abdomen, stomach, liver, intestines, and other parts of the body, illustrated by original engravings, in another work, to which I must refer the reader, *Prostitution in London, Paris, and New York*, as illustrative of the capitals and large towns of all countries, with an account of the nature of the reproductive function. I shall therefore notice this numerous class of diseases in the following pages very superficially, and merely allude to those of most frequent occurrence, such as syphilis, gonorrhœa, stricture, diseases of the prostate gland, bladder, ureters, and kidneys, of which nothing new can be stated.

CHAPTER XXI.

SYPHILOGRAPHY—HISTORY OF THE SYMPTOMS OF THE VENEREAL DISEASE—COMMENTS ON SEXUAL DISEASES.

THE horrible results of the venereal disease are now so generally known, that it would be unnecessary to allude to them in a work of this description, were it not that most persons, even as yet, do not duly estimate the full extent of their direful consequences on health, population, and longevity. An extensive observation in institutions, established for the cure of venereal disease in these and other countries, as well as considerable private practice, has enabled me to study the various forms of this formidable malady, during the last twenty years. It is, however, foreign to my present purpose to give a minute account of all the ravages of this disgusting and malignant complaint; and I only propose to confine myself to a few general remarks on its primary and constitutional effects on the human body, at the different periods of life.

Primary symptoms of syphilis.—The first appearance of syphilis is a small vesicle on the glans, prepuce, or other part of the penis of the male, or on the labia, vagina, or uterus of the female, and this is termed a chancre. It arises from the application of the syphilitic virus, from a similar sore, on a delicate surface, from which it is speedily absorbed in the same manner as the virus of a rabid animal, the virus of small-pox, or of vaccination, is conveyed into the body. The whole system becomes sooner or later

infected, and a vast number of maladies in all parts of the body are sooner or later developed. Amongst these are buboes or venereal swellings of the glands of the groin, ulceration of the throat, a vast number of cutaneous eruptions, which at first are generally of a copper colour, though they may assume the appearance of ordinary skin diseases. These symptoms are succeeded by pains of the shin and other large bones, as the arms, and even the bones of the head, which are greatly aggravated at night, prevent sleep, destroy the appetite, injure the general health, and are often followed by inflammation and swelling of some portion of the periosteum, most commonly on the tibia or shin, instep or back of the hand, and this is termed a node.

There may in many cases be partial or total destruction by ulceration or sloughing of the virile member, and of the female genitals, of the soft palate, of the cartilages of the nose, or warts on the glans penis, or labia pudendi, various abscesses, pustules, and fissures, in different parts of the body; nervous, neuralgic, and rheumatic pains, falling off of the hair, phthisis or general breaking up of the constitution, and very frequently death closes the scene. Vision is often destroyed by the form of ophthalmia, called iritis; there are severe pains in the bones, enlargement, termed exostosis, and sometimes caries or mortification, and at other times brittleness of the bones, which cause them to fracture on the slightest exertion, as rising from a sofa.

The difference or diagnosis of syphilis and blenorrhagia is easily drawn. In gonorrhœa or blenorrhagia, or more properly contagious urethritis, there is a yellow purulent

discharge from the genitals, often followed by sympathetic buboes, destructive gonorrhœal ophthalmia, severe rheumatism, and frequently ulcerations of the genitals, stricture of the urethra, diseases of the bladder, ureters, and kidneys, which are often misnamed gravel or lumbago.

The ravages of syphilis, both local and constitutional, are often hideous and destructive, and frequently incurable. In other cases, supposed to be cured, the disease remains latent in the constitution, for ten or twenty years, and may be transmitted to the offspring, or destroy the fœtus in the womb. In some individuals, it causes incurable impotence and sterility.

We often observe sloughing of the affected organs in both sexes, inducing infecundity, and very frequently death itself. In some cases, there is ulceration or sloughing of the parts between the bladder and vagina, and between the latter and the rectum, so that the urine or fæces, and sometimes both, are evacuated through the vagina, causing a most loathsome and painful disease, which renders cohabitation impracticable, and often leads to infidelity and domestic misery. I have described several cases of this kind in my other works, and was the first person to cure them without any cutting operation (see *Manual of Midwifery*, 1832.) They are most common in abandoned women, though we frequently meet them in other classes of society from tedious labours.

It is also worthy of remark, that we often find infants infected in the womb, and born with the venereal eruptions upon them, and sometimes so feeble and delicate that they only survive a few hours or days: while others appear withered and emaciated at birth, and can only be

cured by exhibiting mercury or the hydriodate of potass to the mother.

When the ill-cured venereal contamination of either parent is very considerable, though not apparent, the infant will be born between the seventh and eighth month, in a state of decomposition and putrefaction. I have described several cases of this kind which fell under my care, in my *Lectures on the Physical Education and Diseases of Infants and Children*, already quoted.

I have repeatedly known women to have six or eight infants in rapid succession, which were born dead and decomposed, between the seventh and eighth month, in consequence of the ill-cured syphilis in the father. I was once consulted on a distressing case of this kind, with an eminent physician of Dublin, about which the most serious family misunderstanding existed on account of the want of living offspring. I proposed that the parties should live separately for six or eight weeks after the lady's next confinement, during which period she and her husband were to be put under the influence of mercury and sarsaparilla. They afterwards lived together, a living infant was born in due time, they have now a large family, and are perfectly happy.

According to my experience, there is no use in prescribing remedies for either husband or wife, when the latter is pregnant, as in such case the infant will be born, as on former occasions, dead and decomposed, between the seventh and eighth month. I feel convinced that the fœtus is contaminated at the moment of conception, not at the sixth month, as Mr. Abernethy inculcated (*Lectures in the Lancet*), and I know, by repeated observations,

that the ordinary remedies will fail when pregnancy has occurred. This remark is of much practical importance.

I may further state, that a man who has no external sign of syphilis, who has been declared cured by his medical attendant, and who is advised to marry, may contaminate his wife and offspring in different degrees, so that his infant may be born feeble, or covered about the genitals, mouth or eyes, with a red or dark copper coloured eruption, or this may appear soon after birth, or the infant may be born dead and decomposed, as already stated.

It is also a fact, that an infant may contract syphilis in passing into the world, by coming in contact with a venereal sore, which may cause a chancre on the lip, angle of the eye, &c.; and the sore on the lip will infect the nipple of a healthy woman, and this, again, may infect every infant that touches it. In fine, an infant may contract gonorrhœal ophthalmia during its nativity, and have its sight destroyed in a few days, unless proper treatment be employed.

I might quote several cases of this kind, which have fallen under my own observation, caused by these methods of infection. It is therefore manifest, that when a pregnant woman is infected with gonorrhœa, the disease ought to be cured before the time of parturition, or otherwise the infant will contract gonorrhœal ophthalmia, which may destroy its vision. I have known this occur in numerous instances, although the woman supposed herself cured for some weeks before the time of her delivery; but every well-informed physician knows, that the disease is very tedious in the other sex.

It is also a fact, that a man who has been supposed or

said to be cured of gonorrhœa for twelve or fourteen months, and has only a slight gleet or watery discharge from the urethra, will infect a healthful woman: such persons ought not to marry while the slightest discharge continues. I have often been consulted in cases of this kind, and have invariably observed, that whenever my advice as to the impropriety of marriage was not followed, disease was communicated to the woman. In one case, a gentleman affected with gleet determined to marry, contrary to my advice, as he expected a large fortune; he carried his intention into effect, and diseased his bride. Another laboured under the same complaint twelve months after a supposed cure of gonorrhœa, and he also infected his wife. I might mention many other cases of this kind, which led to serious conjugal differences, and were highly injurious to public morals. Indeed they are of too frequent occurrence.

The frequency of venereal complaints is much greater than the public imagines, though much diminished of late years. It is, however, a fact, which cannot be disputed, that in large cities there is not, perhaps, one in ten male individuals, from the age of twenty to thirty years, who has not been affected once or twice with gonorrhœa or syphilis. I have been often shocked on seeing boys and girls at the age of puberty presenting themselves with syphilis or gonorrhœa at the hospitals which I attend. Here we daily observe every form of venereal infection, and the most frightful inroads upon health and social happiness.

These diseases are very common in private practice, and lead to the most distressing results. They are often con-

cealed from the family medical attendant, and the sufferer applies for advice to advertising empirics, who generally allow disease to destroy or contaminate the constitution. It must be obvious, that proper advice should be had as soon as possible, and medicine taken on the first appearance of disease.

Transmission of the Venereal Viruses.—The venereal viruses, or of syphilis and gonorrhœa, are transmitted by absorption or inoculation, which occurs more or less rapidly in different persons; in some, in a few hours, in others, not for some days, and in a few not at all. Hence ablution or washing the parts, as soon after exposure to the poison as possible, will often prevent infection. But the disease may also be communicated by impure kisses, suckling, infected parents, absorption in the skin, excesses in sexual enjoyment, and even the consummation of marriage. The direct application of a chancre, or a primary venereal sore, to any part of the body, if the skin be broken, and especially to a mucous surface, such as the lip, the eye, the nostril, or any of the outlets of the body, to the nipple, or to any part where the surface is tender or broken, will communicate the disease. But excoriations of the glans penis, prepuce, and labia, are easily distinguished from chancres, and are merely local affections which cannot contaminate the constitution, though non-medical individuals entertain the opposite opinion.

Prevention of Syphilitic Infection.—The best mode of preventing infection is immediate ablution with water and soap, or a dilute solution of the disaffecting agents, such as the chloride of lime or soda. But when a pimple or sore has once formed, absorption or inoculation has taken

place to some extent, and the disease cannot be removed by ablution.

There are certain means used by libertines which prevent venereal infection and procreation, and I regret to state, these have lately been minutely described in a modern medical periodical in this country.

As soon as a pimple or little blister has formed after an impure connexion, on any part of the genitals, it ought to be carefully touched with nitrate of silver, the diseased part destroyed, the remaining ulcer dressed with mercurial ointment, and washed with the mercurial lotion, called "black wash," to insure a successful and certain cure. The patient should also take mercury until the teeth become painful on pressing them against each other, and until the gums become tender. Sarsaparilla properly prepared, nitric acid, and hydriodate of potass, ought likewise to be exhibited at the same time.

Secondary Symptoms.—When venereal ulcers or eruptions appear, after any primary sore, on any part of the body, as on the face, throat, chest, back, thighs, &c. the constitution is infected, and a judicious use of mercury, compound calomel pill, sarsaparilla, nitric acid, hydriodate of potass, and other appropriate means are indispensably necessary.

It is very important to distinguish the pseudo-syphilitic from the real disease, which is easily done by studying the description of Abernethy and others. There can be no difficulty in diagnosticating imaginary venereal affections of nervous or timid persons, and of those about the age of puberty.

Syphilitic neuralgiæ, or severe pains in the head, face,

or other parts of the body, as well as rheumatism, require the use of mercury and the other remedies already mentioned, with strong anodyne embrocations, and the internal use of the sedative preparations of opium, morphia, or the extract of hyoscyamus and conium, colchicum, veratria, &c.

A gentleman, aged thirty-six years, of scrofulous habit, requested my advice under the following circumstances. He stated that he had not slept for six weeks, in consequence of severe pain in the bones of his head, arms, and insteps, which became intense in the evening, and occasionally at different hours of the day. There were several blotches on his face, which greatly disfigured him, and a copper coloured eruption on his chest and body. There was a painful swelling on the back of the left hand and right instep. He stated that he had been under the care of two of our most distinguished surgeons, who gave him large doses of mercury without affecting him, and who had advised him to take sarsaparilla, which he continued until he had expended a large sum in the purchase of it. The appetite was bad, the spirits greatly dejected, and the general health very much injured. His condition was rendered still more distressing as he had lately married, having been previously assured that he was free from his disease.

I ordered him scruple doses of calomel, combined with camphor and morphia, the hydriodate of potass, and an ointment of the latter, with morphia, to be applied to the painful tumours on the hand and instep, with a full dose of morphia every night at bed time. The painful parts were also rubbed with camphorated oil and morphia, twice

a day. He felt greatly relieved from his neuralgic pains the first night, his mouth was affected with the mercury on the ninth day, after which all his symptoms rapidly disappeared, and in six weeks he looked much better than he had done for many years previously. He has since enjoyed health, and is now a happy husband and father.

Many practitioners are fearful of such doses of mercury, but those who have practised in tropical climates, more particularly Dr. James Johnson, assure us of their perfect safety. I have now employed them for some years past, without the slightest bad result, when combined as above advised, and after ordinary doses had failed. For a further account, see my edition of *The Physician's Vade Mecum*, 1837, *The Universal Pharmacopœa*, and my other works.

A similar case, deserves record:—

A merchant, aged 50, who had been improperly treated for syphilis, seven years before his application to me, complained of severe pain occasionally in the middle of the left shin bone, which became so excruciating at times as to deprive him of sleep for several successive nights. There was no redness or swelling of the painful part. He had been salivated ten times by one of our most eminent surgeons without relief; and he, as first suggested by Sir Philip Crampton, Surgeon General in Ireland, proposed to lay the part open, to which the patient would not consent. I ordered him the hydriodate of potass in combination with the acetate of morphia, and an ointment of the iodu-ret of lead, with morphia, to be applied night and morning to the affected part. He continued this plan for a fortnight, when he was free from pain, and in a month he

considered himself cured. It is now nearly three years since his recovery, and he has had no return of his disease. His sufferings were so great at one time, that fears were entertained by his relations that he might commit suicide. He had been treated by an ignorant chemist, when first affected.

Both these patients had nodes, as well as most severe neuralgia, or tic doloureaux; and I may also confidently state that the treatment employed will often afford relief even in venereal exostosis or enlargement of the different bones.

Venereal Eruptions.—Every form of eruption in the skin may be stimulated by venereal disease, as first accurately described by Mr. Carmichael, of Dublin, and subsequently, most accurately delineated by M. Rayer, in his splendid work on Diseases of the Skin. Some of these produce the greatest deformity of the face, nose, and even destroy the soft parts, as the palate, genital organs, &c., and different parts of the body; they require the use of mercury, sarsaparilla, iodate of potass, &c.

Alopecia or Baldness is also caused by syphilis, and is an incurable disease.

Osteocope, or intense pain in the bones, may also be induced by venereal disease; and it is often accompanied by severe headache. The treatment is the same as in the last form of the disease.

Excresences and Ulcerations of the genitals, about the anus and adjacent parts, and even sloughing must be included in the effects of this horrible complaint.

It would occupy a large volume to describe the different forms of syphilis, and far exceed the limits of a work of

this description. Those who wish for the fullest information on this subject, will find it in the excellent work of Mr. Carmichael, and the smaller one of Mr. Wallace, both recently published. Enough has been stated in the bare enumeration of the horrible effects produced by the venereal disease, to deter all persons capable of reflection, from exposing themselves to this truly frightful malady. It is generally incurable in the scrofulous, and in those who have a delicate or bad constitution.

CHAPTER XXII.

URETHRITIS—BLENORRHAGIA—GONORRHŒA.

THIS disease is a contagious inflammation of the urethra, in either sex, characterized by redness, burning pain on evacuating the urine, and slight swelling of the affected part, with a discharge of a yellowish or greenish matter, which stains the linen yellow, or of a greenish-yellow colour. The difference in the structure of the organs adjacent to the inflamed part, and especially of the length of the urethra, in both sexes, gives rise to various symptoms, which it is necessary to study.

Urethritis in Man.—A longer or shorter time after an impure connexion, as three, six, fifteen days, or more, the patient experiences a sense of heat or itching at the external orifice of the urethra, which at first is more agreeable than painful, but which, in a day or two, becomes intolerable, and especially on voiding the urine. There is redness at the orifice of the canal, which may extend along

the whole of the tube to the bladder, so that the inflammation may be partial or general. The stream of urine is now observed to be changed in appearance, it is diminished in size, bifurcated or forked, or the urine is passed in small quantities, and sometimes even in drops. A slight whitish or greenish discharge is now perceived to issue from the urethra, and there are strong painful erections of the penis at night, soon after the patient becomes warm in bed. About the third, fourth, or fifth day from the commencement, there may be pains in one or both groins, along one or both spermatic cords, in the testis, scrotum, and under this part, which are increased on evacuating the bladder or bowels. The discharge now becomes abundant, the linen is deeply stained, there is a frequent desire to pass the urine, accompanied by severe burning pain, the stream of urine is more or less altered, the glans penis becomes swollen, the testicles are painful, there is pain and sense of weight in the perineum, which prevents the sufferer from walking, and often renders him very grotesque. The erections or the penis are now often constant, especially at night, and so painful that the organ may be curved from above downwards, constituting the disease called *chordee*. The pain extends to the testicles, which become so sensitive as to require to be supported with a suspensory bandage, or that the sufferer should repose on his back and support them with a handkerchief.

In some nervous or aged subjects, the whole of the genito-urinary organs sympathise with the inflamed urethra, there are pains at the neck of the bladder, this last organ becomes irritable or inflamed, as well as the urethra and kidneys, forming a dangerous, and sometimes a fatal

complication of diseases, (See *Prostitution in London, &c.* Plates.)

When the symptoms are intense, the pain is transferred from the urethra to one or both testicles, which may become extremely painful, swollen, and inflamed; and in such cases the urethral discharge generally ceases, or is very much diminished. When one or both testicles are inflamed, they may suppurate or become disorganised, and then lose their function of secreting, when incurable sterility may be the result. Sir Astley Cooper has ably described diseases of the testicle, in an original work, and greatly improved this part of pathology. The diseases now mentioned, are of frequent occurrence, and demand great attention.

In the greatest number of cases, the inflammatory symptoms begin to lose their intensity from the twelfth to the twentieth day after the commencement of the disease. The scalding, in passing urine, diminishes, the painful erections occur more rarely, and without curvature of the penis, the discharge becomes thicker, less abundant, and entirely ceases about the thirtieth or fortieth day, or a small quantity of thin mucus is evacuated in the morning on waking, or on emptying the bladder, for some weeks after the cure. The disease offers great variety in the intensity of its symptoms, according to the habit of the patient and to the mode of complication and treatment. It is most severe, and extremely painful, when it occurs for the first time, though there are cases in which the pain is trifling, and particularly after former attacks of the disease.

When the mucous covering of the glans penis and inner

surface of the prepuce become inflamed, the disease is termed *balanitis*, or spurious gonorrhœa. It may be slight or severe, and induce phymosis, or paraphymosis, and these, if neglected or mismanaged, may be followed by sloughing of a part or the whole of the penis.

Urethritis—Gonorrhœa in Women.—The urethra is much shorter and more capacious in females than in the other sex, and hence, the inflammatory symptoms are less violent, although the disease is of longer duration, extends to the external genitals and to the vagina, thus affecting a much greater surface than in man. When these parts are acutely inflamed, sexual intercourse is performed with more or less pain and difficulty, and sometimes becomes intolerable; but when the disease is chronic, there is no inconvenience.

The discharge is very abundant, and sometimes comes in contact with the extremity of the rectum, which it inflames, when the mucous membrane of this part affords a whitish or purulent secretion. If the mucous lining of the rectum is inflamed, there will be heat and pain in the part, which are greatly aggravated on evacuating the bowels, and the stools will be mixed with mucus or yellow matter, and sometimes with blood.

When the mucous membrane of the vagina is irritated by other causes, it secretes abundantly, there will be a whitish or yellowish discharge, termed "whites," or leucorrhœa; and the worst form of this disease may communicate a slight discharge to the male, which is not contagious urethritis, as lately maintained by Mr. Travers. In such cases there is only a slight urethral discharge in the male, unaccompanied by pain or the other symptoms

of blenorrhagia, which generally disappears in a few days without any treatment.

The purulent form of leucorrhœa, may cause purulent ophthalmia, by coming in contact with the eyes of an infant, in passing into the world; but this will be much milder than the disease caused by contagious urethritis, or gonorrhœa. These facts point out the necessity of curing both these diseases, during pregnancy, and before the time of parturition.

I might narrate the histories of numerous cases in which the vision of the new-born infants was destroyed by opacities of the cornea or pearls, as they are popularly designated, induced by leucorrhœal or gonorrhœal discharge of the parent. It is, however, fortunate that many such cases admit of cure.

The urethra and vaginal discharge is so acrid in some cases as to excoriate the labia, and to give rise to excrescences or vegetations, which may be succeeded by ulceration or sloughing of the affected part.

Sympathetic buboes, or enlargements of the glands, in one or both groins, are common consequences of severe urethritis; but they are easily removed by confinement to bed or sofa, cold lotions, leeches, and when they become chronic, by iodine. They are of little consequence in either sex, when there is no chancre, ulcer, or excoriation, on the genitals; but when there is, the buboes are venereal and require the use of mercury for their cure. Buboes are often very obstinate in scrofulous subjects, and may require weeks or months for their removal. They prevent the patient from walking or taking exercise, while they seriously injure the general health, and excite latent dis-

eases in the lungs, liver, or any part already predisposed to them. They are generally removed by cold lotions and iodine, but should they become red and inflamed, leeches, cold lotions, and the usual antiphlogistic measures, will be necessary.

I found great advantage from pressure, caused by bandages, in several cases, in the hospital of the 65th regiment of infantry, and on many subsequent occasions.

Phymosis and Paraphymosis.—When the prepuce or foreskin is inflamed and swollen, and cannot be drawn behind the glans penis, the disease is termed phymosis; and when this part has been drawn or forced above and behind the glans, and cannot be drawn over it, the disease is called paraphymosis. In either disease there is danger of inflammation, sloughing, and more or less destruction of the penis. (See *Prostitution in London, &c.*)

In cases of phymosis, when the glans cannot be uncovered, the internal membrane of the prepuce becomes inflamed from the accumulation of the natural secretion, or from the acrid matter of chancres or urethritis, and an artificial opening may be caused by ulceration.

In such cases it is necessary to subdue inflammation, and divide the prepuce by incision, in the peculiar manner which I have proposed, and which is described in Professor Cooper's Dictionary of Surgery.

This operation is also necessary in natural or congenital phymosis, when the flow of urine is impeded; as well as in cases of adults, on account of the compression of the glans during erection, and the prevention of sexual commerce; and in old persons when the contraction of the prepuce is so small as to obstruct the evacuation of urine after it has

escaped from the urethra, the effect of which, on the glans, would be irritation, inflammation, or sloughing. Cases of rapid sloughing, in aged persons, have repeatedly fallen under my care, and in some the penis was destroyed to a greater or less extent, in a very few days.

A gentleman, aged twenty-five years, was attacked with paraphymosis, accompanied by considerable swelling of the glans penis, which was three times larger than the natural size, and the prepuce was also very much swollen. He applied to an advertising empiric, who employed such long continued and severe pressure, as to cause fainting; but without reducing the parts to their natural situation. Intense inflammation supervened in the course of the afternoon, and though the usual means for its removal were resorted to, sloughing set in, and destroyed two inches of the penis within thirty-four hours from the time of the harsh treatment.

Such cases are by no means of rare occurrence, and are often observed in hospitals and private practice. They are of daily occurrence in venereal hospitals.

The disease may be acute or chronic. In the acute form, the prepuce, which is distended with serum, ought to be punctured with a lancet or acupuncture needle, so as to reduce its size; the penis should be then extended, pressure made on the swollen glans, between the thumb and fingers, so as to force the blood into the spongy tissue of the urethra, which supplies it; and when the glans is reduced to its ordinary size, or nearly so, the prepuce may be easily drawn over it. But when this cannot be done, the edge of the prepuce ought to be incised. No practitioner who knows the anatomy of the affected parts, will forcibly

and rudely attempt to draw down the swollen prepuce over the enlarged glans, which is a fruitless, as well as most painful operation.

In the chronic form of paraphymosis, the mode of reduction will be the same as for the acute, and will be much less painful. I have seen the glans and prepuce three or four times the ordinary size in children, young persons at the age of puberty, in adults, as well as persons advanced in life.

In one case, a young gentleman was improperly treated, the enlargement became permanent, and he was prevented from marrying on account of his impotence, although he might have obtained a large fortune.

Hernia Humoralis—Orchitis—Inflammation of the Testicle.—This painful disease is often suddenly induced by injuries or gonorrhœa. The best mode of treatment consists in confinement to bed, or a sofa, cold lotions, repeated leeching, fomentation, and other antiphlogistic remedies. A suspensory bandage, or a handkerchief so applied as to support the affected organ, and prevent its weight from stretching the nerves that supply it, will, in general, afford great relief. When the acute stage is over, every effort should be made to reduce the organ to its natural size, by mercurial and iodated ointments, and other appropriate remedies. Chronic enlargement of this organ may injure its secretory power, and induce sterility.

The testicle is liable to many diseases, which destroy its function, and which are graphically described in Sir Astley Cooper's splendid work on Diseases of the Testis, to which I must refer the reader. I shall only add here, that there

may be atrophy or wasting of the testicle, induced by gonorrhœa or external injury. (See Plates in *Prostitution in London, &c.*)

Enlargement of the Epidydimis and Spermatic Cord.—This disease often follows inflammation of the testicle, and may impede the transmission of the semen to its proper receptacles. In the acute form, leeching, cold lotions, &c. are to be employed; and absolute repose, mechanical support, iodated mercurial inunction, and proper compression, will generally effect a cure in the chronic form of the malady. This disease is sometimes a cause of sterility.

Blenorrhœa—Gleet.—When urethritis or gonorrhœa has nearly disappeared, there is often a thin watery discharge from the urethra, which is termed gleet. It is important to state that this is infectious, and will communicate gonorrhœa to healthful subjects. Persons affected with gleet ought not to marry until the disease is cured, or has entirely disappeared for some weeks. The disease may continue for weeks, or several months, in despite of all remedies.

It may also be caused by stricture of the urethra, or disease of the prostate gland, which is situated round the neck of the bladder, but usually arises from slight inflammation of one or more of the numerous lacunæ or folds of the urethra.

It is generally cured by medicines which have a direct influence on mucous membranes, as the balsams, cubebs, ergota in small doses (see my *Medico-Chirurgical Pharmacopœia,* 1837), metallic urethral injections, bougies, cold sea-bathing, local bathing of the genitals with salt and water, blisters, &c.

Strictures of the Urethra.—Strictures of the urethra are caused by inflammation of some part of the mucous membrane which lines this canal, which is most frequently induced by gonorrhœa, stimulant injections, or masturbation. The urinary passage is obstructed to a greater or less extent; and in bad cases there is most excruciating suffering when the patient attempts to evacuate the bladder, and it often happens that he can only be relieved by an operation. The disease comes on so gradually that most persons are not aware of its existence for a long time.

The first symptom is some remarkable change in the stream of urine, which becomes smaller than natural, twisted like a corkscrew, flattened, or divided into two streams. The patient usually observes, that he is obliged to make strong expulsive efforts in evacuating the bladder, and when he supposes he had accomplished this, he finds on returning his penis into his dress, that a few drops of urine wet his linen. He may suffer but few other inconveniences, for months or years, but he finds his symptoms gradually increase, that there often is a gleety discharge from the urethra, that the stream of urine becomes smaller, that a longer time and more straining are required to evacute the bladder, and, at length, that the urine only escapes drop by drop, accompanied by the most excruciating agony. In such cases, the urethra often bursts, the urine escapes into the cellular tissue of the perineum, excites inflammation, suppuration, and fistulous openings under the scrotum, through which the urine and semen are evacuated. (See Plate in work just referred to.)

Bad stricture disqualifies for marriage, as it more or less prevents the seminal emission, which is often forced

backwards into the bladder, and renders the individual sterile, while the stricture is allowed to continue. I have been consulted in many cases of this kind, as to the propriety of the parties entering into matrimonial engagements, and I have known some examples in which the most robust and well developed individuals abandoned the sex altogether, on account of stricture obstructing the seminal ejaculation; and some of these persons became intemperate, and died in the prime of life. Persons thus affected become despondent, decline to form conjugal engagements, are not aware of the cause of their defects, which are easily removed in the majority of cases, and they too often abandon themselves to dissipation and ruin.

When the urethra bursts below the scrotum, the urine becomes infiltrated in the perineum, the part swells to a great degree, inflames, suppurates, or mortifies, and often destroys the patient, though a cure may be effected, even in such cases.

A gentleman, aged fifty-six, consulted me on account of his general health, which for some time had been declining. I discovered that he had two bad strictures, and that these had existed for eight or ten years. I proposed to use bougies, to which he objected; and I then explained to him the danger attendant on his complaint, which might sooner or later cause rupture of the urethra, abscess, or sloughing of the perineum and scrotum, and perhaps, destroy him. He promised in some months to submit to proper treatment, and I lost sight of him. About four months from the time he first consulted me, I was requested to visit him, as it was supposed he was dying. I learned that he had been to Leeds on business, and being a great

admirer of architecture, he passed some hours in admiring the interior of some of the public buildings in that town. He stood on stone floors for several hours, and finally found, on attempting to evacuate the bladder, that he could not do so. His pain was excessive, the urethra burst, the perineum and scrotum inflamed, and were swollen to a great size, and of a dark colour.

He remained in this state for eight days, until he arrived in town, when I saw him. He was very despondent at my having described his condition so long before; his appetite was gone, and his pulse very feeble. In a few days the scrotum sloughed, and the right testicle was partially exposed. It was necessary to make an opening in the perineum, and, notwithstanding the unfavourable symptoms and great debility of the sufferer, he gradually recovered, and in due time allowed the use of bougies. I dilated his urethra so much as to remove all his unpleasant symptoms, and to prolong his life for some years.

My advice was requested, in consultation, on two similar cases, which proved fatal.

With regard to the treatment of stricture, I have found the use of simple bougies, as recommended by Sir Astley Cooper, Sir Benjamin Brodie, Mr. Guthrie, and other eminent surgeons, perfectly successful. Caustic or cutting bougies are very painful, and highly dangerous, unless judiciously employed. They are often followed by profuse hæmorrhage, and are seldom required, even in the worst cases. I prefer wax or metallic bougies, and smear them with an ointment of hydriodate of potass, or ioduret of lead. The French wax, elastic and caustic bougies, are,

in my opinion, especially the latter, far superior to the British.

The instrument ought to be gradually enlarged, and employed until the urethra is considerably dilated, or brought to its natural calibre, and this may require treatment for weeks or months. The internal use of the hydriodate of potass is beneficial at the same time.

Strictures are aggravated by dissipation and sexual intercourse, and lay the foundation of fatal diseases of the prostate gland, neck of the bladder, bladder itself, ureters, and kidneys, which render life almost intolerable. These diseases frequently attack persons about the middle age, or at a more advanced period of life, and very often prove fatal.

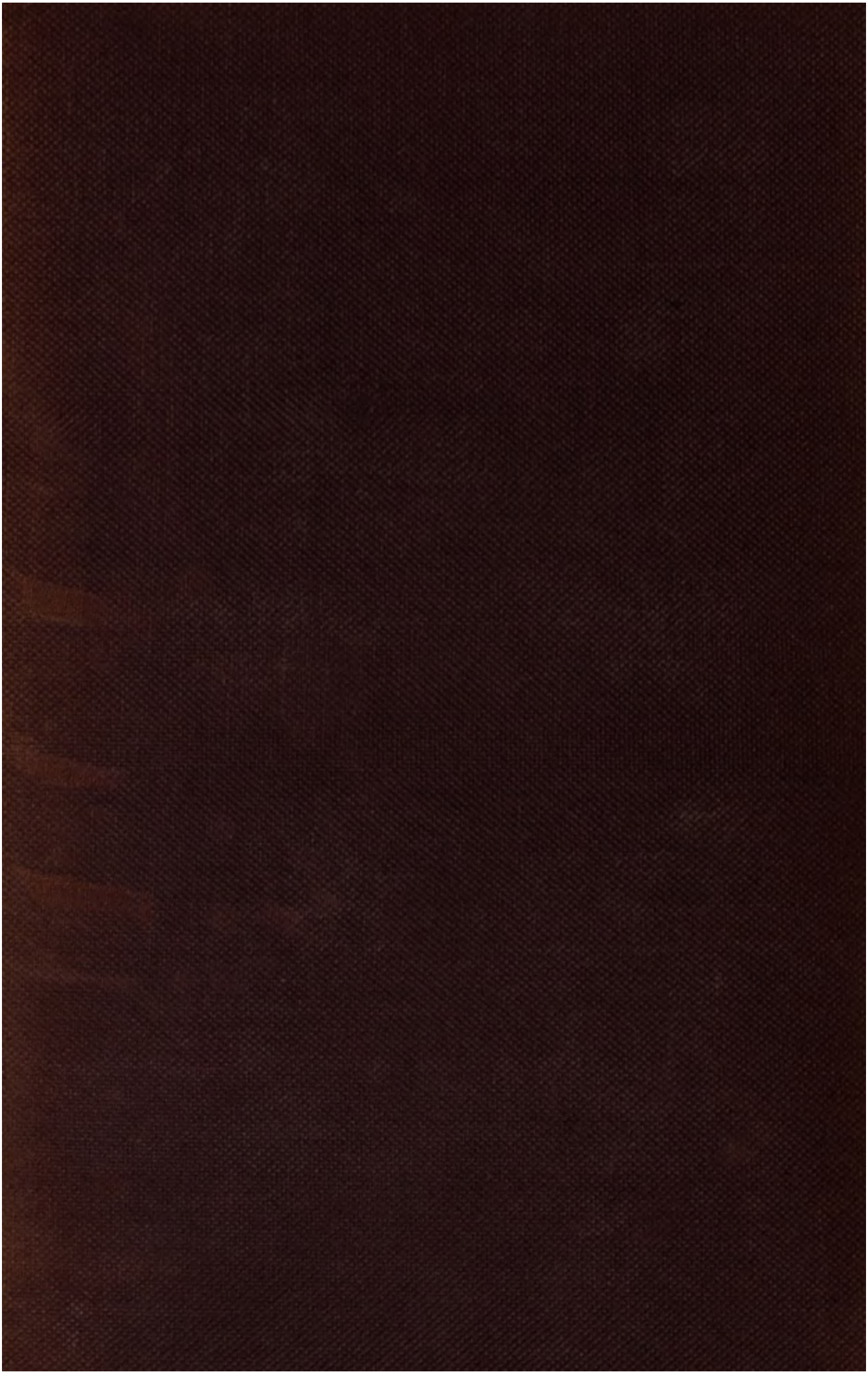
For a full account of these diseases, of gravel, suppuration of the kidneys, and other affections of the genito-urinary organs, see my edition of *The Physician's Vade Mecum*, 1837, *and Work on Prostitution, &c.*

Disease of the Prostate Gland.—The inflammation of gonorrhœa may extend from the urethra to the prostate gland and cause disease of this part at any period of life after puberty. The gland becomes painful and swollen, and may so strongly press the neck of the bladder as to impede or prevent the evacuation of the organ. The disease is of comparatively rare occurrence in young and middle-aged persons, though common to those of an advanced age. It is fully described by Sir Astley Cooper and Sir Benjamin Brodie, and was considered incurable until this year. (See *Prostitution in London, &c.*)

Sexual Diseases of Women.—I must refer the reader to another of my works for a full account of the nature and

treatment of diseases peculiar to women. (*Manual of Midwifery, and Diseases of Women and Children, 3rd edition.*)

In this work I have confined myself to an enumeration of those maladies which impede the genital function, and prevent the procreation of the species. I now submit these pages, the result of many years' study, reflection, and observation, to an enlightened public, impressed with the conviction that they are calculated to correct much error, and with the hope of benefiting succeeding generations.

THE END.

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