Alden March.

RESEARCHES

ON

SCROFULOUS DISEASES.

BY

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TRANSLATED FROM THE FRENCH,

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WITH AN APPENDIX,

COMPRISING FORMULÆ FOR THE TREATMENT OF SCROFULA.

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TO

WILLIAM TURNER, A.M., M.D.,

LATE HEALTH COMMISSIONER OF THE CITY AND COUNTY OF NEW YORK.

My dear Doctor:—

Accept the dedication of this translation of Lugol, as a slight token of my regard for your attainments as a physician, and your qualities as a man.

Yours, very truly,

A. SIDNEY DOANE.

w York, 32 Warren Street,
December 26, 1844.

TRANSLATOR'S PREFACE.

It has been our object, in the following pages, to present a faithful and accurate translation of "Lugol's Researches." No remark is needed as to the value of a good book on this subject. The ravages of scrofula in different forms, the obscurity of its origin, and the uncertainty attending its treatment, will be acknowledged by every practical physician. We can testify, from personal observation, that Lugol's opportunities for investigating everything relative to scrofula, have probably been equal to those of any man living; and the beneficial results of his treatment will send his name down to posterity as a public benefactor.

American literature has been much enriched by many excellent translations of foreign medical works, from the pens of those who stand high in the profession, and bid fair to attain all its honors: they have opened to the student new mines of professional wealth, and have deservedly received the thanks and gratitude of the liberal and enlightened practitioners of medicine. It is thought that "Lugol's Researches"

will be found equal in value to any other foreign book.

We have added no notes, but in an appendix will be found the most approved formulæ of the different preparations of Iodine.

NEW YORK, 32 Warren Street,
December 26, 1844.

AUTHOR'S PREFACE.

I FORMERLY gave a course of Lectures on internal pathology, in which I insisted particularly on the diagnosis and treatment of the most common diseases. I was then satisfied, as I am now, that the science of medicine can not be attained by attending to a few rare diseases, but by studying with perseverance, those which present themselves daily in medical practice, and in regard to which it is consequently very essential, that pupils should early receive solid instruction.

With these views, I could not but devote myself to researches on scrofulous diseases, as the opportunity presented itself daily, in consequence of my position; farther, the subject is, perhaps, the most interesting in pathology, as it embraces those infirmities with which the human family is most frequently affected.

Scrofula manifests its terrible effects in the early months of fetal existence, for it causes those spontaneous abortions which destroy at least one quarter of those affected, before they see the light; after birth, it arrests their physical and moral development; it complicates all the diseases, all the evolutions of infancy and youth, which it renders laborious and full of dangers. Finally, it reveals its presence more formally by a great number of morbid states, the common origin of which has hitherto been overlooked, and which, for this reason, authors have described as so many special diseases.

Sometimes scrofula affects the mucous membranes par-

ticularly, rendering several of them diseased, and sometimes it extends its effects to the mucous system generally. Hence arise ophthalmia, coryza, otitis, leucorrhœa, intestinal worms, mucous fevers, &c.

Sometimes it attacks the skin, and causes chilblains in the hands, feet, and face; chronic eczema of the lips, eyelids, and ears; pustules of acne scattered over the face, forehead, and chest, and pustules of lupus in various forms, in one or more regions of the dermoid system; more or less numerous, and more or less extensive ulcers, &c. It is the source of pedicular diseases, which, like the verminous affections of the intestinal canal, constantly reappear till the constitution is regenerated.

Sometimes it acts more particularly on the cellular tissue, and produces numerous abscesses and profuse suppurations.

When it fixes its seat specially in the osseous system, caries, necrosis, rachitism, supervene in every degree: these different alterations are rarely concentrated on one bone; most generally the bones are affected successively, and many of them are often diseased at the same time, and not unfrequently all parts of the skeleton present manifestly the impression of scrofula; but whatever may be the number of bones diseased, and the degree of the affection, they all have the same nature.

Not only are the scrofulous affections of the bones very similar to each other, but they are of the same character as the ophthalmias, otitis, &c.; as the cutaneous ulcers, and pustules, and the indolent abscesses, however numerous they are in the economy; the only difference is in the situation; this is so true that they alternate with and succeed each other, and sometimes even exist simultaneously in the same patient.

There is not, strictly speaking, scrofula of any tissue, of any organ; it is, in all cases, the same disease, which affects in one patient the mucous system more particularly, in another the dermoid, cellular, osseous system, &c., but never attacks any one of them singly. The appearance

of scrofula in one organ in particular, intimates its more or less proximate development in another point of the economy; often even one perceives then it had existed under other forms, which had not yet been detected.

We shall make the same general remarks relatively to the family. When scrofula appears with a certain degree of intensity in a child, we may expect to see it developed in the brothers and sisters, for most of the other children present signs of predisposition to this disease, and there are those in whom it can be detected by its characteristic marks. We might apply the same remarks to the different branches of the family; but at present we shall merely allude to this point, which is treated of at large hereafter.

Whatever may be the number of the symptoms of scrofula, whatever apparent differences they may present, they have, nevertheless, a common physiognomy, at first view of which we recognise the presence of scrofula. But what is this scrofulous vice? The question, presented in this form, can not be answered; we can only say that the existence of this vice, whatever it may be, is congenital, and is always revealed by the development of tubercles; in fact, this production is scrofula itself, its anatomical and pathognomonical sign; this alone characterizes it, and gives value to all the other symptoms.

In other words, if a patient be affected with tubercles, no matter where they are situated, he is scrofulous; if a patient have ophthalmia, leucorrhœa, cutaneous ulcers, indolent abscesses, caries, white swellings, &c., the nature of these diseases can not be doubted; they are scrofulous when tubercles exist, or when those morbid productions coexist, either in the patient or only in his family.

In our view, tubercle has the same origin and the same mode of formation as all the organs; it is even itself a kind of organ, which has its peculiar life, like the liver and spleen—like them, it goes through a spontaneous evolution; it is a pathological production, which modifies deeply all the inorganic elements, and consequently their functions,

and which impresses on the subject it attacks, a particular constitution, the tuberculous constitution, from which come the tubercles which may attack all the tissues, and also an infinite number of diseases improperly termed scrofulous.

The investigation of the diseases caused by this constitution, embraces the whole medical life of the patient, that of his brothers and sisters, and of his relatives. In these three points of view, we have repeated our observations so many times, that we do not hesitate to say they express, with rigorous exactitude, the natural progress of the phenomena of scrofula.

Our convictions on this point are so well-founded, that we can not express our astonishment at finding that facts, which were so common, had not been recorded in the archives of science, and that they had scarcely been remarked, and yet we stated them in our first special course on scrofulous diseases, delivered in 1828, and we have mentioned them to our pupils a great many times since, in successive years ; hence, we have thought that in publishing our labors, we should throw light on one of the questions which interest society most directly, and thus contribute to the progress of diagnosis. It is certain that the scientific views in the best authors are foreign and even diametrically opposite to the ideas we shall state on this important subject. We shall prove this by a simple remark on the general practice of medicine, a remark which no one can contradict.

A mother has four children, all of whom are scrofulous ; suppose they go to the central bureau to get admission to the hospitals ; the first has a white swelling, and is sent to a surgeon ; a second has pulmonary tubercles, and is recommended to a physician ; the third is ophthalmic, and is placed in an eye infirmary ; while the fourth has subcutaneous tubercles ; the latter is the only one pronounced to be scrofulous ; he is sent to the hospital St. Louis. Who will deny that these four children have the germ of a common disease, scrofula ? and yet their treatment is very dif-

ferent. These are not the only divisions made in scrofulous diseases ; there are others, which I shall not mention, as these will show my views.

This is medical practice ; it is the too faithful application of a theory ; but this theory is faulty in every respect ; it supposes differences between these diseases which do not exist ; it assigns to each of them a distinct course of medicine, when they are all of the same nature, and require the same plan of treatment. These arbitrary divisions show the infancy of diagnosis ; we think they can no longer continue after the general views with which we have connected all these morbid states, and have referred them to the tuberculous constitution.

The generality of scrofula in the family, its coincidence in the different branches of the same race, are sufficient in our view, to prove that the scrofulous diseases are all of the same species, and that they present no essential differences.

But this doctrine, already so evident by the considerations we have presented, becomes irresistible when we refer to the origin of these diseases, and discover they are all hereditary. In fact, inheritance is the general cause of scrofulous diseases, and the only one we have been able to recognise and detect. Our investigations on the pathological causes, and external occasional causes, have satisfied us that they have but little influence, while our inquiries as to the health of parents whose children are scrofulous, have constantly presented the same results. We have always proved the most intimate relation between the health of parents and that of their children, and this general truth constitutes the abstract of our labors and the motto of our book.

The particular facts with which we support our views on inheritance, are neither the most rare or prominent ; they are constantly occurring in practice, and may be seen many times annually, by any one who attends to cases of this kind.

Perhaps we may be accused of devoting too much space to the subject of inheritance ; but could we neglect any opportunity of studying the numerous sources of scrofula ?

It is, in fact, only after analyzing inheritance in all its aspects, that we could discuss with profit, a question of the highest interest to families and society, that of the marriage of scrofulous subjects.

As scrofula is generally transmitted by the ancestral parents, we have been led very naturally to point out, as the most common cause of the propagation of this disease, marriages made without regard to the health of the marrying couple. We have sustained our opinion by facts, which show, that to have a healthy progeny, requires the absence of all germs of hereditary diseases.

We admit that our doctrine differs from what has recently been written on the causes and diagnosis of scrofulous diseases, and even from the doctrines formerly taught by us before making our researches. This difference exists, because authors, who have written on scrofula, have too often neglected clinical researches, and have simply given the results of their reading. We follow a different course, and speak only of what we have seen: we write to mention the results of our inquiries at the bedside of the patient; and have not published a single idea, without recollecting distinctly the case which suggested it, and most of those which confirmed it.

We are thoroughly satisfied of the correctness of our observations, and even dare assert that all practitioners have seen facts similar to those which, at first view, may appear strange to them; the latter, however, are equally exact with those which are apparently the most common, and our mention of them will recall similar facts, which they have seen when engaged in other researches, and which, for this reason, they have not analyzed.

We are very frank, because our convictions are sincere, nor do we allude to any critic. A physician, who writes at the close of his career, enjoys a double advantage, of relating his own experience, and of being freed from all partiality, which is too frequently a source of error when one is less advanced.

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SYNOPTICAL CHART

OF THE

CAUSES OF SCROFULOUS DISEASES.

Children derive their health from that of their parents.

The causes of scrofulous diseases are referrible to three principal orders.
1. Hereditary causes.
2. Pathological causes.
3. External occasional causes.

ORDER I.

HEREDITARY CAUSES.

In this order are comprised:—
A. Inheritance of scrofulous diseases.
B. Health of parents who beget scrofulous children.

SECTION FIRST.

A. Inheritance of scrofulous diseases.

Characters of inheritance.
1. Generality of the disease in the family recognisable by the *scrofulous or family constitution.*
2. The mortality it causes in the family, which affects particularly the young children.

These two characters must be studied.
a. In the family.
b. In the different branches coming from a common origin.
c. In children by different marriages.

SECTION SECOND.

B. Health of parents who beget scrofulous children.

1. ORIGINAL HEALTH. — beget scrofulous children.

a. The parents scrofulous.
b. " " with pulmonary tubercles (the tubercle is the predominant character of scrofula).
c. The parents who have been scrofulous in infancy though now well.
d. Parents who appear not to be scrofulous though their brothers and sisters are.

2. ACCIDENTAL HEALTH. — beget scrofulous children.

a. The parents syphilitic.
b. " " incontinent
c. " " too young.
d. " " too old.
e. " " age disproportional.
f. The male has not the relative strength of his sex.
g. Parents, paralytic, epileptic, insane, &c.

I. Some hereditary causes can not be referred to a sufficiently marked state of the original or accidental health of the ancestral parents.

II. Parents may not present symptoms of scrofula till after begetting scrofulous children.

III. Hereditary scrofula never overleaps a generation.

IV. Hereditary causes may exist in variable number, and be complicated.

V. Marriage is one of the most common causes of the propagation of scrofulous maladies.

APPENDIX TO THE HEREDITARY CAUSES.

Scrofula is very frequent among foundlings and orphans.
The germ of scrofula may be transmitted by nurses to their nurslings.

SYNOPTICAL CHART—*Continued.*

ORDER II.

PATHOLOGICAL CAUSES.

A. Relations of certain diseases of infancy with scrofula; these should be observed particularly.
   1. In Smallpox.
   2. In Measles.
   3. In Hooping-cough.

B. Several morbid states, wrongly regarded as the pathological causes of scrofula, are only the forerunners of this affection; they are:
   1. Mucous or catarrhal fever.
   2. Fever of growth.
   3. Difficult dentition.
   4. Verminous pedicular affections, &c.

C. Relations of pregnancy and labor with scrofula, which may arise when they exist.
   1. Pregnancy exercises a marked influence on the progress of scrofulous diseases (thus it arrests phthisis); *vice versâ:* the scrofulous taint reacts on the embryo, and causes abortion.
      Abortion has its source. *a.* In the father's health. *b.* In the mother's health. *c.* In the health of both.
   2. Labor may cause the development of scrofula.
   3. Labor is often difficult, because scrofulous females are badly formed: they are frequently so without appearing so: the pelvis is often badly formed.

D. Erysipelas sometimes precedes the attack of scrofulous disease: it often supervenes during these diseases, on which it generally exercises a favorable influence.

E. Syphilis complicates and aggravates scrofula, and *vice versâ.*

ORDER III.

EXTERNAL OCCASIONAL CAUSES.

A. Scrofulous endemia.
   1. The cause of scrofulous endemia, whatever it may be, has no special evident quality, depending on the topographical position of the places where it exists.
   2. Endemia may be produced. *a.* By the importation of scrofula. *b.* By the antiphlogistic treatment of syphilis. By the want of crossing the races.

B. Occasional causes.
   1. The invasion of scrofula is usually spontaneous.
   2. Scrofula is not contagious, and one man can not be inoculated with scrofulous pus from another.
   3. Humidity and the other occasional causes of authors exercise a very bad influence on scrofulous diseases, but can not produce it.
      This proposition is sustained:—
      1. By special facts.
      2. By general facts as *a.* Regimen of prisons. *b.* Regimen of camps. *c.* Regimen of vessels.
      4. Certain occasional causes, as unhealthy air, bad food, excessive labor, &c., debilitate a population, and they have scrofulous children.

INTRODUCTION

TO

THE CAUSES OF SCROFULOUS DISEASES.

Scrofula produces a great many infirmities, which are very common, and most generally terminate in death. Hence the study of the causes which generate diseases so numerous, so frequent, and so often fatal, must be very useful and extremely interesting.

Are scrofulous diseases caused by external agents amid which we live, which are constantly acting upon us, and which, under certain circumstances, may impair the health in a very marked manner? Can the air which we breathe; can our food, our occupation; can fatigue, privations, certain diseases, certain localities, cause in us a scrofulous state?

We shall see in the course of this book, that scrofula develops itself, in most cases, without appreciable external causes, and even under hygienic conditions best adapted to fortify the health: that it appears simultaneously with many diseases, to which, however, it does not owe its origin: that it exists endemically

in some localities, the reason for which is as yet unknown: that in workshops, where all the occasional causes of disease are as it were accumulated, the effects of these causes, which are at other times so injurious to the general health of workmen, do not seem to assume the characters of scrofula, except by inheritance; and finally, that it is at least doubtful whether external causes *can* generate scrofula, and also that the most common and most evident cause of this disease, is its *hereditary transmission.*

This last cause is so general, that it may be said to exist, even where not formally detected; for in cases of this character, it is much more difficult to find another producing cause in the external agents, than to assign to them an hereditary origin. (Part I. Ch. V.)

The transmission of scrofula from parents to their children, is too general a fact not to have been recognised at all periods. Nevertheless, we shall see by the cases from which we shall establish this point of doctrine, that the law of this transmission has not yet been found; that it has even been overlooked in many respects, authors having regarded its hereditary transmission only in one point of view—that of the existence of scrofula in one of the ancestral relatives; while it has several other origins, the special study of which is indispensable to ascertain the bearing of hereditary causes. Hence, to treat properly on the causes of scrofulous diseases, it would not be sufficient to refer to some details on this great subject, which have es-

caped my predecessors: they must be studied anew. I have undertaken this task in a position extremely favorable for these researches. I have continued to observe special facts until no new ones presented themselves, and for a long time after my own observations were duly confirmed; and so great has been my experience, acquired by sixteen years of special labor on this subject, that I have formed a tabular abstract of the causes of scrofulous diseases, which I believe to be exact, more especially as every individual case now presenting itself, can readily be referred to some of the causes mentioned in it.

A glance at the principal divisions of this table, will show the immensity of our subject. If this table had been a programme of my work, it would have required much stern resolution to labor for the advancement of the science; but it was not made till my researches were concluded, and with a view to bring them into the most simple form.

As hereditary causes have been recognised in most of our cases, the analysis of these causes will form the first part of this work. In a second part we shall treat of the pathological causes of scrofula. We shall analyze the relations of the cause of scrofula with most of the diseases of infancy, to show that these maladies do not render children scrofulous: that when scrofula appears after them, the individual was predisposed to the disease, and that it is manifest in the family. We shall see that scrofula, so far from being

an effect of the diseases of infancy, most generally renders those diseases more serious, and very often fatal.

The third part of these researches will be devoted to remarks on occasional external causes. Here our views will be different from those hitherto presented. We shall have to prove, contrary to the received opinion, that occasional causes are not attended necessarily with certain effects, and that they differ in this respect from the inheritance of scrofula: that humidity, to mention this cause which is regarded as the most common, does not always give rise to endemic scrofula: that this latter species is not observed in some very damp localities, while it exists, and it is very extensive in other places which are very elevated, very dry, and very healthy. So, too, sporadic scrofula affects all ages, sexes, and different grades of society, in every season, and in all countries; being always specifically the same, however various may be the conditions of the individuals, and the degree of latitude in which they reside. The nature of this disease is the same in England, Spain, Russia, &c. Of this I am daily more and more satisfied by my relations with foreign physicians, who attend my clinique at the hospital St. Louis, and with scrofulous patients of these different nations, whom I have visited. I have attended also young creoles, from our colonies at the Antilles, and in them have noticed no essential difference between the scrofulous diseases with which they were affected, and those which are observed daily at the hospital.

St. Louis. I have only remarked that in the inhabitants of the Antilles, the disease becomes more severe when they come into our temperate climate. I might also cite the case of a young girl at Benares, and another at Calcutta, both of whom were affected with scrofula in the same manner as a young girl at Paris.

Does not this similarity of scrofula, when external influences are so different, and even contrary, prove completely, that the cause of this disease is not external to the individuals, but that it resides within themselves?

Although I do not think that the occasional causes which are regarded as able to produce scrofula, can have this effect on those who are originally well organized, yet we shall study them carefully, because they are very injurious in every state of body, and still more so, when there is originally a predisposition to scrofula, and finally, because that these causes combined, debilitate certain people so that their offspring are almost necessarily scrofulous. We shall consider the occasional causes principally under the two latter respects, so as to impart to them the highest degree of interest possible, in investigating the causes of scrofulous diseases.

In our study of the causes and progress of scrofulous diseases, all classes of society have been found on the same level: neither the splendor of one class, nor the wretchedness of another, have prevented their similarity in disease. This resemblance, which all

scrofulous persons exhibit, insulates them so much, that they form, in my opinion, a variety of the human species, which has its specific characters, independent of the external circumstances amid which it may arise, which is propagated and multiplied by the generative process.

In another work soon to be published, I shall show that the *tubercle* is the anatomical character of this variety of the human species, and that which gives identity to all the scrofulous diseases with which it is generally found.

This work is completed, and I was about to put it to press, when I thought that my theory in regard to tubercles would be more clear and complete, if my ideas as to the hereditary origin of tuberculous diseases were published previously.

ON THE

CAUSES OF SCROFULOUS DISEASES.

PART FIRST.

OF THE INHERITANCE OF SCROFULOUS DISEASES, AND OF THE HEALTH OF PARENTS WHO BEGET SCROFULOUS CHILDREN.

As the title of this first part indicates, we shall divide it into two chapters. In the first, we shall study the characters of hereditary transmission, those by which it can be recognised, and which can not have any other meaning. In the second, we shall investigate the principle of this inheritance in the health of parents: we shall study specially the different states of health which may explain physiologically the degradation of children by the scrofulous habit.

CHAPTER I.

INHERITANCE OF SCROFULOUS DISEASES.

The inheritance of scrofulous diseases, may be recognised by two principal characters: 1st, the generality of the disease in the family; 2d, the very great mortality which it there causes. We shall study each of these characters in a special paragraph.

§ 1.—*Generality of the Disease in a Family.*

THE first and most prominent fact seen in the study of scrofulous diseases, is the generality of the disease in a family. This, however, does not always occur, because scrofula does not appear in all the members of a family at the same age, in the same manner, nor in the same degree, and may affect children only successively.

At the first glance, we recognise a constitution common to all the children—a family constitution—a scrofulous constitution, which reveals the fatal predisposition with which they are affected, and in consequence of which they will be subject to scrofulous diseases. This constitution is the first sign which announces the generality of the disease in the family; the first which indicates inheritance, and that which gives us a hint of the kind of diseases with which children are threatened. Hence we shall devote a few pages to this, before treating of the other characters of the inheritance of scrofulous diseases.

Of the Scrofulous Constitution.

Scrofulous families are recognised by a general mark of debility, which is seen in all the children. A scrofulous constitution permits at most a negative state of health with some, and indicates a want of strength and a good organization.

In their physical formation, these children are not symmetrical: the trunk and extremities are not developed proportionally: the head is too large: the limbs are badly adapted to a feeble body, which is too long or too short; the limbs, too, have not their proper length: the joints are generally too large.

The median line is frequently not in the centre of the body: it seems as if its two halves are not properly joined, one being higher and more anterior than the other. This latter arrangement, a consequence of

unequal development, indicates an unfavorable prognosis of those diseases which will supervene afterward. I shall cite cases proving this, which have occurred in several children of the same family.

Not unfrequently, there is a want of union on one or several points of the median line. It is generally scrofulous subjects, who present instances of separation of the linea alba, hare-lips which are simple, or complicated with a separation of the bones of the palatine arch and the two halves of the velum palati. In some children, the chest is misshaped; the ribs are twisted; the sternum projects upward and forward, and its different component parts can be felt under the skin: the antero-posterior diameter of the thorax is greater than the transverse.

This defective formation may change progressively between the ages of eight and twelve years. When this does not occur, we may still hope that at the period of puberty the deformity may be modified, and that the osseous frame of the chest may approach the normal state; but more frequently it continues, and thus prevents the regular development and complete expansion of the lungs, which is an unfavorable sign, for it indicates that the scrofula is deeply rooted in the system.

Scrofulous persons are generally short in stature, but sometimes, on the contrary, very tall. These two extremes depend on the same principle, that vitality has not power sufficient to regulate the development of the organs, which are thus arrested in the commencement, or receive an unlimited degree of nutrition. The mouth is small or much too large; the teeth of the first and second dentition, but especially the latter, appear late. They are not white, but have a blackish tint, decay readily, and are very friable. The spongy tissue of the bones is too much developed, in proportion to their compact tissue and the soft parts. This state of the spongy tissue is easily recognised by the

following marks, which however do not always coexist:—the malar bone is too prominent: the base of the lower jaw is too much developed, which gives the individual a peculiar rachitic appearance. The extremities of the long bones are too large: the feet and hands, which are formed principally of short and spongy bones, present, in some cases, an unnatural and ungraceful development. The pubis, sacrum, and ischia, are in a state of hypertrophy, which is much to be dreaded in females, as it causes afterward difficult labor (2d part, pathological causes). The body of the long bones is usually small, and their compact tissue is very thin.

The growth sometimes presents the most opposite extremes. I have frequently seen, in my wards at the hospital St. Louis, individuals eighteen to twenty years old, who are not more than 1 metre* 33 centimetres high. I have seen one twenty years old, who was only 1 metre 20 centimetres tall. He did not grow at all, but rather wasted away during the four years passed in the ward St. John, where he died in 1836. I had a drawing made of him in 1832, one third of the natural dimensions, by M. Chazal, painter to the Museum of Natural History, and his picture, which was an admirable likeness, measured only 40 centimetres in height. I placed his skeleton in the Anatomical Museum, where it was pronounced by my friend and colleague, M. Serres, among the most curious specimens in the collection.

I have often compared, in the presence of my class, this patient and several others in whom the growth was much retarded, but in a less degree than the instance cited, with other scrofulous patients of the same age, who measured 1 metre and 65 and 66 centimetres in height: some were even taller, and one named Collot, measured 1 metre and 95 centimetres in height. But in these tall patients, the trunk and limbs were no

* The metre is three French feet.

more symmetrical, nor in better proportion, than those whose growth had been arrested The head in them was generally too small: their carriage was extremely bad, and they were deficient in energy.

The digestive apparatus is very weak, and hence all the assimilating functions are deranged. Many scrofulous children are never hungry; and there is so much anorexia, that they do not consume the fourth part of what is generally eaten at their age. This want of appetite comes from the inertness of the digestive organs, which I attribute to a catarrhal state, of the same nature as ophthalmia, coryza, otitis, bronchitis, leucorrhea, &c. This state is very common in scrofulous patients, and becomes chronic in the alimentary passages of some of them.

These children, who eat but little in consequence of their debility, become more and more feeble because they do not eat. No improvement can be expected, until the functions of the alimentary canal are performed better; for this, a necessity for food must be felt, and digestion be properly performed. The absence of appetite is one of the symptoms which must first be remedied; for it can not continue a long time without becoming a very active cause of sickness, as it arrests in its source the development of the organs, which being already weak, must become still more feeble, when the materials for their growth are not supplied. I treat this state of the alimentary canal, by administering purgatives several days in succession; rhubarb, calomel, and jalap, in equal parts; seidlitz water, or castor oil. I then use preparations of iodine, which possess, in a great degree, the power of giving an appetite, after the patients have been thoroughly purged.

I am now attending a family of five children, four girls and a boy, all of whom have an irregular appetite, and are generally very feeble. None of these children are of the usual size. The eldest girl is sixteen years and a half old; is only 1 metre and 45 centimetres

high, and has not yet menstruated. In these five children, the teeth are black, and they all have red spots on the face.

In other and rarer cases, there is a voracious appetite, which is of no use, and the growth of these children is nearly as much retarded as where they eat but little.

I know a family composed of four children, who have tubercles, in whom the digestive passages are very active, and yet no one has a moderate degree of plumpness. This state of the digestive canal is generally attended with habitual paleness of the face, which at this period of life, is often a forerunner of pulmonary tubercles. The eyes are suffused; the breath is offensive; children have itching of the nose, which leads to the suspicion of worms in the alimentary canal, which, however, are not always found in the alvine evacuations. The predisposition seems to exist without having produced its effects. Thus in many tuberculous persons tubercles have not yet appeared.

The excrementitious functions are irregular. Sometimes there is constipation, which perhaps depends on the dryness of the mucous surfaces, and the feeble peristaltic motion of the intestines: sometimes a diarrhœa of bad character is complicated with this constipation. It might be called a transient blenorrhœa of the intestinal canal, similar to that often seen in the eyes, nose, ears, &c. However copious and durable this intestinal blenorrhœa may be, we ought not to be surprised if the mucous surface of the intestines secrete proportionally as much mucus as the conjunctiva or the pituitary membrane in certain cases of ophthalmia and scrofulous coryza. The dejections contain sometimes badly-digested food, because in this catarrhal state of the intestinal mucous membrane, the digestion of the food must be very imperfect.

The skin, cellular tissue, are extremely thin, or in a state of peculiar hypertrophy, indurated hypertrophy.

Many scrofulous subjects have a dry skin covered with papulæ of lichen and prurigo: there is a general want of transpiration, although partial sweating of the feet, hands, and axillæ, often occur. These sweats generally have a marked acid smell.

The physiognomy seems prematurely old in infancy, and at a later period the contrary is true; the trunk and the limbs are then younger than the individual; that is, they have not the development nor the force generally seen in healthy persons of the same age.

Persons of this constitution have frequently an unconquerable apathy and indifference. We see many scrofulous children who must be led out to walk, because they are extremely averse to motion. In one case particularly, this aversion to move was so great, that a young lady was with difficulty induced to stroll in a garden which was on a level with an apartment occupied by her family.

Mothers often complain that their children, and especially young girls, have a bad carriage: they permit their head to fall forward, as if they could not support its weight; that they are indifferent, and always wish to sit. These young girls can not do otherwise. They stand badly, because they are not strong enough; because the muscles which support the vertebral column are wasted; because the muscular system is not sufficiently developed, and the fibre in these young girls generally wants the degree of tone necessary to keep the body in a proper equilibrium. To these causes must be added the want of harmony between the parts of the skeleton which we have mentioned above, and which is most generally only the rudimentary state of much greater deformities which supervene on the approach of puberty—often before this age, and rarely after it.

Children of a scrofulous constitution often experience a spontaneous degree of lassitude, which is increased, rather than diminished by repose. Some know not

what to do with their limbs in bed; and the repose of the bed fatigues more than it refreshes, as they are always more tired in the morning, than in the middle of the day.

I have known many children affected with catarrhal scrofula, who for many months had taken no exercise, except to go from a bed to a sofa. This apathy is one of the worst signs of a scrofulous constitution; one of those which become a cause of the progress of this constitution. Hence it should be treated particularly by bodily exercises, proportional to the effects produced by the indifference in which the children have been brought up. I have observed the same thing in the course of most scrofulous diseases, and generally the patients are not refreshed by sleep at night. This phenomenon had already been remarked in those affected with pulmonary tubercles, who suffered more during the night than in the day.

The swelling of the upper lip is also more marked in the morning than during the day: in some young girls, the swelling is not manifest, except for a few hours after rising.

Ophthalmias are also more painful in the morning. This phenomenon doubtless depends in part on this circumstance, that the patients pass quickly from the darkness of night to the light of day; I say, quickly, for with the exception of some cases of photophobia, light has generally a favorable influence on the progress of scrofulous ophthalmias. I have had several opportunities of observing the danger of treating these ophthalmias in dark rooms. I will cite particularly, the case of a student thirteen years old, who by being kept in a dark room, had nearly lost his vision. This child was better on the days he went out to consult his physician.

It was observations of this kind, and those I made relative to the indifference of scrofulous patients generally, and the evil consequences with which their in-

dulgence in this feeling is followed, which have induced me to recommend walking to those patients affected with white swellings of the lower limbs. In my third memoir on the Use of Iodine in Scrofulous Diseases, published in May, 1841, I mentioned my custom of recommending bodily exercise, with preparations of iodine, in treating white swellings of the lower joints.

This new remedy was from that time commonly prescribed for all the scrofulous patients treated in my wards; and it had been tried successfully in so many cases, that I hoped it would be adopted by all practitioners to whom it had been communicated by Magendie.

Physicians, however, did not change their course: in 1843, quiet on the bed was prescribed during the treatment of white swellings of the lower limbs; so that those who were cured remained impotent, and continued through life so deformed, that some ran the risk of amputation, to get rid of the deformity. I can only repeat here the advice I gave thirteen years since, to use bodily exercises to cure white swellings of the lower limbs.

During the last sixteen years, this new practice has been adopted in more than 300 patients, in the presence of a great many witnesses, who have all agreed that it was beneficial. Besides assisting in the treatment, bodily exercises render the lives of the patients much more agreeable to them, and they are by no means dangerous.

Why has not this practice become general? Because white swellings have still been considered as diseases having a local origin, while they are only the consequence of a tubercular predisposition, and because teachers have been silent on this advancement in therapeutics. How is it possible, in an age like ours, to hide a light under a bushel?

A certain degree of bodily activity, however, is not incompatible with a scrofulous constitution; but this

activity, instead of favoring the growth of the body, as in well-formed infants, diminishes the strength of scrofulous children: this is the reason that children are so debilitated after the long walks which are taken every week in boarding-schools, and lose the little appetite they have, and can not consequently regain their lost strength. This state, when it continues, is always congenital, although it has been ascribed erroneously to causes independent of the individual.

The development of the genital organs is commonly retarded, and they seldom acquire the size and strength exhibited in well-formed subjects. The genitals of young men, from fifteen to eighteen years old, and even older, are no larger than those of children from eight to nine years of age. This comparison is even too advantageous; for in healthy children, eight or nine years old, the genitals are frequently more developed than in many scrofulous subjects from fifteen to eighteen years old. In the latter, in fact, the testes are no larger than an olive; and the penis is hardly as large as the last two phalanges of the little finger of an adult.

In many scrofulous persons, in the course of their fourth lustrum, there is only one testicle in the scrotum, the other remaining in the abdomen. Sometimes it is arrested in the inguinal canal: sometimes, but more rarely, neither of these organs has descended into the scrotum at the age of fifteen or sixteen years, or even at a later period. I have now in my hospital, a young man twenty years old, whose testicles are still in the abdomen, and whose constitution in other respects is feeble.

The development of young females is equally retarded: they frequently show no sign of womanhood at the age of seventeen or eighteen years. Menstruation most generally begins by a dysmenorrhœa, which continues two or three years, and sometimes through life. After this, the menses are seldom regular and normal. They are scanty; that is, they appear only two

or three days, and are small in quantity: or they are too copious, and continue too freely for seven or eight days; but in no case do they produce a satisfactory result, for menstruation is not attended with the other signs of puberty. The development and functions of the mammary glands and the ovaries, are retarded as in the testicles: the sexual organs remain quiet and insensible, even when the young persons go into society.

In man, the genital organs in the normal state are generally developed at the age of from fifteen to sixteen years: they then grow rapidly, and this increase is communicated to the other organs; for the constitution is developed and fortified in proportion to the power then assumed by the genital organs. The voice also experiences a marked change, which every physiologist has stated. The evolution of these organs develops a sixth sense: man experiences new sensations, of which he has had hitherto but a vague and very imperfect idea; he feels the necessity of uniting his fate with another. To this happiness is attached the propagation of our species.

But in scrofulous subjects this evolution is generally slower and more imperfect. In some cases the constitution takes a start, and strengthens itself a little from the ages of fifteen to eighteen years, but the genital organs do not participate in this progress; they remain in a state of infancy after, as well as before the growth of the other organic systems. The genital functions are not more developed than their organs, and do not assume their proper rank in the functions of the economy: the voice remains infantile: the characters of the sexes are not well marked: the appearance of puberty is abortive, and so at all successive ages.

Some authors have spoken of the voluptuous desires of tuberculous patients; but this remark depends on a few facts, in regard to which there has been some mistake, and which have assumed an importance which

they do not merit. It is with the genital organs, as with the other organs of the economy.

We have seen that tuberculous subjects are generally short, but that some of them, however, are tall; That the appetite is sometimes very slight, and sometimes almost entirely deficient, and yet that it may be voracious in some subjects of scrofulous complexion; That there are a great number in whom a want of flesh forms a strong contrast with the *embonpoint* which others present;

It has likewise been remarked, that those affected with tubercles are generally apathetic, and yet some are turbulent, and present a certain degree of activity of mind;

So, too, the genital organs are slightly developed in scrofulous persons generally, but in some are abnormally large. When this excessive growth is analyzed, we soon see that it is deceptive, and that the genital powers and feelings are no stronger than where the development is imperfect: thus a scrofulous individual who is uncommonly tall, is often no stronger than one whose growth has been arrested.

In these subjects, the scrotum is very much relaxed: the bursœ hang down and are long, presenting in their lower extremity a slight degree of roundness, caused by the presence of the testicles, which are small and do not increase in size for many years.

The penis is very large when relaxed, and forms a strong contrast with the smallness of the organs which secrete the semen. There is a want of harmony between the secretory organs and the organ of ejaculation, which forbids all energy of function, which these patients do not possess. This particular arrangement of the genital organs, as also the opposite, is always congenital: both characterize the tuberculous state. Several times they have aided me in the diagnosis.

The vivacity of venereal appetite, which has been remarked in some tuberculous patients, generally comes

from their education, which renders them precocious, and gives them a false degree of self-esteem: it also arises from the excitement of their growing wants. But the reality is never equal to the appearance: excesses can only exist in a limited degree; and they cause a lassitude, which quiets the genital functions for a long time.

So far from tuberculous patients being more passionate than usual, their desires are very moderate: continence in them is very easy, and is never a cause of disease: it is even very favorable to the general health. Hence we should always recommend continence to those young men who are affected with tuberculous diseases. It is one of the best modes to fortify their health, and to assure for them in the future, the greatest amount of happiness.

Generally speaking, scrofulous patients can bear neither fatigue of body or mind. Sometimes they are intelligent, but can not apply nor regulate their ideas: they have no continued activity of physical appetites, intellectual faculties, or moral sentiments: they present nothing normal, nothing strong, nothing durable. All the phases of their existence are abortive: we see in them neither the period of puberty nor manhood; their physical and intellectual development remains imperfect.

Of the Scrofulous Countenance of Authors.

We shall continue this essay on the scrofulous constitution, by some remarks on the scrofulous countenance of authors.

This must not be regarded as peculiar to scrofulous subjects generally, for commonly it is absent: it exists only in some cases where scrofula is seated principally, or even exclusively in the face. It is the cutaneous, cellular, catarrhal scrofula of the face: there is hypertrophy of the lips, the alæ of the nose, cheeks, eyelids, and their loose edges; lobules of the ears, and

of one or more of these parts but most generally of the middle portion of the upper lip. The subjacent cellular tissue participates in this state of indurated hypertrophy, which disfigures the countenance very much. These partial indurations are very significant: they are constantly connected with a predisposition to tubercle.

I have seen tubercular disease of the lungs commence by the enlargement of the features of the face, but particularly by that of the upper lip. When this hypertrophy supervenes, and the countenance loses its regularity, the body is deranged internally: the sick grow thin, and lose their strength before the appetite begins to diminish, and even before there is cough.

I have known this swelling of the upper lip appear for the first time at the usual age of puberty, and even some years afterward, and thus bind itself to the temperament of a family of children, who were considered safe from any attack of scrofula.

I must here only point out the partial indurations of the face, and not describe them particularly, for this would require us to advance too much with the diagnosis, which we have been already compelled several times to begin.

This indurated hypertrophy of the skin, and subjacent cellular tissue, is generally attended with a catarrhal state of the mucous surfaces, which may be habitual and but slightly marked for many years. Authors have termed this complication, the *scrofulous countenance.*

This state of the face is not noticed in all cases of scrofula, but, on the contrary, is very rare. We never have seen but a few cases of it at a time, and we have often mentioned to our pupils its entire absence in a population of 100 scrofulous persons, in the hospital St. Louis.

To return to the scrofulous countenance: let us now speak of the embonpoint which has been ascribed too generally to scrofulous subjects, and to females more particularly than to males.

On the subject of this embonpoint, we shall make the same remarks as those already presented in regard to the scrofulous countenance of writers. We say that this embonpoint is not common to scrofulous persons, and that when it exists, we always notice some fatal coincidence which reveals its character.

Females of this complexion are of the common height: their skin is white and red: their eyes a little moist, and the transparent cornea slightly bluish: they are plump, round, and have a fresh appearance. This complexion in early youth, gives a brilliancy, an appearance of beauty which the world erroneously regards as real, and as indicating a good constitution. But to the observing physician, this state of health is far from being satisfactory; for this ephemeral beauty so much admired, is only the scrofulous predisposition strongly marked on the skin and cellular tissue of the body. This state is the certain forerunner of scrofulous diseases, which will supervene spontaneously in a longer or shorter period. The medical man makes predictions which generally are not understood, and which sometimes displease the parents: unfortunately, they are realized too early by the young females and their children.

In fact, however beautiful this complexion may appear, still it presents the want of harmony which we have already mentioned. These appearances of health form a contrast with some of the following signs which belong to scrofula:—the pupil is too much dilated: there is a slight discharge from the eyes, and matter on the eyelids: an habitual coryza: the teeth are white, but too long and compact; they are frequently black and carious: there are partial sweats of a penetrating odor: the hair is scanty, and badly nourished; it is too dry or too oily: there is constant leucorrhœa, which in some cases is very profuse: there is frequently dysmenorrhœa, sometimes anenorrhœa, and menstruation is rarely regular. Women who are very fat often have

no appetite, and take but little nourishment; very frequently females of this complexion are subject to headaches, which cause them much suffering. Finally, this embonpoint does not long resist the progress of the scrofulous habit, and it is most frequently replaced by a meagerness which produces deep and permanent wrinkles in females who are yet young.

I will mention a fact of this character, where the scrofula escaped the notice of three practitioners of the first character.

In March, 1833, a young lady from the department of Cher, was brought to Paris to obtain advice for an œdema of the eyelids, which had existed for more than three years. This young girl, aged thirteen years and a half, had menstruated regularly for eighteen months. She was short, had a good color, and a remarkable degree of embonpoint. The three physicians who saw her before me, were surprised that so healthy a girl should be brought to Paris for medical advice. I thought differently: at the first glance I regarded this œdema of the eyelids, not as an important disease, but as the sign of an hereditary scrofulous predisposition, the diagnosis of which might be completed by inquiring into the diseases of this young patient and those of her family. On making inquiries of her parents, my opinion was confirmed. This œdema had, in fact, been preceded by a hypertrophy of the upper lip, and by cervical tubercles, which had disappeared after the disease had affected the eyelids. Farther, this girl was an only child: she had lost a brother and sister, who had died when young, and her maternal grandfather had died with pulmonary tubercles before he was thirty years old.

On considering these antecedents, I was not surprised that the family physician had excited the anxiety of her parents as to the health of their only child. The continuance of this œdema for three years, indicated

that the cause was in the temperament, and that this cause was a serious one.

I went farther: this œdema of the eyelids might follow a different course: it might have appeared first, and have existed for years without antecedents or concomitants, as occurs very frequently in tubercles of the neck aud indurated hypertrophy of the upper lip; even in this case, it would demand the attention of the physician, for its existence was incompatible with good health. The color of the skin, the freshness and embonpoint, formed with this sign a marked contrast, as if to denote that this alone should be regarded as indicating the state of health, and as a guide to us not to be deceived by erroneous appearances. In this case, the œdema of the eyelids formed a marked contrast with the appearances of beauty which scrofula might produce. In the following case, we shall see these same appearances attended with chronic coryza.

A lady from Rouen, twenty-seven years old, who appeared to be in good health, consulted me some years since for chronic coryza, with which she had been affected since her first confinement, which had occurred eight years previous. The pituitary membrane was of a brilliant red under the inferior turbinated bone, where I thought some small, permanent, ulcerated points could be detected.

There were some other signs indicating a scrofulous tendency: a constant dilatation of the pupils: swelling of the eyelids, especially of their loose edges: the spongy bones were too much developed; the skin too white, &c.

The previous state of the health of this lady, and that of her family, in which tubercular disease had existed, rendered the signs we have mentioned still more important; and far from being slight, as many physicians thought, they seemed to us, on the contrary, very serious unless attended to.

Our remarks on chronic coryza, are applicable to

otitis, leucorrhœa, and to most of the symptoms of a scrofulous constitution, which may co-exist with a certain degree of embonpoint, which the world generally regards as indicating good health, but of which the physician forms a different opinion.

On this point science is very defective. Some few years since, being in the environs of Paris, the conversation turned upon the most beautiful females of the court of Charles X., and at the head of them was named a lady who had been under my charge for more than six months. She was the sixth of her family whom I had attended, and the fifth in whom I had observed the same kind of disease. The name of another lady was mentioned whom I did not know. A few months afterward, I was sent for to see her in regard to some subcutaneous tubercles, which existed in several regions, and which had already affected her embonpoint. A few years previous, her father had died with tuberculous phthisis.

But few scrofulous persons have light hair; in more than half of them the hair is dark; among the others, most of them have chestnut hair, which is of a dark, more commonly than a light chestnut color. The same remarks apply to the color of the eyes, and also to that of the skin, which is dark more frequently than light. This color of the hair may be explained partially by the age of our patients: they are generally from fifteen to twenty years old. In fact, we know that the color of the hair becomes darker as children grow up, and that where it is very light in the early years of childhood, it generally changes to chestnut, of different shades as years progress, and is sometimes black at puberty. These general remarks, which are so contrary to all that has been written on the color of the hair, the eyes, and skin of scrofulous patients, may be verified daily in my wards in the hospital St. Louis.

Scrofulous children, considered individually, present only some of the phenomena we have mentioned. All

these signs co-exist but rarely: they are combined in variable numbers and degrees, which are difficult to describe, but which are readily detected. In some cases, these signs are so slight, that the scrofulous constitution may pass unperceived, although it really exists, as we shall see hereafter in several of our articles, when treating of the health of parents who beget scrofulous children.

The scrofulous constitution then presents many differences, from the highest degree it can attain, to that where it is the least distinct. But however much it may vary, it is very recognisable in most cases, and almost as much so as any particular scrofulous disease: no one can be deceived by it, and all the world knows the difference between a well-made child and one of scrofulous constitution. The parents alone may be blinded in this respect: their ignorance may be regarded among the most usual causes of the progress of scrofulous diseases.

Thus, in most cases, the constitution of tuberculous children is so marked, that it is scarcely necessary to be a physician to detect it. Hence we need not insist on the diagnosis of cases of this kind; we should rather dwell on the cases where this constitution is slightly marked, and more especially on those cases where its existence can only be recognised by its transmission to children.

Facts of this kind are so numerous, that we must speak of them particularly, in many of the articles relative to the health of parents who beget scrofulous children. On this point, we think we have made some progress in the diagnosis.

The scrofulous constitution may be overlooked, partly because it is only slightly developed, and partly because individuals may present other good elements of organization, which may conceal for a long time their congenital morbid disposition. Sometimes, in scrofulous families, persons arrive at puberty, become

adults, and survive their brothers and sisters, who have died with scrofulous diseases; but these rare facts are not, however, exceptions: their duration is very limited; time generally brings the individuals who possess them to the common law of the family; they die from scrofulous diseases.

The following is a curious case of this slow revelation of the temperament of the family: I saw, some years since, this fatal disposition appear for the first time at the age of fifty-six years, in a lady whose mother and two sisters died young from pulmonary tubercles. This lady was affected with general hypertrophy, with induration of the skin, and cellular tissue, which had begun at the age of twenty years, and which had become very inconvenient at the age of forty years, on account of the considerable progress which had been made. Her general health had always been good. I had known this lady more than twenty years, and I had never heard her cough or complain of her chest: I was even ignorant that tuberculous diseases existed in the family, and did not ascertain the fact, till I inquired into it on seeing pulmonary tubercles occur at that late period, which terminated in death three or four months after the attack. We shall see hereafter facts of the same kind, which we shall present in another point of view.

Hereditary diseases are like the expressions of countenance and the external forms of body, which also make part of the temperament of the family. The resemblance of these external forms sometimes escapes us, because its time has not come, because it is not sufficiently strong, or on account of certain individual peculiarities which strike us from the first; but these peculiarities most frequently disappear in time, and we recognise a family likeness between brothers and sisters, who have a physiognomy comparatively very different until a certain age, or even until a very advanced age.

I cite a very curious fact of this kind, to show that in certain cases where the scrofulous constitution exists only in a very slight degree, it is, however, transmissible to children, and that after existing a long time without being remarked, it may appear at a more advanced age, in so marked a manner, that it must be detected, and the hereditary origin of scrofulous diseases with which the children are affected, must be admitted.

A lady who possessed a good complexion, and every mark of good health, nevertheless had children and grandchildren who were scrofulous: this astonished her very much, although her sister was affected with the same complaint. She had a third, who was a little rickety, and to whom she bore no resemblance twenty years before. But since they had passed the prime of life, these two sisters had become strikingly similar to each other. The first time I noticed it was on seeing them weep together for the death of a scrofulous child, a relative of both: they wept in the same manner: now they have the same tone, the same accentuation, a peculiar movement of the commissures of the lips, which results partly from the loss of the same teeth in the two sisters: their features generally are wrinkled in the same manner, and the family likeness has become very apparent.

I am far from regarding this resemblance at a late period of life as an accident: it was traced in the first lineaments of the organization. Hence it came spontaneously, without our being able to assign any external cause, not even the influence of imitation, as these sisters did not live together after they were married, say for more than thirty years: so, too, hereditary diseases grow with us; they make an integral part of our organization, and have their marked period of development.

Facts like those I have mentioned disturb our doctrine of hereditary causes. They are very numerous,

and of various kinds. When they present themselves to our examination, we are always told that the parents enjoy good health, and that no cause can be assigned for the scrofulous diseases with which their children are affected. The first thing to be done in a case of this kind, is to ascertain if the children have been subject to external causes of disease, and to causes sufficiently powerful, and continued sufficiently long, to render them scrofulous. When once the absence of these external causes is ascertained, we must wait. We shall see hereafter, that I have often succeeded in this manner, and found at a later period that causes of disease were inherited, a fact which had escaped me on previous investigations.

The generality of scrofulous diseases in a family, is as constant as that of the scrofulous constitution. I can not say how many times I have referred particular cases of scrofula to the temperament of the family; how many times I have predicted the generality of this disease in a family, where only one child was thought to be affected.

I was consulted, last April, for fistulous white swelling of the metacarpo-phalangean articulation of the index finger of the left hand, characterized particularly by caries and enlargement of the joints. When I first saw the patient, the left hand was so much swelled, that its antero-posterior diameter, in the affected part, almost equalled its transverse diameter, and the hollow of the hand had disappeared. As the pus could not come readily from its fistulous orifices, I made two counter-openings, one on the palmar, the other on the dorsal face of the hand. A stylet was introduced into the fistulous openings and orifices, and a deep alteration of the bones was detected.

The patient was a young man, twenty-three years old, of middle height, having black hair, beard, and

eyes, a dark skin, and the muscular system well developed. He had enjoyed good health till he was twenty years old, when tubercles appeared for the first time in the neck, which had very apparent cicatrices in the cervical region.

The physical constitution of this patient might have raised a doubt as to the scrofulous character of this white swelling; but as this affection was preceded by cervical tubercles, this patient belonged to the family of scrofulous individuals.

Here is a young man who is tolerably healthy, and presents for the first time symptoms of scrofula at the age of twenty years, and in whom the disease manifests itself by the most certain signs, viz., tubercles in the neck, and afterward caries in the bones of the hand. Could an affection so well marked, supervening without any occasional cause (this young man being tolerably well), exist only in one member of the family? We could not believe it, although told that all the other children were well. On inquiring, we ascertained that the scrofula was general in the family, and that it was inherited from the father.

This young man had a sister sixteen years old. We learned that she was under treatment for ophthalmia, with ulceration and staphyloma of the transparent cornea. This ophthalmia led us to presume that some other symptom of scrofula existed. On inquiring, we found that this young girl was apathetic, careless, and had not yet menstruated. Having been consulted in respect to her case some weeks after, we regarded it as one of tuberculous phthisis, in the highest degree. Burned up with hectic fever, her skin was ashy and tight upon the bones: the lower extremities were edematous, and there was considerable ascites.

In fact, the left eye presented an ulceration of the transparent cornea, but this was only a secondary symptom of the scrofulous diathesis, which had existed unperceived for a long time previously. It was

now too late to attend to this diathesis, which destroyed the patient a few weeks after my visit.

There is a second sister eighteen years old who menstruates regularly, but is very subject to take cold.

There is a third thirteen years old, who seems not more than ten, and is truly a child. She has a sore nose.

Finally, our patient has a brother nine years old, who has tubercles in the cervical region.

The father of these five children is fifty-three years old. He had an ulcer in the nose when thirty-eight years old. What was the nature of this ulcer? was it scrofulous or syphilitic? We could not ascertain: we incline to the first opinion; but this is not very essential, since in both cases the consequences may be the same, and this man has within him the seeds of an affection, which might render his descendants scrofulous. (Ch. I., § 1, Art. 1; § 2, Art. 1.)

Here is an instance where we were consulted for a case of scrofula, which we were assured was the only one occurring in a family of five children, and the constitution of the patient militated strongly in favor of this assertion.

We have seen that, when consulted in regard to a scrofulous white swelling, we have connected the health of the children with that of their brother, and that, notwithstanding appearances and the assurances given us, we had established the generality of the disease among the five children, and its origin in the health of the father. The result of this analysis did not astonish us. If there be a fact impossible in pathology, it is that of a tuberculous child having three sisters and a brother free from disease. The generality of scrofula in a family seems to me so indisputable, that I do not hesitate to assert it of children who are absent.

During the spring and summer of 1837, I attended at Paris the son of a landholder of Dordogne, who had two daughters enjoying, as he told me, excellent health.

I requested him, however, to bring them to Paris on his next visit. In fact, he returned with his three children the next year. On seeing him, and before making any inquiries, I asked him with a look, if he thought I could be deceived.

These girls, in their infancy, had signs of chronic hydrocephalus. Their heads were large: the growth of the trunk and limbs was arrested. The eldest, eighteen years old, was dark, thin, short, menstruated irregularly, and her figure was not developed.

The second eleven years old, had a white skin and chestnut hair. She suffered from a severe attack of measles, followed by ophthalmia in both eyes, so severe as to endanger her sight. Two years afterward, on seeing this young girl, her eyes were still red, and this redness had existed constantly since the exanthema. These two sisters were frequently affected with hemoptysis. Their mother died of phthisis.

Some years since I attended a young lady, twenty years old, who had a great number of ulcerated tubercles in the cervical region, and upper and anterior part of the chest, and probably also in the lungs. This tuberculization was referred to the early periods of life; and her growth was arrested. The young patient had never menstruated; she had no appetite; she was extremely weak, and was unable to walk a short distance. There were several cases of pulmonary tubercles among her ancestors, more especially on the father's side.

This lady was treated with iodine for a month, when I proposed to the mother to pursue the same treatment with another of her daughters, aged twenty-two years, who enjoyed tolerably good health. But when I first saw her, I noticed that she was small for her age, and that she was not perfectly straight, of which her mother soon became satisfied.

This lady had left in her family two other children, who were younger—a girl and a boy. She assured me that these two children were well. Although they

were absent, I made some remarks as to their appetites, growth, &c. My remarks on these different points rendered the mother less confident that the health of these two children was much better than that of the eldest daughter, and she decided to bring them to Paris. This was not done till two years afterward, and their condition was as I had foreseen.

Soon after this lady returned home, her son showed severe symptoms of scrofula, which induced the family to make a second visit to Paris. This child, ten years old, had hypertrophy of the cervical vertebræ, which formed a large ovoid tumor, occupying the left half of the posterior part of the neck: the head was thrown from this side. The child had cough: he was pale, had no appetite, and was so weak, that although he resided near me in one of the finest parts of Paris, he rode to my consultation daily.

This child, like his elder sister, was cured by two courses of iodine, each continuing for five months. After the first, he was able to walk for several hours in Paris or its environs; and after the second, he showed much agility, skill, and strength, in gymnastic exercises.

The third sister, who was nineteen years old, seemed to be not more than fourteen. She had never menstruated, and exhibited no sign of womanhood. In her the development was arrested, which is an infallible sign of a tuberculous temperament, as I have often remarked to my pupils at the hospital St. Louis; and to this fact I would invite the special attention of practitioners, so that in future they may give to this physiological state all the importance which it merits, in the diagnosis of scrofulous diseases.

This female passed through two courses of treatment, like her brother and elder sister, but with much less success, for the menses appeared only once, and never returned, and she did not grow.

In this instance of the generality of disease in the

family, it was not difficult to point out the similarity in the health of the two elder sisters, although in one the scrofulous state was very much developed, and in the other only the growth was arrested and the form slightly curved. These last two symptoms would have remained unperceived, had the external form been pleasing: they were yet, however, sufficient to justify my diagnosis: and further, these two symptoms coincided in this case, as is very common, with other signs less evident, but which considered collectively were very significant.

In regard to the two younger children, I was certain, without seeing them, that they also had tubercles, which was soon verified. In fact, whenever scrofula appears with so much intensity in a child, we may be certain that all the others are affected with the same malady. Differences may exist, but only in regard to form, seat, and degree.

We will conclude our remarks by a case from the hospital. John Montel, sixteen years old, entered the hospital St. Louis in April, 1829. He had ulcerated tubercles in the cervical region, a fistulous caries of the sternum, another in the left internal malleolus, with three fistulæ in this part. He was very weak in the region of the kidneys, and we found a good deal of puffiness in the lumbar region.

This young man told us that he had lost two brothers and two sisters in early life, and that now he had only a brother seven years old, who was not well, and a younger sister who was born blind. A year after leaving our hospital, Montel entered Hotel Dieu with phthisis pulmonalis. His young brother entered the hospital St. Louis in September, 1835.

He had tubercles on the left side of the neck and in the left axilla, and also caries in the olecranon process of the left elbow, with a fistulous opening on its inner and lower face. The arm could not be perfectly extended.

This patient was small, slightly developed, fair, with a fine and white skin; the nose a little large, the upper lip thick with some crusts upon it in consequence of a recent coryza; he had the same complexion as his elder brother whom I had treated six years before, and resembled him so much, that in my first visit I stopped at his bed, and called him by his family name.

But besides their similarity in complexion, these brothers presented the same signs of scrofula, tubercles, and caries: both of them resembled also the three brothers and two sisters who had died young, the oldest being but nine years of age. There remained to them, as we have said, a sister born blind. Who can doubt but this child came into the world with this infirmity in consequence of the family temperament?

I can testify that I never saw a scrofulous child whose brothers and sisters were free from scrofula. On the contrary, they all resemble, more or less, that one among them who presents external signs of the disease. Not unfrequently one or more of them have died.

It is contrary to nature that parents should have children of two kinds, so different from each other as are scrofulous children, and children who are not so.

I speak this unrestrictedly, and on the authority of facts, which I shall state. Hereafter I shall present summarily another series of facts of the same kind, in order that the law of generality of scrofula in a family may be still better known and free from all dispute. We will now consider the second character of inheritance.

§ 2.—*Mortality in Scrofulous Families.*

A SECOND character of inheritance which always attends the first we have studied, is the mortality existing in scrofulous families. Death cuts off half of the scrofulous children in the early years of life. We see many families in whom only one or two out of eight or ten children remain, sometimes from a larger

number, and those who survive their brothers and sisters any length of time are scrofulous. These latter often live only a few years, and not unfrequently parents who have had many children can not raise one.

A mortality so frightful, from diseases of the same nature, must have a general cause, to be found in the health of the parents. Accidental external causes would not produce scrofulous diseases exclusively: on the contrary, they would engender maladies of several kinds, which under no circumstances could destroy families as do diseases having an *hereditary* origin.

The two characters we have mentioned, viz., generality of scrofula in the family, and consequently the death of most of the children, not only demonstrate the hereditary origin of this disease, but must also be regarded as the best marks of inheritance known. No other malady can compare in this respect with scrofula: epilepsy, suicide, mental derangement, cancer, gout, apoplexy, &c., are not so general, and do not cause so great mortality as that observed in scrofulous diseases.

Perhaps it might be said that hereditary diseases generally have a scrofulous origin in a more or less remote degree, and that the characters of inheritance depend upon the propinquity of the inherited diseases with scrofula.

These two characters are the most prominent in the history of scrofula; they are found on each page of its history: these two signs denote a common origin, and the *single* nature of scrofulous diseases; hence their study is the necessary foundation of all other parts of the diagnosis. For this reason we shall attempt to bring forward all the evidence possible, by mentioning, as we have promised above, a new class of cases, which we shall find in three principal sources: First, in the family; second, in the different branches issuing from a common origin; third, in the peculiar health of the issue of different marriages.

Article I.—Inheritance of scrofulous diseases studied in the same family.

We shall now state successively some facts in regard to the generality of scrofula in the family, and to the very great mortality of children which is its inevitable consequence.

A. Instances of the Generality of Scrofula in the Family.

In the instances we shall cite, to show the temperament of the family, we shall notice that this temperament is so marked, that not only all the children are scrofulous, but that many of them are affected with the same kind of scrofula.

In 1831, I was consulted in regard to a young lady, nineteen years old, who had been laid up for seven months with a white swelling of the right hip, with elongation of the right limb, and danger of spontaneous displacement. Her brother had died of this latter disease the preceding year, aged seventeen years. A second brother had already experienced several attacks of coxalgia, which rendered probable a third case of hip-disease in this family.

Shortly before, I cured of the same kind of scrofula a young man, sixteen years old, who had coxalgia, with elongation of the right lower limb. The sister of this young man, twenty-five years old, had already been affected with this same disease, followed with spontaneous dislocation causing a shortening of the leg about ten centimetres.

In May, 1830, we had at the hospital a young man, seventeen years old, attacked with a fistulous white swelling of the left elbow.

A year afterward, his younger brother came into our wards with the same disease. At the same time we recorded the cases of the two brothers Servit, both of whom had white swelling of the knee.

Some years since, I attended two children of an

armorer of Nantes, both of whom were affected with congenital palpebral ophthalmia. These two children had two twin-brothers, seven years old, affected with otorrhœa from the right ear. The four brothers were evidently troubled with the same disease, viz., with catarrhal scrofula: the two eldest had in the eyes what the others had in their ears.

I knew a young man, twenty-six years old, who had a double chronic otorrhœa, the commencement of which was referrible to the early years of infancy.

He had an elder sister, who had an affection of the same nature in the nasal fossœ, and in whom this disease was congenital. This female died recently of pulmonary tubercles, aged thirty-four years.

In October, 1831, I attended two brothers, the elder aged twelve, the younger ten years, in whom the tonsils were habitually swelled, so much as to impede breathing and swallowing. The nasal fossœ, the frontal sinuses, the ears, pharynx, mouth, the whole mucous system of the head and neck (except the conjunctiva), were in a constant catarrhal state: these two children breathed with difficulty, and with much noise; both slept with their mouths open.

I observed a very severe case of white swelling of the left shoulder in a patient, whose brother, said to have been healthy at the time, was admitted the next year to the hospital St. Louis, to be treated for a white swelling of the tibiotarsal articulation of the right foot. These two patients lost a sister, fifteen years old, from debility, and a brother thirty years old, by variola. Perhaps this last disease terminated fatally only on account of the scrofulous predisposition of the patient.

In August, 1827, Mary Viard, nineteen years old, was admitted to the hospital St. Louis, suffering from white swelling of the right foot. Her elder sister had a disease of the same nature in the right elbow and left knee. In September, 1829, we saw the case of Ferrat, and the next month that of his younger brother.

They were both tuberculous, and both had been affected with ophthalmia until they were ten years old. The ophthalmia generally became worse in both in the spring. They had two sisters: one died when three years old, of hooping-cough, and the other, when eighteen months old, of an obstruction.

The two brothers also had hooping-cough: in the elder it appeared at the age of twelve, and continued six months; and since that time his chest had always been weak. (Part 2d. *Pathological Causes.*)

Twice I have had to treat, in my wards, the two sisters affected with tuberculous scrofula of the neck. In both cases, the younger sister presented the disease in the rudimentary state, as it had commenced in the elder sister. The latter, in both cases, had large tuberculous tumors. I have frequently seen similar cases in the city, and have often noticed distinct small tubercles in the cervical region in children, whose brothers and sisters had very apparent tuberculous tumors in the same regions.

In 1827, I saw the case of a young girl who inherited scrofula from her mother and maternal grandmother: she had obstinate ophthalmias, and was affected with scrofulous ulcers in the commissures of the lips. She had a sister, five years old, in whom ophthalmia existed. I was consulted ten years since by a young man, nineteen years old, from Naples, affected with a double ophthalmia of the loose edges of both eyelids: a year afterward I saw his sister at Paris: she had ophthalmia similar to that in her brother, but it was much less severe.

The same remark applies to every variety of scrofula. We see cases of it in its most simple and least advanced state in families where other children have had the disease in the greatest degree, or even where it has proved fatal to some. This uniformity of scrofula in several children of the same family is not always noticed. We must not consider it as denoting

the highest degree of the disease, for scrofula is equally terrible when it appears under various forms, and attacks successively the members of a numerous family: thus one child had tubercles on its neck; his brother had caries of the feet; the sister had ophthalmia; and in the same family two children died, one of obstruction, the other with caries of the vertebræ. Farther, scrofulous diseases rarely exist singly; we remark, on the contrary, that very frequently they coexist two by two, three by three, &c., in one individual, and that they are complicated. An individual does not present all the signs of scrofula at all periods of his disease. In early infancy he had worms, ophthalmia, bronchitis, &c.; afterward tubercles, with a more or less marked coincidence of former diseases; and in a third period, abscesses, white swellings, &c., so that the medical history of a single scrofulous individual may present a nosological table of scrofula. But to have this table more varied and more complete, it should be observed in several scrofulous families, where the children present not only most kinds of scrofula, but also the different degrees of intensity which occur in their progress. To understand better the temperament of a family, we ought to demonstrate the unity of all the diseases already enumerated: which could readily be done, simply by remarking their coincidence in the same family, and the simultaneous or successive existence of several of them in the same individual. But this would be to anticipate too much in the history of the diagnosis, and to suppose that to be known, of which we have not yet treated. Hereafter we shall make some general remarks on the maladies specially described, to prove that all these diseases, whatever may be their form and seat, whether they affect the skin, mucous membranes, cellular tissue, fat, bones, &c., have the same origin and a common nature.

B. Instances of Mortality occasioned by Scrofula in Families.

F. Fredel, nineteen years old, with tuberculous ophthalmia, had lost five brothers or sisters who were still born, or who died at an early age. Another brother, who was small and humpbacked, could not stand erect, although he ate voraciously; he died when seven years old, of convulsions: another sister died when twelve years old.

There were still two sisters, one fifteen, the other twelve years old, both of whom, as also their brother, had tubercles and ophthalmia. Fredel had an elder brother, twenty-one years old, who had hitherto been healthy.

Gachet, whom we cured of two abscesses in the right coxal region, had eleven brothers or sisters, nine of whom had died, most of them while nursing.

I have published the case of a young scrofulous individual, who had lost three brothers and sisters, and had four others affected, like himself, with scrofula. Also that of a scrofulous patient, who had a sister dying at the age of nine years with caries of the vertebræ, and who had two sisters younger than himself, whose growth, like his, had been arrested: and that of a young man, sixteen years old, whom we cured at the hospital St. Louis of a fistulous white swelling of the right knee. This scrofulous person had lost eleven brothers or sisters, who died very young: he had a brother fourteen years old, of a delicate constitution, and a sister thirty years old who was said to enjoy good health.

When speaking of a scrofulous constitution, we mentioned a young lady from the department Cher, thirteen and a half years old, who was an only daughter, having lost a young brother and sister, and who was herself affected with serous infiltration of the eyelids. In August, 1831, I attended a young lady,

nineteen years old, who had been affected with tubercles and ophthalmia for five years: she had frequent attacks of coryza, and incrustations in the nose; the skin was fat and hypertrophied; the hair scanty and badly nourished.

The mother of this young person died of pulmonary tubercles when thirty years old. Five children died young: a sixth perished, when nineteen and a half years old, of pulmonary tubercles.

This girl had beside but one brother, eighteen years old, who had already a fistulous caries of the inferior maxillary bone. He was very backward, physiologically and morally; was fatigued by the slightest exercise; took cold very easily, which I considered as indicating pulmonary difficulties.

In my first memoir on the use of iodine in scrofula, I mentioned the case of a young girl affected with scrofulous tubercles, who had lost eight of her brothers and sisters, and of whose family there remained only one sister, two years older than herself, who died of pulmonary tubercles. In October, 1833, a lady, forty-two years old, consulted me about her daughter, sixteen years old, whose right leg had been amputated two years previously for a white swelling of the foot. This lady had miscarried once, and had borne five children, all of whom had died except my patient.

Mad. Deslingchamps had borne sixteen boys and girls. Of these fourteen had died; most of them being not more than five years old.

Twelve years since, I treated the only son of a lady who had eleven children. This patient, nineteen years old, had a white swelling of the right foot. His mother died of a pulmonary complaint a few years previous.

An. Eymer, twenty-nine years old, the only one of seven children who had not been attacked with scrofula, was treated very successfully by us in 1829; he

returned to the hospital St. Louis, where he died tuberculous, the last one of his family.

These cases, I presume, are sufficient to prove the hereditability of scrofula, by its generality in families, and by the excessive mortality it occasions among children; a mortality which is greater than in any other disease. We shall find the same characters equally demonstrated in the next two articles, and even in every article of our work; for in all, inheritance rules as a general cause, giving unity to scrofulous diseases, by referring them all to the same origin.

Several times it has seemed necessary to notice adultery, to complete our remarks on the causes of scrofulous diseases. The reader will, however, readily see the propriety of passing this thorny topic. The most indifferent observers are often struck with certain resemblances, foreign to the complexion of the family, and of an illicit origin, which are generally traced with ease. Sometimes the absence of scrofulous diseases has been noticed in children where they ought to have existed, the father being evidently scrofulous; and sometimes the first children have grown up with symptoms of scrofula, while the others show marks of a healthy organization, &c. All these facts, analyzed strictly, depend on the law of inheritance, and far from being exceptions, confirm this law.

Article II.—Inheritance of scrofulous diseases observed in the different branches of a common origin.

I now pass to a second series of cases, in which inheritance is equally evident by the parallel development of scrofula in the different branches of a family having a common origin.

I cured a young man of an enormous fistulous white swelling of the right elbow. His cousin was lying in the same ward, with an affection of the same character,

in the right tibio-tarsal articulation. In the spring of 1833, I attended a child named Fleury, eight years old, with cutaneous scrofula of the left cheek. Her cousin died about the same time, of caries and scrofulous tubercles.

In June, 1831, I was consulted by a lady thirty years old, from the department of Vienne. She had an ulcerated fistulous white swelling in the right knee, which began when she was five years old. She had ulcerated tubercles in most of the subcutaneous cellular regions, and died of pulmonary tubercles, with marasmus, at the age of thirty-eight years. She bore three children, all of whom died soon after birth. At the same time, I treated this lady's cousin at Paris for a cutaneous scrofula of the face and wrists. Some years after, her sister consulted me: in her the osseous system was principally affected, and she was threatened also with pulmonary tubercles.

Ten years ago, I saw in the department of Allier, a girl who had a fissure in the inner face of the right ala of the nose. The lobe and alæ of this organ presented a red indurated hypertrophy peculiar to cutaneous scrofula, on which pustules, and subsequently ulcers of bad character, were frequently developed. This girl was an only child, having lost an elder sister, who died when thirteen years old, covered with abscesses after an attack of the variola; a brother with hydrocephalus, who died when two years and a half old, and another brother, who died at the age of eighteen months. Her paternal uncle had had eight children, six of whom had died already: only two remained, one of them was affected with tubercles, and was much emaciated; the other was very delicate.

A young woman consulted me several years since, on account of her daughter, eight years old, who was affected with coxalgia, with elongation of the right lower limb. This lady was accompanied by her sister, who told me she had borne four children, but

was unable to raise one. I have known two sisters who were affected with tubercles: the elder was twenty-six years old, had been affected with hemoptysis every year in autumn for twelve years; the second was three years younger, and had expectorated, for three or four years, fragments of petrified tubercles, the size of a small bean, presenting very prominent angles and asperities, although the expectoration was neither painful nor attended with hemorrhage.

Each of these two sisters had two children—a girl and a boy: the four children are tuberculous, like their mothers. In June, 1834, I was consulted by two cousins in the department Du Nord: one had a white swelling of the right knee, with necrosis of the lower third of the femur; the other was affected with tubercles of the lungs, and had already lost a sister by this disease. Berard, twenty-three years old, was affected with spontaneous luxation of the head of the right femur: his cousin, on the mother's side, was affected with coxalgia of the same side, but without dislocation. Another maternal cousin, who was eleven years old, and had been affected with ophthalmia since the age of five years, was diseased with variola. Delaunay, who was tuberculous and affected with ophthalmia, had a favus. His sister, ten years old, was also tuberculous and was affected with favus.

This young man had already lost two sisters with pulmonary tubercles: one of them, before dying, at the age of thirty-five years, had two children, who were both affected with ophthalmia, like their uncle.

In June, 1835, we had, at the hospital St. Louis, two young scrofulous persons, who were cousins by their father and mother's side, the brothers having married each the sister of the other.

I have seen, in the provinces, patients whom I have treated at Paris a greater or less length of time; on this account, I have been placed in contact with other members of their families. Among them, I could dis-

cover the consanguineous relatives by their more or less marked resemblance with the patient under treatment, a resemblance which sometimes exists, even though unnoticed at first view.

This physical resemblance generally implies a certain similarity of health and disease. When one is engaged in this kind of inquiry, we soon discover that it is sometimes very difficult to procure information, in consequence of a peculiar feeling of self-love, which leads men to be silent when it is seen that they may resemble persons affected with scrofula: but a little care and management in asking questions, will show that the nature of the diseases existing in the different branches of the same family, are identical.

I was consulted several times by a young man, twenty-two years old, in regard to one of his cousins, who had a scrofulous white swelling of the right knee. This young man, who was short in stature, frequently assured me that the branch with which he was connected, presented no sign of scrofula. Still at a later period, I learned that he had a sister who was deformed, and that useless efforts had been made to render her straight by orthopedic processes; but he had hitherto been silent as to this point. This young man himself, as I have said, was neither erect nor of a proper height. In him, as in his sister, scrofula had principally affected the osseous system: so too with their cousin, who was at that time under my charge.

It would be very easy to multiply instances of a similar character. But we must not enlarge further, as we have to treat the same topic in another point of view.

Article III.—Inheritance of scrofulous diseases observed among children of different marriages.

When the father or mother marries many times, the health of the children by the different marriages differs.

They are scrofulous whenever one of the parents is affected with scrofula; but when the father and mother are equally free from hereditary maladies, the children are healthy.

S. Bataille was affected with cutaneous scrofula of the lobe of the nose. His sister had an ulcer of the same character, in the same place. Their father had a cancerous tumor in the lower lip. The grandfather had one similar, in the inner angle of the left eye. They had a half brother, born of a second husband of their mother, who was healthy.

In September, 1833, a lady thirty-two years old consulted me in regard to a child eleven years old, affected with spontaneous luxation of the left femur, with consecutive abscesses in the upper and anterior third of the thigh. This child was very much emaciated, and was kept in bed for six months, which is always injurious to scrofulous subjects.

This lady had miscarried twice: in due time, she was delivered of a third child, the one I saw, and finally of three other children, who died when young. I had already regarded her health as the cause of this mortality, and my opinion was confirmed on learning that her husband, fifty years old, had children by a former marriage who were healthy.

Here the progeny of the mother would always have been scrofulous, if she had married many times; but if her husband had married a healthy lady, his children might have been healthy.

I have mentioned in another work, the history of a young man, twenty-one years old, affected from his earliest infancy with ophthalmia in both eyes, and who, after he was eighteen years old, had several abscesses in different regions of the body, and five tuberculous ulcers on the sides of the neck, with an extensive affection of the skin. The father of this young man had six children by a first marriage; all were tainted by

scrofula. He had six by a second wife, and all were exempt from this malady.

This observation is similar to the preceding: in both cases scrofula was inherited from the mother: in the first case, it was the second family of children who were scrofulous; in the second, it was the first. In both cases, the father had scrofulous children by one of his two wives, viz., by her who was scrofulous; while he would have had them by both, had both been tainted by a scrofulous habit, as was the case in the following instance.

I knew a robust man who married two sisters, both of whom had pulmonary tubercles: he had scrofulous children by each marriage. By the first wife he had two, one a boy, who died when three years old, of disease of the mesenteric glands, and the other a girl, who died when twelve years old, of rachitis and pulmonary tubercles.

He had three children by his second wife, who died of consumption; two of them at a very early age, while the third, when four years old, was so weak as still to require nursing. These five children, born of two tuberculous sisters, were small and feeble: their life was but a series of sufferings, which commenced before they were born: their mothers had difficult labors, which must be attributed to their health. Here is a case of a healthy man having scrofulous children, in consequence of marrying two sisters who had pulmonary tubercles.

The next case is that of a scrofulous father having scrofulous children by two wives, both of whom were healthy. A man, forty years old, consulted me in regard to one of his daughters, seventeen years old, who was affected with cellular scrofula of the face. The cheeks, lips, alæ of the nose, and the eyelids, were hypertrophied and indurated to a very great degree. There was dysmenorrhœa: each menstrual period was painful, and terminated in a discharge, which continued

slightly two or three days at most. Some time after, this girl came to me with one of her sisters, aged eight years. She was by a second marriage, and she had *spina ventosa* of the two phalanges of the right large toe; an abscess the size of a pigeon's egg, above the inner condyle of the right shoulder; chronic otitis in the same side; so that in this second child we saw combined, scrofula of the bones, of the cellular, and of the mucous system.

The offspring of the first marriage had a brother who was delicate, and whose development was very slow in every respect.

The daughter by the second marriage, whose three organic systems were already affected with scrofula, had a sister eighteen months older, who had chronic otitis of the right ear; there was also a catarrhal state of all the mucous surfaces, and she was subject to intestinal worms.

The father of these four children was the only remaining child: his three sisters died very young, and in his infancy he was very sickly. His development was very much retarded by a favus, which resisted different modes of treatment for several years. He joined the army at the age of eighteen, and his health improved; still, at the age of forty-two, his constitution was feeble, and his height smaller than usual: his chest was narrow; his voice husky; perhaps there was pectoriloquy. His father was the only survivor of six children.

This case gives one an idea of the manner in which scrofulous families become extinct by the natural progress of this disease. The grandfather was the only survivor of six children, and the father the only one of four children: he himself had lost four children, all of whom were scrofulous.

In the preceding case, we have seen a scrofulous man have scrofulous children by two marriages, although neither of his wives was scrofulous. In the

following case, a scrofulous female had scrofulous children by two husbands, both of whom were healthy, while her second husband had four healthy children by a previous marriage.

Condert, a patient at the hospital St. Louis, in 1829, was affected with several severe varieties of scrofulous diseases. The father of this young man had four children by his first wife, all whom were healthy, and three by his second, all of whom had scrofula: our patient was one of them. The second wife had been married before, and had four children by her first husband, two of whom had pulmonary tubercles.

Finally, I have seen the case of a man who married three times, and had scrofulous children only by his second wife. He had three children by this marriage, a boy, who entered the hospital St. Louis, and two girls: one of them died when ten years old, of a white swelling of the knee; the other had cervical tubercles in infancy, but enjoyed good health when forty years old. This man's children by his first and third wives were healthy.

Remarks on the cases in the three preceding articles.

The cases we have stated in the three previous articles give only an imperfect idea of the generality of the disease, and of the number of deaths in scrofulous families. We want the elements necessary to complete these observations. Parents generally deceive and flatter themselves as to the health of their children, and often imagine them healthy, although they are manifestly scrofulous, and even when the disease shows itself by some marked fact, this rarely excites their anxiety as to the health of their other children. Their blindness in this respect is often incredible. A mother brings to us a scrofulous child, and usually begins by stating that this one is the only member of her family affected, and wonders that scrofula can attack one of her children, all the others being exempt

from this disease. These errors arise from the general opinion that scrofula is situated in the face and cervical region, while this disease may appear under very varied forms and degrees in all the organs and regions of the economy.

These erroneous opinions depend on the love of parents for their offspring, and upon their blindness which is generally a consequence of it: they begin by stating what they wish, and thus attempt to influence the physician. But we are accustomed to judge for ourselves; and notwithstanding the remarks of those around, we continue to inquire into the health of the other children, and thus ascertain that they all have a common predisposition similar to that of the child before us. Among the other children, in regard to whose health the parents feel extremely secure, there are often some, more affected with scrofula than the one for whom we are consulted, and who has been considered as the only one diseased, because he presents some more common sign of scrofula.

We see, in the history of the cases presented to show the generality of scrofula in a family, that this fact has been established, only by resisting the negative information given to us.

The first case is that of a young man who had tubercles and was affected with a white swelling, who was regarded as the only scrofulous member of his family, although he had three sisters and a brother affected with this disease. One of his sisters, sixteen years old, had pulmonary tubercles so far advanced that she died shortly after; and we told her family, much to their surprise, that this young girl was more ill than her brothers and sisters.

The second and third cases also show the existence of a scrofulous habit manifested in the family by prominent facts, although the parents felt very safe as to the health of their other children.

We admit that medical men are partly responsible for

these illusions: physicians generally give to scrofulous diseases a particular name, to which they seldom add the real name, the generic name, that which is common to them, and which unites them in the same class. Medical teaching varies so much from our views on the unity of this disease, that scrofulous complaints are scattered through the different wards of the different hospitals, according as they affect the eyes, skin, bones, lungs. With such superficial ideas of diagnosis, one can never know the constitution of the family which is the origin of all these diseases. The number of deaths can only be learned approximatively; although this is much easier than to detect the family temperament in each individual. Parents do not always remember, and the children of whom we inquire in the hospital have only an indistinct recollection, as to the number of brothers and sisters whom they have lost. Hence statements as to the number of those children who have died affected with scrofula are commonly below the truth, and on renewing our questions to patients on these points, the number of those who have died is usually increased.

Whatever this number may be at a given period, it always increases, and has been enlarged many times since the writing of this memoir. It must have increased more than I know, and death will yet cut off many among those who are regarded as having finally escaped scrofula.

In this statement of deaths, we must not forget still-born children. Abortions are very common in females who have scrofulous children, either on account of their own personal health or that of their husbands. (Part 2, *Pathological causes.*) At least one fourth of the scrofulous children die during fœtal life. I regard these abortions as the highest and most intense degree of hereditary disease. In fact, it is evident that the fetus who dies scrofulous is much more affected than the child who dies a longer or shorter time after birth.

Scrofula is then the most active principle of the destruction of the human race. No other disease cuts off as many and as young victims, and there is no cause which abridges human life so much.

Buffon says, that the nearer death approaches, the slower is its step. This general remark has no other reason than the original good health of the individuals. Hence one does not grow old unless one is well organized; unless the body be free from hereditary diseases: an advanced age, therefore, is the sign of a healthy organization, which may be prolonged during the whole course of human existence.

We shall here terminate our remarks on the characters of inheritance. Perhaps we have insisted too much on these characters: we think, however, that our details have thrown new light on the diagnosis of scrofulous diseases.

We proceed now to speak of the health of parents who beget scrofulous children.

CHAPTER II.

HEALTH OF PARENTS WHO BEGET SCROFULOUS CHILDREN.

We have seen, that when scrofula exists in a family, it generally attacks all the children, and destroys most of them early in life, and some even before birth.

These two phenomena are sufficient to show its inheritance in families where these events occur: they are the essential characters of inheritance, which they denote; they can denote nothing else.

Nevertheless we shall extend our researches farther, and having investigated inheritance itself, we shall now seek its origin, by studying the health of parents who produce scrofulous children.

I know no other point in pathology where a more direct and more intimate physiological relation has ever been established between causes and effects, than that found between the health of children and that of their parents. This relation is so constant, that it must be considered as a law of our organization—as a primordial law, according to which *the health of children depends upon that of the parents*, as I have stated in the motto of this work. There must be no exceptions to this law. The facts which seem to us exceptions are not so; but in these facts certain elements escape us, and thus we can not detect them, especially as we are without a guide in our researches on the subject of inheritance, which remains undetected in many cases, where scrofula, however, has no other origin.

This law, which is but little known, is, however, that of our existence; our destiny and that of our children depends on our health. Health and happiness will always be the lot of those men who will make

this law the rule of their conduct: but the relations of marriage as usually contracted, without attention to the previous health of the bride's family, are the inevitable source of scrofulous diseases, and consequently of bitter feelings through life. When speaking of the hereditary causes of these diseases, Fernel says, we draw our greatest strength from our birth—*Maxima ortus nostri vis est.* Our own remarks teach us another truth, which is equally general in its application and useful to know, viz., *that the greatest misfortune which can happen to one is to be born of sickly parents.* But when we say that scrofula arises from inheritance, we do not imply that it comes exclusively from scrofulous parents; and have even shown, that if it had no other origin, and could arise only from itself, scrofula would not long afflict the human species; for it would become extinct by the death of those affected with it.

It is perpetuated and extended, because it has more than one origin—because it arises from several sources, several states of health, all of which debilitate the virility of man, and render his offspring scrofulous.

We have studied these different states of health and their relations with scrofulous diseases, a long time: we think we have specified them with exactness, as we can refer to one or several of them the cases of scrofula which are observed daily. These different states of health are original or accidental. In the first case, the parents themselves are affected with hereditary diseases which they transmit to their descendants; in the second, they become unfit for the procreation of healthy children in consequence of accidental diseases, or of the actual condition of their health. From these two sources, first, the original health, and, second, the accidental health of the parents, we have derived new ideas in regard to the hereditary causes of scrofula, the history of which is thus divided into two natural orders of facts, which we shall state in two distinct sections.

§ I.—*Original Health of Parents who beget Scrofulous Children.*

When the causes of scrofula arise from the original health of the parents, the latter are themselves either scrofulous or tuberculous, which we regard as the same thing, and most generally their state of disease is sufficiently apparent to determine the origin of scrofula, with which their children are commonly affected.

But the pathological temperament of the parents is not always so strongly marked as to enable one to establish easily, in all cases, the relation between their health and that of their children.

Hence, we should have overlooked this relation more frequently, if, at the beginning of our researches, we had not remarked that in cases where the disease was not visibly inherited, we found no occasional external causes.

This general remark brought to our notice facts without a cause, that is, the origin of which we could not trace: here we came evidently to the boundaries of the science. Hence it became necessary to seek for the causes of these facts.

External occasional causes have been much abused; and they have so gratuitous an influence particularly on scrofulous diseases with which they seldom coexist, while inheritance connects them so satisfactorily, that I have naturally been led to think that the causes of the facts of which we are ignorant might be referred to this latter source. My suspicions were soon realized. In fact, I have seen that hereditary causes are more numerous and frequent than is generally thought; that inheritance exists in many cases where the marks of its existence being remote, they were not seen on the first examination, but became evident on studying the health of the parents. For this we must not only consider their actual state of health; we must also ascertain their previous state of health, and the temperament of their family.

These new points extend the field of inheritance very much, and throw great light on a number of facts which hitherto could not be referred to their true origin. It will be easy hereafter to detect it, by attending to the antecedents and coincidences we have mentioned. We shall then see that scrofula does not only come from parents who are actually scrofulous, but that it may also come, first, from parents who have been scrofulous, but no longer appear to be so; secondly, from parents who are believed to be exempt from scrofula, although their brothers and sisters are scrofulous; thirdly, from parents who show no signs of scrofula until they have borne scrofulous children.

Article I.—Of scrofula from scrofulous parents.

We must not think that the particular cases which have served to establish the generality of scrofula and the very great mortality it occasions, can prove nothing else. These same facts serve also as good materials for other views in regard to scrofulous diseases. Most of them might also be used to prove the inheritance of the disease from scrofulous parents, the commencement of the disease without external causes, its attack amid the conditions of hygiene most proper to insure good health, &c., &c. These circumstances can be seen in most of the cases we have stated; but had we followed this course, we should have been subject to many repetitions. Hence we have separated the different parts of the question, to study them in detail in a certain number of facts: this was the only way to embrace the greatest number of cases in our work, and to group them around the natural laws from which they are derived. Scrofula produced by scrofulous parents is one of these laws—one of these hereditary causes, to which we shall attend first. The children of men who are robust, originally well formed, and actually in good health, are never scrofulous: so, too,

it is unnatural for a scrofulous man to beget robust and well-formed children. Scrofula either on the father's or mother's side is impressed on their offspring, and much more strongly when both parents are affected. I regard this transmission as inevitable when it comes from the father; but there are a few exceptions to it when a healthy man impregnates a scrofulous female.

Scrofulous people seldom arrive at the age to propagate the disease with which they are affected; for most of them die in the first months or first years of life, and seldom live beyond the age of puberty. Scarcely a fifth part of them marry; nor is this to be regretted, because the offspring of the union is still weaker than the parents, and if a healthy person marries one who is scrofulous, society is tainted with hereditary diseases.

Still the most common cause of scrofula is its transmission by inheritance: more cases are produced by this cause than by all other causes combined, even including, as I do, pulmonary tubercles, which is only a form of the disease, as we shall show in the next article.

I have attended many children whose parents presented evident traces of scrofula, with which they had been affected in infancy or youth.

In many cases, parents transmit to their children the same form of scrofula as that with which they themselves were affected. I have observed scrofulous children, who had tubercles similar to those in one of their parents; and others who have thus inherited obstinate ophthalmias, abscesses, caries, rachitis, &c.

A female, who had been affected in infancy with ulcerated cervical tubercles, and who had survived with difficulty the age of puberty, had four children, one of whom died when eight months old; the other three had scrofulous tubercles like their mother. Two of them, whom we had together at the hospital St. Louis, were also affected with ophthalmia; the third was not, but was very subject to attacks of bronchitis, which I

regarded as of the same species as the ophthalmias seen in his brothers.

A lady, thirty-two years old, the mother of five children, lost four of them when very young, and consulted me for her only daughter, who had ophthalmia, and in whose eyes were spots, the results of former ophthalmias. This lady had the same kind of disease in her infancy, and had always red eyes, and swelling of the unattached edges of the eyelids.

I treated a student, twelve years old, for a tuberculous tumor in the left submaxillary region. The mother had a tuberculous cicatrix in the same region, and many other marks of scrofula with which she had been affected in infancy.

Barbier had a very broad ulceration at the middle and upper part of the chest, which had continued for seven years, and had resisted every kind of treatment. The father of this patient presented in the same region the cicatrix of a large scrofulous ulcer, with which he had suffered for many years. This young scrofulous patient, who was affected with the same disease, and in the same place as his father, had a paternal uncle who was troubled with ulcers in the legs.

Anjard, forty years old, of feeble constitution, sometimes suffering from his chest, had palpebral ophthalmia in both eyes, arising from smallpox, contracted when an infant. His son, sixteen years old, entered the hospital St. Louis in 1829, having been for eleven years affected with double ophthalmia, occurring after smallpox. A second son, thirteen years of age, when five years old had ophthalmia, which had continued for two years. A daughter, fourteen years and a half old, had ophthalmia after her seventh year. Salmon had been ophthalmic during several years of infancy, and after this had a catarrhal affection of the air-passages. This man was the father of eleven children, seven of whom died when very young. Of the remaining four, three had ophthalmia; the fourth was sick at the hospital

St. Louis: he was covered with scrofulous ulcers, and with numerous cicatrices on the trunk and limbs. Many of these ulcers were fistulous, and from some of them, spiculæ of bone had been discharged. The disease of young Salmon began at the age of seventeen years, and since that time its remissions were short.

In December, 1830, a young lady who was rachitic and short in stature, subject to a profuse leucorrhœa, consulted me in regard to one of her children, six years and a half old, who already was affected with rachitis. This child also had tubercles in the neck and mesentery, and the amygdalœ were habitually large: he was very subject to eruptions, and was very pale. Another child, a girl five years and a half old, had curved spine.

In January, 1841, a man with a scrofulous cicatrix on the right side of the neck, but who was in good health at that time, came to the hospital St. Louis for advice about his son, ten years old, who had a tuberculous ulcer on the right cheek. This child had more than one point of resemblance with his father. The man had two other children—a girl, who died when five years old, of hydrocephalus, after forty-eight hours' sickness; and a son, who died at the age of two years, with this same complaint, preceded by convulsions.

Five years since, I was consulted at the hospital St. Louis, for a girl sixteen years old, affected with ulcerated tubercles in her neck: the mother died ten years before of the same disease.

Frison was one of the first patients on whom we had experimented with iodine, and whom we cured in 1827, of a tuberculous tumor on the left side of the neck. His father had ulcerated tubercles in the cervical region, and died of pulmonary tubercles when thirty-one years old.

In May, 1837, Delpech died at the hospital St. Louis with tubercles, leaving four young children, all of whom died tuberculous in less than three months after their father; the eldest was less than seven years

old. This last case, although very brief, presents three important points: 1st, the inheritance of scrofula; 2d, its generality in the family; 3d, its great mortality.

The similitude remarked in the external signs of scrofula in parents and their children, is often only the actual state of the diagnosis at the moment of observing the case. One child has ophthalmia like its father; another, who has a tuberculous tumor in the same region where the mother has the cicatrix of a tumor of the same kind, will hereafter present other signs of scrofula; for in most cases, several scrofulous maladies coexist and succeed each other during the life of the scrofulous individual. A scrofulous disease rarely continues the same until it is cured, or terminates fatally. A child who is now ophthalmic, will, at a later period, be tuberculous; will have caries of the phalanges, coxalgia, &c.; and if it die, it will not be till most of the scrofulous diseases have occurred.

I have frequently noticed a coincidence of scrofulous diseases in three generations. When this occurs, the third generation dies almost immediately. I know two sisters, whose mother had on her neck evident traces of scrofula, and who was also affected with schirrus in the right breast, supervening at *the turn of life*. Both these sisters married, but could not raise their children. I doubt whether they will live long.

The following case is that of a lady who has survived the scrofulous diseases from which she suffered in her youth, only to be delivered of five still-born children, and of two daughters scrofulous like herself, and who will never be able to bring up any children.

A lady of the department of Aube, aged sixty-four years, came to consult me this year for pains in the right abdominal limb. In her youth, she had a white swelling of the tibio-femoral articulation, and abscesses in the region of the trochanters. This lady is short: she stoops, is rachitic and thin. She was married when twenty years old, and had five miscarriages, all of which were

followed with profuse hemorrhages for two months and a half. Two years after her last abortion, she was delivered of a full-grown daughter, and in three years had a second. Both of these girls were married at the usual age, although they were very feeble. The eldest is thirty-four years old: she had two children—a daughter, who died when eight months old, and a boy nearly fourteen years old, who is now at Cauterets for a white swelling of the right tibio-femoral articulation. The second, thirty-one years old, had two daughters, whom she lost. These two young females also miscarried like their mother, but I do not know how many times.

Five years since, I saw a very small and delicate child, who died when six months old, unable to gain sufficient nourishment, although everything was done to save her. I think the father of this child will not be more fortunate, as I treated him, twenty-four years since, for chronic hydrocephalus, and because he inherited scrofula from his father. This case shows three generations of scrofula in a quarter of a century. The third was extinct at its birth. In many of these cases, this third generation never sees the light: the mothers most generally miscarry, and some never bear a full-grown child.

To these cases of inheritance may be added those already related in the preceding articles; and we shall mention a still greater number, when speaking of the different relations under which we have still to study the causes of scrofulous diseases. At present, we shall not multiply instances of inheritance from scrofulous parents; nor is it necessary, as the inheritance of scrofulous disease is not generally denied by authors. Besides, it is easy to be perfectly satisfied on this point, simply by interrogating carefully a few scrofulous patients.

ARTICLE II.—OF SCROFULA FROM PARENTS WITH PULMONARY TUBERCLES.

I HAVE treated of this kind of inheritance particularly, in order to render the parentage of scrofulous diseases and pulmonary tubercles more evident, and to show more clearly their reciprocal and very common connexion, I will say more, and even their identical nature. Although this idea is not new, one would say it is unknown in our days, if we consider how much physicians attend to occasional causes, and the localization of tubercles, and how much the medicines prescribed differ from those which would be ordered, were the scrofulous nature of tubercles admitted.

Sydenham has recognised the similitude of these diseases so well, that he has applied to tuberculous phthisis the term, *scrofula of the lungs;* an expression of doctrine of which I have the anatomical proof, to be published in another work on the tubercle. Portal regards the disease, which he calls phthisis pulmonalis, as one of a scrofulous character, and alludes to this so frequently, that it is astonishing our physicians have not observed it and practised upon it. The similitude between scrofula and tuberculous affections, is too manifest and constant to have escaped completely Bayle and Laennec; but it is to be regretted, that on this point of doctrine these good observers are less advanced than Portal. Their silence on the scrofulous nature of pulmonary tubercles, has been particularly unfortunate, because it has countenanced the ideas of localization, and in consequence of these views, the most dangerous remedies which can be employed for the treatment of pulmonary tubercles. Had these two authors, deservedly of great reputation, labored to show the scrofulous character of pulmonary tubercles; had they pointed out the more rapid progress of this affection under an antiphlogistic treatment and regimen, based on the pretended inflammatory etiology of tubercles,

they would have prevented the abuses of bleeding in a disease, which does not require sanguineous depletion as a general method of treatment.

The common nature of scrofula and pulmonary tubercles is very manifest: in fact, these two diseases have equally an hereditary origin; both of them are general in the family, and occasion in it the same mortality. These three characters, which belong to them in the same degree, would be sufficient to establish the similitude of these diseases; and this similitude will be still more evident, when we show, 1st, that scrofula has most generally a tuberculous origin; 2d, that these two diseases usually exist in the same family; 3d, that all scrofulous persons have pulmonary tubercles.

1. *Tuberculous origin of scrofula.*—Scrofula most generally has a tuberculous origin. The parents of more than half those affected with scrofula, have had pulmonary tubercles. Scrofulous diseases of every kind; cervical, mesenteric, and pulmonary tubercles, &c.; white swellings, caries, ophthalmias, bronchitis, intestinal worms, acute or chronic hydrocephalus, &c., exist in families, without any other reason than the existence of pulmonary tubercles in one of the ancestors.

Scrofula has so generally a tuberculous origin, that in two wards containing eighty-four beds, I have constantly detected the existence of pulmonary phthisis in more than one half of the parents. This result is below the truth. The proportion of cases in which the hereditary origin of scrofula is tuberculous, must be greater. Many patients can give but few or no authentic details as to the health of their families: others can not attribute the death of their parents to phthisis tubercularis, because the signs of this disease were not sufficiently manifest.

For this reason, in addition to the general remarks already presented, and which are based on the declarations of patients, that one or both their parents have

died of diseased lungs, and which seem to us confirmed sufficiently by details, we must state another series of cases, in regard to which we have not sufficient data to establish formally the existence of phthisis, but in which it is easy to see that this latter disease is the hereditary principle of scrofula. In most of these cases, in fact, we learned that the parents were of a feeble constitution and died young; two circumstances which render it probable they died of pulmonary tubercles.

Finally, we have detected several cases of premature death in grandparents, which we shall mention only for reference.

2. *Coincidence of scrofulous and pulmonary diseases in the family.*—The preceding considerations are justified by the very common coincidence of tuberculous phthisis with other scrofulous diseases. Scrofulous children often have brothers and sisters with pulmonary tubercles. In 1830, I treated at Paris a young child from the department of Moselle, for a cutaneous scrofula of the right cheek. This patient lost an elder brother and a sister by phthisis. Their mother died of pulmonary tubercles when thirty years old.

In a patient named Belon, the cervical region was filled with tuberculous tumors. His mother died with pulmonary tubercles: he lost a brother, twenty years old, with the same disease, and had a sister, nineteen years old, who had a constant cough since she had croup in early infancy.

Domergue was ophthalmic, and suffered with deep-seated caries: his brother, died when eight years old, of cerebral fever: his sister had ophthalmia, and died, when twelve years old, of pulmonary tubercles. The father of these three children died, when thirty-seven years old, of tubercles in the lungs; and they all inherited the same predisposition to this formidable disease.

We shall now see that scrofulous patients have pulmonary tubercles, like those of their brethren in whom scrofula shows itself only in the respiratory organs.

In scrofulous families, children die from diseases of the chest, and reciprocally in families affected with pulmonary tubercles, some children die with scrofulous diseases. In common terms, a family is scrofulous when scrofulous diseases cause a greater mortality than pulmonary tubercles ; and it is tuberculous, when tuberculization of the lungs cuts off a larger number of children than the other scrofulous diseases.

Practitioners still make so great a difference between scrofula and tubercle, that they treat these diseases as if independent of each other. A patient affected with white swelling, is treated without attaching any importance to the death of a brother from the development of pulmonary tubercles. On the other hand, they notice the progressive course of tubercles in the lungs, without establishing any relation between this latter disease and instances of white swelling which have existed, or which then exist in the family. The time is not remote, I think, when the relation of these diseases will be generally admitted, and put beyond the reach of all controversy.

We have seen that scrofula most frequently has a tuberculous origin, and that scrofulous families lose many of their children by diseases of the chest. We shall now see that scrofulous patients are affected with pulmonary tubercles like those of their brethren, in whom scrofula manifests itself only in the respiratory organs.

3. *Scrofulous persons are affected with pulmonary tubercles.*—Those children who are considered as scrofulous, and not as tuberculous, are nevertheless as much affected with pulmonary tubercles, as where the tuberculous scrofula commences in the lungs, and concentrates itself in those organs. The natural death of scrofulous persons is by diseased lungs : we may even state it can not occur otherwise. Subcutaneous tubercles, ophthalmias, ulcers of the skin, caries of the

bones, and scrofulous diseases generally, do not terminate fatally, till after tubercles of the lungs ensue.

Belon, whose case has already been mentioned, as having tuberculous tumors in the cervical regions, in our view was as much affected with pulmonary tubercles as his sister, who died from this malady; as much, in fact, as if he had exhibited advanced symptoms. These three children were affected with the same kind of disease, and there was no difference, except in its actual form and degree.

Belon, perhaps, was not troubled with pulmonary tubercles, but he was predisposed to them, already having tubercles in the neck; one of his sisters died with pulmonary tubercles; another was affected with the same disease, while the mother died of pulmonary affection. Our remarks on Belon apply to all scrofulous persons: they are all affected with pulmonary tubercles.

Domergue, of whom I have already spoken, was almost cured of deep-seated caries in the two feet. He was employed in the hospital kitchen for six years, when he died of pulmonary tubercles.

Scrofulous persons generally die of diseased lungs, either during the existence of other scrofulous diseases, or at a certain time after the cure of these maladies.

Nearly all the scrofulous persons who are affected with subcutaneous tubercles, abscesses, white swellings, &c., and whom we have examined after death, in the hospital St. Louis, have presented pulmonary tubercles.

Many of those scrofulous persons whom we have cured during the last fifteen years have since died, and all or nearly all of them had tubercles in their lungs. The few cases where tubercles were not found, do not constitute exceptions, but they resemble other cases already recorded, where pulmonary tubercles occurred in advanced life, and sometimes even in old age, in those individuals born with an hereditary disposition to

this disease. Thus, on opening the body, we see by the different states in which the tubercles are found, that there are successive crops of these productions. On this point, tuberculous subjects present immense differences, as we descend from the greatest degree of tuberculization to that where only a few tubercles exist. Where the predisposition exists, and these latter are deficient, it is because the period of their invasion has not arrived. We have not yet done with scrofula and pulmonary tubercles. This subject presents several other interesting facts, which are not sufficiently connected with the causes of scrofulous diseases to find a place here. We shall mention them in a special work, in which we shall show that *the tubercle is a production of the same character in all organs, and that most of these organs, but especially the lungs, are tuberculous in those individuals who die of scrofulous diseases.*

ARTICLE III.—SOME PARENTS WHO HAVE BEEN SCROFULOUS IN YOUTH, BUT WHO ENJOY TOLERABLE HEALTH, OFTEN BEGET SCROFULOUS CHILDREN.

MOST persons who are scrofulous die early in life; those whose constitution can sustain the continued or oft-repeated attacks of scrofula, reach the period of puberty much enfeebled: and this period does not restore their strength, but is often fatal to them.

Puberty, however, does not always exercise so unfavorable an influence; on the contrary, it sometimes gives a sufficiently favorable impulse to the temperament to produce a remission or even an apparent cure of former diseases.

But, whatever may be this remission—whatever may then be the improvement in the physical organization, life has not the same power as in a man originally well made. Although restored—although his condition is much improved, the individual is still scrofulous, and in a condition to have a scrofulous family.

This origin of scrofula is more common than is imagined; it exists in a proportion nearly equal to the number of scrofulous patients cured by the salutary changes of puberty. Those spontaneous cures which supervene in the springtime of life simply benefit the individual, and rarely enable him to have a vigorous offspring. In the most fortunate cases, those where we can believe that the diseases anterior to puberty are completely arrested, scrofula may be transmitted hereditarily, and it is not till after several generations and happy alliances that the scrofulous habit ceases to be perpetuated in families.

Parents are generally silent in regard to the facts we have mentioned, and this silence leads to error in regard to the origin of many scrofulous diseases. We seek occasional causes, where they do not exist, and where the disease has its principle in the health of one of the ancestral parents.

I shall present some instances to serve as a guide in investigating facts of this kind.

I attended a young girl, thirteen years old, who after her fourth year, was ophthalmic and tuberculous in the highest degree. The father and mother enjoyed good health. The mother was well formed, and her appearance suggested no doubt as to her previous health. On first examining her, I learned nothing of the causes of the disease. The young patient enjoyed all the comforts of life, and hence external causes could have no influence; the father and mother were both young and well when the girl was born, and consequently there was no apparent hereditary cause: so that here was a very serious disease without causes of any kind.

I afterward learned from the mother that she was very sickly during infancy; that her growth had been very slow; that she did not menstruate till the age of nineteen; and that her good health after marriage was matter of surprise to her family. This lady had four

children: one was the young female with tubercles whom I attended: the other three were delicate.

The fact I have cited was the first one of the kind observed by me: it was in April, 1830; since that I have seen several other instances, three of which I will mention.

About the same period, I was consulted for a fistulous white swelling in the left shoulder of a Greek, thirteen years old, whose parents were young and in good health, and were well situated in life; so that in this case also there was apparently no inheritance nor external causes: but on studying the case more closely, we were obliged to refer it to the kind of inheritance of which we are treating.

The paternal grandmother died of pulmonary tubercles. The father's constitution was feeble; he was forty-eight years old, and enjoyed tolerably good health, but in his infancy he had been affected with obstinate hooping-cough, bronchitis, and eruptive fevers of bad character: at the age of puberty he was so frequently affected with colds that death from pulmonary disease was expected; but this period proved a critical one, in which his health improved, although he never became very strong, notwithstanding he received every care and attention in childhood.

The following is equally interesting: some fifteen years since, I treated a young lady, sixteen years old, with ulcerated tuberculous tumors on each side of the neck. She had a sister, twenty-one years old, who had pulmonary tubercles with hypertrophy of the heart and curvature of the spine, which was not considered as scrofulous. When the mother consulted me for one of her daughters, she was tolerably well; but, as she presented the *facies amabilis phthisicorum*, I questioned her particularly, and found that she had lost her father by pulmonary tubercles, and also her brother twenty-eight years old; that in her youth she had been threatened with them several times; that she was extremely

delicate from the age of nine to seventeen years, and that her menses were established with great difficulty. When forty-two years old, the *turn of life* came, and with it coughs which succeeded each other constantly; her strength and flesh diminished rapidly. There was evidently a reappearance of the pulmonary tubercles: I say reappearance, because the coughs which now affect this lady are of the same character as those which troubled her in youth, and which she transmitted to her posterity even when she was considered, but erroneously, to be completely cured.

Although my ideas will be fully seen in these three cases, I shall mention another, which is the most curious of the kind I have observed: here there was a spontaneous termination of scrofula at the age of puberty, a transition to a robust state of health, and yet scrofulous offspring.

In October, 1834, I began the treatment of a young lady affected with caries of the carpal and metacarpal bones of both hands, a fistulous white swelling of the left elbow, and necrosis of the right tibia. This young girl had cut her second teeth, which were much decayed; she was extremely emaciated; her appetite was poor, and she took but little food; the arm and forearm above and below the white swelling of the elbow were but little larger than the index finger of an adult.

The father of this child was a large and very strong man, fifty years old, who had led an active and laborious life. Although his wife seemed very delicate, still I began my inquiries with him, because he had but few eyelashes, especially in the lower lid, and there was a continual winking of the eye, like those who have had obstinate ophthalmias in their infancy: in fact, his eyes were diseased for several years, and were not cured till he was fifteen years old, when a scrofulous abscess supervened in the right side of the neck, which remained open five or six months. When twenty years old, his health improved very much, and

he became capable of enduring great bodily fatigue. Since that time his diseases have been only colds, which have increased in frequency and intensity, often continuing an entire winter. In some years he became much emaciated from a cold, which was regarded as indicating tubercles. I entertained the same opinion, and for these reasons: because he had a brother affected with caries of the bones of the feet, in whom this affection had been cured, when he was fifteen years old, after continuing for many years, and who died with pulmonary tubercles at the age of forty-two years; because he lost a sister by the same disease at the age of forty-five years; because they have had nineteen children, and thirteen died early, exclusive of the two mentioned.

Observe, now, the similar nature of the ophthalmias and caries which affected the two brothers in their infancy, and which terminated in both at the age of fifteen years; the death of one at the age of forty-two years with pulmonary tubercles; the second threatened with the same, especially if we bear in mind that since the ophthalmias have ceased, all his diseases have been colds.

Let us now resume the history of the family of this latter. We have mentioned the young lady whose osseous system was almost generally affected with scrofula, and who was cured by four courses of treatment, taken four years successively during the spring and summer.

She had a sister eighteen months older, who is gay, lively, intelligent, and well formed for her age, but who frequently suffers from ophthalmia, and has a small tuberculous tumor in the right submaxillary region, and bad teeth. The father had two other children, a boy and a girl, who died shortly after birth.

Here, then, is a man who has presented in his infancy marks of scrofula, which disappeared spontaneously at the age of puberty. He not only seemed

cured, but he gained an unusual degree of physical force: nevertheless, look at his offspring—four children, two of whom died young, and the other two scrofulous. None of these children have yet attained the age of puberty. Perhaps this period will be a critical one for them, as it was with the father and paternal uncle.

Observe, also, the particular disease with which the father is threatened. He has been tuberculous for fifteen years, and this predisposition has never been entirely extinct, for he has always been subject to obstinate colds, and several practitioners have regarded him as affected with pulmonary tubercles for several years.

I know of no other fact which proves as well as this, to what point the temperament of birth remains radically the same, however much it may be improved by the salutary influence of puberty, and to what extent we perpetuate our race according to the health we had when born.

The special object of this article, as its title indicates, is to introduce these general ideas into science: we have wished to establish, that scrofula may be reproduced hereditarily, even when the parents seem to have been cured of their scrofulous diseases in infancy, and we think that all these views are deduced naturally from the facts we have mentioned. We can add that they are confirmed implicitly by another order of facts—by cases where persons have apparently been cured of tubercles, and yet die from them, a longer or shorter period after their apparent cure.

Many practitioners have noticed, as we have, cases of phthisis pulmonalis, threatening at the age of puberty, relieved by the treatment, and remaining concealed for many years, to reappear either at the turn of life or before this period, spontaneously or under some external influence, such as errors in regimen, &c. The same thing occurs with scrofulous diseases generally.

Probably no practitioner thinks that cases of this kind have been totally cured, and that the disease has been brought on again by external causes. In the interval there has been only an improvement: the healthy elements of the organization have hitherto controlled the morbid predisposition until the latter has resumed the supremacy, either spontaneously, or by some occasional cause, or by the progress of age, which always enfeebles the constitution.

This is so true, that most persons who are thus situated, are subject to special diseases: they easily take cold, have sore throats and affections of the chest, and are deficient in energy. They are obliged to pursue a special and very temperate regimen, and they require to moderate their passions, and always suffer if these be too much indulged. Finally, whatever may be their improvement in consequence of a good regimen, they generally die of pulmonary disease.

Now it is precisely this congenital predisposition, this original temperament, modified and amended by treatment, but not eradicated, however promising appearances may be, which is transmissible to children, as we have seen in several families, and as we can see daily. The continuance of this fatal predisposition to scrofulous disease, then, is undeniable. It is seen too clearly in the facts we have stated, to admit of any rational doubt.

Look at the mother of these two young girls mentioned in the third case. One would believe her cured: she had even forgotten the diseases of her infancy: she scarcely understood my motives in making her remember them, and yet when she was forty-two years old, the first symptoms of the diseases of puberty reappeared. These symptoms progressed as usual, and this lady died in three years of pulmonary tubercles. Her elder daughter died eighteen months before her mother, who was soon followed by the younger daughter, my patient.

In this case, the mother presented some signs of a scrofulous habit, and it was in her health that we tried to find the causes of the child's disease.

In the fourth case, I saw at the first glance, that my research for hereditary causes must be directed to the father; but much experience is required, in this kind of diagnosis, to detect the signs of a scrofulous temperament in a strongly-built man, and one, too, who was even proud of his health; although this vigor which he had enjoyed for twenty years, and his power of enduring fatigue, did not prevent him from propagating scrofulous children, because he had been scrofulous when young. Probably he will die from pulmonary tubercles, as was the case in the preceding instance; for we have already said he was scrofulous in his youth: he had several obstinate coughs, some of which were accompanied with loss of strength and of flesh. He lost a brother, forty-two years old; a sister, aged forty-five, with pulmonary tubercles; and thirteen other brothers and sisters, who died young.

ARTICLE IV.—PARENTS WHO DO NOT SEEM TO BE SCROFULOUS, BUT WHOSE BROTHERS AND SISTERS ARE SO, FREQUENTLY HAVE SCROFULOUS CHILDREN.

WHEN scrofula exists in a family, it does not affect all the children in the same degree; its external characters are very marked in the greatest number, and may be less so, or even entirely deficient in some.

When a man does not seem to be scrofulous, and his brothers and sisters are, it is certain that he enjoys relatively better health, and proper rules of hygiene may improve his health very much, and enable him to have healthy children. But, in the most favorable cases of this kind, there is always danger lest the children should be scrofulous: this phenomenon is even too common to be simply indicated; we must examine it particularly, on account of its frequency, and because we have

proposed to study the subject of inheritance in all its relations. A man, however, who seems exempt from scrofula, when his brothers and sisters are affected with this disease, rarely enjoys good health; in this case, even, his appearance does not deceive, for there are generally certain external signs which aid us to form a diagnosis. These individuals present some of the marks of a scrofulous habit, and sometimes more positive signs of scrofula, which pass unperceived because they are not very distinct. This particular state of health would be more readily detected if practitioners were more accustomed to study the diseases of a family: but most frequently this is not done, and, for want of this information, this imperfect state of the organization is regarded as a normal state of health, differing only in degree from one which is better, but still as entirely free from scrofula. The individuals, however, in whom it is seen, are scrofulous, like the other members of their family; they are only less so than these latter: and this must be admitted, because most of them beget scrofulous children.

The brothers Boule, both of whom had tubercles and white swellings, told us that their father and mother enjoyed good health; but we afterward learned that a sister of their mother died of pulmonary tubercles, and that one of her children had been treated for scrofula at the hospital St. Louis.

I was consulted for a young girl, four and a half years old, who had abscesses in the right supra spinal fossa and on the acromial extremity of the right clavicle; the nasal bones had been hypertrophied for two months. The mother of this child seemed to enjoy good health, but she had a sister with rachitis, who was the mother of two daughters, who were similarly affected.

A resident of Manche brought to me his daughter, aged eleven years, who had been affected from early infancy with ophthalmias, coryzas, pustules in the

commissures of the lips, hypertrophy of the cellular tissue, large abdomen, the development evidently arrested, deep-seated and almost general caries of the tarsal and metatarsal bones of the left foot. The father and mother of this young patient were not scrofulous; but the father had a brother who died when young from caries of the sacrum and abscesses.

Servit was the father of six scrofulous children, two of whom we had at the same time in our hospital. This man would not appear at first view to be scrofulous, but he had two sisters who were very much so. His health, also, was very precarious, and scrofula appeared in him by a general state of indisposition, without local phenomena peculiar to any disease of this kind.

Oudin, the scrofulous, was a stammerer; his father was not, and his two paternal uncles were.

I attended a collegian, seventeen years old, who had tuberculous tumors in the neck, larger on the right than on the left side; he lost his two brothers and a sister early in life; his father died of pulmonary tubercles when thirty-two years old; this child had a paternal uncle who seemed to be well, but who, nevertheless, had only one son, who was rachitic and short in stature.

In February, 1832, a mother came to St. Louis to consult me in regard to a boy, the only one living of seven children, and who was affected with several white swellings. The father was thirty-two years old and passed simply as being delicate; but he had lost a brother thirty-five years old with scrofulous caries of the ribs.

Solignat, aged sixteen and a half years, was the only child of a mother who had miscarried four or five times. This female did not seem to be scrofulous, although she had lost twelve brothers and sisters, and there remained only one brother who was weakly.

The parents of this female then had lost twelve out

of fourteen children, and she had miscarried, bearing only one child at the full term, who was scrofulous. Who can say that this female was not scrofulous, when we consider the mortality in her family and her inability to bear children? And yet she was regarded as free from this disease.

In December, 1836, a dark and well-built man brought to St. Louis for advice, one of his children, who was very scrofulous. This man told us that his wife and himself enjoyed good health. I remarked to the pupils that this child was too much affected to be born of healthy parents; and that, notwithstanding the declaration of the father relative to the health of his wife, I should regard her as the cause of the disease before us, and therefore requested the man to bring his wife the next time he came. My remarks to the students excited his attention, and he then said that his wife seemed to enjoy good health, but that her brother and sisters had died of pulmonary affections. We did not see this female, probably because the child died soon after; but I was certain she had tubercles, and that it was from her that his children inherited scrofula. She will die of tubercles long after her children have perished from scrofula, which is not surprising, for authors present many similar cases, and I have recorded some. (Ch. III. Art. 3.)

In the preceding case, we have referred the origin of scrofula to the maternal side of the family, the father being in good health, and the mother having brothers and sisters with pulmonary tubercles. I made the same diagnosis in the following case, although on a first examination, the origin of the disease might have been sought for on the father's side.

I knew a young lady fifteen years old, who had curved spine and died with tubercles. The father of the child was always feeble in consequence of his studies; he was also of a delicate constitution; his skin was white, his hair very light, head large, and his height

less than five feet. The mother, who was very light and white, was also erect and enjoyed tolerably good health.

I know that students, especially those debilitated by excessive intellectual labor, and by the indolent life which these kind of excesses occasion, are not fit to produce vigorous children. Much more when their health is originally delicate. Although these circumstances existed in the father's case, yet I did not regard them as sufficient to account for the rachitis and tubercles which affected the daughter.

In fact, more probably the mother had transmitted to her child the germ of the softening of the bones, and that of the tubercles, for she had an elder sister whose height was less than four feet, who was much deformed, and who afterward died of tubercles, at the turn of life.

I was consulted in 1844, in regard to a young lady, fifteen years old, who had been sick in infancy, and who was affected with indurated hypertrophy of the upper lip, which presented some pustules.

Neither the father nor the mother of this young girl was tuberculous, but the father lost a sister with pulmonary tubercles in six weeks. He has another sister with pulmonary affection, and who has also on her nose pustules of lupus. In this case the indurated hypertrophy of the upper lip is almost a certain sign of tubercular predisposition.

A young lady from Chateau Thierry, aged twenty years, had cervical tubercles and abscesses above the internal malleoli, and an ulcer of the same character on the back of the right wrist. The father of the young lady was forty-eight years old; her mother was forty-two; both appeared to enjoy good health; their ages were well proportioned; they were both young when their daughter was born.

The father's mother had ulcerated cervical tubercles in her youth; he had a sister who was scrofulous, and

whose children were puny and debilitated in their physical and intellectual development. One of them was an idiot. Here is a scrofulous mother who has two children; a scrofulous daughter whose offspring is very feeble, who miscarries as may be readily imagined. She has a son who seems to enjoy good health, who exhibits none of the usual signs of scrofula, and who nevertheless transmits to his daughter a disease which he does not seem to have inherited from his mother. Here inheritance is obvious; this fact, however, is perhaps one of those where external occasional causes are sought for which do not exist, and which are admitted on slight examination. In this case, the patient was exposed to no external influences, such as are regarded as producing scrofula.

Thery, eighteen years old, belonged to a family of ten children, seven of whom died; he was scrofulous in the utmost degree. He spoke to us of one of his brothers thirteen years old, who had been rickety and bandy-legged from the age of four to seven years. He had a brother seven years old, who presented nothing remarkable.

Now if this last child grows up without being scrofulous, in the common acceptation of the term, although he has already lost seven brothers or sisters, can it be imagined that he will be free from the pathological temperament of his family, and can his progeny be healthy?

This is expected daily in cases of this kind, although similar illusions are destroyed by experience, as we may be convinced by the instances already stated; which it is unnecessary to multiply, as they can be constantly observed by practitioners, for they are very common.

§ II.—*On the acquired Health of Persons who produce Scrofulous Children.*

THE causes of inheritance which we have studied in the first section of this chapter, are transmitted by pa-

rents who have themselves inherited them. Scrofulous diseases thus engendered by themselves, may extend to several generations, who are cut off by an inexorable fatality, until the race is completely extinct.

We pass now to another order of hereditary causes. We shall see that a man originally healthy, may acquire certain states of health which he can transmit to his children, under some one of the forms of scrofula, so that he becomes the origin, the rudiment of a scrofulous family, which begins with him in consequence of his indiscretion. These states of health are all those in which the power of reproduction is enfeebled or debilitated; they may be developed in consequence of accidental diseases, by the progress of age, or by some other physiological cause. Thus parents who have had syphilis, who abuse venereal pleasures, those who marry too early or too late in life, those who marry a female whose age or even relative power is not according to the normal state of the sexes, &c., will generally not have a healthy progeny, and will beget scrofulous children.

These general observations may serve as an answer to those persons who do not believe in the influence of hereditary causes, and have sometimes demanded of us insidiously, from whom the first man who was scrofulous contracted his disease. The answer to this question is very simple; he contracted it from one of his parents who was accidentally affected in one of the modes we have enumerated.

We shall describe these different states of health particularly; but we can not name all those which may supervene in a man originally healthy, and which may affect his offspring, who must suffer under many conditions of private life which can not always be known.

We shall mention these different conditions in a chapter on inheritance, in which we shall show that the hereditary causes escape us in many cases, where, however, their existence may still be demonstrated by

the generality of disease, and the mortality it occasions in the family, and in those cases where these two characters are deficient, by the exclusion of all other causes.

Article I.—Syphilitic parents frequently beget scrofulous children.

In the different states of health which parents may acquire and transmit to their children under some of the forms of scrofula, we shall place first, the syphilitic state, because it is one of the most common causes of hereditary scrofula.

Several scrofulous diseases greatly resemble syphilitic maladies. It is especially this external resemblance which has led observers to notice the relations of parentage which these two diseases may present, for it is generally very difficult and often impossible to establish their hereditary transmission by well-sustained facts; a patient may know that his father was affected with tubercles, gout, gravel, rheumatism; but in regard to syphilis he is generally ignorant. Sometimes, however, patients state the fact themselves, and confide to us their domestic troubles, the cause of which indicates the syphilitic origin of scrofula which cuts off certain families. I have known scrofulous children whose parents have been syphilitic, or even were so when their children were conceived. On this point I am morally certain, and this is nearly equal to a physical certainty.

In the hospital St. Louis, we have a patient named Guillen, who is scrofulous, and affected with tubercles and caries; his father had been syphilitic several times, and was frequently troubled with sore throat.

Young Dasailly had a scrofulous exostosis of the left tibia, and her mother had a similar affection. In another case, we saw at the hospital, a child ten years old, with scrofulous tubercles; her mother admitted she

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had primitive symptoms of syphilis, and that she was then affected with exostosis and syphilitic ulcers.

The syphilitic origin of scrofula is still more marked in the following case: that of a family of three children, where the two elder were well, and the third had scrofula. The last was eighteen years old, and was no larger than a child twelve years old, his growth having been retarded by scrofula. The difference between the health of our patient and that of his brother and sister, is worthy of remark; the father of these three children, when he led a regular life and enjoyed good health, had children who were vigorous and healthy. But some years after his habits became dissipated; at that time, while exhausted and syphilitic, having also infected his wife, he had a third child who was born scrofulous, and whose life was only a succession of uninterrupted suffering, till the age of eighteen, when he died of marasmus.

Although syphilis often causes scrofula, Astruc has given too much latitude to this fact, when he says that we must regard every case of scrofula as produced by degenerate syphilis, which occurs in children whose parents are neither rachitic nor scrofulous; for according to this proposition, scrofula would arise only from itself or syphilis, a proposition manifestly erroneous, as we shall see hereafter, when studying the numerous other sources of scrofula.

His doctrine, however, has been adopted, and even extended by the most celebrated physicians of the latter part of the last century, who were too apt to regard scrofula as coming from syphilis, and treated these two diseases nearly in the same way, by mercurial preparations. This practice is recommended by Portal, who adduces, in support of it, the history of a kind of scrofulous epidemic existing at Montmorenci, among the nursing children in that country. The disease was so extensive there, that government appointed Messrs. Morand and Lassonne, a commission to go there to

find out the cause of the disease and its remedy; they soon ascertained that most of the nurses in this province were affected with syphilis, and suggested that they should be treated with mercurials, leaving their nursing children with them. Of the latter only those died in whom the disease had advanced very far.

This instance does not seem to me to prove as was thought the syphilitic origin of scrofula; I doubt whether these children who were cured by subjecting their nurses to a mercurial treatment, were really scrofulous; they were only syphilitic. I have often noticed cases of this kind at the hospital St. Louis; and I regard them all as syphilitic and not as scrofulous. When a nurse is affected with syphilis, she generally communicates it in a few weeks to her nursling; and hence it is very common to find both of them diseased. In these cases we follow the treatment of Morand and Lassonne. We treat the nurse with mercurial preparations, leave the nursling with her, and they both are cured at the same time.

In scrofula this infection never occurs so rapidly: a scrofulous nurse never renders her nursling absolutely scrofulous, but gives it only the predisposition to this disease, which is developed at a later period. (Appendix to the hereditary causes of scrofula from the nurse.)

An error of diagnosis like that I have pointed out, is readily imagined on seeing the similarity of ulcers, ophthalmias, exostoses, caries, white swellings, &c., produced by scrofula, with the same diseases occasioned by syphilis, and which is so great in some cases as to require a knowledge of all the previous circumstances to form a diagnosis, and even then there is a doubt. In these cases, the treatment forms the best mode of diagnosis, syphilis being cured more quickly and more radically than scrofula.

The principle of this resemblance between the external signs of these two diseases is often found in the

syphilitic origin of scrofulous diseases, but still they are extremely distinct. Syphilis is contagious; scrofula is not; scrofula may arise from syphilis, but never the latter from the former; the most robust man may become syphilitic in a few moments and be cured in a few weeks, while scrofula is generally the sign of an organic predisposition, which can only be remedied by a long-continued treatment.

Beside these differences, which are essential and fundamental, there are many other reasons why the exclusive generation of scrofula by syphilis, even when scrofula does not exist in the family, can not be admitted.

The presumption of this kind of inheritance is often deficient, but still there are some cases in which it can not take place.

Bordeu has made a general remark on this point, viz., that scrofula existed in localities where the venereal disease was very rare, and in many other parts where it was still unknown in the time of this ingenious physiologist.

Scrofula certainly appeared in Europe before syphilis : it was very common in the earlier periods, while syphilis has become so only since its importation by the army of Christopher Columbus.

Finally, to all these negative comparisons must be added the history of the causes of scrofula, which are numerous, and may produce this disease independent of any syphilitic affection.

We have now only to inquire, whether in cases of scrofula transmitted by syphilitic parents, this transmission is not a consequence of a consecutive, constitutional state of syphilis: in other words, does not syphilitic cachexia alone give rise to scrofula? We have already answered this question in the affirmative. Primitive syphilis can only produce syphilis; while the syphilitic cachexia, which generally is not communicable by coition, may be transmitted in the scrofulous state, or

even in other pathological forms, by generation. We shall have occasion to return to the syphilitic origin of scrofula, when treating of scrofulous endemia by importation, and of the mode in which this endemia can arise, more especially in Spain, since syphilis has become very common there. We shall speak farther on this point when we consider the antiphlogistic treatment of syphilis as a cause of hereditary, and consequently of endemic scrofula.

Scrofula and syphilis present several other interesting relations, which we shall omit in this chapter, as they will be more in place when treating of the pathological causes of scrofula, and the comparative diagnosis of this latter with syphilis.

Article II.—Scrofulous offspring produced by abuse of venereal pleasures.

The secretion of semen, like that of all the other products of the animal economy, is subject to certain laws, without which it is imperfect and of a bad character.

The semen is secreted by the testes, passes into the seminal vesicles, and there remains for a certain time, in order to be perfectly elaborated.

The semen thus elaborated is the natural stimulant for coition, and produces the necessity for it. Copulation is then potent, and the children who are begotten are vigorous in proportion to the strength and age of the parents.

But if the act of copulation commences by external excitements—if the seminal fluid is secreted immediately before its emission—if it merely passes through the reservoirs in which it ought to remain, and is expelled before its integral molecules are united intimately and homogeneously, it is still only imperfect semen, which is not matured, and has no prolific qualities: in this case, the embryos, if produced, are very

delicate, and all the phases of their development are difficult.

Instances of what we advance are not rare: they are observed more particularly in the high classes of society, where the abuse of voluptuous pleasures dims the future prospects of many young men.

In December, 1822, I was consulted for a young girl, two years old, who had an abscess in the left submaxillary region, the size of a large nut. The skin adjoining was of a violet-red, full of pus, and separated for at least an inch. This child was very pale; her mouth was quite large, the teeth defective, and breath fetid; and this precocious alteration of the dental system led me to suspect a greater alteration of the osseous system, which in fact occurred in a very marked degree.

Having seen this young girl shortly afterward with her parents, I was much surprised to find that her father and mother enjoyed all the appearances of good health. My surprise was redoubled when I saw that the family was numerous, and that the health of the other children more or less resembled that of the young girl for whom I had been consulted.

Whence could scrofula arise in a numerous family, the issue of parents who presented the attributes of a good organization? There were no injurious external influences of any kind in the position where this child lived: hence its state, and the more or less similar condition of her brothers and sisters, was of hereditary origin. I now became satisfied of this, and sought for the general cause of hemoptysis, ophthalmias, rachitis, scrofulous enbonpoint, pulmonary tubercles, intestinal worms, and the arrest of the physical and moral development, which I have observed in this family of seven children: the origin of these numerous diseases of the same character was to be found in the habits of the father, who in early life had been extremely intemperate, in consequence of which he was melancholy for

several years, and finally died when fifty-two years old. I have related this case briefly, because it resembles many others, where we can not at first find the hereditary cause, and because it proves the necessity of studying the causes of diseases very patiently, in order to detect those which may exist even when appearances do not indicate them.

Article III.—Precocious marriages, both among the rich and poor, a cause of hereditary scrofula.

In the higher classes of society, men marry young for reasons which we shall not examine here. This practice, which is contrary to the organic laws of the growth of the body, must be very injurious to the healthy propagation of the species. For a man to enjoy fully the pleasure of reproduction, and to beget healthy children, he must have passed somewhat beyond the age of puberty; he must have acquired fully his strength and development, in order to give his offspring strength and proper elements of organization: these conditions can not take place till the age of twenty-five; all marriages contracted before this period of life ought to be regarded as too precocious, and consequently as liable to be followed by feeble offspring.

This law is the same in regard to all organized beings: the first year that a tree bears fruits, they are but few in number, and of poor quality; and it is not till two or three years later, when its roots are more deeply implanted in the earth, that the fruits are abundant and have the normal size and taste. Most animals do not feel disposed for copulation until their growth is attained: if it is otherwise in the human species, it is because man depends on himself for a faculty which in animals is only instinctive, and is only connected with the reproduction of the species.

The inevitable consequences of these premature marriages are still more to be dreaded, when men who

are married too young have previously led dissipated lives, passing, as it were, through a period of fifty years in sixteen. These two causes are much more to be feared because they rarely exist without a third, which renders them more intense and of a worse character. I allude to some special diseases, which are the usual consequences of an irregular life.

It is to these causes combined, and to the fact that the growth of the race does not take place on a base sufficiently broad, that we must refer a general remark, made long since, viz., that great families are desolated by scrofula, and become extinct, by the hereditary progress of this disease, especially in Spain, Italy, England, Russia, and probably among the privileged classes of all countries.

At the other end of the social scale, we often see precocious marriages for contrary reasons. The artisans in cities marry too young, not from any reason of vanity, but for the possession of a wife. Besides being too young, they have not always acquired the strength of their age: their development is most generally retarded, because they have led too laborious and too hard a life, and they have not been sufficiently nourished. Young men who have lived in these circumstances, and who do not improve their condition by marriage, can not beget a vigorous offspring.

At the hospital St. Louis, in 1829, I had a child, fourteen years old, named Villeneuve: he had a white swelling in the right shoulder, and cervical tubercles on the left side. He had a sister, sixteen years old, who was very tall and an invalid. These two children were born of parents who had hardly attained their twentieth year. They had a brother seven years old, and a sister five years old, who were born when their parents had acquired a reasonable age, and they enjoyed good health.

The same remarks may be made in regard to persons in the country. The world is generally mistaken

as to their mode of living and their constitution: they are far from being as happy and as strong as is commonly thought; for, during the ten years that I have spent half of my time in the country, I have made observations which satisfy me that they are not as healthy as is thought, and that they grow old before their time. How can it be otherwise? Their clothing, food, dwellings, and modes of existence, are reduced to the strictest necessity. The quantity of food is at least a third too little, and their daily labor is at least a third more than it should be. This disproportion between labor and nourishment is common to nearly all the laborers in the country and around the large cities, and they are subjected to it from early life: the children work too much, and are not well fed, nor do they receive any moral education. It is impossible, under the destructive influences of bodily privations and fatigues, particularly when connected with fatal habits which increase the evil, that the children should become robust men, and form a good population.

Article IV.—Of scrofula in consequence of parents being too old.

We have seen that the reproductive power is deficient in vigor in parents who are too young, and whose organization is not sufficiently advanced: we shall now see that scrofulous offspring, also, are born more frequently of parents who are too aged; that as soon as they pass the meridian of life they can not have strong children; that as age advances, their children are sickly and weakly; and that by the natural succession of years, their fecundity diminishes, and finally becomes extinct. There is also a very great difference between the debility of the genital organs, which depends on too tender an age or even on premature abuses, and that resulting from the natural progress of age. In the former case the debility may

be remedied by time and temperance, while in the second it is radical and absolute. Parents can not impart to children strength which they have not, and which has passed without return; their offspring must be feeble: and, in fact, the external characters of this are so well marked and striking, that everybody can tell at a glance those children born of aged parents.

The decrease of the reproductive faculties begins about the age of forty-five years: at first it is but slightly marked, but in a few years becomes more evident. Thus, the days begin to grow shorter at the time of the summer solstice, but this is hardly perceptible till the end of July. The progress of this decrease may be seen in those bachelors who marry late in life, but who still retain so much virility that their first children are well formed, but afterward they become weaker.

At fifty-two years of age, the genital powers of man are so much enfeebled that his children are weak; the physiological conditions necessary to form a being whose growth is to be most rapid immediately after conception, no longer exist. When fifty-two years old, a wise man should abstain from venereal pleasures, since from his state of health and the mean duration of life, he can not expect to place his children in any employment, and has before him only the sad prospect of leaving them minors, to the stern justice of a cold world.

Unfortunately for them and their posterity, it is too often the case that men who have been bachelors for a long time, change their condition, and form an alliance with some one much younger than themselves: their children are feeble, suffer a great deal, and die prematurely; many of them die at birth, from the difficulty of establishing their relations with external objects, and, when young, often show marks of precocity, which argues badly, as it indicates speedy old age, a life which will have neither youth nor adult age,

and which will pass away without having acquired its development, from the want of good elements of organization.

The same remarks apply to the mother's side: when a female approaches the *turn of life*, her power of conception, which will soon cease, is already much enfeebled, and her children seldom present the germs of robust health and long life.

The turn of life commences in females at forty years, and is accomplished in a few years: after this age, the fecundity of mothers is most frequently only a transient illusion; their children die either before or shortly after birth, and those who live, always remain extremely feeble, and soon show some of the characters of scrofula. I have known mothers enjoying all the attributes of a good constitution, and whose habits were continent, who yet have been unable to resist this law of generation, which applies to females after the age of forty years. The following cases will prove our assertions.

Catharine Roth, seventeen years old, had tubercles on both sides of her neck, and also most of the marks of a strumous constitution; she was short in stature, with a large abdomen, full and short neck, prominent angles of the lower jaw, yellow and decayed teeth; her skin was greasy; she felt lassitude in the limbs, and especially in the kidneys, from the slightest fatigue. This girl presented no sign of womanhood: her mother was forty-eight years old, and healthy.

Margaret Pochon, nineteen years old, was born when her mother was forty-six years of age. Her infancy was delicate and weakly, as is usual with children born of too aged parents; she had a tuberculous tumor, about the size of a pear, which appeared in the right and back part of the neck, about five months previous; all her teeth were decayed, and the gums around the alveoli were swelled; she had menstruated with tolerable regularity since the age of fifteen years.

Angel. Freville, sixteen years old, had tuberculous tumors on both sides of the neck, behind the lower jaw, which were larger on the right than on the left side. They appeared early in life. She had also been affected for five years with ophthalmia in both eyes. This girl's mother was forty-three years old.

This fact is equally evident when a female after this age is impregnated by a young man; and perhaps even it is still more evident when this disproportion of age is very great—when, for instance, a female about the turn of life is rendered a mother by a young man.

Early in October, 1831, a lady from La Marne brought to me a boy with white swelling of the right shoulder, having five deep fistulous openings, from which several spiculæ of bone had been discharged. This child was pale; his teeth were very bad; he resembled very much the lady who brought him, and whom I took to be his grandmother: in fact, she was fifty-nine years old, and consequently could hardly be supposed to be the mother of a child eleven years of age; she had conceived when forty-seven years old, her husband being thirty-three.

This child was the fourth by a marriage made when the mother was forty-two years of age. Two girls were dead—one a fortnight after she was delivered with the forceps; the other when four months old, having been a footling case.

Our young patient had a sister, seventeen years old, who presented most of the marks of a scrofulous constitution; the bones were spongy, and the cellular system was much hypertrophied; the menses were not yet established, &c.

Such was the offspring of an ill-assorted marriage: two children who died soon after birth; two others scrofulous in the greatest degree.

There are facts of another kind, to prove that the age of parents alone may produce scrofula, viz., those late births which happen in families where the expec-

tation of having offspring is entirely abandoned. Those children who have been expected for a long time, come into the world with a stamp of original debility on them, which is too often the commencement of scrofulous diseases, which destroys them early in life.

Those who are born after all thoughts of more children have been abandoned, present the same deceptions.

I knew a family of seven children, only one of whom was scrofulous; this was the seventh child of a mother who bore six healthy children between the age of twenty and thirty years, and who was delivered when forty-two years old of a scrofulous child. This child was very small and feeble at birth, and was always puny. When ten years old, pustules of cutaneous scrofula appeared on the inner and upper part of the thighs, and also a large number of cervical tubercles, and caries with hypertrophy of the upper third of the sternum, and several consecutive abscesses of the chest. This child, who had been nursed for two years without success, was cured afterward by preparations of iodine administered at several intervals in the course of two years. He is now twenty-one years old, and enjoys good health.

Coulomb, the youngest of a family of five children, had four brothers or sisters, begotten when their parents were at a proper age, and who enjoyed good health. Our patient was born when the mother was forty-two, and the father forty-eight years old, and was scrofulous. I was consulted in regard to a Greek, eighteen years old, with white swelling in the left knee. Some days after, I saw his elder brother, who had a dark complexion and was well made. This fact, although at first view contradicting the generality of disease in a family, formed no exception to this law. I soon remarked that the ages of these two brothers varied much: I began my investigations of the cause by this. There were seventeen years' difference between them, the elder brother having been born when the father

was thirty-nine years old, the younger when he was fifty-six. Their respective states of health depended on the age of their father at the time of conception.

Article V.—A disproportion between the ages of parents, a cause of hereditary scrofula.

In order for a marriage to be judicious, a man should be a few years older than his wife: this difference is necessary, in order that the progeny may be healthy and strong; and is essential, because if it be varied from by the father or mother, their children will be feeble.

This cause exists in nature, and its existence is so real, that its influence is noticed even when the parents are of the same age, and never disappears entirely, except when their respective ages are according to the laws of their sexual development.

I have seen many cases of scrofula, referrible to no other cause than the disproportion between the ages of the parents, the father being younger than the mother.

Narcisse Decalogne, twenty-two years old, had in the right groin a tuberculous tumor as large as the fist, which had been ulcerated for a month, and had been opened at Hotel Dieu. This patient's mother was older than her father. His two brothers and a sister died when very young.

This cause is so common that I have learned to recognise it easily. About twelve years since, an inhabitant of Charenton brought to me his eldest son, eighteen years old, affected with scrofulous caries of the three phalanges of the ring-finger of the right hand, and a white swelling of the left radiocarpal articulation. This young man had several attacks of hemoptysis. I first inquired the age of his mother: she was eleven years older than his father.

So, too, at my hospital consultations, I often detect this cause, on seeing the father or mother of scrofulous

children who are brought there, and this kind of diagnosis has ceased to surprise my students.

I have also seen some cases, where this cause seems to have given force to other causes of inheritance. Adolphe Quesnot, twenty years old, a patient, emaciated, pale, feeble and hemoptoic, had an ulcerated tumor in each side of the neck; a third tumor of the same character, as large as two fists, under the left axilla; the anterior part of this latter tumor was situated on the chest; the arm was stiff and immoveable, and the slightest attempt at motion was painful. This tumor opened the third day after the patient entered our hospital, and a large quantity of pus was discharged. Quesnot's father was thirty-nine years old, and from his youth had been affected with cough; his mother, forty-five years old, enjoyed good health. In this case, inheritance came from three sources, 1st, from the health of the father who seemed to us tuberculous; 2d, from the fact that the mother is six years older than the father; 3d, from a third cause to be mentioned in the next article.

Article VI.—A man who has not the comparative strength of his sex, begets scrofulous children.

The study of the relations of the male and female shows us that the man is superior in strength. This law is common to all classes of animals, the male is always stronger than the female.

This comparative state of the strength begins with life, is seen at birth; it is very remarkable several years afterward; when we notice groups of children playing in a public place, we are soon struck with the preferences and attachments shown by boys and girls, and the readiness with which the distinctive characters of their sex can be detected. But these characters become still more manifest at puberty; for then they designate that in future they will be the attributes of

man and woman, and the authority passes decidedly to the stronger.

This relative superiority of man ought to be the fundamental law of marriage, the normal state of the parents' health; it is the necessary principle of domestic happiness, and also of the morality of marriage, for adultery is frequent where this is absent.

I shall not insist on the moral side of a position so false that it has been ridiculed at all periods; but shall speak of it only in respect to generation. Now, wherever the comparative force of the sexes does not exist, and on the contrary, man is more feeble, he not only loses the moral ascendency which naturally belongs to him, but his reproductive powers are much enfeebled. I believe also, that a man may be impotent in consequence of this relative inferiority existing in a great degree; and if this opinion be true, we can conceive that if impotence does not exist, the reproductive power may be much enfeebled, and in different degrees. I have several times detected scrofula arising from this cause; it is seldom, however, the only cause of this malady, but is commonly combined with some one of those already mentioned; for generally a man, whose strength is not equal to that of a female, is in one of those weak states which we have stated in the preceding chapters.

The following is a case in point: a young lady, of good constitution, often consulted me fifteen years since in regard to her two children, a boy and girl, who were scrofulous. The father was sickly in his childhood; his growth was slow and imperfect; when forty years old, his constitution was moderately strong in consequence of the diseases of his youth; in this state he could not impregnate his wife with much power, and his children were weak and tuberculous. They inherited the organic weakness of their father, and not the robust health of their mother.

A land-holder, from the department of l'Orne, came to consult me in May, 1833, for his daughter four

years old, who presented the following symptoms; scrofulous ophthalmia in both eyes, which had existed for eighteen months, with habitual coryza of the same character; hypertrophy of the second phalanx of the left index finger, which commenced three months previous, and had progressed rapidly during the last three or four weeks; the internal malleolus of the left foot was evidently swelled, the eyes were less affected since the scrofula had attacked the osseous system; the dentition was of a very bad character.

The father of this young girl was thirty-four years old. He was the only one remaining of six children, and his health had been delicate till the age of thirty, when he married a lady in good health, hoping thus to atone for his own debility; his daughter was the offspring of this alliance, which did not prove as favorable as was expected; and she inherited a scrofulous constitution from her father, and not the healthy organization of the mother.

These two cases might have been mentioned before, when speaking of the direct transmission of scrofula by scrofulous parents; but I preferred to present them here, as showing the impossibility of compensating for a weak state of health in a man by marrying him to a very healthy female. The following case enters more strictly into the subject of this article; it is that of a father who presented no sign of scrofula, who was only of modest complexion, and who was not really feeble, but only relatively, when compared with the full and energetic organization of his wife.

Several years since, I was consulted by a young girl from the department of l'Aisne, who after a mucous fever, had remained subject to ophthalmias, coryzas, and bronchitis; she had ulcerated tubercles in her neck, which like the other symptoms enumerated, were regarded as the consequences of a mucous fever, a theory by which a person might become scrofulous after another disease, without any hereditary predisposition to

it; this is contrary to fact, as we have already mentioned, and as we shall state hereafter in the second part of this work.

I was unable to refer her sickness to any other origin, than the constitution of her mother, which was much stronger than that of the father; and could be ascribed to no occasional causes, as this family lived in the country and at their ease.

The more we reflect on this cause, the more we shall find it, simple, evident, and as presenting necessarily the effects we have attributed to it. It is necessary to demonstrate it, because it has not been pointed out, and because it is generally thought, that a man with feeble constitution, ought to compensate for this weakness, by marrying a female in robust health. This opinion, however, is not true absolutely, and there are limits which must not be exceeded, for a man will never impregnate vigorously a female who is much stronger than himself.

The preceding remarks are still confirmed by another order of facts which are also very interesting. Sometimes a man in good health may have healthy children by a delicate female. This is not true generally, but is seen often enough to have a principle; it is probably because the degree of original strength of children comes from the father rather than the mother. There is no doubt but that this is the law, if each of the sexes brings in coition a degree of action relative to its proper force; this too is the practice of stock-breeders, who always attach more virtue to the qualities of the male than to those of the female.

Article VII.—Scrofula inherited from parents who are paralytic, epileptic, deranged, &c.

I have seen several cases of scrofula inherited by children, where one of the parents was paralytic.

Noblot was the father of five healthy children; he

had a sixth who was scrofulous; and he had lost six others, all of whom were born after this one, and who did not live on an average more than one year each. Only one reason can be given for the deaths of the six children of this family, and for the scrofulous state presented by the one at the hospital St. Louis, and that is, that the father had an attack of apoplexy followed by paralysis; he was cured of it, but since that time all his children have died in early life. This circumstance will surprise no one, except that he should have seven children after an attack of paralysis.

Elizabeth Liard, twenty-three years old, tuberculous and ophthalmic, was also subject to slight attacks of hemoptysis; her father had been paralytic and died at the age of thirty-three years.

I have in my wards several children, one of whose parents was epileptic. The father of L. Guillaud, nineteen years old, was epileptic; he himself had been deranged three times since the age of thirteen, and always in summer.

In 1832, a lady, whose slight intelligence attracted my attention from the first, consulted me several times for her daughter, ten years old, who had large tubercles in the cervical regions. Some time after, she brought to me her child, affected with hypertrophy of the calcaneum and of the internal malleolus of the left foot. This child was then eight years old; the spongy bones were generally too much developed in him. The mother of these two children had been for two years under the charge of Esquirol.

Derangement is not rare in the parents of scrofulous persons.

Two years afterward, I had occasion to observe a boy nine years old, affected with cervical tubercles and impetigo of the hairy scalp. This child was the only son of a widow lady, whose husband died deranged. I have attended a young lady who was tuberculous, and who had three paternal uncles, two of whom died in-

sane. This relation of cerebral neuroses with scrofula astonishes me less, because that acute hydrocephalus is very common in scrofulous children, and because I believe firmly that could those who die of this disease be restored to life they would not recover their intelligence. My presumption on this point is founded on what happens after chronic hydrocephalus; this disease impairs the intellectual faculties of children slowly and feebly. I have never known a young man to become distinguished, who had been affected with chronic hydrocephalus in youth. I have observed the contrary in a great many cases, and have also had occasion to remark the danger of subjecting these children to the discipline of schools, and to attempt to force their minds. The reaction of the mind on the body may be so great as to arrest their growth sensibly.

Schirrus and cancer, two degrees of the same disease, are also causes of scrofula. Perhaps, the description of schirrus should be included in that of tubercle. I will treat this question particularly in my other work, and there demonstrate the connexion which I think exists between the different degrees of schirrus and tubercle.

CHAPTER III.

GENERAL REMARKS ON THE PARTICULAR STATES OF HEALTH IN THE ANCESTRAL RELATIVES.

HAVING studied the particular states of health of the parents who beget scrofulous children, we shall make a few general remarks on these different states regarded in a general manner. This chapter we shall divide into five principal articles. In the 1st, we shall discuss the cases where the hereditary origin of scrofula is not sufficiently marked in the health of the ancestral parents. The 2d, will contain remarks relative to parents, who do not present symptoms of scrofula till after they have begotten scrofulous children, or even till they have lost them from this disease. In the 3d, we shall try to prove that the inheritance of scrofulous diseases, never overleaps a generation. In the 4th, we shall attend to the complications which the causes of scrofula may present with themselves, or with other causes of disease. Finally, in the 5th, and last article, we shall present some medical views on marriage, considered as the most common cause of the propagation of scrofulous diseases.

ARTICLE I.—OF HEREDITARY SCROFULA, WHERE THE CAUSE IS NOT SUFFICIENTLY MARKED IN THE ORIGINAL OR ACCIDENTAL HEALTH OF THE ANCESTRAL PARENTS.

THIS chapter will serve as a complement to the preceding: it will be blotted out from the history of the causes of scrofulous diseases, when these diseases are better known, and we are able to point out the limit between a state of health and that of disease.

The results mentioned in the first and second chap ters, prove that the origin of scrofulous diseases is most frequently hereditary, and show the numerous sources of inheritance which may depend on the original or accidental health of the ancestral parents.

In the third part, where we shall study the occasional causes, all or nearly all of which are found in certain workshops, we shall see that inheritance still plays a very important part in these circumstances, and that perhaps even its concurrence is necessary to produce scrofulous diseases.

But amid the very many facts where inheritance is easily detected, there are some which seem refractory to this classification. We do not include in the cases of this kind, those where the parents have been scrofulous in their youth, nor those where scrofula, although not apparent in any of the ancestral parents, still exists in another branch of the family. It will now be easy to class these facts, after our remarks in Art. III. and IV. of Ch. II.

We wish to point out, here, another class of facts in regard to scrofula, the origin of which escapes our first inquiries—certain facts, the formal cause of which is not at first referrible to the health of the parents, and which can not be ascribed to any occasional external causes, as the patients have not been exposed to them.

In these cases, inheritance seems to me sufficiently demonstrated, if scrofula be general among the children, and if it occasion great mortality. These two characters can not arise from accidental occasional causes, and, *a fortiori*, are not an effect of them when these causes do not exist.

All practitioners know by their own experience, that in medicine one can not account for their impressions, and that sometimes by seeing patients we form a diagnosis which it is difficult to analyze. The same difficulties present themselves in the study of scrofulous diseases. I have seen some patients in whom I could

detect none of the hereditary causes which I have specified, and yet on seeing their parents, I have made up my mind that their children would be sickly; and although these individuals could not be said to be tuberculous, or too old, or syphilitic, yet on seeing them, we concluded that they could not beget fine children.

When a tuberculous child is brought to us, and the origin of the disease does not seem referrible to the health of the parents, we soon satisfy ourselves of the occasional causes to which it might be subject, and if these causes do not exist, we admit inheritance. One of two things must then be the case—either the scrofula must be hereditary, or there is an effect without a cause.

We say it is hereditary, and this is true of the upper and middle classes of society, who are subject to hereditary causes, but are not liable to the external influences which could render individuals scrofulous: this is also true of most artisans, whose health is strengthened by labor till it procures for them the comforts of life.

Inheritance must also be admitted in cases of this kind, for another reason, because it is very possible that the physiological state of one of the ancestral parents may be injurious to generation, which however is not sufficiently marked for us to detect it; while an occasional cause, sufficiently intense to cause our species to suffer from scrofula, can not pass unperceived if it has existed, and could not be concealed if it was then acting.

Eugenie Nanche, fourteen years old, had been affected with ophthalmia of the left eye since she was five years old; further, she was deaf in the left ear, and very subject to a headache, which was more severe on the left than on the right half of the scull. In this young girl there was an absence of occasional causes, and the inheritance was not very manifest: I have thought, however, that her state arose from the health

of her parents. Why this diagnosis? Because she had a sister who died of phthisis pulmonalis when twenty-four years old: because a second died when seventeen years old without menstruating—a child in appearance: because a third died when fifteen years old, whose development had also been retarded: and finally because there was a fourth sister who had dysmenorrhœa. Such phenomena are not the effects of external causes. The eldest of the three sisters died evidently of phthisis: the two youngest who died when from fifteen to seventeen years old, without presenting any sign of womanhood, all whose functions too were arrested in their development, were tuberculous, like their eldest and youngest sister, whose case has already been referred to. These sisters had the same temperament—the tuberculous temperament. Occasional causes in no case could produce such uniform effects in four persons.

If we insist particularly on the inheritance of scrofulous diseases, it is on account of the therapeutical indications to be drawn from them: it is because hereafter we shall have to oppose the local methods of treatment which are founded on local causes admitted on the slightest appearance; and when we have demonstrated clearly the hereditary origin of tuberculous diseases, and also the necessity of treating them by internal remedies, it will be easier to do away with these modes of treatment.

On many occasions, it is not sufficient to inquire into the health of the parents; we must also look at them in a moral point of view, and scrutinize the secrets of their private life, which often conceals many causes of disease.

At Paris particularly, where families live by effort, where it is so difficult, not simply to attain a position, but even to procure bread, men are subject to privations which must injure their general functions much. This life of labor, which is the lot of most of them, forms a strong contrast with those who revel in luxury;

but perhaps the latter have the greatest cause of complaint, for many of them quickly become satiated and impotent—a sad recompense for the advantage of being made men of the world in early youth.

Fortunes are too frequently acquired at the expense of health: the fortune of a man, however brilliant it may be at the close of his career, generally comes excessively slowly, or with a rapidity which causes him to feel, almost at the same time, the fear of distress, and of dishonor, and the intoxication of an opulent position. This is learned daily by talking with the founders of these brilliant careers, from which some few men emerge victorious; by bold speculations, they rapidly pass through the space which separates a man of poor origin from one who is extremely wealthy.

We can readily see there is no moderation, and nothing normal, in men who are subject to a life of so much agitation, and that in them the genital functions must share the trouble and the anxiety constantly felt by all the other functions of the economy.

There are also very numerous classes of society, where the existence of females is so occupied by business and cares as to leave no leisure for a life of reproduction: such are all the females who are bound down by trade, and who spend every day in the same manner, in the narrow limits of a shop, often destitute of air and light, and most generally damp. Females who live in this atmosphere, usually have only the warmth of a chafing-dish to protect them from dampness, and the vapor which exhales from this vitiates the air they breathe, sometimes to such an extent as to make them ill: its use softens and impairs the special sensibility of the genital organs; and at length it causes the stagnation of venous blood in the lower extremities, and hence come a marbled appearance of the skin, varices, uterine engorgements, fluor albus, and floodings, which affect most of them. The physiological state of females who live under this regimen can not but be

detrimental to the healthy propagation of the species. Imagine with what feelings a female approaches the conjugal bed, after sustaining for sixteen hours the labor and trials of business. Females who pass the flower of their life in this manner can not become the mothers of fine children.

There are also many private habits which render individuals singular, and deprive them of all affection. These too personal tastes render domestic life insupportable, and cause invincible antipathies: here there can be only an apology for coition.

Can a female be properly impregnated by a man whom she regards with fear, and to whom she is frequently repugnant?

All these particulars in regard to domestic life, on which I should have dilated farther had they not seemed out of place in these dissertations, extinguish conjugal love, and have a very injurious influence on the original constitution of children. But we could not pass them entirely in silence, in a work designed specially to seek out the causes which may enfeeble the genital functions, and impair the original constitution of the children.

Article II.—Some parents do not present symptoms of scrofula till after they have had scrofulous children.

We have seen that children may receive from their parents diseases which affected these parents in infancy, and of which they were apparently cured; that this transmission may occur also from parents who were considered exempt from scrofula, although they have had scrofulous brothers and sisters: we shall see in this article that parents may not present signs of scrofula till after begetting scrofulous children, and even till after losing their children by scrofulous diseases.

Lalouette reports a very remarkable case of this

kind, which has not been viewed in the light that we shall regard it, and which has been considered only in respect to the periods of life when scrofula may attack. A lady is affected with scrofula when twenty-six years old: one of her sisters experienced the same disease at sixteen years; and a third, when fourteen years old, with complication of chlorosis. The father of these three girls, who had enjoyed good health till he was forty-six years old, had at this period, tubercles in the nucha, under the skin, along the neck of the two ribs, under the axillæ, and in the hams. These tubercles were very hard, and in a short time became so large, especially those in the neck, that the patient was suffocated by them in the night.

In October, 1827, Eglem came to the hospital St. Louis; he was eighteen years old, and had cervical tubercles, ophthalmia, coryza, &c. This young man was the only one remaining of a family of eight children; seven brothers or sisters were still-born, or died very young. The father of this family, which was so terribly diseased, did not seem to be scrofulous; the disease did not appear in him till the age of fifty-eight years, under the form of a large scrofulous ulcer, in the right side of the neck, of which he died, after suffering eighteen months.

I know four tuberculous sisters, two of whom are sterile, and the others have tuberculous children. The origin of these two scrofulous generations remained for a long time unknown, and its discovery was thought impossible, when their mother, who had brought up her children and grandchildren, died of phthisis, sixty-six years and some months old. The original cause of the strumous temperament of these four sisters, hitherto unknown, was finally detected in the kind of disease of which their mother died.

Very recently, I have been consulted by a lady from the department of Eure-and-Loire, fifty years old, in good health, and still menstruating, although less fre-

quently, lately. She has in the right breast a gland the size of a nut, which began ten years since, and which is sometimes a little painful.

In March, 1844, a tuberculous tumor appeared, the size of a pullet's egg, behind and under the angle of the lower jaw: this tumor has been ulcerated for four months, when the ulcer cicatrized; it remained closed for two months, but during the last three weeks it reopened with all the characters of a tuberculous ulcer. The suppuration is very profuse.

This lady miscarried twice after her marriage, then bore a daughter who is now twenty-three years old, and who has had tubercles in the cervical region since she was ten years old. None of these tubercles, which are very large and numerous, have ever ulcerated. This young female has been married for two years; she had a daughter one year after her marriage.

Here is a case to show the hereditary transmission of scrofula long before its origin had been manifested on the mother's side.

Observers before us have related instances of pulmonary tubercles supervening in parents who had previously lost their children by this disease. Portal has made a good abstract of these cases, and relates that among those affected with phthisis, and whom he had regarded as having this disease accidentally, and who have died leaving their father and mother in good health, he has seen some where the father and mother died long afterward of the same disease, which increases still further the number of those inheriting phthisis.

My opinion daily becomes more and more confirmed that those affected with phthisis inherit it. I know of no well-ascertained fact of phthisis pumonalis supervening in a man exempt from all hereditary predisposition to this fatal disease. I shall develop this important question in my work on tubercle.

We shall conclude this article by the following case,

where a father became goitrous after begetting eight scrofulous children :—

In October, 1840, I treated a merchant of Rouen, thirty-nine years old, affected with goitre. This disease began at the age of thirty-one ; it remained stationary till he was thirty-eight, but then became rapidly developed, and when I observed it, a year afterward, it occupied the whole anterior middle region of the neck ; it was a little more marked on the right than on the left side.

I have with me five daughters of this patient, all affected with goitre. Beside these five children, he had five other daughters and a son, who died.

Before the goitre appeared in him, eight of his children were affected with this disease. Cases of this kind are much more common than is thought. Is it not evident that the eight children of this man were goitrous because he was so himself?

We needed not to have waited for this tardy revelation of an hereditary cause ; but could have supposed the existence of inheritance from the generality of the disease in the family ; as this last character can not occur except from the health of the ancestral relatives.

We shall have occasion to return to the development of the scrofulous diseases in parents who have had scrofulous children, when we shall treat of scrofula which may appear for the first time by spontaneous abortions, or after a difficult labor, and sometimes, too, after a common labor. (Part II., Pathological causes, Article II.)

Article III.—The inheritance of scrofulous diseases never overleaps one generation.

This proposition presents nothing which should much astonish us at the present point of our researches, as to the inheritance of scrofulous diseases : it is deduced naturally from the ideas we have advanced in the pre-

ceding articles. The opinion that scrofulous diseases may overleap a generation is entirely gratuitous; a father who is born of scrofulous parents, and who has scrofulous children, is scrofulous himself. This is proved by his offspring: to deny this, would be to say that a man may give what he has not, that is, that effects may exist without a cause. This opinion, like many others on the subject of medicine, and more particularly on scrofula, has been advanced by those who wish to explain phenomena without studying their laws; this, however, can not be admitted in the domain of science.

The facts to confirm the statement that inheritance has overleaped a generation, are only facts badly noticed: they are facts similar to those mentioned when speaking of scrofula transmitted by parents who seem to be cured of this disease, and to the cases derived from parents who are thought not to be scrofulous, although their brothers and sisters are so. Many persons have no recollection of any sickness in their infancy; others often say nothing about the existence of scrofula in their family; and many physicians neglect to inform themselves about it: three circumstances which lead us in error as to the origin of this disease.

These errors are still excusable when the parents present the appearances of good health; but there are cases in which no notice is taken of certain signs by which however the existence of scrofula might readily be detected. Of many examples, I shall select the following, in which inheritance was thought to have overleaped a generation, because a mother was wrongly supposed to be entirely exempt from the disease which she had transmitted to her child. It is the case of a young girl, five years old, who is deformed and smaller than a healthy child three years old; she did not grow, she could scarcely speak, and her understanding was very inactive. The grandmother of this child is rachitic and very short. Her mother, never-

theless passes as free from rachitis; still in her the short bones and the ends of the long bones, are much too large, and there is a marked disproportion between the development of the soft parts and that of the osseous system. The infancy of this lady was very sickly and her labors have been difficult. I attribute this latter circumstance to the pathological size of the spongy bones of the pelvis, and to the general want of tone.

This case would be erroneously regarded as one of those where the disease has overleaped a generation. One might think that this young girl inherited disease from her grandmother, which is doubtless true: but she also derives it from her mother, in whom the predominance of the spongy tissue of the bones must be regarded as pathological. This case also shows us three scrofulous generations, and it is remarkable that in all three, the morbific disease has affected the skeleton.

These facts of hereditary transmission inexplicable at first glance, to which it was necessary to recal the attention of observers, prove what we can not repeat too often, that the element of hereditary diseases, in the slightest degree, even when it was thought to be extinct, is still transmissible to children. This would be seen by studying more carefully than is done generally, the medical life of the patients and that of their parents.

Article IV.—Complications of hereditary causes with each other and with other causes of disease.

Hereditary scrofula arises not only from a cause derived from the father or mother; in many cases, on the contrary, inheritance has its origin on both sides at once.

Thus the father may be scrofulous and the mother too young: a father may now enjoy good health, although he was scrofulous in his youth, and his wife

may be older than him; the father may be tuberculous and his wife does not seem to be so, but her family is scrofulous; another is scrofulous and his wife is predisposed to a cancer of the mammæ; finally a man, originally well formed, may be borne down by the sufferings experienced by his wife and children before yielding to the attacks of scrofula, and this moral state adds much to the causes of inheritance which come from the mother's side. I here merely allude to the subject, and this ought to suffice after the explanations given of the different states of health of the ancestral parents. It is evident that if an hereditary cause exists on the father's side, the effects will be worse if the mother does not enjoy good health: so, too, when there is a formal cause of inheritance on the mother's side, the effects of this cause will be more marked and more intense according as there are coincidences in the health of the father.

Moniton, thirty-two years old, married a lady forty-six years of age, and died at St. Louis in December, 1832, of scrofulous caries in both feet, leaving a girl six and a half years old, who had been rachitic for a year. In May, 1837, his widow brought us at the hospital the daughter eleven years old; she was rachitic, short in stature, and had ulcerated tubercles in the right side of the neck.

This case presents three kinds of causes which combined their effects. 1st, the father was scrofulous; 2d, the mother was too old; 3d, the father was much younger than the mother. These reasons prevented the child's growth; her physical development was arrested by the scrofulous vice, which advanced to the detriment of all the organic functions, and raged with much more intensity as it came from three sources, each of which could alone produce it.

Conscription has grouped together many of the hereditary causes of scrofula, and hence has evidently degraded the human race. Of this, one can judge by

a short glance in a medical point of view, on this mode of recruiting armies.

Medical Glance at Conscription, considered as a Complication of the hereditary Causes of Scrofulous Diseases.

The period has not long passed since our country was much exposed to the united influences of a great many causes, which deteriorated our species with frightful rapidity. When the first revolution broke out, all the European powers formed a coalition and rose together against France, who was obliged to fight them all at the same time. This war once commenced, continued nearly a quarter of a century. During this time France had numerous armies on foot, which she could not sustain, except by an almost permanent recruiting of men; and this was practised with extreme rigor, especially during the latter years of the empire. At this time the contingent levies could not be supplied, except by enrolling every man capable of bearing arms, and even those who presented reasons for exemption. There were left only the infirm, the sick, or those who married hastily in order to escape the inexorable fate which awaited them, at or before the age of nineteen.

During this period, then, the population was renewed in very great part, by those the least able to beget healthy and vigorous children. The heads of families generally presented the conditions most favorable for the propagation of scrofula; 1st, an organization primitively feeble; 2d, a state of disease more or less manifest; 3d, a constitution which had not attained its growth. We do not hesitate to place this latter condition among those which exercise a most pernicious influence on generation; for if in all periods this condition is very injurious, as we have already said, it would be still more so in the species, because the

father was generally found in one of the first two categories we have mentioned, and often both of them, and very frequently he married a female whose age was disproportional to his own.

Such are the incontestable causes of the deterioration in the species remarked by all observers. The number of men, their strength and height, had singularly been diminished. This was proved by the official documents collected from the department of war and of the interior.

Under the restoration it was difficult to find two thousand five hundred men in a levy of twenty-four thousand, to form a picked corps. Sometimes, to complete this slight contingent, it has been necessary to lower the height first required, to one metre seventy centimetres.

In the last nine years, we have begun to feel the benefits of a lasting peace, and the race is sensibly improved. The conscripts are more numerous, and generally of a better complexion and height than in the preceding years; the race is stronger, because the men enlisted in the last nine years have been born since the peace of 1814, which restored fathers to their families. The populations of cities and countries are no longer deprived entirely of healthy and vigorous men by conscription; the infirm and the sick do not form the common source of these populations, as occurred in a moment when the spirit of conquest took men from their homes. Precocious marriages have become more rare, and hence, it is reasonable to hope that hereafter the young men will generally enjoy good health, that they will engage freely in agriculture, and find in labor their happiness, strength, and morality.

ARTICLE V.—OF MARRIAGE CONSIDERED AS ONE OF THE MOST USUAL CAUSES OF THE PROPAGATION OF SCROFULOUS DISEASES.

A MAN marries to possess a wife and to procreate healthy children; the physical and moral end of marriage, is the enjoyment of domestic family happiness. This double purpose is necessarily wanting when one of the connexion brings into it the germ of hereditary diseases. Judging from the solicitude with which the law has taken in hand the interests of the children, for it is with a view to them, that the civil code pronounces the indissolubility of marriage, we can not see why it has not secured to them, before everything else, the greatest of blessings, health.

Marriage is interdicted but in one single case, that of delirium, and this only because the will is not free. The forms previous to the fulfilment of marriage have been multiplied; but the law reserves no right to inquire whether the individuals who marry have the health to procreate healthy children, capable of doing the state service, and who in all cases will not be a charge to it as occurs too commonly in the indigent classes. Every day marriages take place, which carry with them the germ of all the infirmities which can be produced by scrofula; marriages which will certainly destroy the happiness of the married by hereditary diseases, and the mortality they occasion in children. Can any thing be more fearful?

Society, however, ought to watch over children with the anxiety of the father of a family. This solicitude should be exercised on two sides; society is the teacher of children, as man is the tutor of his own. These ideas are so simple that they ought to be admitted by the whole world; but they are written neither in our morals nor laws. We shall see the evils arising from their forgetfulness.

We must, however, admit that the legislator might be discouraged by a first unfortunate attempt, that re-

lating to impotence. This case of impediment and nullity of marriage, has given rise to interminable debates and to scandalous scenes in our courts of justice. We must admit also, it is very difficult to define the species with sufficient clearness to reach all the cases of interdiction and these only. But the difficulty of remedying the defects of our legislation, is no reason for leaving society helplessly exposed to the propagation of hereditary diseases. The legislation of ancient Sparta was probably equally tolerant with ours on the subject of marriage, but it ordered the sacrifice of those children who were too feeble ever to become useful in defending the country. This revolting custom at least, would spare the newborn babe the infirmities attached to a suffering existence, and it also had the advantage of preventing those individuals from propagating and from giving birth to children whose fate would be still more unfortunate than theirs, and finally, it was the means of preventing marriages, except between healthy persons.

But, instead of sacrificing those children, who at birth do not seem to possess the qualities requisite to make robust citizens, it is much more simple, and more humane, and more worthy of an advanced state of civilization, to arrest the evil at its source, by interdicting marriages which produce scrofulous children.

It belongs to science to prepare the way for legislation on the important question of the inheritance of disease in families. The results of many years' researches, prove the numerous origins of scrofulous diseases by inheritance. The propagation of these diseases by marriage, is established so frequently and so clearly by the facts analyzed in this book, that no one will deny that great advantages would accrue to society, by regulating marriages in such a way as to shut out all hereditary causes, especially those which constant experience teaches us are transmissible by parents to their descendants.

It is with this view that we shall discuss farther the question of the marriage of scrofulous persons. We shall cite instances, in order not to proceed except by aid of experience, and to enable the reader to judge for himself of the validity of our opinion on this question.

A young man twenty-one years old, from the department of la Somme, came to consult me at Paris early in September, 1833.

His complexion was delicate; his countenance was pale, the skin very white, the hair light; he grew very slowly, which made him look younger than he really was.

Six or seven years ago he was affected for the first time with tubercles in the cervical region, which remained stationary from that period till his marriage, which occurred when he was 26 years old. This change was not favorable to him, for three months after he was affected with a catarrhal fever, which continued six weeks, and was followed by extreme debility; at the same time the cervical tubercles, which began when he was six or seven years old, advanced very rapidly; new tumors formed, and when I saw the patient a few months afterward, they were quite large, filling the sides and back of the neck, and extending to the upper and anterior part of the chest and into the axillæ.

The rapid progress of the tubercles in the subcutaneous regions and large cellular spaces indicated that the respiratory organs were affected; and this opinion was strengthened by the remembrance of the catarrhal fever, with debility and emaciation, which had preceded and attended the reappearance of the external tuberculization.

This patient was treated for two years with preparations of iodine, and gained much strength and flesh; his complexion became more vital; the tuberculous tumors proceeded to resolution, &c. His health was so much strengthened, that for eight years he has been able

to continue uninterruptedly the overseeing of a large farm, and latterly has taken charge of the municipal affairs of his birthplace.

This success could not certainly have been attained by any other plan of treatment; but although very important in restoring a man to life, and giving him power to manage his business, yet it did not so far regenerate his constitution as to enable him to beget healthy and robust children, as we shall see hereafter.

If we consider the marriage of this young man in our point of view, we shall see that, strictly speaking, he ought not to have married, because he was tuberculous, or at any rate he should have waited till his growth was more advanced. Had his marriage been postponed, as it ought to have been, the cervical tubercles which had been stationary since infancy, would probably have been resolved under the influence of puberty, seconded by appropriate treatment.

The disappearance of these tubercles would have shown a marked improvement in the health, especially if his strength and his body were simultaneously developed.

Far from following this course, imperiously required by his feeble constitution, this young man married before his physical frame had acquired its full development. The consequences of this error were soon seen. We will examine them, first in the father, and then in his offspring.

Four months after marriage, this young man was attacked with catarrhal fever, which exhausted his strength, and rendered him languid and emaciated: after this fever, tuberculization proceeded so rapidly and alarmingly as to cause serious fears in regard to his chest.

The health of his children were as would naturally be expected. Previous to our attendance he had a first child, and within eight years, three others. One of them, the youngest but one, when four or five years old,

had a distressing cough. This was a very delicate boy, who probably had pulmonary and mesenteric tubercles; in fact, his parents admitted it. The other three children were boys, and have hitherto presented no sign of tuberculization. They are all, however, very delicate; but their health may be improved as much as or even more than that of their father, as these children are bred in the country, and their regimen has been regulated better in every respect.

In this instance marriage hastened tuberculization in a frightful manner, though this had remained stationary from the age of seven years; but in this case, the morbid effects produced by marriage were remedied by the treatment with preparations of iodine.

In the following case we see the same effects existing with so much intensity that it is impossible to hope for a remedy.

In the spring and summer of 1828, I attended a child thirteen years old, from the department Seine and Oise, who was affected with a double ophthalmia, and with chronic coryza, with ulcerations of the nasal fossæ.

This child was cured by treatment with iodine, continuing for six months. I lost sight of him for fifteen years, till March, 1843, when he came to consult me, being then twenty-eight years old. When he mentioned my former attendance on him, and the diseases of his childhood, I carefully questioned him as to what had occurred.

This young man was delicate, with little beard, pale face, and colorless skin; his limbs were smooth and round, like those of a female; his muscles were slightly developed; his character was mild and affectionate: he had a certain degree of sagacity, but his physical never equalled his mental organization; his original health paralyzed his best resolutions. This had been his state for several years. The scrofulous disease, however, did not return, and when twenty-two

and a half years old he married, so as to be assisted in an establishment he wished to found at Paris.

Although his life had been regular and very moderate since his marriage, and his venereal appetites were not much indulged, yet numerous tubercles soon appeared in the cervical regions, which increased in number every spring, and in six years acquired the dimensions presented at their examination.

They then formed a collar, open only behind. Its greatest thickness corresponded to the sides of the neck, and its transverse exceeded its antero-posterior diameter. The tumors on this point, but particularly on the left side, were larger: they attacked the base of the jaw, extended into the space between the auditory passage, mastoid process, and posterior edge of the lower maxillary bone. They had a schirrous hardness, penetrated deeply into the soft parts, and united with the amygdalæ, which were much tumified, and almost touched each other. They compressed the carotid arteries, the jugular veins, the air-passages, pharynx, and beginning of the esophagus. None of these tumors have ulcerated outward. Although the skin over them is very tense and evidently thin, yet its color is unchanged. There are other tumors in the axillary regions. I noticed some vestiges of ophthalmic redness in the right eye: the voice was very feeble and guttural: there was cough, especially at night: the respiration had become very difficult, threatening suffocation: the strength had failed for several months; yet the appetite was good, the dejections normal. At times there was drowsiness, which had become unconquerable in the latter periods of life.*

I need not say that my prognosis was extremely unfavorable. This young man was the eldest of three children; and he died of consumption, which had al-

* In my Treatise on Tubercles, I shall mention this tendency to drowsiness, by which the phenomena of tuberculization terminate in many who are diseased.

ready swept off his two brothers. He died of pulmonary tubercles, in a state of somnolence, to which we have already alluded, and which continued constantly except when he was disturbed by those around him. He also presented symptoms of slow asphyxia. He died six and a half years after marriage, leaving a child three years old, and his wife in the seventh month of pregnancy. She was afterward delivered of a daughter.

This fact shows evidently that marriage is very fatal to a young man originally scrofulous, in whom the disease seemed cured, but reappeared after that period in a new form, and increased so rapidly as to cause the death of the patient. The appearance of his children is alarming. The eldest is three years old, and already has a large tuberculous tumor on the left side of the neck. His eyes are blue, prominent, watery, the pupils dilated: the eyelids, especially their loose edges, are swollen and a little red. This child is slow, eats but little, and does not yet talk. The second child, who was conceived and born under these unfavorable circumstances, will soon suffer from the consequences of his original disease. Here we see tuberculous tumors supervening shortly after marriage, increase in the spring for six years, and then cause death by scrofulous consumption. This case also is an instance of the fatality with which the seal of inheritance weighs upon the offspring of scrofulous men. A last case of scrofula, by which this family is to be entirely extinct, is about to occur.

The mother of our patient, sixty-three years old, who has seen her three children die, one after another, of the same disease, and who often told us that she could not imagine from whom her children inherited their fatal malady, also died with pulmonary tubercles. Probably her death was accelerated by the loss of her third son.

If we add that the father died a year since, incon-

solable for the loss of his second son, a fine young man, who was cut off at the age of nineteen, in less than three months, by acute pulmonary phthisis, we have a very distressing family picture.

The following case is that of a lady, who after being cured before marriage of tuberculous and cutaneous scrofula, died in childbed: During the years 1830 and 1831, I attended a young lady, twenty-two years old, who suffered from scrofulous diseases from her earliest infancy: at seven years of age, ophthalmia appeared in each eye, which gradually became worse in the spring; she was subject to obstinate chilblains, which returned periodically at the beginning of winter, and left their marks on the phalanges of the fingers. When I first saw her in May, 1830, she had a tuberculous tumor on each side of the neck, larger than an orange, and many other smaller ones of the same nature around the principal tumors; there was also a cutaneous scrofula, of oval form, on the right cheek in front of the ear. She has had two courses of iodine, four months interval between them; the first was continued for five, the second for four months: these two courses have been followed by the resolution of the existing tubercles, and with the cicatrization of the ulcer of the cheek.

Two years after her cure, this lady was married. She died in childbed in her first confinement, and her family regarded it as only an accident of labor. I thought differently, and considered this fatal termination rather as a remnant of scrofula existing in the organism, and brought into action by the puerperal state. This young woman died in childbed, because her original constitution did not rally sufficiently to bear without danger the labor of parturition.

At the same time I commenced the treatment of a young lady, sixteen years old, who had also suffered from scrofulous affections, more especially from diseased eyes, and who had numerous tuberculous tumors

in the cervical regions. The treatment by iodine was successful. She married when twenty years old, and became pregnant: her first labor was difficult; the ophthalmias reappeared, and the tubercles became regenerated. In the first five years of wedded life this young woman had four children; the second died when eighteen months old; the other three are very delicate and backward in every respect: the third, who is a boy, has already suffered from ophthalmia, with coryza and pustules of melitagra around the external opening of the nostrils. One day his mother brought him to me with violent ophthalmia and diarrhœa, which I regarded as of the same character. She too had crusts of melitagra like those in the child; they occupied the same situation, but were more numerous and thicker, and were seen also on the ears.

We will now state cases where a radical cure has been performed, after which marriage has been consummated, without causing so far any return of scrofula, while the offspring has been healthy. A young woman of St. Germain-en-Laye, came to consult me in June, 1835: she was fourteen years old, and very pale, and had in the left side of her neck a fistulous orifice, which opened at the horn of the hyoid bone, which was denuded. When four years old, this child had on this point an abscess a little larger than a nut; it was punctured at the age of two months, and remained open for from five to six weeks. A year afterward, an abscess appeared at the same point, and followed the same course as before; and again a third time the next year; a fourth time six months afterward; and a fifth time three months after the preceding. After this no account was taken of it. When this child was brought to me, the fistulous orifice had been open this time more than six months: the young girl had headache, was delicate, indifferent, and fatigued by the slightest exertion. Her parents added that she had been very sickly while nursing, and until she was

four years old, after which commenced the series of abscesses which appeared for several years in her neck. She had been troubled with frequent catarrhal affections of the air passages, attended with much difficulty of breathing, and sometimes she was threatened with suffocation.

Two physicians were consulted before I saw her; they detected caries of the hyoid bone, and proposed to lay bare the diseased spot and apply the actual cautery. I had heard such a proposition before, and yet this barbarous method of treating caries is seldom followed by a cure, but is often attended with fatal results. Farther, this young patient would have been scrofulous after, as well as before this operation, so that an internal treatment would still have been requisite: I recommended her to begin with this, and it was successful: the operation was not required, and the young girl was completely cured by preparations of iodine, without the annoyance of a cicatrix, which cauterization with a hot iron always leaves.

In June, 1833, a young lady from the department du Nord, eleven and a half years old, was subjected to the treatment with iodine. Her symptoms were as follows: white swelling in the right knee, with two fistulous openings going to the femur; this bone was necrosed and very much swelled in its lower fourth; the leg was flexed on the thigh, and the young patient was unable to execute the motions of flexion and extension. This limb was very much wasted, and her physical development very much retarded in every respect. This disease began at the age of two and a half years.

One of the first manifest effects of the iodine was the development of the body. This development could not be deceptive,for it was generally proportional; the diseased limb was nourished almost as well as the other, and no part of the body seemed retarded in its growth. The white swelling did not improve for a

year. At this time the fistulous orifices were no longer indurated, which is always a good sign. The soft parts were healthy; the hypertrophy of the femur, and that of the ends of the tibia, had much diminished; and the patella was nearly as moveable as on the left side.

The sides of the fistulous passages did not adhere till long after the surrounding parts presented no induration. But as these openings had been organized for nine years, it was very difficult for them to close. We thought that possibly too they might have remained open to permit the discharge of some fragments of the dead femur; but no spiculæ of bone were discharged. It was necessary to recur several times to the treatment with iodine, and to combine this with other remedies. We tried for more than four years, and at the end of this time we cured the white swelling, which for nine years had resisted all other modes of treatment, although these methods had always been used by celebrated practitioners.

Dubois and Larrey had proposed amputation of the thigh; but Dupuytren took a different view, thinking it was too late, and that the general state of the young patient presented too few chances of success. Under these circumstances, I suggested the treatment by iodine.

Some years after the cure, this young lady was married, when nineteen and a half years old. She lost her husband with pulmonary tubercles, fourteen months after marriage. She has had no children nor miscarriages, and has not been pregnant. During her widowhood, her troubles have occasioned cramps in the stomach, which caused her much suffering, but no symptom of scrofula has reappeared. The limb formerly diseased continues to be nearly as strong as that of the opposite side.

The general health of these two young females has been so much improved, and their state is so much

better, that they may reasonably be married, without fear of injury, and with the hope of having a healthy offspring.

Our views have been realized. The first has borne two children at the full time without any accident; and her children, the elder of whom is now three years old, have presented no symptom of scrofula.

The other has no children, but her husband fell sick soon after marriage; she was so unfortunate as to lose him, which affected her so much as to cause cardialgia, but no recurrence of scrofula.

In the spring of 1835, I began the treatment of a young man twenty-two years old, for a fistulous caries of the inferior maxillary bone and tubercles which occupied the whole left side of the neck: many were ulcerated and the skin was altered. There were also several fistulous orifices, running to the carious bone, and a salivary fistula in the duct of Steno. This disease began long since; this young man was very feeble: his face was pale and the hair generally was discolored; his countenance showed the sufferings he had experienced from his infancy; he had been almost always sick: he was a little above the middle height, although his body was short and particularly his chest, which contained, probably, tuberculous productions, either in the parenchyma of the lungs, or in the mediastina.

We cured this patient by two courses of iodine, each of five months; in the three following years, tubercles again appeared and colds which I regarded as signifying the presence of pulmonary tubercles: the fistulæ have opened occasionally. It was necessary to return to the preparations of iodine, which I continued during the summer months. In the intervals, I purged the patient frequently, and he often used, during the winter, the antiscorbutic syrup and sulphurous baths.

This patient recovered, and from being apathetic, has become very lively; he has acquired a decided

taste for bodily exercise, and can now walk five or six hours a day; he often rides on horseback; his digestion is good, and his nutritive vessels have become active.

This young man is now thirty: he married a year since, but consulted me previously. In granting him permission, I recommended him to remain nine months of the year in the country, to pass most of the time in the open air, to devote himself entirely to his health: to seek a change of air occasionally by travel; to have nutritious diet, a simple but substantial regimen; to commit no excess of any kind; to cultivate the affections, and in short to lead a patriarchal life.

In pursuing this course our patient will enjoy as far as possible, an existence free from disease, and will be as happy as he can be. He will labor himself to regenerate his race; and the constitution of his children, originally improved, will be still better adapted to receive the salutary influences of their healthy position.

We shall omit many similar cases which have thus far presented advantageous results, but which want the sanction of time, without which, the value of these cases can not be estimated.

We will conclude by stating a case which has been sanctioned by a long series of years, and which is the oldest of these occurring in my experience.

In February, 1831, a stranger of middle stature, with black hair and dark skin, twenty-nine years old, requested to be treated for very large tuberculous tumors in the cervical and inguinal regions. He had a very large tumor in the right and posterior part of the neck, which extended behind the pavilion of the ear. The skin covering this tumor was much changed and seemed liable to be destroyed.

In the right groin was a tumor larger than the fist, fissured transversely by a bad cicatrix: the skin there was much more affected than in the cervical tumor, and

it had even separated in several parts under which a little pus could be felt. Tumors also existed in the left side of the neck and in the left groin, but they were less advanced than on the right side. Thus when the two lungs are almost filled with tubercles, they are less general and less advanced in one lung than in the other.

The general symptoms were very serious: a want of appetite, sleep, and strength, and the patient had become so feeble and wasted, that he could with difficulty ride out and take the air.

The diagnosis was very difficult; the constitution of the patient was good; there were no cases of pulmonary tubercles in his family; he had never had but one attack of syphilis, which occurred when he was eighteen years old; nor had he been subjected to any of the causes which according to many authors may produce scrofulous diseases.

This patient was cured by a treatment of iodine lasting three months. So rapid a cure led me to think that I had treated a case of syphilis, and I was the more confident of this, because I then believed there were no tubercles in the family.

For several years I regarded this case as one of syphilitic cachexia. In fact, a scrofulous disease is seldom cured by one course of iodine, and especially by so short a treatment, while this result is often obtained in a case of constitutional venereal disease.

Since that time, however, I have learned from a positive source, and more lately from the patient himself, that one of his sisters died of tuberculous phthisis prior to my acquaintance with him, and that since that time two other sisters had died with the same disease. Hence the tubercles in the cervical and inguinal regions were scrofulous.

The patient however continued well for twelve and a half years: the case may be considered cured, and he has frequently told me that he had never enjoyed such good health as since his treatment.

About eight years since, he resolved to marry, being then thirty-three years old. The marriage did not impair his health, but rather improved it. His offspring, a girl and a boy, seem hitherto to have been free from scrofula.

So far, this case leaves nothing to be desired. But it is proper to observe that the elder of these children is only about seven years old, and the second only five years. Whatever in fact may be the actual appearances, we can not regard these children as really exempt from a scrofulous disposition which appeared in their father when thirty years old, but with a slight degree of intensity.

I know several young collegians who have had scrofula in their infancy; they have been cured of it, and have been able to resume their course of studies which was interrupted during their treatment: probably by observing the rules of hygiene demanded by their situation, they might retain their health and pass the critical period of puberty without trouble.

I preserve my relations with former patients who have recovered their health and who propose to marry. If with them the question simply was to be less happy than those persons who enjoy good health, I would enter fully into their views, giving them the recommendations indicated by prudence. But a tuberculous patient is not only feeble when compared with a man in very strong health, but even when he is not actually suffering, there is reason to fear that marriage would cause the reappearance of former diseases. On the possibility of this reappearance, instances of which are not rare, depends the future happiness of a tuberculous man who gets married. We foresee that our reserve on this point will not, perhaps, meet the unanimous assent it merits; but we shall still advise the utmost circumspection in these cases. But why refuse to tuberculous beings the enjoyment of that portion of life which falls to their share? Why deprive them of

their pleasure? This language may flatter one's self-love, but it shows the most cruel indifference to the future state of the tuberculous, of the persons who are united to them, and the children arising from the union. The interest we take in our patients obliges us to advise them of the dangers which they will encounter in the married life. Our words may affect only a few reasonable persons, to whom they have been already useful, and whom they will benefit much more under the force of good examples.

Can we say anything else, when we have so often seen scrofula produce discord in families, and separate those who were thought to have been well married: we have known a simple otorrhea produce trouble between a couple in the seventh month of a marriage which had been impatiently expected on both sides. Mental alienation and suicide were caused by the health of one of a married couple, who was an object of permanent disgust to the other, who was well. A young woman died of this kind of torture, after seven years of marriage; and another became insane from remorse.

We have too often had occasion to notice the incessant solicitude of parents who have married their children ignorant of the previous health of those to whom they were united. We have too often listened to the tardy complaints of those who have neglected the councils dictated by prudence; and we have known our predictions to be accomplished too frequently, to dispense with pointing out the cause, the existence of which, renders so much domestic trouble inevitable. All these misfortunes are the results of ignorance; how, in fact, can parents marry their children under such circumstances, could they have known what would occur?

We shall only cite two cases on this point, but they will show how much grief may be caused in a family by the existence of scrofula:—

In March, 1839, I was consulted by a lady, twenty-one years old, affected with a white swelling in the right knee, and the opposite knee already presented a trace of the same disease: she had tubercles in the left side of the neck, with amenorrhœa, and was much emaciated. She was of the usual height, and erect.

The mother of this girl had been rachitic between seven and eight years; after puberty she suddenly gained flesh and looked fresh; but when eighteen years old, she began to grow thin, and since that time had always been very poor. Her first child died before the full term; the second is the subject of this case; the third is a young man, whom I have not seen, but who is certainly scrofulous, as his mother and sister are so: thus there is no doubt as to the origin of the affection of our young patient—an origin which grieved her unfortunate mother deeply. The treatment by iodine was commenced, but after a few days it was discontinued, in consequence of the parents becoming alarmed about the pretended dangers of this remedy. The antiphlogistic and derivative method was vigorously employed; but it was so different from what was required by the nature of this disease, that it hastened the death of the patient, which occurred six months after.

The disease of this young person, and the uncertainties about her treatment, and her death, have so disturbed the mind of the mother, that she became deranged.

This lady, however, had less to complain of than another lady, whom I saw in such extreme despair that she did not dread the death of her sick children, which is the same thing for a mother as to desire it.

She had been married for six years: her husband's brother died with pulmonary tubercles, and he himself presented many symptoms of this formidable malady. At first she had a miscarriage, and then two weak and sickly children, who were not well nourished, as the

digestive passages had no assimilating power. One of these children was a young girl, two and a half years old, who was blind after the age of nine months, losing her sight after an ophthalmia in both eyes for several days: the second was a boy, eleven months old, for whom I was consulted Feb. 5th, 1839; he had ophthalmia in the left eye, of ten or twelve days' standing only, and yet this organ was completely disorganized. On the 26th of February, the right eye seemed perfectly healthy, and the child did not complain: on the morning of the 27th, this organ grew red; the eyelids, especially the upper one, became edematous, and it was impossible to separate them: on the evening of the same day this eye was attacked by suppuration, and became wasted and irrecoverably lost: from that time, this child, like the sister, was perfectly blind.*

How deplorable for a female to miscarry, or to bring into the world children who are always sick and infirm from their birth.

This mother is so wretched that she desires the death of her offspring, rather than fears it: she has often expressed this to me, and it was easy for me to understand such a desperate moral state under such sad circumstances. This state of mind is not peculiar to females; for I have observed it in men who were truly devoted to their children. Our remarks on the marriage of scrofulous patients refer only to themselves—that is, to the reappearance of former diseases, and to the progress which marriage often impresses on them.

The same question is equally interesting when considered in regard to the offspring of these marriages: but it is unnecessary to treat of this particularly; for,

* I compare this terrific action of scrofula in the eyes to acute hydrocephalus, which carries off a great many scrofulous children in a few hours: to the sudden invasion of tubercles in the cervical regions, which may be filled with these parasitic productions in a few days: to acute phthisis pulmonalis, which destroys scrofulous patients in a few weeks, &c.

every article in this book contains numerous instances of fatal diseases, which carry off the children of scrofulous parents soon after birth.

Our convictions will not allow us to pass unnoticed an opinion, entirely contrary to ours, stated in several works of many distinguished authors. We have mentioned that scrofulous diseases in some cases receive a favorable influence from puberty, and that at this age they may experience remission, or even be apparently cured. Many authors, and Bordeu among others, have regarded this happy change as the effects of the seminal emission at this age. It would be difficult to find in one of the finest phenomena of our organism, a stranger explanation, and one more dangerous in relation to the indications required.

This opinion is so absurd (if I may be allowed the expression) that it is difficult to believe it was adopted by one of the most celebrated physiologists of the last century—by Bordeu, who, after combating victoriously the mechanical doctrine of the great Boerhaave, has laid the foundations of the doctrine of vital properties, which was afterward cultivated by the illustrious Bichat. Instead of repelling this doctrine, Bordeu adopted it: he has given it vitality in his writings; he admits its consequences; he advises scrofulous subjects to marry very young, for several successive generations: this precaution seems to him the best preservative of the individuals, and the most direct mode of enfeebling and of extinguishing the predisposition in the family.

To these false and gratuitous ideas, which carry with them such dangerous indications, we oppose our personal experience, and the remarks which have been made at all times on the dangers of onanism and of premature intercourse with females. Instead of advising precocious marriages, we shall continue to point out their dangers: we shall repeat them on every occasion, as the greatest benefit we can confer on

young men, after curing them of scrofulous diseases, to render them moderate in every respect, but more particularly in their venereal passions.

The different states of health which we have studied particularly, are in our eyes so many reasons why tuberculous persons should remain unmarried. But they can not all be pointed out: there are several which would demand investigations, which can not be pursued impartially, and which also would open the door to domestic dissensions. So far as regards these different states of health, science must be content with throwing light on our opinion. The existence of many, however, is easily detected, and when these occur, marriage should be forbidden by law. We might mention some propositions on these states of health, but we have thought it proper to abstain from it, and to leave practitioners at liberty to apply our ideas, with a hope that our researches may be of some utility in pronouncing upon special cases where they may be called to give their advice.

In recognising these cases as presenting impediments to marriage, the law would reach the source of the evil: it would prevent the progress of scrofulous diseases, which have already swept off at least a fifth of the population, and which are constantly imported into healthy families by marriage.

It is useless to say that the interdiction, being established only in regard to the future, should be free from all violent measures, and should respect acquired rights.

When it shall be written in our codes—when the whole world shall adopt the same law—society will soon be populated by men of a better constitution; the number of hereditary diseases will be diminished, and after three or four generations they will be very rare. Society will number fewer persons affected with blindness, deaf-muteism, and scrofula of all kinds; we shall have fewer orphans, incurable and infirm old men; the populations of poorhouses, which increase in

a frightful manner would be diminished; there would be a greater number of robust men to till the soil, to clear away fields and parts yet uncultivated, and to multiply the products of industry.

Most of the objections to our ideas on the marriage of tuberculous subjects, seem to me so slightly founded that in my opinion not one could be seen in thirty years. One could not live under a legislation marked by a physiological spirit, without being astonished that the precautions taken against hereditary diseases were of so recent a date, and that they were not adopted in the early periods of civilization.

We have now to make a few remarks on the diseases developed after marriage. They relate to a very common error, which ascribes to marriage the cause of certain diseases, which are, however, only the continuation of those of infancy and puberty. This error of diagnosis is committed more particularly in regard to the diseases of females; and therefore we shall present a few reflections on the health of females after marriage.

Remarks on the Health of Females after their Marriage.

Many females have told us that they were not sick until after marriage, and that they enjoyed good health before. This assertion is most generally wrong. There are but few diseases produced by marriage, except those of a syphilitic character. Marriage, on the contrary, is the state of nature, and can not but exert a happy influence on the health of well-organized females. But this is not true, when they marry with a state of health, which is only the remission of previous diseases.

A lady, twenty-four years old, small in stature, had for a year, in the right nostril, a polypus, the size of an olive. This young woman was affected with profuse leucorrhœa and with floodings; she was much emaciated and feeble—thus showing the tuberculous

temperament. This lady told me that she had been in this state for the three years she had been married.

A year previous, I was consulted by one of her sisters, who ascribed her bad health to the same cause. She was twenty-four years old ; her lower lip was enormously tumified, and indurated; its loose edge was turned up, and presented some very thin crusts of impetigo. The alæ of the nose were also hypertrophied and indurated ; the left eye was affected with ophthalmia, and there was slight but constant leucorrhœa ; the skin was mottled, and the fibre in general was much relaxed ; the menstruation was very regular.

These symptoms of scrofula succeeded the diseases of infancy, which, as in the preceding case, had presented numerous complications in consequence of the scrofulous predisposition existing in the family.

Some years before these two ladies came to me for advice, I had attended their elder sister at Paris. She was affected with an impetigo, a cutaneous disease, which is not rare in scrofulous subjects—(we shall see that the younger sister had symptoms of it on her lips). She had embonpoint of a bad character, which disappeared after a first confinement, after which the health of this young lady was very precarious.

There was a fourth sister, whom I did not see. If I had an opportunity of describing her physiological state, it would doubtless resemble that of the infancy of her three elder sisters. The present state of this child must be similar to the former condition of her three sisters, as the actual state of the latter certainly indicates what will be the future state of the youngest.

Inheritance is manifest in this case by the generality of the disease in the family. Its cause is in the health of the father, who is not well, who did not have his children till his age was much advanced, and whose venereal appetites were excited beyond measure.

These two ladies referred their present state to their marriage. They did not awake from their error, although

I made them remark that the marriage having been removed, as it were, as a cause of disease, their health did not become better. They did not understand my remarks on the state of the health of their elder sister, and on that of their younger sister. I have known nothing about this family for four years, but I affirm, without fear of being deceived, that they have had much domestic misfortune and trouble.

I have often had pictured before me the sufferings of scrofulous females. The diseases affecting them after their marriage are of the same character as those experienced before, and which have more than once endangered their lives. Puberty has improved their health slightly for a little time, but this remission, which has rendered their state more supportable, has not, however, made them strong enough to be pregnant, to be confined, and to suckle their children, and to bear the fatigues and anxieties of domestic life. The illusions which sometimes exist, of happy changes in their health, are not of long duration after marriage.

A married female in this state of health will be barren, and this impotence, from which her self-love will suffer much, is nevertheless the happiest condition of her lot.

If she be impregnated, her pregnancies are unfortunate, she miscarries frequently, and her labors are difficult. Her form changes after the first labor, she has constant leucorrhœa and bad digestion; she loses her flesh rapidly, and does not recover it; her health is impaired; it is never renovated; pulmonary tubercles, which often exist a long time without detection, appear on this occasion, and with very marked symptoms. This must not be ascribed to marriage, as is done but too frequently, but rather to the original health, which ought to have prevented marriage.

The moral state is still more lamentable than the physical state. The females of whom I speak are very numerous, and I do not hesitate to regard them

as the most unhappy beings of the social state; they are always restless and dissatisfied; they live in a permanent state of suffering, caused by inconsolable anguish of the heart. Happily for themselves, scrofulous females are seldom long-lived; after being sick, or invalids, all their life, and bringing into the world sickly children, they die prematurely, and leave a part of their children to their husband.

It is very easy to foresee the misfortunes of a man with such responsibility. Among many instances of this which I have witnessed, I will only mention, briefly, the case of a very desirable alliance, where the offspring were very infirm, and where the mother died, leaving the care of them to her husband. This widower laid one after another of his five children in the family tomb, and for twelve years his days and nights were passed in taking care of the sixth, who presented no sign of puberty at the age of nineteen, although he lived in a part of France where puberty generally appears at from fourteen to fifteen years of age.

When we find families deprived of one of their parents, most generally this latter died young of an hereditary disease, the germ of which has been transmitted to the children, all, or nearly all, of whom die one after another, in proportion as the germ of the disease, which is common to them, is developed. Thus many families are almost extinct at birth. In studying the morality of so deplorable a situation, we are often obliged to admit that the one who lives, only reaps what has been sown.

From the preceding remarks we see what may be expected from the marriage of a young girl whose health has been enfeebled by former diseases. What follows from these alliances formed without reference to a former state of health? The death of one of the partners after a few years of marriage, children still more feeble than their parents, and new germs of hereditary diseases which infect society.

Marriage has been advised with too much levity, as a means of fortifying the health: it is a kind of flattery, the responsibility of which should never be taken by the physician: his mission, his duty, compel him, on the contrary, to contend against the self-love of the parents, and to show them that they will sacrifice to it their child's future happiness. This occurred to a young lady, the mother of six children, who had already lost two of them, and who was complaining to me of the prospects of those who remained (one of these four children died a few days after I penned this paragraph), because she knew instinctively that they had the same health as that of the children whom she had already lost. I shall never forget her reproachful remarks against those physicians who had advised her parents to permit her to marry.*

It is often said that health is the greatest of blessings: but on seeing a few of the cases that we do, one would say that no person believed it to be so precious a boon. The hereditary sufferings entailed on some families, even to their extinction, bear too strong a testimony to man's improvidence. It is too true that we are less anxious about our offspring, than for the mating of our domestic animals. We are more careful in selecting a stallion than the head of a family. Hence one of the greatest services which science can render to society, is to make known the hereditary causes of disease, and to introduce the knowledge of these causes into domestic education. I am convinced that most of the marriages of which I have spoken, would not have taken place, if either party had known the ills to which they were liable.

* This lady died a few months since with pulmonary tubercles and tuberculous ascites.

Appendix to the Hereditary Causes of Scrofula.

In this appendix, we shall make some remarks in regard, 1st, the frequency of scrofula in foundlings and orphans; 2d, the transmission of scrofula by the nurse to the nursling.

Article I.—Frequency of scrofula in orphans and foundlings.

I propose to prove the frequency of scrofula in orphans and foundlings. In them the study of the pathogenetic causes is always extremely difficult, from our ignorance of the health of their parents: as their antecedents are unknown, we can seldom appreciate, justly, the influence of occasional causes. The simplest reflection, however, will soon show, that inheritance must in these children, have a great influence in producing scrofulous disease.

In fact who are generally the parents of orphans? The mothers are usually poor young girls, who are seduced and obliged to fly from their paternal mansion to conceal their pregnancy, overcome with mortification, exposed to privations and fatigues of every kind, and often infected with syphilitic diseases. Some of them, to remove the appearances of their unfortunate position, use tight corsets and even try to produce abortion: these efforts always interfere with the regular evolution of the fetus.

The fathers who are unknown are generally intemperate in venereal pleasures, one of the most powerful causes of the debility of their offspring.

In regard to orphans, their fathers and mothers are so much reduced by misery and disease that they are obliged to get rid of their children. Their condition is certainly badly adapted for the procreation of robust and healthy children. Besides, parents generally die young, and of diseases (except a few by violence) to which

they are exposed by their profession. But what are the maladies which destroy the young children? In the first place they are scrofulous diseases, and more particularly pulmonary tubercles, which cut off the young in great number.

Thus although inheritance can not be demonstrated with the rigor generally introduced into our investigations, we still admit it by analogy as the principal cause of the frequency of scrofulous diseases in foundlings and orphans.

In them, however, the occasional causes play too large a part unfortunately in the development of the predisposition with which they are born. In fact we know that children brought up by public charity are placed in the cheapest possible places. They are put out to nurse at great distances from the capital, in places where the government can exercise no efficient control over them: hence an immense number die the first year. Those who survive, are not well nourished; they have only the means of sustaining life; the vicissitudes of the seasons, heat and cold, bring no change in their food, which is not always sufficient nor of good quality: these unfortunates occupy the lowest place in the social scale, where they never know happiness: hence they are subjected to all the external causes of disease.

But the absence of the moral sentiments is particularly calculated to arrest the current of life in them. Deprived at birth of all family affection, the sensibility is not developed in them, and is, as it were, arrested at its source: hence they are almost indifferent to the relations of friendship.

I have treated fifty of these children at St. Louis; and further, I have visited their establishment, have assisted at their recreations: how silent when compared with boys' at academies. They are united by no tie; and we see among all those children of the *Grand Maison*, individuals who are small and stunted, with-

out expression of face, where the intellectual faculties are very limited, and whose sensibilities are completely blunted. Among them is no child of a spiritual face nor fine form; one would say they never smile, they never see the sun. This kind of physical and moral inertia, is never remarked in so great a degree in any other condition of society: it is, it alone, a kind of scrofula, in the production of which, the regimen of foundlings must exercise a great influence, but which can not, however, be regarded as caused by this regimen only, after our reflections on the physiological state of the parents of these unfortunate children.

Article II.—Transmission of scrofula from the nurse to the nursling.

We will offer a few remarks on this point, and we have placed these in the appendix to hereditary causes, because it has with them some resemblance: it however differs from them too essentially to be mentioned under the same head.

When a strange nurse communicates scrofula to a child born without any predisposition to this formidable disease, it is, strictly speaking, only a disease produced by an external cause; the child has acquired what it did not have at birth: but we must admit there is a great analogy between the transmission of scrofula by generation, and its inoculation by nursing. In fact, does not the nurse communicate its state of disease to the nursling, as parents transmit theirs to their offspring?

Many authors have detected the propagation of scrofula by the nurse. Bordeu has remarked a similar phenomenon in lambs, who have tumors in the neck very similar to tuberculous tumors.

The diagnosis of this kind of cause is very important in practice, if we regard scrofula communicated by the nurse as only an accident in the family; while that transmitted by inheritance affects all the children

indiscriminately, and is common to them. In the first case, the existence of scrofula is a single individual fact, which originates out of the family; in the second, it constitutes a sign, which should excite the anxiety of the physician as to the actual and future health of the other children.

Nurses are generally responsible for the diseases which affect children who are confided to them: hence we should always guard against the information received, when the nurse is accused of being the cause of scrofula in a child; for the pride of the parents seeks but too often a refuge in this mode of propagation.

I was consulted in regard to a child who presented the following symptoms: fistulous caries of the fingers, paleness, debility, indifference, apathy, small limbs, slight development of the muscular system; no sign of puberty after the age of fourteen; the right testicle remained in the inguinal canal, behind the ring, and had not descended into the scrotum.

This highly scrofulous state was referred, but wrongly, by the mother to the nurse of her child. As she had her daughter, sixteen years old, with her, I asked if the two children had the same nurse. On her saying no, I remarked to her the very great resemblance in their constitutions, and I thought this resemblance was referrible to the health of the mother, who presented marks of a scrofulous constitution: in fact, her bones were too large, and she was not straight.

Hence the inoculation of scrofula by the nurse should not be lightly admitted, nor until after inquiring carefully into her health and that of her children; and if there be any doubt, we should consult the family temperament, which in this case is one of the most certain diagnostic marks.

This cause of scrofula has also seemed manifest in several cases, which I have collected carefully; and some of these I shall present to the reader.

Henriette Levallois, twenty years old, was affected with scrofula, attacking more particularly the cellular and fatty tissues of the abdominal limbs, which had become enormously large, and presented an infinite number of cicatrices, several cellular tumors, and many fistulous ulcers; she had amenorrhœa, the menses having appeared only three times in two years. This young woman had no scrofulous parents in her family; she had never been exposed to privations, and had never lived in damp places: but her nurse and her child died of scrofulous diseases.

Morand, twenty years old, was rachitic and short in stature. The mother of this young scrofulous person, who came to consult me at the hospital St. Louis, enjoyed good health at the age of fifty years, and told us that her husband was also well, but he had been nursed by a scrofulous female, and his nurse's daughter was rickety like him.

The mother of six children had two affected with scrofula: both of them were nursed by the same person, whose children were scrofulous, and who afterward died of scrofulous disease. The other four children were healthy and well.

In April, 1834, a lady, thirty-two years old, consulted me in regard to her son, six and a half years old: he had been affected for six months with ophthalmia in both eyes, more intense in the left than in the right eye, with hypertrophy of the phalanges of the middle finger of the left hand, and of the corresponding metacarpal bone. The father of this child was thirty-five years old, and healthy, as was also his wife: his parents were still living at an advanced age. Their child, originally healthy, had been nursed by a female with pulmonary tubercles; but only for seven months, because the chest of the nurse was then affected, and she died six months afterward.

In June, 1834, we saw a similar case at the hospital St. Louis. The nurse died of pulmonary tuber-

cles, eight years after giving up her nursling. The scrofulous child for whom we were consulted had a brother who was healthy.

Among the different states of health which have been mentioned as injurious to nurslings, pregnancy is the most common. I attended a scrofulous child, who had been nursed by a pregnant female until the moment of her confinement, as she bore a child the day her nursling was taken from her. Similar or nearly similar facts are very common, as we shall see by some remarks on the nurses of the children of Paris.

Remarks on the Nurses of the Children of Paris.

There are in Paris many private families who have retired recently from business after having made their fortune. This position, so fortunate *in itself*, is often attended by cares and chagrin, occasioned by the death of children, or by different diseases which affect them constantly, and which it is very difficult to relieve, because they have their foundation in the organic debility which children inherit from their nurses, and often also in the habits contracted by the parents, which have been for many years unfavorable to the propagation of healthy offspring, as we have already said.

The families of which we speak are generally in an humble position, from which they are elevated only by much fatigue and exertion, supplying a want of capital by labor. As the females have been occupied from morning to night, they could not suckle their children, as this would give them too much trouble. Hence they send their children away to be nursed, sometimes to a great distance, where the mothers can seldom, or even never, see them. In this case, the children are left entirely to the discretion of the nurses, and do not enter the paternal mansion till they are eighteen months, two, or even three years old, when they can walk alone, and do not give the mother much trouble.

These children are badly nursed, most frequently by females who observe no continence, who become pregnant, and who conceal their situation so as not to lose their nursling. This is very common, for the females who prefer to be nurses, seek to become pregnant as often as possible, in order that their wages may not be interrupted. Hence nurses are even pregnant when they go to seek a nursling.

I have known children who have suckled the old and new milk of their nurses; that is, they have had the old milk when young, and the young milk when their stomach required more substantial nourishment. We also see nurses who nurse their own child and their nursling together, and who allow the latter to suffer, in order that its development may be retarded, and that the parents may leave it with them as long as possible.

To the vices of nursing, we add the scanty nourishment of the nurse, her laborious pursuits, her want of cleanliness, her marital relations, and we have only a very imperfect idea of the causes of diseases to which these nursing children are subject.

It is very desirable that some observing mind should do honor to themselves by exploring this subject, which we have merely touched upon, as it interests more than half the Parisian population, who would enjoy much more robust health, if their children were nursed better than they are.

I regard these researches as a social want of the highest necessity, as a permanent want, since there are very many classes (all the classes of artisans and of tradesmen), who, as we have said above, have no time to attend to their children, and thus are compelled to intrust them to strangers.

Hitherto our remarks on nursing relate only to the propagation of scrofula by nurses to children, presumed to be healthy. In cases of this kind, the original health of the children presents a favorable element which

balances to a certain extent the injurious influence of the bad character of the nurses.

But if a healthy child becomes scrofulous by using the milk of a nurse affected with scrofula, of one who is too old, or one who is pregnant, a child born scrofulous will be still more so, if nourished with the milk of a female in any of these states of health. The effects of the inoculation with the disease, are added to the original predisposition, and render it more complex. An external cause adds to it more intensity than it had primitively. It is very difficult for a child to resist this concurrence of circumstances, and this seldom happens.

Scrofulous Mothers should abstain from nursing their Children.

From the preceding remarks it is hardly necessary to enlarge on this point. It is very evident, that when children inherit scrofula from their mothers, maternal nursing can only develop the proximate cause of their malady. A child born with scrofula, who has received the principle of the disease from the mother, will necessarily become more scrofulous if she nurses it. This nourishment is the most pernicious the child can receive. A scrofulous mother can not have good milk; she has but very little, and almost none at all, for she has not in herself the materials for its secretion at every moment of the night and day.

Farther, the elements supplied by the animal economy must be eliminated by the mammary gland, which is often arrested in its development, or affected with scrofulous hypertrophy; so that the organ secreting the milk, far from correcting the materials of the secretion, by a proper elaboration, adds to these qualities, which are already injurious, those of an imperfect and even bad secretion.

With such elements of formation, the milk of scrof-

ulous mothers is watery, thin, and scanty; in quantity it is insufficient, and its quality is bad; and hence it must render a child scrofulous who is not so, and must, *a fortiori*, develop its original predisposition to become so.

Nursing, too, is equally dangerous to the mother. Scrofulous mothers do too much when they nurse their children; they are always too much enfeebled, and most of them can not continue beyond a month a task which exceeds their strength. This inability to continue nursing is shown by fatigue and exhaustion which the constitution necessarily experiences by similar attempts; the most usual consequences of which are a debility and emaciation to be recruited by good nourishment. These symptoms, then, indicate the invasion or progress of pulmonary tuberculization.

Hence those mothers only should nurse their children who enjoy good health; and those affected in any of the ways mentioned in this book should abstain from it, as consequently should those who beget scrofulous children. It is, then, absolutely necessary to employ a strange nurse. I have counselled this several times successfully; and my fears have been cruelly justified, in some cases where my advice has not been followed.

PART SECOND.

PATHOLOGICAL CAUSES OF SCROFULA.

CERTAIN diseases, peculiar to infancy, and after which scrofula appears for the first time, or becomes more intense than it was previously, have been regarded as the pathological causes of scrofula.

The same is true of many other diseases not peculiar to this age, and which are only the forerunners of scrofula, or rather this affection itself.

Certain states of health peculiar to females, have also been considered as causes of scrofula, during which it may appear for the first time, although these can not produce scrofula in those not predisposed to it. Scrofula also has relations with syphilitic diseases, and very frequently with erysipelas; but all the relations it may have with these diseases are only complications; they may favor its development, but it is certain they can never produce it.

We shall enter into some details on these different pathological causes of authors, in order to embrace in our work facts which have doubtless been mentioned long since, but which have been wrongly interpreted; we shall attempt to present them in their true light.

We shall therefore divide our remarks on this subject into five principal articles, as this has never been properly treated, although it presents, as we shall see, a high degree of interest in the treatment of children's diseases.

In the first article we shall treat of exanthematous fevers, and particularly of measles and smallpox. In

fact the invasion of scrofula occurs frequently after these diseases, or rather these give new intensity to the pre-existing scrofulous diseases. We shall then devote some space to hooping-cough, considered under the same points of view.

In a second article we shall mention many other diseases which are not so peculiar to infancy as the preceding, but which are very common in scrofulous children, and which have been regarded as the pathological causes of scrofula. We shall see that all these diseases are only the forerunners, the first signs of scrofula, that they are only the peculiar modes of its invasion.

In a third article, we shall speak of pregnancy, abortion, confinement, considered in relation to the invasion or the progress of scrofulous diseases.

We shall devote a fourth article to some remarks on erysipelas considered in its relations of cause with scrofulous diseases.

We shall terminate this essay on the pathological causes of scrofula, by a fifth article, in which we shall consider the influence of syphilis on the progress of scrofulous diseases, and reciprocally the influence of scrofula on syphilis.

Article I.—Smallpox, measles, and hooping-cough, as causes of scrofulous diseases.

Scrofula often is seen for the first time, after the appearance of measles, smallpox, hooping-cough, or if already existing, it becomes more intense after these diseases.

Authors have thought that in these circumstances scrofula was accidentally generated. Measles leaves after it a chronic ophthalmia, a catarrhal affection of the bronchiæ: smallpox, ulcerated tubercles, abscesses in different regions of the body; these symptoms arise from these diseases: measles and smallpox have rendered children scrofulous.

Thus the origin of scrofulous diseases is often refer-

red to some previous disease, while their appearance after this disease has no other cause than an hereditary predisposition, which is overlooked.

In children affected with this predisposition the progress of eruptive fevers is rarely simple: it is attended, on the contrary, with more or less numerous phenomena, which perpetuate it and render it more complex, until it is finally effaced by the appearance of some scrofulous disease.

The complications to which we allude are all of the same nature, however differently they may appear. Thus whether ophthalmias, or tubercles, or abscesses, are seen in different regions of the body, &c., it is always scrofula which is developed after an exanthematous fever.

If we regard the diseases of infancy under this new point of view, we shall see that these maladies are generally mild in well-formed children, and that the complications presented, and too often their fatal consequences, are the effects of the original health of the children. Let us apply these ideas to some diseases particularly.

A. Smallpox a Cause of Scrofula.

Smallpox often leaves after it signs of scrofula, as ophthalmias, tubercles, &c., which appear for the first time after this eruptive fever.

In 1829, we had at the hospital St. Louis, a person named Aujard, sixteen years old; he had been affected with palpebral ophthalmia in both eyes after he was five years old, and after an attack of smallpox; he had also cervical tubercles which had remained stationary from the age of eleven years, while the ophthalmia had become more active every year, in the spring.

The father of this young patient, forty years old, of a feeble constitution, sometimes suffering from his chest, was affected with a palpebral ophthalmia in both eyes since he had the smallpox in his infancy.

Some years after, we observed the case of a person affected with scrofulous tubercles in the third generation, who remained small and bandy-legged for three years, after he had confluent smallpox. This man had a first attack of subcutaneous tubercles when twelve years old, and a second when twenty-two years old. He died at the age of twenty-four years, with pulmonary tubercles in the highest degree.

I have known scrofulous persons where the smallpox has been malignant, as it had been with their brothers and sisters; others have died of it, as had already been the case previously in their family. I have known two sisters with pulmonary tubercles, who died after smallpox, aged about eighteen years. Their brother died some years afterward, of pulmonary phthisis. Smallpox is fatal in some families, as it is during the course of some epidemics: in the first case, its fatal progress is owing to the original constitution of the individuals; while in the second, it has its source in the predisposition acquired by the epidemic influence. We have lost several scrofulous patients by confluent smallpox, which they had contracted in the hospital.

Pallet, fourteen years old, affected with tuberculous tumors on both sides of the neck and in the right axillary region, was convalescent, when he was attacked with smallpox, April 14, 1832. This eruptive fever proceeded with great intensity, attended by cerebral phenomena, and angina tonsillaris, and he died on the sixteenth day. Some hours before his last moments, the patient threw up a great deal of fetid pus from an abscess in the amygdalœ, which had broken spontaneously. The tuberculous tumors existing in the cervical regions had disappeared during the course of the variolous fever. The abscess of the amygdalœ might be metastatic: perhaps, also, the smallpox would not have been confluent, complicated, and fatal, except from the tuberculous state of the subject. It is not

only the cases of confluent and complicated smallpox which cause the death of scrofulous persons; we have lost two where the smallpox was of the simplest and mildest form.

Eve, twenty-two years old, short in stature, and of delicate constitution, was affected with general hypertrophy of the short bones and of the extremity of the long bones. This patient also was affected with caries of the right radius, and had on his skin numerous marks of abscesses which he had had some years previous. He died with smallpox, in February, 1830, although this exanthematous fever presented nothing to lead us to expect a fatal termination.

Joly, seventeen years old, being affected with white swelling of the left foot, was attacked with smallpox: after this disease, tuberculous peritonitis and acute ascites supervened, and caused death in Nov., 1833.

We have, however, treated successfully several of our scrofulous patients affected with confluent and adynamic smallpox.

Fauché, sixteen years old, was affected with ulcerated white swelling of the right foot, and with cervical tubercles.

Saussenet, seventeen years old, had ulcerated tuberculous tumors in the right side of the neck, under the left clavicle, and some separate tubercles in the left side of the neck. These two scrofulous patients were affected with smallpox at the same time in Sept., 1831.

In Fauché the commencement had the form of cholera: the suppurative fever was very violent, attended by ptyalism, which exhausted the patient; an epiphora also supervened. The patient was extremely reduced; the ulcer of the foot became black and fungous; under the influence of tonics taken internally, and the application of flying blisters, a critical abscess appeared under the right ear on the side of the neck; it slowly became the size of a fist, and discharged in the seventh week.

In Saussenet, the invasion of the smallpox was more inflammatory. The eruption of pustules was confluent as in the preceding case; there were pustules on the tongue. The third period, that of suppuration, was marked by cerebral symptoms, which were subdued by laxatives, and by blisters to the lower limbs. The hair fell off in consequence of numerous pustules occurring in the hairy scalp; they were followed by several abscesses, which I considered to be critical. The scrofulous ulcers became black, soft, and bloody, as was noticed in the preceding case. They were powdered with the red cinchona bark, and afterward cicatrization was completed by the concentrated solution of iodine.

The health of these two scrofulous patients has evidently improved since the smallpox, although this, during its course, presented alarming symptoms of adynamia and even of gangrene.

We have seen other cases where the symptoms of scrofula improved after smallpox, and where this eruptive fever was hardly modified in its course by the preceding scrofula.

B. Relation of Measles with Scrofula.

Measles is also an occasional cause of the invasion of scrofulous diseases, and of the death of the patients. The instances of this are still more common than of smallpox, the latter being very rare when compared with measles. One can not tell the number of children where scrofula has occurred after measles, and where measles has terminated fatally in consequence of previous scrofulous diseases, or only on account of an inherited predisposition to scrofula.

In all the cases of this kind, we readily see that such fatal consequences come from the temperament of the patient, and not from the exanthematous fever. This is rendered certain by analyzing the antecedents

and coincidences in the manner we have already recommended on several occasions.

In February, 1841, a lady consulted me about her daughter, nine and a half years old, who had palpebral ophthalmia of the right eye, otorrhœa on the same side, and tuberculous tumors on both sides of the neck. These three diseases had continued for eighteen months, since this young woman had measles. Their coexistence indicated that scrofula was deeply rooted in this child, and yet the mother was very easy in regard to her child's health. But her security was cruelly misplaced; for she died a year afterward with continued fever. I heard in the family it was a typhoid fever; but this disease is so abused in our day, and it is seen so frequently where it does not exist, that in this case the typhoid fever was probably a catarrhal fever, of the same nature as the ophthalmia and otorrhœa left by the measles. Such an error in diagnosis might be attended with serious consequences in the treatment.

In June, 1834, I was consulted for a young girl, nine years old, with cervical tubercles: most of those on the left side and the skin over them had suppurated, after a bad attack of measles which this child had a year before.

Early in 1835, a manufacturer at Rheims consulted me in regard to his daughter, nine years old, who was affected with cutaneous scrofula on the right side of the neck and the corresponding upper part of the chest. The skin was suppurated to a great extent; it presented an ovoid ulceration an inch long, and a great many small fistulous openings. This young girl also had marks of ancient ophthalmias; the right shoulder was much more prominent than the left. The cutaneous scrofula was developed after measles, and had been regarded as an effect of this eruptive fever. The father of this child was a short man, thirty-seven years old, who had ophthalmias till the age of eleven, and was of delicate constitution. This man had a very

rachitic sister, who had been an invalid all her life, and died at the age of thirty-two, without having menstruated.

The young patient for whom I was consulted resembled her paternal aunt very much, in every respect. In this case, the father was much less affected than his sister, although he begets children nearly as scrofulous as she was. On questioning him slightly, he did not know whether he had ophthalmias in his infancy as his sister had, and he was ignorant as to the health of this sister, nor could any idea be gained as to the hereditary origin of the diseases of the child: these were always attributed to external causes, and finally to an eruptive fever, which might have developed the predisposition, but certainly did not render this young girl scrofulous.

We shall now state the case of two brothers, who remained very delicate after measles. We shall also see that one of them, the elder, had lost the right eye after this eruptive fever.

In January, 1839, a lady from Versailles came to consult me for her two sons, both of whom were delicate, which she attributed to measles, which had affected both of them two years previously. The elder, twenty-one years old, was short and extremely thin; he was pale and yellow; he had no appetite, and slept badly; he had constant headache and ringing in the ears; his voice was low and feeble, and he was unable to bear any fatigue of body or mind; he was so inert as to be much disinclined to any exercise, and could with difficulty be prevailed upon to walk half an hour in his garden. He had a large staphyloma in the corner of the right eye, the sight of which was entirely lost, and the left eye was very feeble. His brother, nineteen years old, was also short and delicate, and was affected with a fistulous caries of the last three left true ribs.

The bad health of these two young men was as-

cribed to measles; but this eruptive fever only favored the development of a predisposition, which became very evident on investigation. In fact, these two young men were the feeble remnant of a family of six children, all the issue of a father who died from tubercles of the lungs. Their mother's constitution also was very delicate; but none of her relatives were affected with pulmonary tubercles.

Hence these children inherited their bad health from their father, and it was wrongly ascribed to measles, which we repeat had been the occasion of its development.

The following case will give an idea of the fatal influence exercised by inheritance in the progress of measles in scrofulous patients.

Ten years since I commenced the treatment of a young girl five and a half years old, and who was affected with two white swellings. One of these white swellings was in the left foot, the back and inner edge of which presented four fistulous orifices. The other tumor was situated in the left knee, and had three fistulous orifices, one of which was situated at the lower and inner fourth of the thigh. There were also several tuberculous ulcers and crude tubercles on the right of the neck and behind the chin.

This child was very small and feeble at birth; its hair was black, and skin dark; it was extremely thin, and never had a healthy appetite. Scrofula had commenced in her by cervical tubercles, and the white swelling of the left foot and that of the knee had appeared successively.

At first view the mother of this young child presented the marks of a very advanced pulmonary tuberculization, and the commencement of her disease could be traced to the first years of infancy. When five years old, she had a bad attack of measles, which brought her very low, and she remained ill after this exanthematous fever. After puberty she had experien-

ced symptoms of chlorosis, and since that time she had been subject to raising of blood; she had not gained much flesh, and her menstruation was irregular and imperfect.

She married when eighteen years old, having hardly attained the age of puberty, and after her first confinement she remained an invalid for seven years. Her first child died with measles when five years old, the age when she herself was so low from this malady.

Eight years after she had a second child, the subject of this case. She then miscarried, and two years afterward was confined with a third daughter. The latter had measles when four years old, and died of them, like her elder sister. The second child, of whom we have already spoken, and who had been under treatment for a year, had the same eruptive fever when six and a half years old, taking it from her younger sister, who lived until the third week of the disease, and then died with it. Our young patient had common measles, but was several weeks recovering; the eyes were a little red; the meibomian glands secreted too much mucus, and the eyelids were glued together. She had pain in the throat, and an obstinate cough, which caused us to fear that tubercles existed in the chest. Hence, having purged this young girl three times, I resumed the treatment by iodine, in order to prevent the pulmonary complaints which threatened. The pain in the throat and the attending cough yielded to this treatment in fifteen days, which was, however, continued to cure the white swellings and cervical tubercles; and this was done in three months.

It is now about eight years that this lady has been cured. We have seen her father lately, and he says she has never enjoyed better health. She will soon be fifteen and a half years old; she is well formed; menstruated six months since, and is very gay. The scrofula has left but slight traces on the left foot and

knee ; but its impression is more apparent on the right side of the neck and behind the chin.

The mother of this lady died in the last stage of pulmonary consumption in March, 1837, leaving behind her, of her three daughters, only the one whose case has been stated.

The influence of inheritance is too evident in this case to demand special notice. The three sisters had measles at about the age, when their mother was affected with the same disease so severely, that her life was in danger, since which time she had never enjoyed good health. Of these three sisters, two died of measles. In the third the convalescence was very long, continuing for several weeks, with some phenomena of a catarrhal affection, which led us to fear the generation of pulmonary tubercles ; and this fear was better founded, because our young patient already had cervical tubercles and two fistulous white swellings.

The death of these two young girls, occasioned by measles, is not, properly speaking, an accident ; it was a necessary result of their organization ; they died of a disease which their mother escaped with difficulty, and after which she remained ill her whole life. We attribute, in this case, so much influence to inheritance, that we scarcely dare to regard the third child as saved, although she has enjoyed good health for eight years, and has passed the critical period of puberty without any accident.

The marriage of this lady gives rise to many reflections. Phthisis affected her before the period of puberty, and even at the age of five years after the measles ; the predisposition to this fatal disease arrested her growth ; she was extremely delicate and hemoptoic. The fate of these children was written in advance. But yet she married in this state, and her offspring, whose medical history we have traced, proves again, not only that tuberculous parents have children who

resemble them, but that these children are more affected than their parents.

The two children who died of measles, doubtless would not have been carried off by this disease, so common to children, had they not inherited a morbid predisposition, which renders all the diseases of infancy more complex and serious.

Had these two children escaped the measles, like their mother, they would probably have experienced, like her, all the phases of tubercular phthisis; perhaps even before this disease appeared, they would have had subcutaneous tubercles and scrofulous caries, like their sister.

In the following case, also, measles left after it a cough of long duration. To this cough there was finally a remission, which we might have regarded as a cure, had we not known, by experience, that relapses in all cases of this kind are much to be feared.

Gachet, twenty-two years old, born of a mother who had pulmonary tubercles, was rachitic, and short in stature; he was treated for a large abscess in the coxal region, when he was attacked with measles. It was mild, but left behind it a cough, which continued a long time, and the patient still coughed at the end of a year, when he was admitted to Bicetre in 1832.

There was some probability of the generation of pulmonary tubercles, as the mother of Gachet died of this disease, but in a year the cough subsided, and the patient seemed well. But, although in a satisfactory state of health when he came to see us in the hospital St. Louis, ten years since, it is more than probable that he will die with pulmonary consumption, if he is now alive. Gachet, however, is indebted to a course of iodine for several years of passable health, while he would have died inevitably, and more than twelve years since, from the coxal abscess, had he been treated in any other manner.

Cough, after measles, in scrofulous subjects, de-

mands much consideration, as it is generally the sign of tubercles in the lungs.

This invasion may occur rapidly; tuberculization may come on in the acute state, and become fatal in a few weeks. Cases of this kind are too often overlooked and regarded as consecutive pneumonias, which have occasioned death.

Cases of the slow tuberculization of the lungs after measles are much more common than is imagined. Authors have termed it *exanthematous pulmonary phthisis*. On reading attentively the remarks published by Portal on this kind of phthisis, it becomes evident that the patients who have died from them were affected with phthisis previous to the exanthematous fever, and that those who were cured had no other disease than pneumonia—a chronic catarrh which terminated by resolution, because there was no predisposition to pulmonary tubercles. In some cases, measles exercises a favorable influence on the progress of scrofulous diseases. In August, 1837, we saw at the hospital St. Louis, a young girl, seven and a half years old, in whom the tuberculous abscesses in each arm had improved after measles, and her general health also was better. Improvements of this character augur well, and favor the view that puberty will also make a favorable change: but the influence of measles and that of puberty combined, rarely produce anything but a more or less durable and marked remission of scrofulous diseases.

C. Relation of Hooping-Cough with Scrofula.

Hooping-cough is very common among scrofulous children; it affects nearly all of them, and often commences after measles. It is always more obstinate and dangerous in tuberculous constitutions. Scrofulous diseases in general often commence by hooping-cough; and it is after this disease that children who have

hitherto seemed healthy, are attacked for the first time with ophthalmias, coryzas, bronchitis, intestinal worms, internal or subcutaneous tubercles—scrofulous diseases which cut off more than half of the children whom they attack.

I have been consulted for a young boy, six years old, who had a large tuberculous bilobed tumor on the left side of the neck. This tumor commenced in winter, while this child had hooping-cough. The father told me it seemed as if he could see the tumor commence during a paroxysm of coughing.

May not the vomitings which are so frequent in certain cases of hooping-cough, depend on the same cause as those occurring in confirmed tubercular phthisis of young people, or even in persons of a more advanced age.

When children die of sporadic hooping-cough, the only pathological fact noticed is the production of tubercles in the bronchiæ, lungs, or mesentery. I do not speak of the redness of the air passages; for if hooping-cough be bronchitis, there is then no hooping-cough. This redness of the mucous system results, in our opinion, from the fatigue of the respiratory organs caused by paroxysms of cough, and from the congestion of the capillary vessels which results from it.

But, whatever may be the relations of hooping-cough with tuberculous diseases, its epidemic and contagious character will not permit it to be arranged among these latter diseases; hooping-cough is more durable, more intense, more complex in scrofulous subjects, and during its existence scrofulous diseases often appear for the first time. Hence we can not be silent in regard to the relations of hooping-cough with scrofula, and shall state a few facts.

In March, 1840, I was consulted in regard to a young girl, seven years old, who for six weeks had been sick with hooping-cough. The paroxysms of cough were very violent, and attended with turgescence

of the face, and sometimes with vomitings: they fatigued the young patient very much. She was the youngest of three children, and when born, her father was fifty-seven, and her mother forty years old. She was small for her age; had a yellow, bistrous teint; her teeth were broad, separated, and yellow, the fibre soft; occasionally she had symptoms of leucorrhœa. The hooping-cough continued nearly six months, and during its course the upper lip swelled and became very hard, and continued so for four years, presenting only a slight diminution, which seemed to be connected with the alternate increase and diminution of the leucorrhœa. For some time, pisiform tubercles have appeared in the cervical regions; the complexion is also yellow, and the fibre more delicate than it was four years since.

We see that in this case, as in the preceding, hooping-cough has only developed the germ of an hereditary disease. In fact, the father and mother of this child are too old; the right shoulder of the mother is much larger than the left; and two years since, at the commencement of the turn of life, she has had a schirrous tumor in the right breast.

This lady has a son, twenty-two years old, who was bandy-legged in infancy, and who is short, has curved spine, and all the characters of rachitis. She also has a daughter about twenty-five years old, who was very bandy-legged in infancy, and in whom the spongy part of the bones is generally hypertrophied: she has been married for four years; after a first confinement she lost a great deal of flesh.

It is worthy of remark, that our patient communicated the hooping-cough to two children in the neighborhood, with whom she was in the habit of playing; these children were born of healthy parents, and were cured long before her, and without experiencing any symptom of scrofulous disease.

To what can this difference in the progress and results of hooping-cough be attributed, except to the

difference in the original health of the children of the two families?

In the course of this year I was consulted for a young girl, six and a half years old, who had measles, which was followed by hooping-cough. This latter continued six weeks. Measles had also left after it a very intense coryza, with the formation of impetiginous crusts at the orifice of the nostrils, and of tubercles on the sides of the neck.

The parents attributed the symptoms which appeared after this disease to the measles; and yet it was not so, for the father and mother were very delicate; the father's constitution was phthisical, and they had both lost brothers and sisters by scrofulous diseases and pulmonary tuberculization.

ARTICE II.—OF SEVERAL MORBID STATES ERRONEOUSLY REGARDED AS PATHOLOGICAL CAUSES OF SCROFULA, AND WHICH ARE ONLY THE FORERUNNERS OF THIS AFFECTION.

THE diseases we have considered, and which we have studied in their relations with scrofula, are seen both in healthy children, and in those who are born with scrofula; with this difference, however; in some the progress of these diseases is mild and simple, while in others they are most generally attended with severe symptoms, and are followed by accidents which leave their marks for a long time after them.

There are also several morbid states which are continually mentioned among the pathological causes of scrofula, and which are most generally only the signs of this latter affection; for this reason, they are not observed, or but very rarely, and in a slight degree, in well-organized children; such are mucous fever, the fever of growth, which frequently assumes the particular character of the preceding, difficult dentition, intestinal worms, &c. We shall review them in succession, first making a few remarks on mucous fever.

a. Mucous fever is a febrile and catarrhal state, most usually confined to the mucous membrane lining the digestive and the air passages, but sometimes affecting most of the mucous membranes, and extending even to the whole mucous system.

We allude here only to that mucous fever which affects scrofulous subjects sporadically, and constitutes proper catarrhal scrofula.

This catarrhal state is seen in very young children at a later period ; it becomes much more common, and its existence most generally coincides with that of most scrofulous diseases.

A distinctive character of the mucous fever, a character it shares with all scrofulous diseases, is to appear spontaneously in conditions apparently the least favorable for its development, and even when every precaution is taken to prevent it.

It has been thought that the mucous fever might cause a scrofulous state in children ; but this is wrong, for in the cases we speak of it is only the scrofula itself. The mucous membrane of the digestive passages is affected in the same manner as the conjunctiva in ophthalmia, the pituitary membrane in coryza, as the mucous membrane of the bronchiæ and that which lines the passage of the ear, in bronchitis and otitis, diseases which are seen so frequently in scrofulous children, that they seem, as it were, a part of their constitution.

In this case scrofula begins by the mucous membrane of the intestinal canal; in other cases, which are much more numerous it acts first on the eyes, ears, bronchiæ, &c.

The same occurs when the catarrhal fever is situated in most of the mucous membranes, or even in the mucous system generally. Whatever may be its extent and generality, it is of the same nature as that of scrofulous ophthalmia, as we shall demonstrate by some instances.

We have cited above (Ch. II., Sect. II., Art. 11) the case of a young lady from the department of Aisne, who, after a mucous fever, had experienced ophthalmias, coryzas, bronchitis, and who had ulcerated tubercles on each side of the neck, all of which symptoms of scrofula had been regarded as the effects of this catarrhal fever in accordance with too general an opinion, that one can become scrofulous after another disease, and on account of this disease. This opinion, which might arise from a superficial intuition of the progress of the diseases of infancy, rests on no firm foundation, and will not bear the test of a close examination.

In fact, in our view, the mucous fever has been in the species, the beginning of scrofula; the ophthalmias, the coryzas, and bronchitis, which it leaves after it, are only the catarrhal scrofula itself, localized in the conjunctiva, pituitary membranes, and air passages. Tubercles are frequently seen after this fever in practice; but in cases of this kind, we think there is a succession of diseases of the same nature, and not a change from one species to another.

In April, 1838, I was consulted for a young girl, nineteen years old, with tuberculous tumors on each side of the neck, and who was also affected with caries of the head of the fibula.

This lady had a sister, fourteen years old, who was then affected with a catarrhal fever; she was pale and depressed, was extremely feeble, coughed without expectoration, had pain in the throat, dry skin, white tongue covered with mucus; she was not thirsty, although the skin was dry. The young patient took no nourishment. This state continued more than three weeks without being characterized by any local symptoms indicating the lesion of any region of the mucous system other than that of the pharynx.

After this catarrhal fever, the amygdalæ remained tu-

mified, and tubercles appeared in the sides of the neck and behind the chin.

We learned that the disease of the elder sister had also commenced by a catarrhal fever, at the end of which cervical tubercles appeared, and afterward caries of the fibula, which had existed for nearly eleven years. The father of these two ladies died of pulmonary tubercles when thirty-two years old. Their mother enjoyed good health, and there were no tubercles in her family. Inheritance, having its origin on the father's side, was inevitable, according to our remarks made in analyzing the hereditary causes coming from the ancestral parents.

The following case shows the succession and coincidence of catarrhal and tuberculous scrofula, in consequence of the single nature of these two diseases. We shall see the mother and daughter affected with catarrhal and tuberculous scrofula; the catarrhal fever supervening the first in the two cases, and afterward constituting in the mother an almost permanent state of health; this became aggravated several times, and the last time was attended with subcutaneous abscesses, and shortly after with pulmonary tubercles.

In February, 1837, a lady, forty-five years old, consulted me for herself and daughter, eleven years old. In this lady, scrofula had commenced when six and a half years old, by a mucous fever and an abscess in the right side of the neck; this abscess opened spontaneously, and the opening remained fistulous for three months. Since this period this lady has been very subject to catarrhal affections; they were marked principally by a spontaneous lassitude, which is only increased by rest, and which can not be treated by exercises, as the patient is invincibly repugnant to the slightest motion.

This lady was married when twenty years old; had three children in five years; all three died young; the eldest five and a half years old, with cerebral fever, in

the space of two days; the second, at three and a half years old, of convulsions; the third, while at nurse.

She married again, at the age of thirty-three years, and had a daughter; this was the young patient she brought with her. This child's character was very apathetic; she had leucorrhœa for several years, was very subject to catarrhal affections of the air passages, twice had hooping-cough, which had continued five to six months each time, and she had tubercles in the cervical regions.

Thus this young girl had scrofulous catarrh like her mother. In the mother and daughter, the disease appeared first in the mucous system. The girl also had cervical tubercles. We have said the mother had an abscess in her neck at the age of six and a half years; new abscesses of the same character covered the neck and cheeks after a new catarrhal fever, which affected this lady when forty-four years old. This fever was marked by extreme lassitude, but this was only an unusually depressed state of the patient's usual health. After this fever, the abscesses of the neck and cheeks, which had opened, remained fistulous, the appetite did not return; the menses, which had only appeared scantily for three or four days, ceased entirely, but without causing any bad symptoms; the patient lost flesh, and although she did not cough, I considered her as affected with pulmonary tubercles, thinking that the turn of life was the period marked for the appearance of tubercles in the lungs.

This diagnosis was at first controverted: it was said this lady was lymphatic, and not tuberculous; but the tuberculization of the lung soon appeared with such marked characters that it could not long be overlooked. The progress of the disease was rapid, and in a few months death closed the scene. The common antiphlogistic and derivative mode of treatment was followed as usual, although there is no instance yet where this course has ever cured a single patient with tuber-

cles. The death of this lady at the turn of life, in consequence of pulmonary tubercles, is very common in tuberculous subjects who arrive at this age. I have lost sight of this family, and should not be surprised to learn that the young daughter, who had been catarrhal and scrofulous from infancy, had died at the age of puberty, from the tuberculous consumption which she had inherited from her mother.

This catarrhal state of the mucous system often affects scrofulous females after labor, particularly those who wish to nurse their children. In these the digestive passages are soon inert, and there supervene a lassitude and exhaustion, which arrest the secretion of milk: the females are obliged to renounce their attempts, and to commit their children to a strange nurse. In these cases, this want of milk is attributed to an accidental disease, while this disease is only the manifestation of an impotence which might have been expected from the constitution of the mother, taking into consideration also that of her family.

In these cases, pulmonary phthisis rarely fails to show itself: remarkable paleness supervenes, debility progresses, the appetite fails, hectic fever ensues, the body wastes from disease and the want of nourishment: all contribute to hasten the progress of pulmonary tubercles and the death of the patient. Mucous fever then frequently commences the progress of scrofulous diseases; but it is not on that account the cause of the diseases which supervene after it: one might as well say that scrofulous ophthalmia is the cause of tubercles, as that these latter may be an effect of the catarrhal state of the digestive or air passages. Not only is this catarrhal fever frequently the mode of the invasion of scrofula, but it may also reappear many times during the course of other scrofulous diseases; and in these cases it can not be said there is a complication of different diseases: there is only one scrofulous malady more.

b. The fever of growth is very analogous to the preceding, but especially to the mucous state of the intestinal canal. It is characterized by a painful lassitude of the limbs, anorexia sometimes existing in so great a degree that children will scarcely eat; there is extreme debility; the children keep their beds for several months, two or three years successively, and sometimes longer; they are almost constantly drowsy, and yet have little or no sleep. This state presents but very slight remissions: while it continues, the children grow much and sometimes very rapidly, and some become very tall, which indicates a very severe scrofulous affection. Sometimes, on the contrary, after this fever, the children remain small and stunted as before, and their growth is arrested.

This febrile state often develops other diseases which arise during or after its occurrence. This coincidence and succession of scrofulous diseases have led these last to be considered as a consequence of the fever of growth. True, they come after it, but they are not an effect of it; these diseases are of the same nature as the fever of growth: this is itself a scrofulous state—the first, or only one of the first, by which scrofula appears. And the connexion between the fever of growth and the other scrofulous diseases ought not to be understood otherwise. This fever sometimes, but very rarely, exercises a favorable influence on the scrofulous constitution of children: in some the health is manifestly improved, after the state of languor, depression, and drowsiness, in which they have remained for several months, and sometimes a longer period.

c. These remarks on the mucous fever and the fever of growth are equally applicable to dentition. In children of a good constitution, the growth of the teeth is as easy as that of the nails. The difficulties of dentition do not produce scrofula: they suppose its existence: they are the signs of it: it is scrofula

which disturbs the process of dentition as it affects that of the bones and all the organs generally.

d. So, too, with verminous affections with or without fever, chilblains, disagreeable mental affections, jealousy, &c.: all these morbid states are often regarded as the causes of scrofula, while they are only the forerunners of it, the signs which indicate to the observing physician the ulterior manifestations of scrofula.

Reflections on the preceding Articles.

Our mode of viewing the diseases of infancy seems to be the most natural, but it is not so, according to the theory and practice of our contemporaries. Far from it, if we might judge from some literary articles; the practice in children's diseases, in our day, is too antiphlogistic and debilitating: it pays no regard to the predisposition and temperament of the children. The abuse of sanguineous depletions in children is one of the most common causes of the often irremediable progress of scrofulous diseases. This abuse also causes scrofula in this respect: it debilitates the subjects of it so that they will have scrofulous children.

In the spring of 1831, I was consulted in regard to a young girl, three years old, who had hypertrophy of the last two phalanges of the right ring finger. On inquiring as to the health of the other children, I learned they had never been affected with any disease similar to that for which I was consulted. Having asked to see them, they brought me a boy twelve years of age, whose height and limbs resembled those of a child eight years old, although his face showed his real age. He was said to be exempt from scrofulous diseases, but had frequent attacks of angina and bronchitis; the amygdalæ were enlarged, the voice thick: he had been affected for ten years with scrofulous catarrh of the air passages, as other children are ophthalmic for many

years. He also had pulmonary tubercles, which had never been suspected.

All these diseases, which had followed each other from early youth, had been regarded as produced by external causes, and consequently had been treated by local methods, especially by the inordinate use of leeches.

These errors of diagnosis are very common in the practice of scrofulous diseases, because the history of these diseases is too much neglected, and their antecedents and coincidences are overlooked, although these form an essential part of their diagnosis. We can not well explain the origin of these errors, and at the risk of reproach for insisting too much on certain truths, we shall still call the attention of practitioners to our ideas of the cause which we have already stated many times in this book. These ideas serve not only for diagnosis; they also lead directly to therapeutical indications. The particular case cited is an instance: this child was feeble at birth; his bodily development was arrested; he coughed because his air passages were affected in the same way as the eyes in other children, and probably also because he had tubercles in the lungs. The inflammation of the amygdalæ, the attacks of bronchitis, and the pulmonary affections, were the same disease, viz., a catarrhal state of the air passages, arising from scrofula. Nevertheless, this state was attributed to every supposable external cause, overlooking the fact that all precautions imaginable were taken against these causes, and without considering that for ten years this state presented alternately an increase and decline, as often happens with scrofulous ophthalmias—that it coexisted with hypertrophy of the amygdalæ, bad teeth, and marked arrest of development. The simple continuance of this state of disease, of these alternate periods of increase and diminution, showed that it had its origin in the constitution of the patient, and not in the influence of external agents.

This diagnosis was confirmed also by the health of the mother, who had cervical tubercles; by that of the young sister, whose osseous system, at the age of three years, was affected with scrofula, &c., &c. The diseases of this child were not attacks of angina and bronchitis caused by sudden changes of temperature, or by some other occasional cause. The indication was, not to remedy the transient effects of accidental causes which did not exist, but to treat the feeble, catarrhal, tuberculous constitution of the young patient by good aliment; by some tonics; by walking in the open air and at midday; by journeys, which would have been much more efficacious than bleedings, diet, or rest in bed or in the room, as these latter would only add to the debility of the patient, and hasten the development of pulmonary tuberculization, of which he died when twenty-two years old.

These etiological remarks, which should be regarded as the essential source of therapeutic indications, are, however, now neglected. The most celebrated practitioners are still localizers, although they must long since have observed the unfortunate consequences of this system of localization. The instance I have cited proves this, and also serves to show how little the family constitution is considered in the treatment of the diseases of children.

Article III.—Relations of pregnancy and labor with scrofulous diseases which may arise when they exist.

Pregnancy and labor are generally simple and natural functions in healthy females; but these two states are always complex in those who are impregnated by scrofulous men, or whose state is in any other respect injurious to generation. (Part I. Ch. II.)

The accidents which attend pregnancy and the lying-in of scrofulous females, may be compared to

those mentioned in the article on smallpox, measles, and hooping-cough, considered especially in scrofulous females. They constitute, properly speaking, the signs, and not the causes, as we shall show hereafter.

A. Pregnancy in relation to the Progress of Scrofula.

An attack of scrofula is not rare during the first pregnancy. In May, 1837, we were consulted at St. Louis by the mother of five children, who after her first pregnancy was affected, for the first time, with ulcerated tubercles in the neck and chest, and who experienced the same accident in subsequent pregnancies.

Another female, the mother of five children, three of whom died from scrofulous diseases, had a fourth, nine years old, who was tuberculous, and affected with ophthalmia in both eyes; her face was pale, as is common in those affected with worms. The fifth, twelve years old, was well. This female, then tuberculous, had been so since her first pregnancy; previous to that she had no other sign of scrofula. She was, however, very subject from her earliest infancy to violent headaches. I have noticed these headaches in a great many scrofulous patients, and more particularly in females.

It would doubtless be easy to multiply cases, tending to prove a fact which we consider established, viz., that scrofula, in certain cases, manifests its effects for the first time under the influence of pregnancy; but we hasten to another part of our work, which is highly interesting, viz., of pregnancy in connexion with those spontaneous abortions which are the effects of scrofula.

B. Of Abortion, considered as an Effect, and not a Cause, of Scrofula.

The causes of these spontaneous abortions are, 1st, the health of the father; 2d, the health of the mother; 3d, that of the two ancestral parents.

a. When the father is scrofulous, the fetus may find in the uterus of the mother, if she be healthy and have a suitable regimen, materials of reparation, which nourish it and strengthen it, so that at the end of pregnancy it will be more or less healthy. But when the semen of the man is of too degraded a character, too destitute of prolific qualities, its elements can not combine intimately enough with those furnished by the female, to have even a common degree of vitality, and pass through all the phases of fetal life. Abortion then supervenes, however well formed may be the organs of the mother: thus, seeds which are too much deteriorated can not germinate in good soil.

I knew a scrofulous person affected with harelip, in whom puberty did not ensue till he was thirty years old, and who married a few years afterward. His wife miscarried constantly, although she seemed to enjoy good health.

I know a family scrofulous from the incontinence of the father. The mother miscarried five times successively, at four and a half months, although she was healthy. I will also cite the case of a man who married when nearly sixty years old, and whose wife miscarried five times, and never bore a full-grown child.

Here are three very different states of health which alter the generative powers of man, to such an extent that the wife constantly miscarries. In the first, the father was scrofulous; in the second, incontinent; in the third, much too old.

b. When the mother is scrofulous, abortion may not occur if she has been impregnated by a healthy and well-made man; but if her health be much impaired, it can not frequently be prevented; the mother and child both concurring to produce it. In cases of this kind, as in those stated in the preceding article, the fetus is no sooner conceived than it is scrofulous; it has neither the degree of vitality nor the assimilating force necessary to its growth; it contains the causes

of abortion, which are nourished by the materials received in the uterus: finally, the state of debility of these organs, which does not permit them to support the labor of gestation to its full term, is also a third cause, which, added to the first two, renders abortion more frequent.

Other things being equal, abortion frequently ensues from debility of the genital organs in the male. More rarely, it is caused by some similar alteration in the female: this alteration even may exist, and the female be impregnated in a healthy manner by a healthy man; while a healthy female is never known to have healthy children by a man who is unhealthy.

c. When inheritance has its source in the health of both ancestral parents, abortion is almost inevitable—pregnancy is only a cruel deception: most of the beings resulting from this alliance die during fetal life, and those who are born have only an ephemeral existence, which is very infirm.

I attended, some years since, a case of abortion which I had expected. On seeing the husband of the young woman who was so unfortunate, and who was of a delicate constitution, his countenance indicated that he had been affected with hydrocephalus in his infancy. This union, then, could present no chance for generation, and we could expect only abortive embryos: in fact, she has again been pregnant, and this time miscarried at the fourth month of gestation.

Those abortions which have their source in the health of the ancestral parents, most generally supervene without external causes. In fact, we do not regard the most simple occurrences of domestic life as efficient causes of abortion, to which they are too readily attributed. Nature, after taking care to propagate the species by the imperious necessities implanted in us, can not leave her work at a point where it is to perish by the slightest causes.

If a false step, a long walk, too hard labor, mortifi

cation, chagrin, an attack of anger, a fright, the abuse of venereal pleasures—if the raising of the arm, the leaning of the body too much forward or backward, were causes of abortion, nearly every female would miscarry, for they are generally exposed to some of these dangers. Hence the number of abortions would exceed that of births at term. All these causes and many more, which we have not wished to enumerate here, have so little influence that they exercise none at all on healthy females. Farther, books are filled with cases showing that the medicines for procuring abortions, which are all very violent, do not usually produce the effects expected, and several of them have caused the death of females who used them, by the accidents peculiar to them, without occasioning abortions.

Abortions from an internal cause may occur a great many times. I counted three in a rachitic woman, who had afterward three children, two of whom died very young. I have counted seven in another female, who had two scrofulous children, some years before dying of pulmonary tubercles. We have had at the hospital St. Louis, Duhamel, who had ophthalmia in both eyes and a very large tumor in the abdomen. The origin of these two diseases was lost in the early infancy of our patient. His mother had five scrofulous children, three of whom were dead; she also had five abortions, one of which was a twin case.

Spontaneous abortions are very numerous; but to ascertain in regard to them, we must inquire into the antecedents and coincidents, two sources of diagnosis much neglected in our day, as we can see by reading an article on abortion by Desormeaux, in the first edition of the Dictionary of Medicine. This article contains some good things, especially remarks on the modes of procuring abortion. He remarks that the employment of the most violent remedies often fails, and that they do not always cause abortions, even when they

produce the death of the female. But Desormeaux nowhere mentions the kind of abortion of which we are speaking, although in our times it is the most common kind, and I might even say more common than all the other species combined. Such an hiatus in a work written with so much care, and by such an enlightened physician, is one of the most striking instances we can cite to show the spirit of instruction, and how far things very essential to be known are neglected.

Had Desormeaux been less preoccupied with local causes, he would have understood better the bearing of all these criminal attempts at abortion procured by abortive drugs, which but seldom destroy children in utero. He would have discovered in these facts the insufficiency of the local causes of abortion which he has enumerated, and would have remarked that in families where abortions are frequent, their cause is to be found in the health of the father or mother.

Spontaneous abortion is the most common species, and the most interesting to study. An abortion from a local cause is an isolated fact, and without any future value. A female miscarries from having ridden too much on horseback, or from carrying too heavy burdens, &c. Most generally the female will carry her child the full term in the next pregnancy, by avoiding these causes: but this is not true in cases of spontaneous abortion. Here the present indicates the future. This abortion will be followed by several others, unless the cause producing the first is well understood and remedied by pursuing correct medical doctrines.

Spontaneous abortion well understood may direct attention to the scrofulous temperament of the mother, or that of the father, and we can readily conceive the consequences of this diagnosis in regard to the future prospects of a family.

Scrofula, then, is the most common cause of spontaneous abortions. Generally when these abortions depend on the mother's health, they have been pre-

ceded by scrofulous diseases which they often increase. Sometimes scrofula first shows itself by spontaneous abortion. After that comes a series of scrofulous phenomena, among which are several other miscarriages, which render females sickly during their whole life: such are curvatures of the spine and pelvis in different degrees, ophthalmias, leucorrhœas which pass to the chronic state, but especially pulmonary tubercles, which appear for the first time, and the progress of which is rapidly fatal, unless a new pregnancy supervenes, which arrests the progress of tuberculization. All these scrofulous phenomena, which succeed one or several miscarriages, are not the consequences of them, but must be ascribed to the same cause with them.

This mode of analyzing the symptoms of diseases, requires time, and often reveals results more fatal than is expected. But is it not better to understand a position, however difficult and discouraging it may be, than to treat a patient upon some superficial notions of diagnosis, which leave the true situation of diseases unknown?

Relations of Parturition with Scrofula.

We shall offer some remarks on difficult labors, in connexion with our subject. We do not allude here to those labors rendered difficult by the malposition of the child, nor to those which may be occasioned by a plethoric state, or any other cause which has no connexion with scrofulous diseases.

We intend to speak only of those difficult labors which depend on the same causes as spontaneous miscarriages; those which supervene when these abortions do not happen, although there are many causes capable of producing them, and they have threatened to occur many times during gestation—of those which depend on vital organic causes connected with the con-

stitution of the father and mother—of those which, like severe attacks of measles, hooping cough, &c., depend on scrofulous antecedents—of those which are followed by the same scrofulous diseases as supervene after spontaneous abortions.

When these difficult labors originate in the scrofulous constitution of the mother, the labor of parturition is complicated by the arrangement of the fœtus and that of the mother. Everything then contributes to prolong labor, and render it more difficult. Labor is sometimes so dangerous to the mother and child that art is required to finish an operation which naturally ought to take place, by the simultaneous efforts of the mother and child.

This proximate cause of difficult labors, which depends on the debility of the fibre, is not the only one I desire to point out.

There is also another, which is at least as frequent as the preceding, and often is coincident with it; it is the hypertrophy of the spongy bones of the pelvis, a hypertrophy of the same character as that of the short bones and of the ends of the long bones, and which is very common in scrofulous patients. This hypertrophy is frequently the cause of the slowness and interruption of the labor of child-birth. Its diagnosis is very important, for when this cause is once recognised, we must not hesitate; the female must be delivered without waiting, as long as is done sometimes, from a reliance on the powers of nature, which, on the contrary, are exhausted by the mechanical obstacle presented. In a case of this kind, labor was not terminated by the forceps till the third day. The mechanical cause of which I am speaking, was not detected till I had an opportunity of investigating the case, several months afterward.

Scrofulous diseases do not appear simply after painful pregnancies, repeated abortions, laborious labors. In some cases the same effects follow normal pregnan-

cies and labors. The transient trouble produced by these different states of health in the economy, serves occasionally for the development of scrofulous diseases. We have already seen that these same diseases also appear after an exanthematous fever, or a mild attack of hooping-cough. It is hardly necessary to repeat, in conclusion, that the changes which supervene, always commence in a predisposition, in the absence of which, pregnancy and labor, far from affecting the health, seem to improve it. It has been remarked that the most prolific females are generally those who bear it best.

Relapse of scrofula may occur in a first labor, which has otherwise presented no untoward circumstance.

We will cite an instance of this, which is also very curious in other respects.

August 10, 1829, Marie Duhamel, thirty-nine years old, entered our hospital. This female was the only one remaining of eleven children, and had been feeble and rickety in her infancy. At the age of three years, ulcerated tubercles appeared in the left side of the neck, behind the great angle of the lower jaw; when fourteen years old, these ulcerated tubercles cicatrized, the health improved; the patient grew fleshy, and even became robust. The menses appeared at sixteen years, and this state continued for twenty years.

When thirty-seven years old she suffered very much from her first pregnancy; but the labor was not difficult, and the mother nursed her child for eleven months.

Marie Duhamel was much exhausted by this nursing, and did not recover. Cervical tubercles soon appeared, and formed large tuberculous tumors, and afterward broad and deep tuberculous ulcers, with fistulous passages, which extended deeply into the soft parts. The profuse suppuration caused the patient to sink; phlegmonous erysipelas appeared, and she died February 22, 1830.

On the autopsy, the patient, who was tall, was remarkable for her extreme emaciation, which gave an appearance of old age; the limbs were edematous, and showed marks of the blisters which had been applied to the arms, thighs, and legs. The neck was scarred, especially on the right side, with broad ulcerations, several of which communicated by fistulous openings under the skin, and several of these terminated in ulcerated tubercles.

The abdominal viscera were generally discolored, doubtless in consequence of the exhaustion with which the patient had died. The mesentery presented a great many tubercles, several of which were the size of pullet's eggs, and were softened. The spleen was softened, and the color of wine lees, and studded with tubercles, some in the simple state of granulation, others as large as a pea, and some again the size of a nut.

The tubular substance of the kidneys was only injected; the bladder and ureters were a little red, a pathological appearance we ascribed to the action of the cantharides, and which was explained by the numerous blisters applied for the phlegmonous erysipelas, which caused death.

The tubercles in the cervical regions, mesentery, and spleen, were of the same kind, and differed only in size. We thought these tubercles were similar to those existing in the left side of the neck for a year, and which disappeared at the period of puberty, and that they all had the same origin. In fact, we think that these tumors, which appear in a patient, are always identical, whenever and wherever they are developed.

It was a remarkable feature in this case, that this female, the only survivor of a family of eleven, who was tuberculous from her infancy, and died when thirty-nine years old, wasted away by tuberculous suppuration, yet had no tubercles in the lungs. We have a number of special cases, where pulmonary tubercles

were absent in tuberculous subjects. These we shall analyze in another work.

Article IV.—Relations of erysipelas with scrofulous diseases.

Most scrofulous diseases may appear for the first time after erysipelas. This last affection supervenes very often during the course of these diseases; most frequently it has a favorable influence on their progress; it may, however, cause their fatal termination. We shall cite some special facts, to illustrate erysipelas under these three points of view.

Fleuriet, twenty-two years old, had been affected with tubercles, for about two years, on each side of the neck, and in the left axillary region. When seventeen years old, he had erysipelas in the face for the first time; it was followed by many others, and the invasion of the tubercular disease occurred after one of these attacks of erysipelas.

We have often seen this inflammatory state of the skin also precede the commencement of scrofulous ophthalmia, and this presents numerous relapses, which were most generally preceded by an erysipelas of the face.

Scrofula, affecting the skin and subjacent cellular tissue, also appears after erysipelatous fever. This mode of attack is very common, with swelling of the upper lip, seen so frequently in scrofulous patients. This kind of scrofula may attack several parts of the face, or even the whole face; it deforms the countenance so much that the term *leonine scrofula* has been applied to it. Its attack is often preceded by erysipelas of the face, which is also at a later period the precursory phenomenon of the recrudescence which it presents in its progress. I have made numerous observations of this kind, and more particularly in the youths of both sexes, and in young females, in whom I have

seen the erysipelatous state of the face present only intermissions, or even remissions, of short duration, in the course of several years.

Our remarks on cellular and cutaneous scrofula of the upper lip and face, apply to this same kind of scrofula, whatever may be the region affected.

The following is a case where indurated hypertrophy of the skin and cellular tissue of the left leg, succeeded erysipelas. Poirrier, sixteen years old, had a necrosis of the tibia of the left leg. Its progress must have been very rapid, for it began and ended the same year. When the fistulæ were closed sometime after the discharge of several spiculæ, phlegmonous erysipelas appeared in the leg and foot; the swelling was very great, and did not diminish till after the erysipelas had yielded, for it was only one form in which a case of cutaneous and cellular scrofula commenced. Shortly after, a new scrofulous disease appeared in the form of pustules upon the limb, which had enlarged very much. These formed segments of a circle, and entire circles, in which the skin presented no alteration but the increase of thickness and induration.

In the cases we have analyzed, inheritance governs as the productive cause of scrofula. Poirrier's mother died of pulmonary tubercles, and Fleuriet's father by the same disease; so that there is not even room to ask if the scrofulous diseases, appearing after erysipelas, arose from this acute disease. Erysipelas, however, is one of the most common diseases, and is not followed by scrofula once in a hundred times.

Why, then, is it in some cases? Because here, subjects originally scrofulous, are affected, and the disease to which they are predisposed, then manifests itself.

Our remarks on the relation of erysipelas with tubercles, ophthalmia, and cellular and cutaneous scrofula, apply to scrofulous diseases generally; they may all appear after erysipelas, and perhaps even under the

erysipelatous form. In fact, scrofula attacks so commonly in this form, that one may think it is a scrofulous disease, as hooping-cough often is, which has also other peculiar characters, not belonging to scrofula.

Erysipelas is frequently not only the precursory sign, I might even say a mode of invasion of scrofula, but often supervenes during scrofulous diseases; this inflammation of the skin is frequently seen in my wards, and that, probably, in consequence of some peculiar affinity it has with scrofulous diseases, for it is seen there, even when it is not observed in the other wards of the hospital St. Louis; and it generally exercises a favorable influence on the progress of scrofula, although its appearance coincides with the development of new lesions. Erysipelatous fever often improves the state of the scrofulous; it animates engorgements, remaining stationary; for want of sufficient excitement, and causes them to pass from the chronic to the acute state; and it is well known that the acute state is the most favorable state for the termination of the engorgements, whether it produces their resolution, or causes them to suppurate.

J. Lebarre, fifteen years old, had tubercles in the cervical regions; and they were more numerous on the left than on the right side. He had also similar bodies in the left axilla, and they impeded the movements of the arm, and prevented him from working.

In the course of the third month of his treatment by iodine, Lebarre had phlyctenoid erysipelas of the face, which passed successively to the right and then to the left arm. After this attack of erysipelas, the tubercles of the neck, and still more those of the axilla, diminished in size, and the patient could move his arm freely. After this attack of erysipelas, an acute abscess appeared in the left popliteal space; and this abscess was evidently a critical abscess of the erysipelatous fever; had this abscess not appeared, erysipelas would probably have continued its progress in the other

regions of the skin, and until it had passed over the whole periphery of the body, many cases of which we have seen. Possibly, too, this abscess had contributed to the resolution, which occurred at the same time in the tubercles of the neck and those of the axilla.

The following case also proves, more than the preceding, the favorable influence which erysipelatous fever may have on the progress of tubercles. D. Cogés, eighteen years old, had a cerebral fever in the course of his tenth year; he had anteriorly tubercles scattered through the cervical regions. At fifteen years of age, new tubercles were developed on the right side of the neck. Three years after, this young man entered the hospital St. Louis, with numerous tubercles on each side of the neck, especially on the right side. This patient had been under treatment for six weeks, when he was affected with erysipelas of the face and fleshy scalp, which continued for more than two months, after which the size of the tubercles diminished one half.

In the two cases we have mentioned, the influence of the erysipelas produced a marked improvement in the state of the disease. In the next two cases, this improvement was still more perceptible, and perhaps even erysipelas caused the complete resolution of previous diseases.

G. Bricault, twenty-six years old, entered the hospital St. Louis, May 21, 1832. This young man stated that he had been weak and feeble in his infancy. When nine years old, he had a tertian intermittent, which, after eight months, became a quartan, a new type, under which it continued for eleven months. A verminous affection supervened, and the patient passed lumbricales from the mouth and anus, particularly from the former. This verminous affection was cured by using the juice of cresses, and the quartan fever resisted every kind of treatment, and finally disappeared after excesses at table.

When fifteen years old, the patient assumed the

trade of a carpenter, and two years after travelled through France, enjoying good health, although he was very licentious. When he was twenty-five years old, the first tumor appeared above the centre of the clavicle. Four months after, there was a second, which soon became the size of a nut. Afterward, a third supervened in front of the lobule of the right ear, and then a fourth in front of the tragus of the left ear.

These tumors opened spontaneously, and remained fistulous. His general health became impaired; his appetite and strength diminished; cough and night-sweats supervened, and the patient lost flesh.

This was his state when he came to the hospital St. Louis, where he was subjected to a course of iodine. One month after this treatment began, erysipelas appeared in the face, after which an enormous abscess came in the axilla, and opened spontaneously; at the same time there appeared purulent otitis, and a great many tuberculous tumors around the neck and in front of the sternal extremity of the clavicles; some of these tumors opened spontaneously, others were lanced, and others were resolved, or perhaps communicated with those which opened spontaneously.

These discharges of pus seemed favorable, for the disease subsided, unattended by any unfavorable symptom.

This erysipelas continued two months, during which I tried to keep the bowels free by the use of Seidlitz powders and calomel, administered alternately. These remedies were continued for a week, when the erysipelatous fever disappeared entirely. The course of iodine was resumed on the first of September, and continued till the 25th of October, when the patient left the hospital well. I saw him some years afterward; his health continued good, and he had resumed his trade.

Benault, sixteen years old, had been affected for three years with ophthalmia in both eyes, with pustu-

lar coryza and formation of crusts in the pituitary membrane; in him also a tuberculous tumor, the size of a pullet's egg, had existed for two years, in the right and central part of the neck. After remaining in the hospital two weeks, he was attacked with erysipelas of the face and hairy scalp. The tuberculous tumor of the neck diminished one half. Fifteen days afterward, on the decline of the erysipelas, it swelled anew, and became larger than it was before the erysipelas; it soon acquired all the characters of a critical acute abscess, in which the fluctuation was soon felt. This tumor having been punctured, a yellowish white but flocculent pus escaped, which was not creamy like that of an ordinary bile. This abscess remained fistulous for fifteen days, after which the tuberculous tumor of the neck, the ophthalmia, and the coryza, had disappeared.

After purging the patient three times in one day, I gave him iodurettted mineral water during six weeks, and Renault left the hospital, cured, in May, 1833: since that time I have not seen him.

In these last two cases, symptoms of scrofula have disappeared, and the general state has been so much improved, that the two patients have been regarded as cured. Their cure seems much more admissible, because the end of the disease was marked in both cases by very profuse suppurations, which are always good signs, when they coincide with the return of strength, and the re-establishment of the health of the patients. The same remark applies to sweats and hemorrhages in some of these diseases, and to diarrhœa in chronic diseases generally.

Erysipelas rarely terminates by the death of those affected with scrofula: nevertheless this fatal termination occurs in some cases through incidental complications. In the following case, death supervened from pleuro-pneumonia, and from the erysipelatous inflammation of the intestinal canal.

L. Giraud, eighteen years old, entered the hospital

St. Louis, June 17, 1830. The father of this young man was delicate, and died at the age of forty, after some months of sickness. The grandfather of our patient was generally an invalid. From the mother's side this young man had derived good elements of organization, for his mother had never been ill. But, as we have already said several times, the mother's good health can not compensate for the feeble temperament of the father, while the case is different when the father is healthy and strong. Giraud had lost four brothers or sisters, who were born before him: he was the fifth child, and the first one who had been raised. He had a sister, ten years old, who was affected with cervical tubercles, which were regarded as *glands of growth*. Our patient at first had been affected with chilblains, which ulcerated and healed with difficulty. When six years old, he had a first attack of ophthalmia, which continued several months, and afterward reappeared several times. When eight years of age, abscesses appeared on the posterior face of the right forearm: they remained fistulous till the age of twelve years, and then seemed to close, permitting, however, a little pus to escape occasionally, particularly in the spring. When twelve years old, the submaxillary and parotid regions were filled with tubercles, which formed abscesses, and left after them ulcers and fistulæ of very long duration. When seventeen years old, an abscess appeared at the base of the sternum; it opened spontaneously, and left behind it an ulcer of the extent and form of a dollar. On entering the wards, Giraud had tubercles on both sides of the neck, some of which were ulcerated after a longer or shorter time, while others were yet crude. The diseased regions also presented cicatrices, which destroyed, in many cases, the roots of the beard. On the 18th of June, this patient was subjected to a treatment of iodine, and after the second month he became convalescent. At the beginning of the third week in October, the ulceration of the chest

had diminished very much in depth and extent; the cervical tubercles were disposed to be resolved and cicatrized, when the patient was suddenly affected, without any apparent cause, with a chill; and the next day erysipelas appeared in the face, and soon became so intense as to inspire us with fear. The patient was treated by evacuants, and his brain soon became better; but the gelatinous appearance of the sputæ, their abundance, their difficult expectoration, the anxious respiration, and state of the pulse, attracted our attention to the respiratory organs. We soon detected a pleuro-pneumonia, especially on the left side. Eight grains of emetic tartar were given daily. The thighs, neck, and chest, were covered successively with plasters and blisters. Yet the suppuration of the ulcers of the neck and chest, which appeared at first and indicated the severity of the prognosis, did not reappear: the chest continued more and more embarrassed, and Giraud died, Oct. 31, 1830, after a long and painful struggle, from suffocation. The body was opened thirty hours after death. The cadaver was tall, and bore the marks of six large blisters: the embonpoint was well marked: the muscles were red and well developed: the brain seemed slightly injected; it was healthy in other respects, as were its appendages.

The neck no longer presented the tubercles remarked at its base before the attack of erysipelas. We found only two or three small deposites of softened tuberculous matter, along the sterno-mastoid tubercles. The left pleura was much inflamed, and contained a litre and a half of reddish fluid, mixed with flocculi of albumen. The part of this serous membrane which covers the base of the thoracic cavity, was very much thickened by the formation of a false membrane, and presented an oval pouch, which seemed at first to be an abscess in the pleura: but on account of its characteristic form, we decided to regard it as a tuberculous cyst, softened under the influence of the pneumo-

pleural inflammation. The base of the lungs presented inflammation in the first degree: farther, there was no pulmonary tubercle.* The size of the heart was normal, but the tissue of this organ was remarkably flaccid. In the abdomen there was a marked effusion of serous fluid: the mucous membrane presented positive symptoms of acute inflammation, especially in the duodenum and jejunum, which I regarded as erysipelatous, and of the same character as that on the external integuments during life. At the tip of the spleen was a large cyst, filled with softened tuberculous matter, which crowded the substance of the spleen, but did not enter it.

We also found several small tuberculous cysts along the psoas muscles, and also under the kidneys, which were much injected: all these abdominal tubercles were softened. We thought that before erysipelas occurred, they were hard like those of the neck, but that the erysipelatous fever produced the rapid resolution of these last, and likewise that it had produced an inward softening of those in the abdomen. The same febrile influence which removed the first only softened the second.

This fact is still very remarkable from the absence of pulmonary tubercles in a scrofulous subject, eighteen years old, in whom tubercles appeared at the age of twelve, and in whom other signs of scrofula were seen in early life. But the analysis of this case, in this point of view, belongs to another work.

The following is another instance where death occurred much more rapidly than in the first case:—

A. F. Ferlin, twenty-eight years old, entered the hospital, May 11th, 1832. He was affected with a

* Perhaps I may be reproached for not bleeding this patient. First, his medical life would not permit it; and farther, I abstained from sanguineous emissions, because I used antimony in large doses in the treatment of pneumonia and pleurisy in scrofulous subjects, and from which I always derived benefit, as those can attest who have followed me for twenty years in the hospital St. Louis.

white swelling of the right elbow, which presented several fistulous orifices, three of which formed ulcers the size of a quarter-dollar: the skin and subjacent cellular tissue of the whole limb were hypertrophied and indurated, and the patient also had large tubercles and tuberculous tumors in the cervical regions, the axillæ, and groins. This tuberculization commenced more than fifteen years previous; the white swelling of the elbow was much more recent; and abscesses did not supervene around the humero-cubital articulation till two years before. Many tubercles had supervened and even ulcerated, when I saw Ferlin for the first time: I opened one on the inner and lower face of the elbow, and half a glass of clear pus was discharged. Iodurettted water was injected into the cyst, and the common treatment was commenced by the internal and external use of the preparations of iodine.

This treatment had been continued successfully for five weeks, when our patient was attacked suddenly on the 5th of June, without any known cause, with erysipelas, which affected the right hand, forearm, and arm, to the axilla. At first appeared symptoms characteristic of the saburral state of the primæ viœ, and the fever was extremely violent—in fact, too intense to permit the patient to vomit: I ordered him a weak solution of antimony, which produced several copious alvine discharges. Still, delirium supervened, with marked alteration of the countenance. This alarming state increased the next day, and the patient died on the third day, notwithstanding the use of powerful remedies. This was on the 17th June, 1832: I was then convalescent from an attack of Asiatic cholera, contracted at the end of the epidemic, and the autopsy was made by Dr. Lambert, who at this time was extremely devoted to my patients.

On opening the body, it was found that all traces of erysipelas had disappeared: the arm affected with the white swelling was in the same state as before the

erysipelas; the skin did not seem altered; the subcutaneous cellular tissue of the limb presented a general serous infiltration which existed before the erysipelas, and which had been treated very imperfectly by means of methodical compression.

The articulation of the elbow was very large, and presented numerous fistulous openings, which terminated by more or less sinuous orifices in the carious osseous surfaces. The cellular tissue and ligaments surrounding the articulation were blended in the form of a hard, homogenous, dense, and lardaceous mass, which crackled under the scalpel.

The humerus was fused at an obtuse angle with the ulna; the upper extremity of the radius and corresponding part of the humerus were wasted and carious; the cartilages had disappeared. In both sides of the neck were tubercles as large as nuts, enveloped in fibro-mucous cysts. Similar tumors existed in the inguinal, popliteal, and axillary regions; only there they were much larger.

The intestinal canal presented nothing remarkable; but the mesentery was studded with very large tumors formed by aggregated and yet perfectly distinct tubercles, varying in size from a bean to a pigeon's egg: these tumors did not compress any of the surrounding organs. Both of the lungs were crepitating and free from adhesions, except at their summit, where some miliary tubercles existed.

The erysipelatous fever did not seem to have exercised any influence on the subcutaneous tubercles; they had the same size and consistence, as during the life of the patient. Those of the mesentery were very consistent, and none of them were softened: they had probably the same degree of consistence as before the erysipelas, and their size was unchanged.

In conclusion, erysipelas has numerous affinities with scrofula; it often precedes and attends its attack; supervenes frequently during its course, and generally

has a favorable influence on its progress. In these different cases, erysipelas continues much longer than when it appears under any other influence, existing not less than six weeks, sometimes two or three months, and it may remain a much longer time.

In the course of an erysipelatous fever, scrofulous patients generally have several attacks of erysipelas; the face, fleshy scalp, trunk, &c., are successively affected; it travels from one part of the skin to another; this transition is not always direct; in some cases, on the contrary, there is an intermission, which is regarded as the termination of the malady, but this termination does not usually take place till after the erysipelas has passed over most of the regions of the body.

The erysipelatous fever does not occur or become complete, till abundant evacuations appear, tuberculous or cellular purulent collections, diarrhœas which continue several days, and often three or four weeks, excessive sweats, and in some very rare cases, and in young persons, hemorrhages from the nose.

I regard the appearance of erysipelas as calling for evacuants. I sometimes begin by an emetic, and follow this up by giving the same medicine in enemata; but generally I commence by this latter remedy, which I usually continue for seven or eight days. I replace this by Seidlitz water, diluted with herb tea, small doses of calomel administered three or four times daily, and use at the same time very simple drinks: hydromel, oxymel, barley water, sweetened with tartaric sirup, or simply herb drinks.

We have said that patients often remain in a febrile state, which continues for several months, during which several attacks of erysipelas supervene; we apply the same treatment to each attack; the continuance of the disease does not change its nature; the indications remain the same. Hence, we continue our mode of treatment and the use of laxatives. We dilute the evacuants according to the intensity of the fever; when

the fever is acute, and the thirst urgent, we give Seidlitz water with two parts of herb tea; we then increase the purgative medicine as the fever diminishes, as the skin becomes cooler, and the thirst less urgent.

We have derived benefit from this mode of treating erysipelas; it prevents congestions in the brain, and in the thoracic and abdominal viscera. To act in this way with more certainty, the feet should be kept warm, with mustard cataplasms applied to the soles of the feet.

This derivative effect is obtained still more efficiently by applying cups to the lower limbs, and sometimes by flying blisters. I think it is to this mode of treatment, which is based on purgatives and derivatives to the skin as an accessory, that we must attribute the generally successful course of scrofulous diseases, in my wards, under the influence of erysipelatous fever. To profit completely by this influence, I am careful not to resume the course of iodine too quickly, which I discontinued at the commencement of the erysipelas, as the febrile state contra-indicates this treatment.

Article V.—Influence of syphilis on the progress of scrofula.

Syphilitic infection is one of the worst complications which can affect scrofulous patients. In them syphilis is extremely obstinate, and scrofulous diseases become more intense, and consequently more serious and dangerous.

Syphilitic infection must be considered under three different points of view, according as it affects: 1st, subjects who are simply predisposed to scrofulous diseases; 2d, patients in whom these diseases are already confirmed; 3d, as it causes a relapse of these diseases.

1. We have noticed several cases where the predis-

position to scrofula, although manifested prior to the syphilitic infection, did not assume the special form of a scrofulous disease till after this affection.

A young man, eighteen years old, entered the hospital St. Louis, August 24, 1832. He was of mean stature, light hair, soft flesh, fine skin; had pustules of acne on the face and forehead, and the muscular system was but slightly developed in him. This young man had several characteristics of the lymphatic temperament of authors, which were more marked, as his mother was carried off by pulmonary tubercles, and his father died idiotic, at the age of fifty-seven years, our patient being then eleven years old.

Although feeble, yet the young man suffered from no scrofulous disease; but when fourteen and a half years old, he contracted a gonorrhœa, and the bursœ were affected; three months after, the knee became inflamed, and a kind of gonagra supervened.

When sixteen years old, there was a second attack of gonorrhœa, the discharge being very profuse. The patient left for Bordeaux. The running was checked by the fatigue of the journey, and he became affected with general rheumatism.

When eighteen years old, he had a third attack of gonorrhœa, which caused pain and swelling in the wrists, knees, feet, and more particularly in the right hip-joint. The pain in this last joint shifted from the hip to the knee alternately, and the pelvic limb on this side was longer than on the opposite side; the fold of the groin, and the great trochanter, were lower than on the left side; walking was difficult and painful; the patient coughed; his appetite and sleep were bad. The third attack of gonorrhœa was still present; there was a spontaneous dislocation of the right femur. Although the patient was originally scrofulous, we regarded the syphilitic attacks as evidently aiding to develop this coxalgia. The treatment by iodine relieved the disease several times, but not so thoroughly as to

enable us to pronounce him convalescent; and he left the hospital St. Louis, after having been there four months.

In the following case, the patient exhibited still more marked signs of scrofula, two years after the first syphilitic infection.

A young man, twenty-four years old, entered the hospital St. Louis, September 23, 1831, with a large tuberculous ulcer at the junction of the neck with the chest.

This patient was short and feeble; his mother, when twenty-six years old, died from pulmonary tubercles, and his father was presumed to be syphilitic. He had an eruption in the face, and tubercles in the cervical regions, till the age of twelve.

When thirteen years old, he was attacked with pleuro-pneumonia, and spitting of blood, and since this affection of the chest, he had been subject to cough, more particularly in winter. At the age of eighteen years, a kind of furuncular diathesis supervened; shortly after, this patient contracted gonorrhœa, with chancres on the penis.

Two years after, a small tumor appeared in front of the sternal attachment of the sterno-cleido-mastoideus muscle; it became as large as the fist, and fluctuated; the pus was discharged through a small opening; this ulcerated so rapidly, that in forty-eight hours it was as large as a dollar, and resembled a syphilitic ulceration very much. It was, however, a tuberculous ulcer, or rather a large ulcerated tubercle, which had appeared in a patient born tuberculous, two years after a syphilitic affection, and to the production of which this infection seems to have contributed much.

This patient was subjected to a course of iodine, and was cured in four and a half months.

2. In other cases, which are much more numerous, we have seen scrofulous diseases remain stationary for several years, and develop themselves more forcibly

and rapidly, and be more dangerous after a syphilitic affection.

A young man, twenty-four years old, entered the hospital St. Louis, March 31, 1829, having a large trilobed tuberculous tumor on the right side of the neck. This tumor commenced at the age of nineteen, by a tubercle the size of a nut, which did not increase for two years. At the end of this term, tuberculization had advanced very rapidly after a venereal affection, and the tumor had acquired the size mentioned above.

The tubercles which had thus been quickened by syphilis, were of hereditary origin; for the mother of our patient died from pulmonary tubercles, and he had already lost three brothers and sisters from scrofulous diseases.

This patient, after being much improved by a course of iodine, left the hospital St. Louis; but returned in April, 1835, in a very advanced state of tuberculization, from which he died. We shall have occasion to refer to this case again, when speaking of the progress of tubercles and their presence in the osseous system, in another book.

3. We have seen some cases of relapse of scrofula after syphilis. Doussin, twenty-one years old, entered the hospital St. Louis, March 12, 1832. In early infancy this man had been very sick with eruptions of impetigo, ophthalmias, and ulcerated cervical tubercles, which left indelible scars in the neck. At the age of ten, his health was much improved. When eighteen years old, Doussin gave himself up to his venereal appetites. At the age of twenty-three years he had gonorrhœa, which was suppressed by secret remedies; this was followed by a bubo in the left groin, and three months after by a second bubo under the first. When thirty-eight years old, there was relapse of scrofula—and tubercles appeared in each side of the neck; hypertrophy of the thyroid gland; a tubercle

above the hyoid bone, the size of a nut, which was moveable under the skin; a tubercle, the size of a nut, on the right cheek, in front of the ear; and ulcerated tubercles in the submaxillary region of the same side: there was also on the palatine arch and the velum palati, an ulceration, two centimeters long and three millimeters deep, with sharp edges and grayish base; the uvula and amygdalæ were tumefied. This case presents two kinds of antecedents: 1st, the diseases of infancy leaving after them the seal of scrofula; 2d, syphilitic diseases forming a second order of precedents. When this man entered my wards, he presented some symptoms of these two diseases, viz., tubercles, which succeeded the diseases of infancy, and ulcers of the velum palati, which followed syphilitic infection contracted ten years before. The scrofulous and venereal diatheses existed simultaneously: the latter seems to have excited the former, which might have been regarded as extinct at the age of ten years, as there was then no sign of its presence.

In 1831, at the hospital St. Louis, I cured a young man, twenty years old, of tuberculous tumors in the neck. He continued well for five years, till he contracted a gonorrhœa in 1837: this discharge continued more than a year. In the early months of this infection, tubercles appeared, and a large tuberculous tumor soon formed on each side of the neck. These tumors suppurated successively in several places, and great quantities of pus were discharged.

I resumed the iodine treatment with this young man. I attended him a year and a half; and during this time he had two courses of iodine, each of five months' continuance, after which most of the tuberculous ulcers of the neck had cicatrized, although some continued to discharge, and tubercles could still be felt under them. The gonorrhœa had reappeared during the treatment, and there was gleet when I left off seeing the patient.

The remote period when this relapse supervened, and its manifestation during the course of the gonorrhœa, seemed to indicate that it was a consequence of the syphilitic infection.

Hence, the syphilitic infection of scrofulous patients is one of the gravest complications which can occur. The union of these two diseases seems to give new force to each; they form together a mixed state, which takes a deeper root in the economy than either of these diseases separately. This state also presents in other respects an aspect which soon reveals its double origin. To the skilful practitioner, it is neither scrofula nor syphilis, but these two diseases combined. The indication to be fulfilled, evidently comes from the two elements of the disease before us: in these cases we use the iodine, whatever may be the predominant symptoms. This special treatment, it is true, is not always successful: but, independent of the fact that we have obtained complete cures by it, this state of disease has generally been so much improved by it, that the treatment by iodine may be said to be the most advantageous in all cases where scrofula is combined with syphilis.

These two pathological states have also other connexions, which we shall attend to briefly. Secondary syphilis sometimes assumes the forms of scrofula. In 1829 and 1830, we treated at the hospital St. Louis, as scrofulous patients, those who were only syphilitic. We were not undeceived by the knowledge of previous attacks of syphilis, but detected it by the promptitude and the permanence of certain cures, which could not have occurred by three or four months of treatment, had the diseases been of a scrofulous character.

This latter element must not be regarded as entirely foreign to that scrofulous appearance assumed by certain syphilitic diseases: on the contrary, it is more reasonable to think that this appearance is the effect of some scrofulous principle, which has been devel-

oped by the syphilitic infection, and which without this opportunity would not have been revealed.

Scrofula, in its turn, assumes forms which resemble syphilis. We have seen cases of it where the patients assured us sincerely that they never presented any primitive symptom of syphilitic infection. We have generally regarded cases of this kind as being of venereal origin: but in several cases this origin could not be proved, and was not even probable, as the patients had never experienced venereal disease, and some of them were entirely ignorant of it. When there is no primitive infection, we refer the syphilitic aspect of scrofula to the health of the parents. (Part I., Ch. II., § 2, Art. 1.)

The scrofulous nature of these special cases is shown by the manner they resist the treatment: in fact, in all cases where scrofula simulates syphilis, a longer course of treatment is necessary than when syphilis simulates scrofula.

We conclude the history of the pathological causes of scrofula, and now pass to that of the external and occasional causes, although this has already been commenced, for the pathological causes themselves are only occasional causes. The admission of two orders of causes was only to facilitate their study, for none of them is the efficient cause of scrofulous diseases: they doubtless favor the attack and development of these diseases; but these, strictly speaking, depend only on one cause, inheritance: as our readers may be satisfied by what has already been stated, and by what we shall mention hereafter.

PART THIRD.

EXTERNAL CAUSES OF SCROFULA

CHAPTER I.

ENDEMIC SCROFULA.

In the first part of this work we have stated the characters of inheritance of scrofulous diseases, and we have studied the origin of these diseases in the health of the ancestral parents : in the second we have stated the influence of the tuberculous predisposition on the progress of the diseases peculiar to infancy, and on several other diseases or peculiar states of health : in the third we shall examine the influence of external agents in the production and propagation of scrofula. We shall first study the influence of places, or the *endemia*, and we shall correct the errors of authors on this point.

The influence of places on the health of the residents may be compared, to a certain extent, to the influence exercised by the health of the parents on that of their children ; for we are not the children of our native land simply in a figurative sense, but in a literal one. All organized bodies have a nature which they derive from their native soil, and all degenerate when they are transplanted into a foreign soil. The native soil imparts to them then a predisposition, so that they are acclimated with difficulty, and prevented from prospering in a remote country. Man alone enjoys this power of being acclimated in a great de-

gree; and yet, in his case, the limits are confined, as is seen if we consider the mortality which affects Europeans under the tropical clime, and the injurious influences of our temperate climates on men born in the intertropical regions.

Our menageries and our hot-houses constantly present facts in support of this primitive law of organized bodies. In the Museum of Natural History, animals and exotic plants are the objects of constant care, directed by the most enlightened vigilance; all possible precautions are taken to preserve the species and protect as many as possible from the fatal influence of our temperate climate. Notwithstanding the efforts and aids of science, the influence of climate occasions constant losses, and these objects die more rapidly than they can be replaced.

The natal soil is, then, an element of our organization, and the races present marked differences according to the regions they inhabit; this is seen by comparing men with one another, according to the great divisions of the globe, according to the peculiar divisions of Europe, and even by comparing the populations of different provinces of one nation; thus in France, the physical formation of the inhabitants of the northern differs much from that of the southern portion; there are also marked differences between those who live nearer together. Each of these provinces has a temperament, and a physiognomy, which marks the population. And such is the origin of the wants, industry, manners, costumes, and amusements, peculiar to our ancient provinces.

These cases, which could easily be multiplied, (sometimes even within the limits of one department of France), may give an idea of the necessary relation of our organization with the nature of our native places, and of that which must consequently exist between the nature of these places and the diseases to which the human species is more particularly subject.

We thus come to endemic diseases, to those which are peculiar to certain countries.

Hence, nothing is better demonstrated than the endemic cause of diseases. But what is the connexion between this cause and scrofula? This, I believe, is unknown, notwithstanding the assertions of authors on this point, which, as we see, are only general facts badly observed.

Article I.—The endemic cause of scrofula, whatever it may be, has no peculiar evident quality.

What is the relation of endemia with scrofula? In other words, what is the general nature of the places where scrofulous diseases exist endemically? We find in authors a response to this question, which, however, can not be solved in the actual state of science.

Shall we say, with pathologists, who, from want of observations, treat the causes of diseases according to preconceived ideas, that humidity is the endemic cause of scrofula? This assertion is refuted by great numbers of general facts. Scrofula is frequently endemic in very lofty and dry places, and it is not so in certain countries which are very moist.

It is endemic in Spain, but more particularly at Madrid, where the population, tainted by scrofula, is remarkable for its diminutive height; and yet the plateau of Castille is very lofty, being three hundred toises above the level of the sea; there are frequently droughts, and insulation is there very easy and intense, in consequence of the absence of shade.

Scrofula is very common in Sweden, but more especially in the province of Scania, the most fertile and most pleasant part of the kingdom; here it can not certainly be ascribed to humidity, nor to any other appreciable cause. This observation was communicated to me by Professor Retzius, in September, 1836, at which period I communicated to him my views on the causes

of scrofula, and my doubts relative to the only cause, humidity, to which endemic scrofulous diseases have generally been referred. Professor Retzius assured me that he also had doubts upon this point of doctrine, and that in Sweden he had desisted from giving any reason for endemic scrofula, and stated that scrofula in Sweden was the same as in France.

The population of Nice, which is sheltered from the north winds, with a maritime atmosphere and a southern exposure, is also tainted with scrofula; and my investigations prove that a residence in this city is far from being as favorable to tuberculous persons as is generally imagined.

At Utelle, a village in the county of Nice, we find a great many who are scrofulous and goitrous, although this village is situated on a lofty mountain, and has a southern aspect. The well-water is of good quality; they do not use snow-water, but the people generally are miserable, and badly *fed*. Their nourishment is principally composed of chestnuts, potatoes, dried fruits and beans, cabbage, rye bread, corn meal, and different kinds of cheese.

In France, scrofula is endemic, and very common at Rheims and the adjacent country, which are not moist, for there is but little vegetation.

In Orleans, where scrofula affects more particularly the osseous system, the country is not moist.

Many of the inhabitants of Montpelier, which is situated on an eminence, protected from the winds, are scrofulous. This I have from a physician, who, being affected with pulmonary tubercles, went to reside at this city, where he lived a year without any improvement in his health.

Near the Mediterranean, in the region of the olive trees, in the department of Herault, and in the fertile valley of Montagnac, the small village of Cazouls numbers many who are affected with scrofula and goitre. There the disease seems to come from

inheritance alone, and not from the air or from the places; for the climate is tempestuous; the soil is dry almost the whole year; the mean temperature in summer is 30° Cent., and in winter 9° Cent. Besides, all the adjacent countries, and the plains and coasts, are free from scrofula. The treatment adopted in this unfortunate locality is very curious, consisting only of blisters and cauteries!!

These places are very remote from each other; none of them are moist; all have a special character, and yet they have this in common, viz., that of numbering many who are scrofulous; so that scrofula is there endemic.

Now, if we study scrofula in countries which are very moist, we shall see that the disease is not so extensive nor so general there as it should be, if moisture was the special cause of scrofulous endemia.

Lepecq de la Cloture has made us acquainted with the very moist atmosphere and the acute catarrhal diseases which exist endemically at Rouen. This excellent observer has not mentioned scrofula.

Bretagne is a country generally moist; scrofula there is by no means endemic; if it presents this character in some parts of this province, it is not precisely in those which are the most moist; and this disease is nowhere so common and intense as among the populations of dusty Champagne.

Scrofula is endemic in places which are similar in no respect except in the disease, which is common to them. It is endemic in several parts of Italy and England, two countries, two nations, separated by ten degrees of latitude, and which vary in the regimen, which is so different, in every respect, that an Englishman and an Italian can with difficulty be understood to have the same health.

It is particularly in the Pyrenees that we find the most striking contrasts in the qualities of the places where scrofula exists endemically.

Take, for instance, a village situated on the banks of the Adour. This river is on a level with the cottages built on its borders. Water runs abundantly around the habitations and in the gardens, where a most picturesque verdure exists. The inhabitants of this locality are bandy-legged; they are goitrous, rachitic, have a very slight degree of intelligence, and are very often idiots.

This fact seems, at first glance, to confirm the opinion of those who consider moisture as the cause of the endemic scrofula, and the more so, because if we examine the cottages built a little farther from the bank, we see that the population is healthy in every respect. This is known by the whole world, and establishes so marked a line of demarcation, that the inhabitants above do not marry with those below, whom they regard as of a nature inferior to their own. As they rise, the population improves; but at a greater height, above the level of the river, in a dry and pure country, an unexpected fact suddenly strikes the observer: the inhabitants of the brow of the mountain are scrofulous. Thus, then, we find scrofulous endemia in places entirely different from those which are situated on the banks of the river, and on a level with it.

These contrasts, which are often seen in the Pyrenees at short distances, and which are remarked in many other countries where scrofula exists endemically, do not permit us to mention humidity, nor any other local cause, as the origin of scrofulous endemia.

Some fifteen years since, in my clinical lectures at St. Louis, I mentioned the plan of a scrofulous chart of France. It would show the infinite dissimilarity between the localities where scrofula exists endemically, and the impossibility of detecting anything else in common with these localities except a scrofulous population. To execute this plan, it would be necessary to make several scientific journeys, in order to study the physical nature of the places where the inhabitants

are generally scrofulous, and the relations of cause and effect which may exist between the nature of the soil and the diseases observed there more particularly. There is no other way to study the question of endemia seriously. I have always regretted my inability to devote to this subject the necessary time, being satisfied, from what I have gained from my relations at Paris with scrofulous patients from foreign countries and from the provinces, that the results would be immense. And if it were necessary to excite the zeal of observers, I would say that the subject proposed to their investigations is not one of those which are only rare and curious, but very interesting, on account of the great number of scrofulous people who exist, and which is so great that we may justly regard them (as I have said in my Introduction) as forming a very common variety of the human species.

From a want of these documents, I can not treat of the relation of endemia with scrofula, so perfectly and conclusively as I have the origin of scrofulous diseases, which is most frequently hereditary.

When I treated of the characters of inheritance, I referred to facts which were constantly occurring under my own observation, and I could generalize my ideas daily by the acquisition of similar facts, which were too prominent to be contested.

This is not true of endemia. I see that it has been attributed too lightly to one cause, humidity, according to some imperfect observations, and that no attention is now paid to the subject; and I see well that scrofulous endemia has not one cause only which is easily recognised; that this cause can not be detected in the localities where scrofulous endemia is observed, while it evidently exists in others, where, however, the population does not suffer from this endemia. But on these two points, my observations are too much confined in comparison to the extent of our subject: I have seen enough to satisfy me that the doctrine of the

schools is erroneous, but not enough to build up a new history of scrofulous endemia.

At all periods, ideas have been entertained on endemia generally, which are not at all applicable to scrofulous diseases. To prove this, we will select a well-known instance of endemic cause, the Pontine marshes. The inhabitants of these marshes are cut off by intermittent fevers of bad character. The traveller passes hastily through them, being careful not to sleep on the route; because experience has taught that those who remain there any time, or who sleep when passing through them, contract there the endemic disease. In this case, the cause and effects are permanent; the following is a case where the cause and effects were transient: When the canal of Ourcq was dug, more than thirty years since, the excavating gave rise to a transient endemia, which produced an epidemic of intermittent fevers: the epidemic disease generally attacked those who lived on the borders of the canal, and also the workmen from the different departments who worked on it. It did not spare the engineers and directors, though most of them took the precaution to return to Paris every evening. Many of the physicians, too, who were sent to observe the disease and take care of the sick, contracted intermittent fever. In the two examples cited, we see that the endemia attacked not only the inhabitants, but also the men who encamp in the country, those who frequent it daily, and those who only pass through it: in all these cases it acts in the same manner, if not equally, for it produces the same kind of disease, which differs only in intensity.

This is not the case with scrofula. The effects of endemia are seen only in the individuals born on the soil: a man who is originally healthy does not become scrofulous by going to live in a country where it exists endemically, and it is doubtful even whether his children would be scrofulous; his posterity might become so after many generations, commencing by the most

delicate children, and this would progress more or less rapidly according to the local influences around it, and especially the connexion formed with this population.

I know many persons who have held high offices in the departments Nord, Marne, and Aube, where endemic scrofula is very general: neither themselves nor their children have contracted this disease, although they remained there several years.

There is still a very important remark to make on the two instances of endemia we have cited, viz., that in the two cases humidity has produced intermittent fever, and not scrofulous diseases. We can find a great number of similar facts in Holland, from which it would follow that intermittent fevers are observed more particularly in moist localities. When humidity is putrid, when it is loaded with vegetable or animal emanations, it then produces fevers of bad character, as typhus and malignant fever, dysentery, &c., but no scrofula.

Ought not these general remarks, which have long been known to science, to prevent authors from attributing endemic scrofula to a cause which so frequently produces endemia of another character, and which does not exist in many localities where the inhabitants are generally scrofulous?

Finally, several dissertations which have been published on the antagonism between marshy fevers and tubercles, also serve to prove that humidity does not engender the tuberculous state.

From our remarks, it is evident, I think, that humidity has been wrongly admitted as the only cause of this kind of endemia; that scrofula exists endemically in very extensive provinces, where there is no humidity, and which are even dry; that endemic scrofula is not observed in very damp places; that this last disease does not affect equally all the inhabitants of a country who live under common influences; and finally, that the cause of endemic scrofula, whatever it may be, has no particularly evident quality.

Article II.—Scrofulous endemia produced by the importation of scrofula.

Perhaps a knowledge of the causes of scrofulous endemia may be gained by following a course different from that of our predecessors: thus, instead of seeking for these causes in the nature of the localities, if scrofula be imported into the healthiest places, inhabited by the finest populations, we do not hesitate to say it will take root there, and increase among the inhabitants, in proportion to the number of germs sown there, and that in a given time a scrofulous endemia will exist.

Perhaps the mode of importation which we suppose, and by means of which we can multiply scrofulous populations at will, is only that by which most endemias now existing are formed, and which have wrongly been ascribed to certain qualities of air, water, and location.

When a man enters a family, and brings into it scrofula from which it had hitherto been freed, is not this a true importation? Why may not scrofula be imported into certain places, as it may perhaps be brought into a family? Probably the number of those affected with pulmonary tubercles, who have been in the habit of going to Nice, may have rendered scrofula very common there.

This kind of scrofulous endemia can not be attributed to any other cause in a city which has always been regarded as very favorable to the cure of phthisical patients.

When the Spaniards returned from the New World, loaded with treasures, the victorious armies brought back with them syphilis, a contagious and hereditary disease, which has been of much more detriment to them than their conquest has been useful. Since the importation of syphilis into Spain; since this disease

has taken such deep root in the peninsula, scrofula has become frequent in that country, and the national character has lost very much of its energy. Syphilitic cachexia, and after it scrofulous cachexia, have progressed much more rapidly in Spain, because the venereal disease has there been generally neglected, or is treated by remedies too inert to produce a radical cure.

The importation of hereditary diseases, then, is the greatest scourge which can afflict a nation, and a much more fatal plague than a destructive epidemic. The latter subsides after the occult causes, which have produced it, are removed, and it often reanimates a population, by sweeping off the feeble and sickly beings, while hereditary diseases, once implanted in a country, multiply among the inhabitants, and may affect a whole nation.

This last proposition is so true in regard to scrofulous diseases, that in many large cities I doubt whether a twentieth of the native population, for three or four generations, are exempt from scrofulous diseases. The inhabitants there are all scrofulous; and even those who seem healthy, often beget scrofulous children.

I learned one day, in society, the marriage of a young man in the province, whom I had treated many years before for different scrofulous diseases; although he was cured, I would not have advised him to marry. A lady, who was speaking of this marriage, made some very just remarks on his apparent health. Another lady, whose father occupies one of the first stations in the government of his native village, replied that very probably the young man would find the same thing to be true of his wife's health, that the latter did of her husband. The lady added, that scrofulous diseases were so common among the inhabitants of this city, that even the young did not escape, and that children, four or five years old, were frequently seen with wooden legs, while others were crippled by the loss of

an arm. Similar things are stated in society, without attracting any more attention than the most indifferent question.

We shall conclude this chapter by a general remark, showing our views on the harmlessness of endemia in well-formed men, and on its origin by importation. We have said that a healthy individual would not become scrofulous by living in a country where scrofula exists endemically; that his descendants, in the first degree, would escape the disease, and that it would not be engendered in the family till after several generations. So, too, parents born in communities where scrofula exists endemically, if they are affected with this disease, do not protect their children from it by emigrating into more exposed and more healthy situations; on the contrary, they carry the disease with them, as has frequently been remarked in those families who move from the provinces to Paris; this emigration does not bear its fruits till after several generations, and only in cases where the children have good nurses, and where marriages are made discreetly. At Paris these families are too few, compared with the population of the capital, to import into it scrofulous endemia; but one can readily see that it is not necessary for a large number to be transferred to some small localities, to produce scrofula there generally.

Although scrofula is very common at Paris, it can not be said to be endemic there. Its frequency in this city does not depend on the qualities of the air, nor on those of the soil, but rather on irregularities of life, and certain privations. The numerous causes which render life wretched, degrade the generations, and when once the spring is tainted, corruption goes onward with mathematical progression; in the third generation scrofula appears in children whose ancestors came to Paris full of strength and vigor, and from that time it is perpetuated, as we have often observed, until the family becomes extinct.

ARTICLE III.—ANTIPHLOGISTIC TREATMENT OF VENEREAL DISEASES, CONSIDERED AS A CAUSE OF ENDEMIC SCROFULA.

MANY authors, as we have already remarked, think that scrofula is very common in Spain, because the venereal disease is much neglected there, and is treated by remedies too weak to cure it radically.

This general remark has an important bearing; it ought to undeceive practitioners, who, in our days, advocate the almost negative modes of treating syphilis, and who deny the efficacy of mercury in these diseases.

Mercurial preparations have been denounced more particularly by the army physicians, who treat syphilis by antiphlogistics; it is one of the deplorable consequences of the dangerous doctrine of irritation.

This mode of treatment, which is of easy application, would long since have taken the place of all other modes, if it had been efficient; the most powerful opposition could not resist the evidence of facts. On the contrary, it has but few partisans, and I declare impartially, that the antiphlogistic method has given me several opportunities of treating cases of secondary syphilis, and that I regard it as a mode of inoculation with syphilitic cachexia. May not soldiers, returning to their homes with this fatal predisposition, spread syphilis, and consequently hereditary scrofula?

These unfortunate effects would not be anticipated if venereal diseases were treated methodically with mercurial preparations; but mercury, like all heroic remedies, has always had its opponents, who have cried up other methods of treatment, although these are generally prejudiced practitioners, who only see the bad effects produced by the abusive and routine prescription of this remedy. In this respect, it is with mercury as with bleeding, quinine, and emetics; as

with purgatives, caustics, and all operative processes which are the great levers of therapeutics, those with which there is a way to cure, but which are useless, when one is ignorant of the practical rules for their administration. The controversies as to the antisyphilitic powers of mercury, are only quarrels which will be again quieted by facts proving the efficacy of mercurial preparations in syphilis. It is painful to see the experience of our ancestors called in question on this point; for syphilis can certainly be cured by mercury, and the denial of this produces in practitioners a discouraging state of uncertainty, and causes them to adopt a modified and mixed mode of treatment, which does not cure the disease, and which renders syphilitic patients liable to have scrofulous children.

Article IV.—Scrofulous endemia from a defect in the crossing of races.

Formerly the royal roads were nearly the only routes in France; they were established but in a portion of territory, and they were generally neglected. Routes of the second class were not common; the relations between villages, towns, and even small cities, were maintained only by by-paths, to be travelled on foot.

When the modes of communication were in this state, one can imagine that journeys were very difficult and rare. Hence we can remember the time when travelling in France was a great event; an inhabitant of Orleans was quite remarkable because he had been at Paris; and a villager was a stranger a few miles from his parish. The neighboring villagers often lived in a state of misunderstanding, which was readily excited, and sometimes caused bloody quarrels between the young men. These causes combined to keep each population within its own circumscribed limits.

For want of other acquaintances, the inhabitants in-

termarried with each other, and even made it a point of honor to find a wife in the village ; and it was regarded as very singular for a young man to go and demand one elsewhere. The females, who left their native soil to establish themselves in other places, were always regarded as having done wrong.

What followed from such a course? Populations married with each other, and with their relatives, and some villages finally formed, as it were, only one family. Hence, the race was debilitated, and after a certain number of successive generations, the scrofulous state ensued, and when scrofula is once implanted in a population, it extends itself by inheritance. Such is certainly the origin of several endemias, of which we can not find the point of departure, nor recognise the cause in the physical and geographical position of the places.

In our times there are still many parts where the customs relative to marriage favor the development of endemic scrofula, and where men neglect, so far as they are themselves concerned, the precautions which they take in regard to animals and vegetables, being careful, in the latter cases, to cross the races, so that their deficiencies and excesses may compensate for each other.

Those unenlightened men, who form alliances without any discernment, and without any regard to the future welfare of their race, know, however, that the products of the earth degenerate in the third generation ; hence, they are always careful to seek for foreign wheat in order to cross its qualities, and thus have an uninterrupted succession of good harvests ; and they do the same with their stock. But that which regards themselves and their children, is in their eyes of too secondary importance to require their attention. They attend to their worldly interests, but so far as their health is concerned, they show an indifference which savors of fatalism.

The same remarks may be made in society. We there see many families who are connected with each other; these alliances are formed according to considerations which far outweigh all those we have presented, although these latter should never be omitted, when we wish to secure the happiness of the married couple, and health of their children; parents conclude these alliances, without regard to what may be said to them, although, from time immemorial, it has been observed that families can not keep themselves vigorous and healthy by intermarrying with each other.

Buffon remarks, and correctly, that the law forbiding the marriage of relatives is a natural, rather than a political law; this remark contains advice, which, perhaps, no one has ever followed, although nearly all the world has read Buffon, it has probably never prevented a single alliance between relatives, when this alliance has been arranged according to certain considerations, which were entirely independent of the health.

The inhabitants of several cities of France and of foreign countries, mountaineers, and entire classes of society, furnish a great number of facts to prove how far the races may be deteriorated from a want of intercrossing of the blood.

A. Bodin, in his statistics of the department du Nord, says that the inhabitants of Lille have scrofulous offspring when they intermarry, which is not the case if they marry strangers.

At Orleans, alliances between inhabitants, and even relatives, are very common. I know of no other cause to which the frequency of scrofula in this large city can be referred.

Scrofulous diseases are very common among mountaineers. This kind of endemia can only be attributed to their habit of intermarrying, and of not mingling their blood sufficiently with that of the inhabitants of the plain. Neither the healthy position, the good

fare, nor the happy lives led by the inhabitants of Auvergne, Cevennes, the Pyrenees, and the Alps, can protect them against the frequent attacks of scrofula, which can be referred only to the cause we have mentioned.

In the Isle of Jersey, noble families intermarry with each other, and it has been remarked that they have nearly become extinct by the progress of scrofulous disease.

So, too, in Spain; the grandees rarely marry beneath them, and we know they are nearly all rachitic; they are generally short in stature, and many are bow-legged; great mortality exists in their family. I know a Spanish nobleman, who is rachitic; he had five children by two marriages, and there remains only one daughter, who is rachitic; the other four children died when very young, from scrofula.

The nobility of every country has suffered much in their physical constitution from these alliances, formed within too narrow a sphere. Most of the cases related, when speaking of the generality of scrofula in the family, and the health of relatives who beget scrofulous children, have been collected from titled families.

Noble families, by forming alliances exclusively with each other, have first been deteriorated by a want of crossing of the blood, and then being enfeebled by too long a succession of generations, they have given birth to scrofulous children; and scrofula, when once implanted in their families, has been necessarily transmitted by inheritance, and has made new progress in each generation.

The Jews, who are scattered through the universe, never marry except with each other; this is the reason why their race, primitively so fine, has evidently degenerated, and is now cut off by scrofulous diseases. We can even foresee, as a natural consequence of the laws of inheritance, that they will be extinguished one day by the progress of these diseases.

Hence, we can not insist too much on the necessity of crossing the races, in order to dry up one of the sources of endemic scrofula. It is only by constant intercrossings that it can be removed, and the populations, which have suffered so long from it, can be improved.

It follows, from our remarks, that scrofulous endemia may arise from causes entirely independent of the topographical position of the countries where it exists; such as by importation, by wrong treatment of venereal diseases, the want of crossing the races, &c.; but we repeat, in conclusion, it is not the necessary effect of any evident quality of the air or of the situation.

CHAPTER II.

INFLUENCE OF CLIMATES AND SEASONS ON THE PROGRESS OF SCROFULOUS DISEASES.

We now pass to some remarks on climates and seasons; we shall treat of them separately; they will serve to confirm our views of endemia.

A.—Influence of Climates.

One climate can not be compared with another, relative to the frequency of scrofulous diseases, for the question is prejudged by this comparison, and to the climate is attributed what is not the effect of its influence.

Scrofula exists in climates which are extremely different. Tubercles are very common in the north, in England, in Russia, and equally so in the south, and in Spain and Italy.

Tubercles multiply in a climate according as the origins we have assigned to them are more frequent there. Suppose a latitude where this disease is unknown; it may be imported there at pleasure; hence one would be much deceived, should he attribute to the influence of this latitude what was caused by the importation of the disease.

It is demonstrable that one does not become tuberculous from the influence of climate—in other words, that climate will not render a man tuberculous who is originally healthy. But the latitude in which one lives, modifies our species too much and too manifestly

to affirm that it has no influence on the progress of scrofulous diseases. What is this influence? I know not. I have seen scrofulous persons who have come from all parts of the intertropical and temperate zones, and can make no distinction between their diseases. Their state generally depended on the health of their parents: but I could refer no peculiarity to the influence of climate. I have only remarked that the inhabitants of the intertropical regions were much injured by the influence of our temperate climates: the scrofulous diathesis was developed in them very rapidly; tubercles also became general in the organs, but particularly in the lungs, and threw the patients into a state of consumption, which soon left no hope of cure.

I have treated about a dozen blacks, two of whom were in comfortable circumstances; but I could not cure them. Colored men present fewer chances for successful treatment: they do not recover, but their health is improved by medicines.

Thus, too, most of the foreign animals in our menageries die in a very short time from pulmonary tubercles.

B.—Influence of the Seasons.

The first attack of scrofula generally occurs in the spring, and scrofulous diseases are commonly more active at that time of the year.

We have often known persons affected with ophthalmia, who could number their attacks by the number of the springs which had elapsed since their eyes were first diseased. Others, who have tuberculous tumors, have noticed that these tumors presented two kinds of progress: one which is slow, and occurs every year; another, more marked and rapid, which returns at every spring. Some are affected with cutaneous scrofula, new patches of which annually appear in the spring.

I have seen slightly firm cicatrices open each year

in many successive springs: abscesses, which have remained fistulous, suppurate much more freely from the close of winter to the middle of summer: I have known a tuberculous ulcer under the chin to close annually during the winter, and open in the summer, &c. More pus is discharged from all kinds of fistulous orifices during the spring than at any other season of the year. So, too, with all scrofulous diseases in general: they seem to redouble their activity when nature awakes after the sleep of winter.

The recrudescence of these diseases seems to me to begin with the increase in the length of the days; it becomes more sensible and general among the scrofulous as the days become longer. This recrudescence, considered generally, presents a movement of increase and decrease; it commences from the first days of January; it has its apogee in the month of March; and it decreases till the month of June inclusively. In nine tenths of the scrofulous patients the disease increases during this semestrial period, which embraces the whole period of the year that the sun remains longest in our horizon.

The increase of scrofulous diseases in the spring studied logically, may contribute much to the prognosis: it has warned me in many cases of an advantageous termination of the disease. In fact, whenever the annual recrudescence of a scrofulous disease begins to diminish, we may consider it is in the way of being cured. Take, for example, a child twelve years old, with cervical tubercles and ophthalmia in both eyes: after being treated from April to September or October, the symptoms have much diminished, and the treatment of the patient is suspended during winter; the body acquires strength and flesh; the child continues as well as when the treatment was suspended, and is even a little better. In the following spring, the digestive passages are deranged; fever and restlessness supervene; at the end of a few days the eyes become red-

der, but especially more tearful during the day, and more blear-eyed in the morning: we soon perceive that the tubercles have enlarged, and sometimes even new ones appear.

Is there then recrudescence of the disease? Yes, but it is less acute, less intense, and of shorter duration, than that which had occurred previously for many years; it is evidently mitigated; the predisposition on which it depends has been modified and corrected by one course of treatment. A second, and sometimes a third course of treatment, are necessary to act efficiently on this predisposition, and the disease progressively decreases till the age of puberty, which completes as much as possible the purification of the economy.

From our remarks on the influence of spring on the progress of scrofulous diseases, we need only say that we by no means regard this season of the year as a cause of scrofula. In fact, we never see a youth of good complexion become scrofulous when nature is invigorated: on the contrary, this period of the year is favorable to the growth of the body. It is only when there is a morbid predisposition, that the animal economy is unfit to receive the salutary influence of the return of light and heat, and that this influence, instead of being profitable, lights up the germ of hereditary diseases, or favors their progress when they have already attacked.

CHAPTER III.

EXTERNAL OCCASIONAL CAUSES OF SCROFULA.

THE doctrine that certain external occasional causes may produce scrofula, has already been contested implicitly by our remarks on inheritance and on endemia.

We can not expect to find in a book of this character, a very long enumeration of the occasional causes which authors have copied from each other, without ever ascertaining if the existence of these causes rested on experience. Most of these causes are denied: those which are admitted, have only led to error as to the nature of scrofulous diseases: these errors are rooted so deeply in the field of science, that it is very difficult, if not impossible, to eradicate them. It is desirable, however, that the occasional causes should be estimated at their true value, and that it should finally be admitted that all of them united can not render an originally healthy man scrofulous. With this view, we shall proceed to analyze the principal external causes mentioned by authors.

ARTICLE I.—THE INVASION OF SCROFULA IS MOST GENERALLY SPONTANEOUS.

ALTHOUGH scrofulous diseases have been but little studied, yet we know they appear in early infancy, and that they change their form and seat several times up to the period of puberty, which either hurries off the patient, or improves the health.

This is the most usual course, whatever may be the class of society to which the diseased belong. This established, there is another general fact which we hasten to notice, viz., that in most cases, in artisans, scrofula appears before the children have served any apprenticeship—before the external causes to which they will be afterward much exposed, could have rendered them diseased. On the other hand, children born in the better classes of society are very seldom subject to the occasional causes of scrofula: and yet we number among them more scrofulous patients than in any class of artisans.

When once the invasion of scrofulous diseases has commenced, they are developed in the absence of any external cause, and sometimes even when the scrofulous persons conform to the most salutary hygienic laws, because hygiene alone does not cure the diseases which are so deeply rooted in the economy.

Scrofula is certainly very common: it is much more so than is generally thought, because those only are regarded as being scrofulous who present the most marked signs of it. Every one will see, however, that nearly the whole human race would be affected with scrofula, could this disease be caused by moisture, bad nourishment, badly ventilated and lighted houses, unhealthy workshops, &c. In all periods, in all places, workmen and artisans of every kind have been subjected to injurious influences, which have not been lessened by their food and regimen, nor by the observance of the other rules of hygiene: and our species must be endowed with great powers of reaction, not to degenerate more rapidly than it has, when so many are exposed to fatigue, privations, and excesses, and a few to those immoderate wants which constantly assail it.

Article II.—Relations of the vaccine disease with scrofula.

Parents often assign cowpock as the cause of the scrofulous diseases of their children: I, however, have been unable to establish any relation between the vaccine disease and the appearance of scrofula. We can not see that scrofulous diseases have become more common since Jenner's splendid discovery; and this latter remark seems to me a peremptory objection to every opinion which would tend to regard scrofula as arising from cowpox. The number of persons, however, who believe the contrary, is great: some have attributed to the cowpox the scrofulous diseases of their children, and have told me that if they had other children, they would never consent to have them vaccinated: but this was unreasonable; for in most of the cases, the causes of inheritance were evident. It is to be hoped that time will gradually destroy this blind opposition to the benefits of vaccination.

Article III.—Connexion of onanism with scrofula.

Onanism has been regarded by all pathologists as one of the causes of scrofula. I have never been able to establish the relations between this fatal habit and the existence of a scrofulous disease.

The remarks I have made on young men, and especially on adults, who are inclined to masturbation, have led me to regard this fatal habit rather as a sign of scrofula than as a cause of this disease: feeble subjects are much more addicted to this than those who are strong. Authors have already remarked it in those affected with pulmonary tubercles, and I can support this remark by some general observations.

When a child originally well formed is passionately

addicted to onanism, his constitution always suffers from it, and may suffer to such an extent as to cause death by exhaustion.* In this case the child dies of phthisis, and not of scrofula; and in the autopsy, no tubercles are found in any of the organs. Facts of this kind prove that onanism does not produce the scrofulous state in well-formed subjects.

We see, also, cases of marasmus in young men, from this cause, which are cured, provided they leave off onanism. The abandonment of this cause terminates its effects, however disastrous they may be, when the subjects are healthy; while a tuberculous subject, who has arrived at a certain stage of consumption, from this same cause, presents no chance of being cured. The termination, which is so different, and which supervenes in the two cases, is a consequence of the predisposition.

Article IV.—Relation of menstruation with scrofula.

It has been asserted that children conceived during menstruation, are born scrofulous. I have analyzed strictly all the cases of this kind which have been presented to me, but I could not refer any of them to the origin which the patients stated; but I could always explain these cases more satisfactorily by some one of the causes mentioned particularly.

I say, then, that I have observed no cases of scrofula arising from copulation during the discharge of the menses, and I will conclude in saying that parents ascribe disease to this cause more frequently, because it wounds their self-love less than others which are very common.

* See Deslandes, celebrated work, Manhood, its Causes, Decline, and Remedy: Boston, 1844.

Article V.—Of the contagious quality attributed to scrofulous diseases.

Scrofulous diseases have been said to be contagious, but without any reason. This quality has been attributed to them by a decree of the parliament of Paris, which even prescribes preventive measures. This decree was passed in consequence of the Faculty of Medicine having answered affirmatively to a question proposed on this point by the parliament.

As to us, although we have observed scrofula under all its forms for twenty-five years, we have been unable to detect a single case of contagion.

At the hospital St. Louis, scrofulous patients have no special wards; they are treated in common with the other patients, who are affected with all kinds of cutaneous diseases; they have a common promenade, but we have never noticed a case where the disease has been communicated from one to another.

In the city we have never known a husband to communicate the disease to his wife, nor the wife to infect her husband. The most intimate conjugal relations produce no inoculation of the disease, even if one of the couple is affected with it in the most advanced degree; this is particularly the case with those diseased with pulmonary tubercles.

The observations which we have made in our hospital and the city, seem to us sufficiently general to answer this question in the negative. Society, however, regards scrofula as contagious; and we are often asked if it be not dangerous to allow a scrofulous child to play with its brothers and sisters? These fears arise from some superficial and erroneous observations which have been made in regard to the temperament of the family, and to the generality of hereditary diseases among children.

It has been remarked that in a numerous family, the

children were affected, one after another, with scrofulous diseases, and instead of referring this to the hereditary cause which connects all these diseases in a common origin, contagion was thought to exist; in other words, it was supposed that these children who were affected, the second, received the disease from those in whom it appeared first.

But if scrofula were contagious, it would pass beyond the limits of the family, and it would be extended by the relations of society. A scrofulous student might import the disease into a college, as often happens with smallpox, measles, hooping-cough, &c.; but nothing like this has ever been seen, so that the idea of contagion is only a prejudice, which has no foundation, and which will probably be of short duration.

Article VI.—Inoculation of scrofulous pus.

Many physicians have inoculated dogs, and even men, with the pus of scrofulous ulcers, to ascertain if the disease could be inoculated in the healthy subject. All these experiments have failed, and have proved that scrofulous pus is not transmissible.

I have not thought proper to repeat these experiments; every one labors to advance science in his own way. I admit that I have some scruples about endangering the health of those intrusted to my care. I do not claim the right, nor admit that any one else has it, to inoculate a healthy person with so serious a disease as the scrofula.

Critical Reflections on the Inoculation of Morbid Virus.

The inoculation with morbid virus, excepting, however, the vaccine, has hitherto been attended with no good result; in many cases, on the contrary, the ef-

fects have been deplorable. Virulent diseases, when contracted by the ordinary modes, are mild when compared with those arising from vaccination; the course of these latter is formidable and violent. This can be sustained by several instances.

We all know that the lives of Michael Cullerier and an old interne of the hospital des Veneriens, were much endangered, and each lost an eye by being carelessly inoculated with the pus from a venereal ulcer.

Every one remembers, and with grief, the melancholy death of those young students, who, animated by an inconsiderate zeal, tried experiments on themselves, which were followed by unexpected results. Error, despair, and suicide, terminated these fatal experiments.

Very recently our young and unfortunate colleague, Dr. Hourmann, physician to the hospital of Lourcine, died, after much suffering, having been inoculated with syphilis by means of an excoriation in his hand.

These facts are more eloquent than the most logical reasoning; the mere mention of them will be sufficient to deter any reasonable man from making experiments which are useless, and which may subject him to real danger.

Article VII. — Relations of moisture, and many other occasional causes, with the production of scrofulous diseases.

There are few external causes, which authors have mentioned more frequently than moisture, that physical agent, whose dissolving action constantly tends to destroy inorganic bodies. Organized bodies also suffer from it; it is particularly very injurious to our species, and is one of the most powerful causes of disease, producing mucous and rheumatic fevers, dysentery, scurvy, malignant and yellow fevers. Wherever it exists, alone, or combined with heat, putrid animal or

vegetable productions, it gives a character of malignancy to diseases in general. Those people who live within its influence, are feeble and delicate; sometimes even they are degraded to cretinism; but it exists in many cases where scrofula is not common, and even where this disease has not been mentioned by observers; it acts powerfully on classes of people subject to certain diseases, among which scrofula is not included.

In England, those sheep which are raised in damp places, are all affected with dropsical cachexia, when about four years old; this disease, which is produced by humidity, presents no tubercles; only water is found in all the tissues.

But although humidity may not fully produce scrofula, we shall study it carefully, for it is very injurious to scrofulous subjects. We shall examine it in connexion with most other occasional causes, with which it habitually coexists, and we shall investigate the influence of these combined causes: 1st, in some special cases; 2d, in several general facts; so that we shall know the kind and degree of influence it may have in producing scrofulous diseases.

1.—*Special Facts.*

We find in medical practice cases of scrofula which appear, at first view, to have been caused by the influence of humidity; this can not be admitted when the causes of the disease are studied more carefully. I will mention a case of this kind, one of the first which pointed out to me the way for my researches on the causes of scrofulous diseases.

In September, 1827, there was at the hospital St. Louis, a shoemaker named Gloria, who had large tuberculous tumors on each side of his neck: he was a young man twenty-two years old, who was unable to give much information about his family, and in whom the cause of inheritance could not be admitted. This

man came from the prison at Poissy, where he had been two years, after waiting for his trial three months in the winter season in the prisons of Paris: at Poissy he worked on cotton in the workshops, which are situated in the basement and are very damp.

Every one will think that this man, who complains of no hereditary cause, not having been scrofulous in his infancy, became so at Poissy, where he worked in a damp place: ought he not to be considered as contracting his disease where he lived two years?

The following considerations, however, induced me to change my opinion; and I think it useful to mention them here, for I now report one of the first cases which gave me my ideas on occasional causes—views which are very contrary to the opinions generally adopted as to the influence of external agents in the production of scrofulous diseases.

I asked this young man how many workmen were employed in the cotton factory: they were generally one hundred and fifty to one hundred and sixty. I asked if there were many scrofulous persons among them, remarking that by scrofulous persons I did not simply understand tuberculous persons like him, but patients similar to those he saw in my wards, and who were scrofulous, although not affected in the same manner as he was. He answered, none. I asked him if there were any affected with this disease in the other workshops of the first and second stories, which were occupied by saddlers, jewellers, weavers, tailors, &c., working in the rooms which were loftier and better ventilated, and which were not damp: he answered that he remembered to have seen five or six scrofulous persons among five or six hundred prisoners. It follows from these remarks, that of one hundred and fifty men employed in the cotton factory, which was damp, there was not more than one scrofulous person; while in the other workshops, which were drier and better

ventilated, there was one scrofulous person in a hundred.

Since I saw this case, I have communicated with a manufacturer who employs a great many workmen detained at the prison of Poissy, and he confirms the statement of my patient. This case is very appropriate in the beginning of our remarks, because it proves that moisture does not necessarily produce scrofula.

In the following case, also, scrofula appeared under the influence of humidity; but in this case, it is evident that the external cause only developed an original predisposition.

In 1832, we had at the hospital St. Louis a fireman, who had very large tuberculous tumors on each side of the neck: he told us that in his company were several diseased like him, and that the scrofula was considered as caused by the humidity to which firemen are almost constantly exposed. In fact, they are on guard every two days in the theatres of Paris, from five o'clock, P. M., to one o'clock, A. M.; during this service their feet are often in the water, and they remain in a very damp atmosphere, without light, and often without air. This man left the hospital, and almost convinced us, to a certain extent, that his disease was caused by influences of this kind. Some months after he left, he brought to us his sister, and we gained some new details in regard to his family, which were readily referrible to the observations of which we had already made a large number.

His sister was thirty-two years old, very fat, and enfeebled prematurely; she had ophthalmia in her infancy, as could readily be seen by the swelled edges of the eyelids, by a slight redness of the conjunctiva, and the small number of the eyelashes, particularly on the loose edge of the lower lids, and by a little dirt caused by a chronic alteration of the sebaceous secretion of the meibomian glands, which is very common in scrofulous subjects.

The daughter of this female was affected with cutaneous scrofula of the face, for which she had been treated at the hospital St. Louis; so that this fireman, whom we had at first regarded (from his own saying) as the only scrofulous member of his family, had a scrofulous sister whose children were scrofulous. We then have reason to say, in commencing, that the humidity to which our patient was exposed, was only the occasional cause of the development of the tubercles to which he was predisposed.

January 18, 1829, Tessier entered the hospital St. Louis: he was thirty-eight years old, a carpenter, and had been affected for eighteen months only with ulcerated tubercles on each side of the neck; he had ophthalmia in the right eye, and a coryza of the same side. This man was well made; he was born in St. Jean sur Vilaine, and told us his country was very moist; that he had worked late and slept in the basement; that he had been a soldier for two years, and had often slept on the ground in his damp clothes. His father died when fifty-five years old, after an illness of two years; his mother died suddenly.

We remark in this case, 1st, the late attack of the disease, at the age of thirty-five years; 2d, the action of several occasional causes, and more particularly that of humidity; 3d, the absence of ancestral causes—all negative circumstances, which might lead one to suppose this man had contracted his disease without any hereditary predisposition.

But there are other elements which seem to me to prove the existence of this predisposition: Tessier had lost two brothers, one of them from pulmonary disease, at the age of eighteen years; his sister died when very young; and he had another sister, who was married, and had lost all her children. With such antecedents in the family of Tessier, can we believe that he became scrofulous by the influence of external agents alone? We are rather inclined to think that this man,

having shown no symptoms of scrofula till at an advanced age, was less predisposed to it than his brothers and sisters, and that the occasional causes, the action of which we do not pretend to doubt, have developed this predisposition: that the effects of this latter would have been less, had this man attended properly to the laws of hygiene; but he could not resist the united influence of the predisposition and occasional causes.

When scrofulous diseases are studied in an hospital, most of the subjects belong to the lower classes of society, so that all, or nearly all of them, are still exposed to many causes of disease. Apprentices to trades are usually deprived of air and light; they frequently labor where it is damp; are generally badly fed, and are overworked.

The regimen of apprentices is in every respect detrimental to their physical development; but to appreciate its influence in the production of scrofulous diseases, we must carefully analyze the medical health of the patients, so as to know the relations which the previous state of health may have with the actual state of disease.

Thus a shoemaker, tailor, carpenter, weaver, &c., become scrofulous, during their apprenticeship; cervical tubercles, white swelling, &c., supervene. In our inquiries about causes of diseases, one most generally stops at the actual causes to which these diseases can be referred, and does not go further: but if we refer to the antecedents, we learn that these young persons have had in their infancy obstinate ophthalmia, and indolent abscesses, which have remained a long time fistulous; they have been subject to chilblains, intestinal worms, &c.; and finally, the tubercles in the cervical regions have enlarged, and have become more numerous every spring, whatever improvement may have been caused by the regimen. This arises from the fact that these tubercles have very intimate relations with previous diseases, with which they form one

species of disease, which presents several successive states, and which follows its course, independent of the conditions of the patient. These remarks in the medical life of the individuals, become still more valuable when we inquire into the temperament of the family.

We have seen at the hospital St. Louis, many young men in whom scrofula commenced in the workshops: we have always carefully inquired as to the number of tailors, shoemakers, &c., who work together in the same shop, and as to the number of the workmen who become scrofulous. Most generally, the patient whom we interrogated was the only one affected with scrofula, when three or four, or even ten or twelve, workmen labored in the same place.

We often see at the consultation of the hospital St. Louis, scrofulous children, who live in damp places, destitute of air and light, as, for instance, in most of the porter's lodges at Paris. But when we refer to the beginning of the disease, we learn that it commenced before the child came to live with the family in the unhealthy locality where we saw it: scrofula appeared in this child when its parents were in good circumstances, and before the reverses of fortune had reduced them to the condition of porters.

I have often inquired of the sick to know if they had ever seen any number of men, working together, become scrofulous from a common cause. But no case of this kind has come to my knowledge.

These reflections embrace most of the occasional causes of authors; for most of them are found coexistent in the workshops. Thus, the workmen who labor in moist places are not exposed simply to the influence of moisture—they suffer also from other causes of scrofula, and especially from too much fatigue; a diet not sufficiently substantial; and from intemperance, which is the inevitable attendant of privations. Even where these causes coexist, how-

ever, scrofula is not common; and it is where a native and individual predisposition to scrofula exists, that the effects of these causes sometimes lead to the scrofulous state.

If we pass from the hospital St. Louis to city practice, the picture changes completely: here the occasional causes are generally absent; and most frequently there is no room to suppose their existence, as the patients enjoy, more or less, the comforts of life, and are not exposed to most of the debilitating causes. While performing my varied duties, I have frequently considered alternately the sick in my hospital, and my patients in the city. I have always been struck with the similitude of scrofulous diseases in all classes of society; and I have asked whether diseases which are always the same, and which have such marked common characters, could have so different an origin as to come, some from external occasional causes, and others from an hereditary predisposition.

It is certain that at least one half of those who are scrofulous, are so spontaneously, and their disease can not be referred to any external cause. The second half, it is true, are exposed to nearly all the causes of disease; but these causes do not produce scrofulous affections unless there is some organic reason for it in the temperament of the individual: we shall show this by a few examples.

Chombry, eighteen years old, had enjoyed good health till he was thirteen; he lived well, and slept in a healthy place, staying with his father, who was an innkeeper. When thirteen years old, he became a weaver, and worked in the shop; and about three years after, scrofula appeared in the left elbow, and successively in the left carpus and metacarpus, and in the right elbow. As soon as these different white swellings commenced, Chombry left his trade in order to prevent the progress of caries, which would certainly have taken place if scrofula had affected the osseous

system simply from the occasional influence of humidity. But his disease was not generated merely by the influence of this physical agent, but sprung from a more powerful cause—inheritance. In fact, Chombry had already lost a brother and sister by scrofulous diseases, who had not been exposed to the action of humidity. Our patient also had several cousins, the children of his mother's brothers, who were also scrofulous, although they had been exposed to no influence which could affect their health to this extent.

Antoine Fritsch, fifteen years old, entered the hospital St. Louis, June 29, 1829. His skin was white and fine, and the lips and alæ of the nose were a little hypertrophied; his hair was red: he was small of his age, but his figure was lively and animated. This child had a tuberculous tumor, the size of a pullet's egg, elongated from above downward, prominent in the centre, moveable under the skin, which had preserved its natural appearance: around this tumor we detected numerous small subcutaneous tubercles, which, when enlarged, would become connected with it, and thus increase its size.

This child was apprenticed to a button-maker; he slept in a basement room, with six others, which was very damp and badly ventilated, on a mattress placed on the ground; this room was so low, they could not stand erect in it. Our young patient often experienced ill effects from this atmosphere, and attributed his disease to the bad and damp air which he was obliged to breathe at night for eighteen months.

But we shall see, from the medical life of this child, that his disease could not be produced by these injurious influences, but that it was of an older date, the progress of which had not even been sensibly hastened by the unfavorable circumstances in which he had lived for eighteen months, during which time he had suffered not only from moisture and want of air, but also from overwork, and a scanty supply of bad food. All

these causes contributed to arrest his growth; but the tuberculous scrofula with which he was affected was referrible to a period prior to that of his apprenticeship. In fact, this tuberculous tumor commenced when he was twelve years old, by tubercles in the left side of the neck, which were observed after a fever which had continued a few days. These tubercles were regarded as *glands of growth*. They were at first insulated and small in size, but they enlarged, united, and thus formed a tuberculous tumor, which commenced a year and a half before this young apprentice had been exposed to these occasional causes.

This tuberculous tumor was not even the first sign of scrofula in the young Fritsch. When eight years old, he had an attack of ophthalmia, which was very violent and continued for two months; the eyelids swelled so much that the child could not see to walk. Since this ophthalmia, the child's eyes were constantly red, and each year the disease increased in summer: this increase had not been noticed since the tubercles appeared in the neck, and the eyes were no longer ophthalmic. Thus, the medical history of this young scrofulous person shows us that the disease commenced more than six years before he slept in a damp and unhealthy place, and experienced at the same time the influence of many other debilitating causes. The health of his parents gives us a better reason for his being scrofulous. In fact, the mother of young Fritsch was very feeble, and she had always been weakly; she raised blood for a long time, and died when twenty-four years old, with pulmonary tubercles. The father was thirty-five years old, had a strong constitution; had frequently been affected with ophthalmia, but had as yet presented no other pathognomonic sign of scrofula. Our patient was then manifestly tuberculous before his apprenticeship commenced, and before he had experienced the influence of moisture, bad air, &c.; consequently, his state could not be attributed to these

influences. But the scrofula would have appeared under this influence, as well as with the precedents presented by the health of the parents. I would regard it then as of hereditary origin.

Simeon Ansenius, woolspinner, twenty-two years old, entered the hospital St. Louis, June 20, 1835. He had tubercles in the right side of the neck; they were separate and had not yet united in one large tumor. The mother of this young man was six years older than his father. He had worms, chilblains, and cervical tubercles, till he was eight or nine years old: the tubercles were few and stationary until he was seventeen years old, although this young man labored from seven to eight years in a woollen factory, which was very damp, and they were developed spontaneously while the patient was working in a much more healthy place.

Here, then, is a case where scrofula remained stationary, notwithstanding the influence of humidity. In the following case this disease was cured spontaneously, although the patient was exposed to the same influence; and it afterward reappeared spontaneously, although the patient labored for three years at Paris in a workshop which was not damp.

Bergtold had been tuberculous since he was nine years old, and had ulcerated cervical tubercles since the age of twelve years; when he was fifteen years old, these ulcers closed in summer, while he labored at Rouen in a very damp workshop.

When twenty-two years old, at the beginning of spring, this patient worked at Paris in a workshop which was not damp, and tubercles again appeared in his neck. Two years after, he died at our hospital, of tuberculous phthisis.

From our remarks on workshops in connexion with the production of scrofula, we can not but admit they have a general permanent influence, which arrests the growth of apprentices, and debilitates them very much

without rendering them scrofulous when they have no disposition to become so; it is easy to foresee, from this, our opinion of certain accidental causes to which we refer but too frequently scrofulous diseases, which are evidently of hereditary origin. Still, we shall cite some special instances to prove that these causes are inefficient to produce such effects.

Olivier, twenty-six and a half years old, entered the hospital St. Louis, on the 17th September, 1827. He presented, 1st, a white swelling of the right shoulder, with three fistulous orifices; 2d, an indolent abscess on a level and to the left of the last lumbar vertebræ; 3d, a violent palpebral ophthalmia of both eyes. The lower lids were destitute of lashes, the pupils were constantly dilated, and the conjunctivas were red. The phenomena of consumption were very marked; there was anorexia, debility, emaciation, and sleeplessness.

These different diseases began four years before, after walking in the rain four hours, and their origin was referred to this circumstance. But was this the cause of so serious a disease? What would become of the human race if a young man, twenty-three years old, and healthy, exempt from all hereditary predisposition, would become tuberculous in consequence of walking twelve miles in the rain?

In this case, this occasional cause was attended with such serious, and afterward such fatal results, only because this young man was tuberculous by his mother's side, who died of pulmonary phthisis at the age of thirty-seven.

Olivier having been cured by a course of iodine, which continued eleven months, left off all treatment, September 20, 1828. A month afterward he entered the hospital to attend on the baths. He was obliged to be awake nearly the whole night, which was very fatiguing. He was employed there, however, for seven years uninterruptedly; but at the end of this time the

respiratory organs became tuberculous, and in a few months Olivier died in the last degree of marasmus, with the same disease as his mother, December 27, 1835, aged thirty-four years.

Many patients ascribe the sudden appearance of white swellings to a blow, a fall, or shock of some kind, and unfortunately the treatment is in accordance with this theory.

A young man, sixteen years old, entered the hospital St. Louis, in December, 1831. He was affected with white swelling of the right elbow, with four fistulæ, extending to the denuded bone; this young man referred his disease to a fall on this joint, eighteen months previous. It was precisely at this time that we admitted his brother into the hospital, for the same kind of scrofula, which had supervened spontaneously in the same joint.

The local causes are generally harmless. Hence, in academies, where children are constantly falling and receiving blows on the joints, white swellings do not supervene once in a hundred times.

Why should so common a cause among students present its consequences so seldom? Because it is not a necessary effect, and produces scrofula only in those who are predisposed to it. Many cases might be cited to prove this.

I attended three pupils, who had been affected with white swellings, in three different institutions; one was affected in the left shoulder, another in the left elbow, and a third in the right knee, with an encephaloid affection of the upper half of the tibia. This last case, which was much more recent than the other two, soon terminated fatally, and this child presented the scrofulous constitution in the greatest degree.

In these different cases, the cause of the disease was referred to falls which the children received when playing with their comrades; but their past health, and the special health of their parents, explained their patho-

logical state better than the accidental local causes to which the disease had been referred.

In the first part of this work, when treating of the family constitution, we related the history of a young man, twenty-three years old, with fistulous caries of the metacarpo-phalangean articulation of the left index finger. This young man referred the commencement of his disease to an occurrence fifteen months previous, when, while playing with his comrades, his index finger was twisted in his dog-chain. We stated that we had detected tuberculous cicatrices in him, and that we established the hereditary origin of the disease, and its generality in his family, notwithstanding his assertions in regard to the health of his parents, and brothers, and sisters. (Part I., Ch. I.)

I shall conclude by an instance, where I shall analyze the respective value of the occasional causes and inheritance.

L. Tourbier, twenty and a half years old, commissioner, entered our wards May 24, 1831. Since the age of fourteen, this young man had several abscesses in the external iliac region, in the external posterior face of the left thigh, and groin. When I saw him for the first time, these different abscesses were discharging pus, and communicated with each other; the skin was separated for some distance, and more than three hundred grammes of the ioduretted solution were injected into it at once. Tourbier tells us that these abscesses had supervened after falls, or long walks carrying bundles; they were finally cured, after being for a long time fistulous, but afterward they opened spontaneously.

It would be difficult to cite a case where the action of occasional causes seems more manifest than in him. Probably, however, the results were so disastrous, on account of the hereditary disposition of the patient, which we deduced from the following circumstances:

Tourbier's father died at the age of thirty-seven

years, of mental derangement. His mother, apparently of a fine constitution, died, extremely emaciated, three months after her ninth confinement, at the age of thirty-seven, very probably of phthisis pulmonalis, supervening after her last pregnancy, as is very common. Finally, of nine children our patient was the only survivor.

To say nothing of the health of the parents, how can we admit that a young man, twenty years old, who lost eight brothers and sisters when very young, could be born with healthy elements of organization? Is it not evident that an exception of this kind in a numerous family, is not in accordance with natural laws.

2.—*General Facts.*

The special facts which we have mentioned, have occurred under the influence of certain occasional causes, and if studied summarily, they might be regarded as the effects of these causes, but a closer analysis will show us their hereditary origin.

Although these particular facts, considered as we have said, may seem sufficient to elucidate the subject before us, still we shall continue to study the occasional causes in certain general facts which are frequently occurring around us; and we shall examine the regimen of prisons, camps, and vessels, which include most of the causes stated by authors as producing scrofulous diseases.

A.—Regimen of Prisons.

We know that prisons are generally damp; and that they combine most, if not all, the conditions regarded as causing scrofula; wretchedness, in all its forms, privation of air, light, and exercise, the influence of moist heat, and cold, a coarse and insufficient diet; dirty

clothing, too slight in winter, a bad bed to sleep on, and the most perfect demoralization.

The union of these causes produces numerous diseases in prison. We observe there, itch, prurigo, dysenteries, chronic enteritis, putrid fevers, and jail fevers, all of which affect the prisoners; but we can not add scrofula to this list, for it is not endemic in prisons, and further, as we have already stated, but few cases of it are seen in the dampest and most unhealthy workshops.

The frequency among prisoners of the diseases enumerated, is doubtless one of the usual effects of the causes to which they are exposed; this is so true, that these diseases are developed much more rarely, and less severely, since the regimen of prisons has been improved.

B.—Regimen of Camps.

Soldiers are subject to many debilitating causes, especially when in the field.

During the wars of the revolution, the causes of mortality were very numerous and active; death cut off in the hospitals those who escaped from the field of battle; the population was renewed so often that the most powerful and direct causes did not have time to produce scrofula.

But besieging armies who are exposed to humidity, to all kinds of privations, the use of unhealthy food, to want, and incessant fatigues, night and day, &c.—these armies, as well as those who are besieged, do not present many who are scrofulous. Had the siege of Antwerp continued for two years, the army would have been decimated by putrid dysentery, scurvy, &c., but never by scrofula.

C.—Regimen of Vessels.

Sailors form a special population, which, until our day, has been subjected to a very hard life. Former-

ly, when the crew was once wet, in long voyages, they did not get dry again till they returned to port; hence the sailors were subject to peculiar endemic diseases, produced by a combination of causes similar and often identical with those regarded, but wrongly, as producing scrofulous diseases; for these latter seldom attack sailors.

Here we have three regimens, that of prisons, camps, and vessels, which, until our times, have presented the concurrence of most of the external causes, which authors have mentioned as the occasional causes of scrofulous diseases, and which, nevertheless, have never been found to cause endemic scrofula, although developed to a great degree.

Wherever these causes have existed, they have given rise to epidemics of bilious fevers, putrid fevers, dysenteries, cholera, and scurvy, so well described by Pringle and Rouppe; but no author mentions scrofula as a disease peculiar to soldiers and sailors.

Final Reflections on the Occasional Causes relative to the Generation of Scrofula.

It follows, I think, from the cases and general facts stated, that the occasional causes of authors have no necessary effect, and that when scrofula appears under their influence, it is because the individuals are predisposed to it; that when these causes are permanent, they are always very injurious to our species, and that the populations exposed to them can not have robust offspring.

The study of the occasional causes, applied to special populations, under the charge of the government, has already been attended with happy effects. In this respect, our course is manifestly onward; the rights of humanity are now respected much more

than ever in our prisons, and epidemics occur there less frequently.

The life of the sailor is easier; his food is more healthy; efficient precautions are taken against damp clothing; his sleep is proportioned to his labor; and in the last twenty-five years, many long voyages have been performed without a single instance of those fatal epidemics of scurvy, putrid fever, dysentery, cholera, &c., with which the annals of the sea are filled.

So, too, with the regimen of the land troops; the barracks, bedding, and food, and the ventilation of the sleeping apartments, have been much improved, and epidemics in barracks are now rare.

Men's minds are now bent on improvements, and this has already produced marked effects. Paris, in particular, has been rendered more healthy in many points; drains have been dug, fountains multiplied, streets widened, insalubrious establishments have been removed, and every year adds to the line of quays, which, by narrowing the river, quickens its current, and thus renews more frequently the atmosphere of this large city.

The food of the population (while there is still room for improvement), is much more healthy than it was twenty years since. Domestic life is more moral and happier, and certain diseases have almost disappeared. I will cite in particular, scurvy, but few cases of which are now seen at St. Louis, where it was very common twenty years ago.

The diminution of the number of diseases, wherever the laws of hygiene are observed, proves the injurious influence of the occasional causes we have enumerated, and the benefits which may be expected by their removal.

Scrofula, also, would be less common among the working-classes, if their food was better, and if they were not compelled, by low wages, to work beyond their strength, and if several pursuits, which keep men

constantly weak, degrade their offspring, and render it necessarily scrofulous, could be made more healthy.

Considered in this point of view, the study of the occasional causes of scrofula still presents a new interest in a therapeutical respect, for there is no method of treatment which can be completely efficacious against scrofula, if the sick continue to live amid these causes.

I am also certain that the laws of hygiene alone may, in certain cases, arrest the progress of scrofulous diseases, and that at all periods of these diseases, the nursing must be regarded as an essential part of the treatment.

But, whatever truth may be in these observations, the origin of which is referrible to the first notions of science, I must remark here, that the progress of scrofula is rapidly fatal in families where all the external causes are absent, and where the children receive every possible human care. Every practitioner knows of opulent families who can not raise children. These families, which are usually very numerous, are cut off by convulsions, hydrocephalus, verminous affections, mesenteric tubercles, &c., &c., being the affections of a scrofulous origin, which carry off those children born amid the luxuries of life.

We do not reflect enough on cases of this nature; in them resides all the power of the predisposition, and on this account they resist the regimen and the treatment prescribed in the most rational manner.

Difficulties attending the study of the causes of scrofula.

The diagnosis of scrofulous diseases is generally very easy; the special character of an ophthalmia, abscess, white swelling, &c., may be said to be attested by the cicatrices of the tubercles, which have formerly existed, or even by the coincidence of these

latter; it is also most generally marked by the presence of these parasitic productions in other members of the amily; then the progress, duration, and special appearance of these diseases, rarely leave the practitioner in doubt.

But this is not the case on investigating the origin of these affections; most commonly on this point we receive wrong information, for the patients generally substitute pretended accidental local causes for the true ones; we allude to inheritance. These erroneous notions, which physicians admit too easily, lead definitely only to an error in diagnosis, an error attended with serious consequences, when we consider the difference between the treatment which is applicable to an accidental malady, and that demanded by a constitutional disease, which is intimately connected with the constitution of the patient.

The study of the causes of scrofulous diseases also presents difficulties of more than one kind. The history of a scrofulous person embraces not only all the medical life of the individual, but also that of his ancestral parents, and that of his brothers and sisters: and there are frequently valuable data to be found in the health of different branches of the family, which are often very similar in this respect.

To arrange all the details of the special history of the individuals, and to detect their common nature, the sick must be questioned with great attention, being very careful not to influence them, as otherwise they might be led to say anything you wished.

The same difficulties present with each patient who is questioned, whatever habit may be acquired, because there a kind of education is necessary; the patient having at first no idea of what is asked, he always gives his opinions in place of his experience.

The principal difficulty to be overcome in questioning patients, is to make them admit the hereditary causes: their self-love, the affection of their parents,

and even their apprehensions, are always stretched, like an officious veil, over the origin of their diseases. In many cases, I have been unable to gain information on this point until long after a first examination. According to the statements of many patients, their disease had no cause, and especially no hereditary cause. This belief is so firm in some people that it even resists all evidence. A young woman brought to me, several years since, her daughter, four years old, who had pain in the hip, with marked elongation of the right lower limb. This lady was short, but denied all inheritance of disease, and yet she could assign the disease of her daughter to no external cause. Her sister, who was with her, was also short; her complexion was delicate; she was pale, thin, and had bad teeth: let us add that she had borne four children, but could not raise one. I remarked to the mother of the young patient the connexion between her own health and that of her sister with the disease of her daughter: but it was useless; she could see no resemblance between them.

I treated at Tivoli-les-Bains, in 1832–1833, a young lady from the department Côtes-du-Nord, without being satisfied as to the nature of the disease; but her parents knew very well that she had not felt the influence of any scrofulous cause. Two months after commencing the treatment, I learned that her grandmother was rachitic, and that her mother and aunt had curved spine. In this case, it is true, I had already admitted inheritance, based on the fact that an elder brother, who resembled my young patient very much, died at the age of sixteen, of acute hydrocephalus: there were also three other children, all of whom were feeble. The parents were blind to all these facts, and they found it very difficult to understand the generalization of the disease in the family. It seems that the scrofulous children were a source of constant trouble and mortification to the parents, who attempted to

limit their misfortune, by taking advantage of some apparent differences in the scrofulous diseases.

Many errors of this kind, it must be admitted, are committed in the practice of medicine, and by physicians, which singularly favor the tendency of parents to deceive themselves.

I knew a mother and daughter, who were very reasonable in every other respect: they both had a goitre of the same form and size; the mother could not account for the disease of her daughter, and filial affection rendered this blindness reciprocal.

Several years since, I treated a young lady, thirteen years old, who was affected with cutaneous scrofula of the lobe of the nose on the left side, and with cervical tubercles. The mother of this young person enjoyed good health, but she had constant leucorrhœa and moist eyes, especially the left; the puncta lacrimalia performed their functions badly; and the tears accumulated on the loose edge of the lower lid, and in the internal angle of the eye. This lady also had embonpoint which was not of a good character, and which, with the catarrhal affections I have mentioned, revealed a scrofulous habit. One day, when leaving her, I met her father, who was of delicate constitution, and who had an ulcer of a very bad character on the left side of the lobe of the nose, in the same place as that of his granddaughter. Of this disease in the grandfather I had been kept in ignorance; and when I remarked upon its connexion with the disease of the granddaughter, the allusion was understood with difficulty.

In the spring of 1825, I was consulted in regard to a young lady, ten years old, affected with impetigo of the hairy scalp, which had been considered tinea. The elder sister of this young lady had palpitation of the heart, and her chest was badly formed. Having remarked that her waist buckle was not straight, I was led to think that in these two sisters there was curved spine; this was doubted by the parents, but was finally

admitted, these girls having been undressed in my presence. I have observed many cases of this kind. The elder of these two persons, in regard to whom I was consulted incidentally, seemed to me more sick than her sister; and I would say, that these two children would not have had, at their age, such serious diseases, were they not predisposed to them.

The aunt of these young girls, the sister of their father (who died when forty-two years old, with pulmonary tubercles), consulted me about their health, but was not disposed to admit the hereditary origin of their diseases. This lady was extremely fleshy, which she considered a sign of good health, but which I regarded only as a hypertrophy of the cellular system and skin, so common in scrofulous subjects. It was useless for me to designate this embonpoint in this manner, although I pointed out on the phalanges of the fingers, cicatrices which were the remnant of obstinate chilblains; both eyelids had been inflamed for a long time; and the teeth were bad. This lady had a son who presented most of the marks of a scrofulous constitution.

Let it not be presumed that these illusions of self-love belong only to the higher classes of society. Sixteen years since, when talking with a patient in the hospital St. Louis, about the health of his brothers and sisters, he insisted that he was the only one of the family who was scrofulous: he added that he had a *very beautiful* sister at Paris, who was going to leave that day for Metz. I made my arrangements to see this lady before her departure: she was one of my old patients, and still had a tuberculous tumor in the right side of the neck, for which I had treated her two years before at the hospital St. Louis. I tried to persuade her to enter my wards, and to be treated by preparations of iodine, which I was then trying for the first time; but she had taken her place in the diligence,

and she wished to return to her family, where she died suddenly shortly after her arrival.

The fireman whose case has been reported, did not intend to conceal from us the truth: he firmly believed his sister was too handsome to be sick, and if the form of his niece was altered, this disease had no connexion with the tubercles with which he was affected.

It is always very difficult to collect observations of this character, and the more so because the parents are so blind. The ties of marriage, maternal and filial affection, and more especially self-love, produce illusions, against which we must guard, without always attempting to dispel them. We must say, however, that in some persons these illusions are so deeply rooted, that they continue after investigations which might be thought indiscreet, and even cruel.

I could write a longer chapter on these human foibles: they might even be considered as causes of scrofulous diseases, as they prevent patients from receiving the special treatment and regimen demanded by their health: but I will leave this task to the reader, in which he may be aided by our remarks on the spontaneous development of scrofula, and on its generality in the family.

We here conclude our researches: we are aware that our book is imperfect, and yet we believe we shall contribute to the progress of science and the art of healing, if we are fortunate enough to have our new opinions adopted by the physicians of our age: these opinions are the result of more than thirty years' personal experience in a large hospital, and an extensive practice. We are convinced that they are true, and that they will throw new light on therapeutics, which has been our constant aim.

APPENDIX.

As iodine is so warmly recommended in the course of this work for the treatment of scrofula, and as it enjoys in all countries a well-merited reputation for the cure of this disease, we shall now proceed to present some of the formulæ of its different preparations, *which have been found beneficial.*

Pills of Iodine.

℞ Iodinii, gr. $\frac{1}{8}$j. Twice a day in pills.

Tincture of Iodine.

℞ Iodinii, ℈ij;
Alcohol (36°) ℥j.

Mix.

20 drops contain about gr. j of iodine.

Give iv—x and even xx drops, progressively, three times daily, in half a glass of distilled water, sweetened with sugar.

M. Magendie states, that a drop of this tincture weighs two thirds of a grain, while a drop of the different solutions of hydriodate of potass weighs from one to two grains. This should not be forgotten when we administer these medicines in drops. The prescriber should be aware of the exact strength of the tincture or solutions which he orders, and these vary considerably in the shops.

Iodurettted Sulphuric Ether.

℞ Iodinii, gr. vj;
Ether. Sulph., ℥j.

Mix.

10 drops contain 1 grain of iodine.

Tinctura Iodinii, c.

℞ Iodinii, ℥j;
Potassæ iodidi, ℥ij;
Spiritus rectific. Oij.

Dissolve and strain. Dose ♏x—xxx, twice or three times daily.

Iodurettted Mineral Waters.

	No. 1.	No. 2.	No. 3.
℞ Iodinii.	gr. $\frac{3}{4}$,	gr. j,	gr. j$\frac{1}{4}$:
Potass. iodid. ç	gr. j$\frac{1}{2}$,	gr. ij,	gr. ijss;
Aquæ distill.,	℥viij,	℥viij,	℥viij;

Employed by M. Lugol in the treatment of scrofula.

At first ℥vj, then ℥viii of the water, No. 1, daily, in two or three doses. After the first fifteen days, ℥viij of No. 2 is given daily; and in the fourth fifteenth, ℥viij. of No. 3. These liquids should be sweetened at the moment of administration.

Iodurettted Solution. (Lugol.)

℞ Iodinii, ℈j;
Potassæ. hydriod., ℈ij;
Aquæ distill., ℥viij. Dissolve.

Six drops of this solution are given twice a day in half a glass of water, sweetened with sugar. Each week the dose should be increased two drops, until it has reached xxx or xxxvj drops.

If the sugar be added to the mixture, a decomposition is effected.

Iodureted Solutions of Iodine for External Use. H. St. L.

	No. 1.	No. 2.	No. 3.
℞ Iodinii,	gr. ij,	gr. iij,	gr. iv;
Potass. iodid.	gr. iv,	gr. vj,	gr. viij;
Aq. distill.,	Oj,	Oj,	Oj.

Employed in lotions, collyria, and fomentations in scrofulous affections, and injections in fistulous passages, the nasal fossæ, &c.

Rubefacient Solution of Iodine. H. St. L.

℞ Iodinii, ℥iv;
Pot. iodidi, ʒj;
Aq. distill. ℥vj.

Fiat solutio.

Employed to stimulate scrofulous ulcers, &c.

It is also employed in baths, added to a sufficient quantity of tepid water, until this becomes yellow.

Iodated Cataplasm. H. St. L.

℞ Cataplasm. lini, q. v.;
Solutionis iodinii rubefacient., q. s.

Misce.

This cataplasm is applied very hot to glandular swellings, chronic glandular swellings, &c.

Caustic Iodine. H. St. L.

℞ Iodinii,
Potass. iodidi, āā ʒj;
Aquæ distill., ℥ij.

Solve.

This preparation is used when the rubefacient solution fails to excite scrofulous ulcerations, and to apply to cicatrices, &c.

Iodated Baths. H. St. L.

	No. 1.	No. 2.	No. 3.	No. 4.
℞ Iodinii,	℥ij,	℥ijss,	℥iij,	℥iv;
Potass. hydriod.	℥iv,	℥v,	℥vj,	℥viij;
Aq. distill.	℥vj,	℥vj,	℥vj,	℥vj.

Solve.

This solution is added to a bath, prepared in a wooden vessel.

At the infirmary for scrofula at Margate, the greatest benefit is produced by warm iodated fomentations.

In the iodureted baths for children, the drachms of the iodine and the hydriodate of potass are changed for scruples of the same material. They are employed with success in scrofula.

Iodated Pommades. H. St. L.

	No. 1.	No. 2.	No. 3.	No. 4.
℞ Iodinii,	gr. xij,	gr. xviij,	ʒj,	gr. xxi;
Potass. iodidi,	ʒiv,	℥ij,	℥ijss,	℥ijss;
Adip. recent.	℥ij,	℥ij,	℥ij,	℥ij.

Misce.

Used to dress scrofulous ulcers, and in frictions, to swellings of the same nature.

Unguentum Iodinii Comp. (Ph. Lond. 1836.)

℞ Iodinii, ʒss;
Potassæ iodidi, ʒj;
Spiritus rectif., ʒj;
Tere simul et adde adipis, ℥ij.

Pommade of Iodine. H. of Italy.

℞ Iodinii, ʒss;
Adipis, ℥jss.
Fiat unguentum.
Used in frictions upon indolent tumors, &c.

HYDRIODATE, OR IODIDE OF POTASS.

It possesses the same properties as iodine, except that it is not quite so active. It is used in combination with that medicine in the treatment of bronchocele, scrofula, certain cases of cancer, scorbutic swellings of the gums, hypertrophy of the heart, &c.

INTERNALLY.

Dose, gr. v—xxx.

Solution of the Hydriodate of Potass. F. de M. (Hydriodate of potass, ʒss; distilled water, ℥j; a drachm of the solution contains gr. 4½ of the hydriodate). Gutt. xx—ʒss, and even ℥j daily, the dose being gradually increased.

Liquor Potassii Iodidum Comp.

℞ Potassii iodidi, gr. x;
Iodinii, gr. v;
Aquæ distillat., Oj.
Misce.
Dosis x—xx bis vel ter in die.

Solution of the Hydriodate of Potass with Iodine.

℞ Potassæ iodidi, ʒss;
Aquæ distillat., ʒj.
Solve, et adde,
Iodinii, gr. x.
Misce.
Guttæ v—xv to be taken daily in sugar and water.

Pills of the Hydriodate of Potass.

℞ Potass. hydriodat., ʒijss;
Aq. distillat., ʒiij;
Micæ panis, q. s.
Divide in pilulas cl. Take 2 morn and night.
In hydrocele, white swellings, tumors, &c.
Each pill contains a little less than gr. 5 6ths of the hydriodate.

EXTERNALLY.

Pommade of the Hydriodate of Potass.

℞ Potass hydriodat., ʒss;
Adipis, ℥jss.
Fiat unguentum.
Employed in frictions, half a drachm at a time, and, at the end of eight days, a drachm morning and evening, in hydrocele, scrofulous tumors, and certain enlargements of the testicles.

I frequently use ʒjss to ℥jss in similar cases, over the scalp in congenital or chronic hydrocephalus, in enlargement of the liver, spleen, ovary, uterus, testis, in hydrocele, in lepra, and other obstinate cuta-

neous diseases. When the skin is reddened, I desist until it has assumed its natural color, and add ʒss of liquor opii, or gr. i—ij of morphia to the ointment.

Pommade of the Hydriodate of Potass with Iodine.

℞ Potass. hydriodat., ʒss;
Iodinii, gr. x—xx;
Adipis, ℥jss.

Misce.

A scruple should be used in frictions in the same cases as the preceding.

IODIDE OR IODURET OF LEAD.

It possesses the same properties as iodine, but is much more energetic in its action. It is used in the same cases as that medicine.

The iodide of lead is considered by far the most valuable of the metallic compounds of iodine. It does not cause cutaneous inflammation, like the preparations of iodine and hydriodate of potass, and succeeds when all these have failed. The dose is from a quarter to half a grain; and the ointment is composed of ʒj to ℥j of lard.

INTERNALLY. Gr. 1-2---j in pills, which should be gradually increased to gr. xij and gradually to gr. xx—xxx.

Pills of Iodide of Lead.

℞ Plumbi iodidi, ʒss;
Confect. rosæ, q. s.

In pilulas cxliv divide. Take one pill morn and night, and gradually increase dose to twelve daily.

In scrofula, tabes mesenterica, schirrous tumors, &c.

EXTERNALLY.

Pommade of the Iodide of Lead.

℞ Plumbi iodidi, ʒj;
Adipis, ℥j;
Olei limonis, q. s.

Fiat unguentum.

Employed in frictions, and to dress scrofulous ulcerations.

I have found this ointment more efficacious than any other in scrofula of the glands of the neck in children. I also apply in solution ℈j—ʒj to ℥vj of distilled water, as a lotion to scrofulous and cancerous ulcerations, and add morphia or liq. opii. sed.

IODIDE—IODURET OF ZINC.

The ioduret of zinc possesses nearly the same properties as the hydriodate of potass. It is only employed externally in frictions on scrofulous tumors.

Ointment of the Iodide of Zinc.

℞ Zinc., iodidi, ʒj;
Adipis preparatæ, ℥j.

Fiat unguentum. Use twice daily, in frictions.

IODIDE OF ARSENIC.

It possesses the properties of its two compounds. It is only used externally in tubercular herpes.

Pommade of the Iodide of Arsenic.

℞ Iodidi. arsenic., gr. iij;
Adipis prep., ℥j.

Misce.

IODIDE OF BARIUM.

Its properties are analogous to those of the preceding substances Employed only externally in scrofulous swellings.

Pommade of the Ioduret of Barium.

℞ Iodidi. barii, gr. iv;
Adipis prepar., ℥j. Misce.

In frictions, in slight scrofulous engorgements.

IODIDE OF SULPHUR.

It possesses properties similar to the preceding substances. It is only used externally in certain cutaneous forms of scrofula and tubercles of the skin.

Pommade of the Ioduret of Sulphur.

℞ Iodidi. sulphuris, gr. xxij;
Adipis prepar., ℥vj.

Fiat unguentum.

Another formula contains 8 parts of the ioduret to 134 of lard.

IODIDE—(HYDRIODATE) OF IRON.

Stimulant, tonic, possessing the properties of iodine and iron.

INTERNALLY. Gr. ij—iv a day, in pills, rapidly increased to gr. xv—xx. Dr. Thomson advises it in draughts.

Pastilles (Lozenges) of Hydriod. of Iron.

℞ Ferri hydriod., ℥j;
Croci pulv., ℥iv;
Sacchari, ℥viij.

Divide in pastillos ccxl. Dosis viij—x quotidie.

Chocolate of Hydriod. of Iron. Gr. cxv—Oj. Half a cupful a day, in some cases.

Wine. ℥iv—Oj. of Bordeaux, ℥ss morning and evening.

EXTERNALLY. ℥iv. Oj of water, in enemata, injections, lotions, several times a day.

Baths. ℥ij to any quantity of water.

Ointment. ℥iss—℥j—℥j. *In frictions.* Night and morning.

Iodated Sarsaparilla.

℞ Decoct. sarsapar., Oij;
Potassæ hydriodatis, ℥j;
Syrupi aurantii, ℥ij.

To be taken in twenty-four hours.

Ioduretted Cynoglossus.

℞ Decocti cynoglossi, Oij;
Potassæ hydriodatis, ℥ss;
Syrupi menthæ, ℥ij.

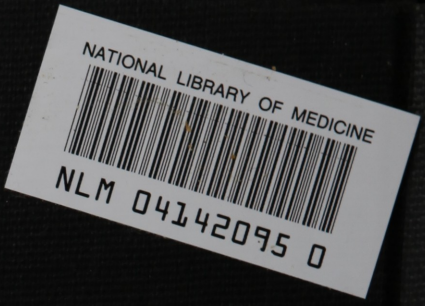
Dose as above.

Iodated Collyrium. (Magendie.)

℞ Aquæ rosæ, ℥vj;
Potassæ hydriodatis, gr. xxiv;
Iodinii, gr. i—ij.

This solution is applied four times a day, in ulcerations of the conjunctiva and cornea in scrofulous habits, and a cure is effected in a month. Morphia is sometimes added.

THE END.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