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Cbe Social
Danger of Syphilis

The most important and the most effectual means for combiting the diffusion of venereal maladies consists $\ln$ widespread information as to the importance of these maladies and the very grave dangers attending them. It is especlally necessary to teach young men not only that chastity and continence are not injuriuss, but that these virtues are highly recommended from the medical point of view. -Unanimous Resolution of the second Brussells Congress, 1902, for the prevention of venereal diseases.

# The <br> <br> Social Danger of Syphilis 

 <br> <br> Social Danger of Syphilis}

By PROFESSOR ALFRED FOURIER<br>Member of the Academy of Medicine Paris

One of the most renowned authorities in the world on the vice diseases

# A Report Submitted to the International Congress at Brussels, 1899, for the Prevention of Venereal Diseases 

Translated, abridged and copyrighted by Ernest A. Bell, 1912 Translation revised by Winfield Scott Hall, M. D., Professor of Physiology in Northwestern University Medical School, Chicago

Published by
The Board of Social Service and Evangelism
The Presbyterian Church in Canada 436 Confederation Life Building, Toronto

## RA 644

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## THE SOCIAL DANGER OF SYPHILIS.

Syphilis constitutes a social danger from four proncipal points of view :

1. From the individual damages which it inflicts on the patient.
2. From the collective damages which it inflicts on the family.
3. From the hereditary consequences which it carries with it, notably from the frightful mortality with which it strikes the children.
4. From the degeneration and corruption which it inflicts on the race.

Each of these propositions requires its proofs, and these proofs are here submitted.

## I <br> INDIVIDUAL DAMAGES.

Syphilis, I have said, in the first place, constitutes a social danger from the damages which it inflicts on the individual patient.

This first point is one of common notoriety. So I need not take much time to demonstrate that syphilis is, for the individual, z serious, important, and grave disease, at times indeed very grave. I limit myself to stating thr ${ }^{+}$which is not less known; namely, that it is a disease 'stremely fruitful in manifestations of every kind, anc. all manifestations capable of localizing themselves in all parts of the living body, and equally capable of results the most varied-results, immediate or remote, indeed at time :lmeasurably slow and knowing no end but the end : life itself.

To consider them only from the viewpoint of prog-nosis-the only one which ought to occupy us espe-cially-the incredibly numerous and diverse manifestations of syphilis divide themselves naturally into two groups.

On the one hand are the manifestations which are mild, or relatively mild at least, superficial and transient. They may be hard to bear in various ways, painful in various degrees, exposing and vexatious; but altogether they do not constitute (with rare exceptions) serious dangers, and above all they do not menace the integrity of an organ or of life.

The other manifestations, on the contrary, are always more or less important. They deeply involve the tissues; they are parenchymatous, as we say in technical language; they are disorganizing, ulcerating,
hardening, in a word, destructive. Under this form. consequently, they are always grave, indeed often enough very grave, to the point of putting in jeopardy it may be the life of an organ, it may be even the life of the person.

Of these manifestations we know also that those of the first group arise in what is called the second stage, and those of the second group compose the third stage.

The third stage then comprises those injuries which constitute the ordinary gravity of syphilis. It is this which makes syphilis a dangerous, menacing disease, at times mortal, and oftener mortal than we have believed until now, and now far oftener than most people believe. This then is what claims our study in view of the special subject which actually occupies our attention.

Relatively to the third stage which comprehends almost all of the individual dangers of syphilis two questions present themselves for us to face.
I. What is the frequency of the eventualities of the third stage, of all forms and all terminations?
2. What are these injuries or lesions called the third stage, and especially, what is the frequency of the most menacing-the most grave?
We will examine these two points.
I. I shall be brief with the first question, and for a good reason. Indeed, to determine in what proportion of frequency syphilis goes on to the third stage, is a problem actually not solved, in truth it is likely never to be solved. Have we, indeed, the possibility of following our patients perpetually? And how much will the number be reduced, for each of us, of those whose whole pathological history we know, and with regard to whom we are able to affirm that they will or will not remain uninjured by the third stage till their death? We see, when they remain faithful to us, those who are attacked by the third stage; but those whom the third
stage spares escape our observation, at least the most of them.

That which we know in the matter is only this, that the third stage is more or less common according to various conditions, such as the following: Age, constitution, temperament, previous state of health; predispositions, hereditary, or acquired; morbid forms; superadded complications; intervention or nonintervention of treatment, and other things. So, to cite as an example only one of these conditions, we are in position to affirm this; that the third stage is exceedingly common, almost inevitable, in the persons who have not been thoroughly treated or not treated at all. In proof of this there is an infinite multitude of thirdstage lesions readily observed as unrecognized consequences of syphilis, which necessarily have been left to their usual development without any medical repression. On the other hand, the third stage is rare, at least relatively, with those persons who have been subjected to a methodical and prolonged treatment.

But, excepting some ideas on the relative frequency of the third stage following the circumstances of the second, we know nothing pertaining to its absolute frequency. In one hundred persons affected with syphilis how many on the average reach the third stage? We lack precise estimates on this point. I will say nothing then of figures which have been produced on this subject except those which I shall produce myself.

At all events, it is all too certain by experiences that the third stage is common, exceedingly common, and this in both sexes and in all classes of society.

Daily, for my part, I have under my eyes a "quarantine" of such cases of every sort in my wards at the St. Louis Hospital, and I have met an almost equal number of them at each of my weekly consultations at the same hospital. In the hospitals not specially for venereal diseases there is not a single clinic-I take this
from my colleagues-where they do not meet, uniformly from one end of the year to the other, certain visceral affections of syphilitic origin. Likewise, throughout the city the third stage abounds and superabounds under forms the most diverse. In my own practice and in my office-the only place where I can make a record of what I see -I have observed more than five thousand cases of this sort.
It is useless, then, to insist further on this first point. The frequency, the excessive frequency of the third stage in our society is an incontestable fact, moreover, a fact not contested. Now it is to the third stage, I repeat it, that almost all the lesions pertain which constitute the individual danger of syphilis.
II. Second point: What lesions compose the third stage? And especially what is the frequency, in this group of lesions, of the most menacing-the most grave?

To this double question my answer is the following statistical table, based on 4,400 patients- 4,000 men and 400 women, children excluded-whom it has been given to me to observe personally and in my practice in the city. It is thus a document whose absolute accuracy and authenticity I am able to guarantee.

> NATURE OF LESIONS OBSERVED.
Number
of Cases Tertiary Syphilides-affections of the skin
,451
,451
Subcutaneous gummata-tumors under the skin
Subcutaneous gummata-tumors under the skin ..... 204 ..... 204
Tertiary Lesions of the genital organs .....
271 .....
271
_ - - of the tongue .......................
262
262
of the pharynx ..... 215
of the lips ..... 94
of the tonsils ..... 42
of the pituitary ..... 12
Lesions involving the whole throat
11
11
Lesions of the bones
Lesions of the bones ..... 519
Lesions of the nose and bony palate .....
229 .....
229
Gummata of the tendons ..... 22
Gummata of the muscles Lesions of the digestive canal
16
16
Lesions ano-rectal ..... 8
Lesions of the larynx and trachea ..... 13

- of the lung ..... 32
of the heart ..... 23
of the aorta and arteries ..... 6
of the liver ..... 13
of the kidney ..... 9
- of the testicle ..... 31
- of the eye ..... 245
of the ear ..... 110
of the arteries ..... 24
Syphilis of the brain ..... 3
Cerebro-spinal injuries
758
758
Paralysis of one limb
29
29
Syphilis of the medulla oblongata
6
6
Tabes-including locomotor ataxia ..... 135
Tabes, cerebro-spinal
Tabes, cerebro-spinal ..... 631 ..... 631 ..... 631 ..... 45
Neurites and muscular atrophies
Neurites and muscular atrophies General paralysis (paresis) .....
24 .....
24
Ocular paralysis
Ocular paralysis
83
83
83
Facial paralysis
110
110
Various nervous affections
Various nervous affections ..... 23 ..... 23
Various local lesions ..... 13
Total ..... 19
5,749
A simple glance of the eye cast over this table is enough to make known the extreme gravity of the third stage, by showing it to us as made up of all sorts of impairments, invading the most important, the most essential organs and systems-such as the nervous system, the bony system, the vascular system, the viscera, the testicles, the tongue, the soft palate, the eye, the ear, and others. Much more surely still does this notion of gravity come out from a deeper analysis of the statistics in question. But such a task is not here in place, and it will satisfy the purpose I have in mind to put in evidence, from the figures which precede, the two following considerations:
I. First, see what a considerable, what an enormous, part nervous syphilis takes in the manifestations of the third stage; see to what an extraordinary degree of
frequency the nervous lesions rise in the third stage of the disease.

On the one hand, brain syphilis takes its place in the second rank among all the injuries of the third stage. At the head of the statistics which precede figure the injuries to the skin, the tertiary syphilides, to the number of 1,451 cases. Then, immediately after them appears syphilis of the brain, with the enormous total of 758 cases.

So, after the skin it is the brain which is the most frequently attacked by syphilis--the BRAIN, that is to say, the noble organ above all, the "prince of the organs" as our fathers called it, that which rules all the others and which governs all the human machine. Now, do I have to say what consequences the lesions of the brain carry with them? Consequences which, summed up, are nothing less than these: infirmities of locomotion, at the head of which ranks paralysis; loss of intellect, in various degrees; and death, not infrequently.

On the other hand, to the brain injuries properly so called, caused by syphilis, let us add now those which involve the medulla oblongata and the nerves of the head and spine, and those also which involve the whole nervous system-then we shall reach the total of all those lesions which are located in the ner 's. Do you know what this total will amount to? It will become astonishing-prodigious. It will exceed the figures of any other class of injuries of the third stage. It will exceed, and by far, the injuries to the skin, the syphilides, which nevertheless by common conser. constitute the most usual expression of tertiary syphilis. Let us be exact: it will be 1,857 , while that of the tertiary syphilides does not rise above $1,45 \mathrm{I}$.

In a way which is decisive, from statistics whose accuracy could not be suspected, since they are based on an array of facts just as the chance of my practice has presented them to me, the nervous system is the pre-
ferred victim of syphilis. It is that system, which of all the organic systems is most often affected by tertiary syphilis, and this with a preponderance of frequency which I was far from suspecting myself before I had made a record of my observations.

This truth, morenver, is accepted not only in the small camp of syphilographers. It begins to make its way in the great medical public. It is already some years since one of my eminent colleagues, Dr. Landouzy, said to me, "It is incredible how many nervous affections we meet traceable to syphilis, especially brain syphilis, and this both in the city and at the hospital." I learn from Professor Raymond that, from his observations, syphilis is the most common cause of the affections of the nervous system. And as for myself, I have for a long time expressed this conviction that "the principle of syphilis constitutes a poison of the whole being, and constitutes above all and principally, a poison of the nervous system."

Now, being given the quality and the importance of the functions devolving upon this system, we may judge of the gravity which the prognosis of the third stage derives from this fact.

Of this, in addition, I will produce positive proof, so far as it relates to brain syphilis, a proof which is furnished to me by the following statistics:

I have in my hands the record of 743 cases of brain syphilis observed in the city by me during $t$ : "y-nine years. Excluding from this number 389 cases which the mode of termination has escaped me, I remain in possession of 354 cases known to termination. Now what have been these terminations? Here they are, very exactly.
I. Seventy-nine of the patients in question have been cured.
2. Sixty-six are dead.
3. Two hundred and nine have survived, but with
various infirmities, often important and grave, in every case incurable, involving it may be the locomotion, it may be the intelligence, it may be the locomotion and the intelligence at the same time.

Here is the detail of the 209 cases of survival with various infirmities:

Reducing the figures relating to cures, deaths, and survivals, to percentage, for easier comprehension, we find this:

Of one hundred cases of brain syphilis, in the conditions where brain syphilis usually presents itself to the physician in the city or at the hospital, there are in round numbers:
Twenty-two who are cured.
Nineteen who die, in a manner more or less rapid.
Fifty-nine who survive, but with permanent and definite infirmities, of which a good number (such as paralysis or insanity) are little less than equivalent to death as results.
In a total then, of 100 cases, 22 are favorable, against 78 unfavorable in various degrees-and of these 78 cases 19 are fatal.

An ill-starred balance sheet, surely it is !
II. And this is not all. For there is now a second consideration well adapted to surcharge and darken the prognosis in question.

This consideration results from the advent, on the scene of syphilis, of the group of affections called parasyphilitic. Some words of explanation are necessary on this subject.

It is actually recognized, if I do not mistake, that certain affections which are observed with a very notable frequency in syphilitic persons are the consequences of syphilis without being syphilitic except as to origin. They issue from syphilis, they are recognized as being syphilitic as to their cause, but without being on this account syphilitic in their nature. To these affections I have given the name of Parasyphilitic.
Now, on the day when syphilis is doubled by parasyphilis, we can say that its gravity is increased in a considerable proportion. Syphilis, certainly, was already grave by itself alone; it has become much more grave by annexing parasyphilis-and this for three reasons, which it is essential to specify, namely :

1. Frequency of the parasyphilitic affections. So, not to speak of more than one only (in truth the most frequent of all) tabes is exceedingly common with syphilitic persons. In the statistics previously cited it figures in the third rank as to degree of frequency among all the lesions of the third stage, and this to the considerable number of 631 cases in 4,400 patients.
2. Peculiar gravity af the greater part of these parasyphilitic affectians. To say that neurasthenia, chronic mucous patches in mouth and throat, general paralysis and tabes constitute the principal types of this group will be to specify sufficiently their prognosis.
3. Failure of syphilitic treatment in affections of a parasyphilitic nature. These last are very far from being influenced by mercury and iodide in the manner of true syphilitic affections. Against true syphilis we are armed, and even well armed, while we are almost disarmed against parasyphilis; such is the sad reality of things. In consequence, we can cure, or at least we have $a$ chance to cure, a brain syphilis or a medullary syphilis; but can we cure in the same way general paralysis or tabes?

So-I repeat and I insist deliberately on this consideration, because, it seems to me, it is not yet appreciated in its just measure-so, I say, the annexation of parasyphilis to syphilis has charged the latter with new and crushing responsibilities. Positively, it has more than doubled the gravity of its prognosis, it has rendered it incomparably, infinitely more serious than before. Positively, the incorporation in the bounds of syphilis of a whole group of lesions, almost all grave and for the most part incurable, has transformed the disease, as to the sum and as to the quality of the perils which it carries with it.
Syphilis, as we understand it to-day, is very different, at least from the viewpoint of prognosis, from syphilis as our fathers were able to look on it, and as we ourselves were prone to regard it as recently as fifteen years ago. To-day, for example, we are compelled to recognize for syphilis two possible and terrible terminations, which our fathers knew nothing about, namely : general paralysis, and more frequently still, tabes.

Now, this consideration of prognosis is not, certainly, meant as a slight to the question which actually brings us together here. Only we wish to estimate it at its true value in the interest of prophylaxis.

## II

DANGERS INVOLVING THE FAMCLY.
Relatively, to the family, the social danger of syphilis resides in these three points:

Contamination of the wife;
Separation, even dissolution of the marriage;
Material ruin of the family by incapacity of its head.

Let us examine each of these points.
I. The first peril imported into marriage by the syphilis of the husband is, quite naturally, the contamination of the wife. From which results as consequence this double fact, namely:

1. The wife becomes exposed on his account to all the individual risks of syphilis, risks identical with those of the husband, and which I need not further describe, since they are known to us by what precedes.
2. The children destined to be born of this infected couple will be exposed to the worst of heredities, that is, the mixed heredity, which far exceeds in hurtfulness the exclusive heredity of one of the two partners. We know, indeed, by experience that of the three heredities which menace the unborn child (paternal heredity, maternal heredity, and mixed heredity), the last is by far the most mischievous and the most murderous. This is a point which I believe I have rigorously demonstrated in my book on Syphilitic Heredity, published in Paris in 1891.

Now-a capital question in this connection-is the married woman often contaminated in marriage, that is, of course, on account of her husband, all con-
tagions of another origin being left out of the case?
Yes, certainly yes, it is exceedingly common that the married woman, the virtuous wife, is conjugally infected with syphilis-and this in one or other of the three following ways. It may be that this infection comes from the syphilis of the husband contracted before marriage-which is by far most frequently the case; or it may come from the husband's syphilis contracted after marriage; or lastly, it may proceed from an unborn child hereditarily infected
by the father.
This fact, this sad fact, I am in a position not only to affirm from my observations as a practitioner, but to specify its frequency numerically from an inquiry which I instituted on this subject and pursued for a long time. This investigation, which I long ago reported to the Academy of Medicine, the lack of space forbids me to reproduce here. But it will readily be granted me to summarize the results, actually deduced from more than a thousand observations. These results are as follows:

In city practice, of 100 syphilitic women (sexually infected, all other modes of contamination being left out of the case) I have found:
Eighty-one belonging to the category of irregulars of every sort; and nineteen belonging to the class of married women-I state precisely, nineteen who had contracted syphilis from their husbands, who were duly proved syphilitic by me.

Nineteen in 100, this makes in round numbers one in five; that is to say, among syphilitic women one woman in five is conjugally contaminated.
At various times since I produced the stitistics cited above $I$ have renewed this inquiry, and always to arrive at results almost identical-I7 per IOC, 21 per 100, 23 per 100. So I believe an average of
face to face with the husband who has inflicted on her such a defilement, sentiments of repulsion, of disgust, of contempt, of anger, of indignation.

In the eyes of a virtuous woman syphilis, above all under its vulgar and grosser naine of "pox," is a disease shameful, ignoble, low bred; it is a stigma -f wantonness, of debauch, almost of infamy; it is the disease of the bad women, of the harlots, of the reprobates. "What a disgrace to mel" said a young wife of the better class to me recently, who had been contaminated by her husband. "The wretch has treated me like a harlot, he has given me the disease of the harlots!"

It is thus that very often syphilis introduces into the home an element of disaffection, of disunion, even of absolute division.

Most often, in truth, "things arr arranged," as they say, and this for various reasons which it would be superfluous to produce here. May be the wife does not understand, or (more frequently than we think) she feigns that she does not understand; may be she pardons or seems to pardon. But it is not always so, above all (be it said in passing) in cases where the family of the wife enters on the scene, to treat its son-in-law with a very legitimate severity. Besides, though the wife inclines freely to pardon end to forget it when it affects no one but herself, often it is no longer the same when children come into the consideration. Let us give an example.
One of my patients, who had already had three miscarriages, of which the cause remained unknown to her, brought forth a syphilitic child, whose disease was a revelai.on to her and which soon died. One day she said to me in her vexation: "Never will I pardon my husband for the four children which I have lost through his fault." Some time afterward, when, in view of certain syphilitic disabilities whi h
had come upon her, I attempted to induce her to acccept treatment which was repugnant to her, when I insisted on the value of the treatment for the children which she might still have, she answered me with a veritable indignation: "What an affrunt you offer me, my dear doctor 1 How can you believe that I will again bear children for the man who has killed my fourl This man is, and will be to menothing. Do me the favor, the honor, to consider me a widow." That was ten years ago, and she has kept her word.
From such germs of resentment and disunion, once they are introduced into a family, one can easily understand what the consequences may be, namely: rupture of the conjugal bond, with all the social miseries which are the usual results, such as: actual separation of the couple, under appearances of keeping up married life; and then, constant adultery of the husband, possible adultery of the wife also; or true separation, either friendly or judicial ;-or, at last, divorce.
Divorce, founded on traismission of the husband's syphilis to the $\cdots$ ife, is tar from a rarity in our days, especially in Parisian society. For my own part, I have observed twelve cases in my practice. I have it from M. Feuilloley, acting solicitor of the Republic at Paris, that in the year when he presided over the Fourth Chamber he granted eight or ten divorces for this special cause. "And the number of such divorces," he adds in a letter which he has dor: me the honor to address to me on the subject," ould be much more considerable still if the said cause were not most often passed over in silence in the decree of the court, the parties limiting themselves to reciting grievances of another class."
It is not even rare that in a like situation the rupture of the marriage comes about in a superacute
and sudden manner, the offended wife precipitating the conclusion in a rage. Thus I have seen, six times, young wives, immediately after learning that they had been infected with syphilis by their husbands, desert at once their husbands' house and return to their fathers' home.
III. A third dangèr is many times introduced into the home by syphilis of the husband. And this danger is none other than the ruin of the family; the ruin of the family by the disease, the disability or the death of its natural head, of him who ought to be the support of this family, of him who has charge of the material interests of the little commonwealth.

This also is an entirely natural consequence of the proper morbid evolution of syphilis. We know, indeed, that the results of the third stage are more or less slow, that is to say, that the third stage manifestations frequently do not enter on the scene before a long time has elapsed. Thus, in a total of 5,767 third-stage lesions I have found that 2,814 made their appearance at and beyond the tenth year. From which comes this proportion: In 100 manifestations of the third stage 51 are before or at the tenth year after infection, and 49 are after it.

So it comes to pass that, very often, the mature man expiates the sins of the young man;-so that syphilis, commonly contracted in the years of youthful folly, during single life, frequently presents its bill to pay (allow the expression) at the age when the young man of other days is transformed into a serious man, a husband and a father of a family. Especially, then, it is the married man who pays the debt of the bachelor, and this fact is greater in respect to its consequences as we come to see it.

For the debt in question may be heavy. It may consist in an injury capable of disabling an important organ, an essential system, even of menacing
life. This injury, indeed, may be a brain syphilis, or a medullary syphilis, or a deep inflammation of the eye, or locomotor ataxia or general paralysis. And thence as definite result comes the possibility of grave functional trouble, very grave, truly permanent and irremediable, such as paralysis of one side, or of the lower limbs, or of one limb, blindness, deafness, or loss of intellect.

And then?-And then, by the disability of its head, behold the family in distress, at least when it does not possess a patrimony (a rare thing) which permits it to live without the work of the husband. In any case you see it knocked on the head, reduced in resources; and so very often you see it fall at a stroke into poverty, torment, misery.

How often have I seen misery install itself in the home because of the disability of the head of the family, stricken down by syphilis. Then the social dangers of syphilis are actually on the order of the day, and even deserve to be considered in the first rank.

Such calamity is not zare, I repeat. At the hospital it escapes us and passes unperceived, because at the hospital we know nothing of our patients but their disease , and nothing about their circumstances. But in the city, where we penetrate into the interiors of homes and are present and see the distress of families, it forces itself very often upon our observation.

To establish the fact by giving some examples will not be super duous, for with this particular consideration we are, it seems to me, in the very heart of the question.

A workman, an engraver, contracted syphilis at the age of twenty-three and treated it carelessly. At thirty years he married and soon became the father of two children. Skillful at his trade, earning 8 to 1o francs a day, he provided easily for his family.

But, at a stroke, in consequence of his old disease, he was seized with a serious brain syphilis, which ended in paralysis of the right side, with permanent contraction and rigidity of the muscles. Work was henceforth impossible. Consequence: misery, black misery. Fortunately, a charitable woman took care of the two children. But the wife remains without means, with a sick husband; she and he live on one franc and fifty centimes a day (thirty cents) which the unhappy woman earns laboriously with her needle.

A young architect married seven years after he had contracted syphilis, which though negligently treated had remained remarkably mild until then. Six months later he was seized with cerebro-spinal symptoms manifestly syphilitic. He died, leaving a wife and very young child in absolute destitution.
A young artist, a painter full of talent and prospect, married some years after he had contracted syphilis, which he too did not have very thoroughly treated. All went well for several years. His pictures sold, the little household prospered, and was enriched with a child. Then there came upon the husband an affection of both eyes, the nature of which was at first unknown, and which, treated too late with remedies for syphilis, resulted in complete blindness. Result: a family ruined, falling into poverty, and forced to register at the bureau of charity so as not to die of hunger.

And how many more tragedies of this kind, all caused by syphilis, could I not recite!

## III <br> HEREADITARY CONSEQUENCES

In the third place, syphilis constitutes a social danger by the hereditary consequences which it carries urith it, notably by the frightful mortality with which it menaces the children.

Hereditary consequences are, above all, the social danger of syphilis. These consequences there is only one word to describe. They are dreadful, and this word is seen to be used most legitimately from the facts which follow.

Oh! without doubt, these hereditary consequences are not inevitable, unescapable. For if that were so syphilis would be the most active of all the factors of depopulation-which it is not, thanks to Heaven. And I hasten to say that its hereditary influence can be counterbalanced, dimisished, even annihilated by specific treatment. So true is this that it is quite common to meet persons who, though syphilitic, have had healthy children, free from all taint.

But insufficiently treated or, still more, if left to its own natural evolution, syphilis proves singularly hurtful to the young, hurtful in many ways, and very often hurtful even to death. Someone has said that "it kills the young by hecatombs," and the word is no exaggeration. It remains to be said that it stands ready to kill them at various ages. Thus:

It kills them oftenest from the first months of conception. Hence, "syphilitic abortion," noted for its frequency.
It kills them often also at a period more advanced in the pregnancy, namely, in the last months of ges-
tation. Hence, premature confinement, still extremely common.

It kills them at their birth. Children suffering from hereditary syphilis see the light of day only to die after a few hours!

It kills them, and that with a frequency known of all, in their first weeks.
Thus official statistics of public charity give a total of 458 children dead in 996 births from syphilitic women who came to be confined in the hospitals of Paris from 1880 to 1885 . Proportion of infantile mortality: 40 per cent.

At other times it lets them live for a wiile, some years may be, even to adolescence, to kili them at long range by some injury arising from what has been called slow hereditary syphilis, which is very common, infinitely more common than is generally believed, because generally it remains unrecognized.

A second fact not less essential to note is that, very frequently, this murderous action of syphilis is maintained and continued through a whole series of pregnancies. Thus nothing is more common than to meet families where, from the fact and from the exclusive fact of syphilis, a whole series of miscarriages has been produced-for example, two, three, four. Not to speak of those cases, naturally very rare. where abortions have been seen to follow one anothe: in a series, so to speak, even to the number of five, six, seven, eight, nine, ten, eleven; twelve, or even more.

Example: One of my patients at the St. Louis hospital, a woman of good constitution, but syphilitic and married to a syphilitic husband, had twelve miscarriages, and that without any other appreciable cause than her syphilitic condition. Since then she has had four children, of whom three died at a very early age "of meningitis," and the last, a llttle
old, rickety and distorted creature, is due in all probability to undergo the lot of his elders.

Later. I have just learned that this easy prediction has been realized.
Likewise it is altogether common to meet syphilitic families where, not to speak of abortions, many children have come to term (or about to term) and have succumbed at various ages, and oftenest at a very young age, from the undisputed fact of syphilis. It is by thousands that one could produce the cases where syphilis has killed in this way two, three, four, five children in the same family.-In other cases; that we may cite the number of deaths rises higher, and still higher, in certain families.

## Examples:

CASE or
Dr. Behrend .................................... deaths births
Dr. Turhman ................................................ 8 11
Dr. Comby .......................................... 8 11
Prof. Moncorvo ....................................... 8 11
Personal .............................................. 8 8


Dr. Apert $\ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots . .$.


Dr. Bryant ….................................... 10 11

Personal …........................................... $11 \quad 12$
Dr. Nobie .................................................. 11 15
Davis ............................................. 12 15
Dr. Ribemont-Dessaignes ............................................. 15
1819
Moreover, syphilis frequently exterminates in germ the posterity of certain families. There are families where it makes the void complete, where it makes a clean sla $:$. Here are some examples among hundreds of such cases which I might produce: observation of
Bertin ..... births deaths
Cazenave ..... 4 ..... 4
Dr. Anteaga ..... 4 ..... 4
Dr. Orlowski
Dr. Legrand ..... 4
Dr. Hutinel4
4
4
Dr. Lemonnier ..... 4
Dr. Perrin ..... 4
Personal ..... 4

- ..... 4 ..... 4
Dr. Pinard ..... 4
Dr. Hermed ..... 4 ..... 5
Dr. Helene Krykus
Dr. Helene Krykus Personal ..... 5
5
Dr. Tanner Dr Tanner ......................................................... 5 ..... 5
Dr. Trousseau ..... 5
Dr. Tardiff
6
6
Dr. Hudelo
6
6
Personal ..... 7
Dr. Ermasus Wilio. ..... 7
Dr. Christian ..... 7 ..... 7
Dr. Bar ..... 8
Dr. Porak ..... 8
10
Etc., etc. ..... 11
Ali this, moreover, is known, all this has even become common knowledge, since numerous works have been published on this point and thousands of observations have converged to the same meaning, without discord, to confirm these results. So much so that polymortality of children in a family has become in our days a usual sign for the diagnosis of hereditary syphilis. Not, surely enough, that syphilis stands alone in killing children in such a way (for we know that tuberculosis, alcoholismi, lead poisoning, and other things exercise on children an influence of the same order) ; but, equally surely, such is the frequency with which syphilis cruelly kills the young that this polymortality of infants should not fail to arouse a suspicion of syphilitic heredity, a suspicion which other signs come most often to confirm.
To that which precedes I would have now to add a number of considerations not less important and
curious, if I had to do here the work of a pathologist. I would have to say, for example, that this hereditary hurtfulness of syphilis varies in intensity according to a sumber of conditions. Thus we learn from statistics that:
I. As to its origin, the paternal heredity is that which shows the least mortality ( 28 per 100) ;-the maternal heredity, infinitely more dangerous, carries with it a mortality more than double the preceding, namely: 60 per 100 ;-finally, the mixed heredity furnishes the maximum of mortality, with the figure of 68 per 100.

2. This hereditary hurtfulness of syphilis varies notably according to the social position. In the city the mortality of children born of syphilitic mothers varies from 60 to 61 per 100, approximately. At the hospital I have seen it rise to 84 , even 86 per 100.-This last figure, in truth this terrible figure, has ieen furnished to me by statistics gathered at Lourcine, a hospital where the young free prostitutes seek rather than fear a miscarriage, and conduct themselves accordingly.
3. Lastly, it appears from experience that this hereditary hurtfulness shows itself very irregularly according to the age of syphilis. It attains its maximum in the first three years of the disease ,to decrease beyond. So that time weakens, attenuates, and finishes even (but slowly) by annihilating the hereditary syphilitic influence.

However cursorily I may be obliged to touch these various points, as so many others referring to the same subject, there is one nevertheless to which, by reason of its high importance, I will give here particular mention. It relates to the extraordinary malignity which the hereditary syphilitic influence assumes when it takes effect in the first periods of the disease. It becomes then verily a scourge of hurt-
fulness, which passes beyond all that one could believe.
Thus I have seen, with my own eyes, this:
Ninety women, infected by their husbands, have become pregnant in the first year of their syphilis. Now with what results have these ninety pregnancies terminated?

Fifty have terminated in abortion or the birth of stillborn children;

Thirty-eight in the birth of children which have quickly died;

And two (only two) in the birth of children which have survived.

And the hecatomb of children-let every one note this well--where have I observed it? Not at the hospital, not at Lourcine, that is to say, in the lower social grade, where various conditions of bad hygiene, of overwork, of misery, of debauch, constitute undeniable predisposition to abortion, but in the city. I need to state it precisely, in the city and in my private practice, that is to say, in good creditable or even aristocratic families, among young wives of good constitution and healthy for the most part, enjoying all the privileges of hygiene ard of fortune. This first year of infection is, then, above all the terrible year from the viewpoint of heredity.

IV

## DYSTROPHIES AND DEGENBRAOIES OF HEREDITARY SYPHILTS

Lastly, a fourth order of dangers results from these curious dystrophies of hereditary syphilis, which we have begun to study only a little while ago, and ot which a good number, from their high importance, constitute for the individual as well as for the race veritable stigmas of forfeiture, of debasement, of inferiorization, of degeneration.

These hereditary marks of syphilis, which do not exhibit the true syphilitic quality, which are not syphilitic properly speaking, assume the character of dystrophic manifestations.
"They consist, nearly all, under forms infinitely varied, in failures of natural development, resulting in imperfections, in abnormalities of organs, in arrested or defective formations, in deviations of type, etc., indeed, in their highest degree, in veritable monstrcsities.
"From this cause, for the individual, comes a lessening of vitality and of vital resistance; whence comes for him an inferiorization, in degrees naturally very various, in relation to individuals better endowed than he, better armed than he for the struggle for life; whence comes definitely a start, in varied degrees, towards degeneracy." (Dr. Edmond Fournier.)

These dystrophies produced by hereditary syphilis it would take a volume to describe. I shall be obliged, then, so far as they are concerned, to hold myself here to a mere mention of the most prominent, or
rather to a simple enumeration of the heads of chapters.
With the author of a recent monograph on the subject, Dr. Edmond Fournier, I believe that we can divide them naturally into three groups, in the manner following:

1. Some of them involve the individual in a partial way, by affecting him in one system, in one segment of a system, indeed in one organ only, separately.
2. Others have qualities of a general order, which extend to the whole being, which affect it together and in all its parts.
3. Others, lastly, infinitely more rare and difficuit to define, are characterized by the excess even of the dystrophy, by the exaggeration of the anomaly, and constitute monstrosities.
I. - In the first group, to cite only the principal types, the various dystrophic types take their place as follow:

Dental dystrophies, extremely common, as we know, with hereditary syphilitics; and maxillary dystrophies (atrophy of the incisive bone, cleft palate, hare-lip, etc.) ;

Malformations of the skull, in very varied types (large bulging head, unsymmetrical skull, natiform skull:-microcephalus;-hydrocephalus, etc.) ;
Nasal dystrophies;
Oc:alar dystrophies;
Auricular dystrophies;
Spinal dystrophies (lateral curvature; - cleft spine) ;

Dystrophies of members, of extremely various types: hypotrophies, asymmetries, partial elongations, gigantism, partial dwarfing, general dwarfing (of which a specimen has been afforded by the celebrated dwarf Bébé, who, very certainly, was a hereditary
syphilitic), polydactylism, syndactylism, ectrodactylism, ectromelism, hemimelism, pelvic dystrophies, congenital dislocation of the hip, club-feet, etc.;

Cerebral and medullary dystrophies;-deaf mutism;

Cardiac and vascular dystrophies ;-blue disease:congenital aplasia of the vascular system;

Genito-urinary dystrophics: ectopic testicle, nondescent of the testicle, infantile testicle, uterine and ovarian malformations, etc.

And I cannot deny that there are others!
II.-The second group, made up of dystrophies of a general character and involving the whole being, includes three principal well-known types, namely:

1. That of original dystrophies of constitution, of temperament, of vital resistance, appcaring under diverse forms at various periods of life.

In the first period of life, this native dystrophy is represented by the well-known type of the syphilitic abortive child, a little, stunted creature, puny, atrophied, debilitated to the point of not being able to suckle or cry, presenting the typical appearance of what is called infantile decrepitude or senility, coming oftenest to the light of day only to be quickly extinguished.

Later this dystrophy shows itself in that other very rare, but none the iess authentic, type of the sickly child, delicate, puny, cadaverous, hard to bring up, always sick, only coming out of one morbid state to fall into another, predisposed to all the contagions, notably to that of tuberculosis, etc.

At every period of life, finally, it reveals itself in what briefly I may call fragility of life, that is to say, an amount of vitality below the normal amount. by a less than average resistance to disease. It is certain, in short, that hereditary syphilitics are frequently carried off by diseases which do not usually
have a fatal termination. At a very young age especially ve see them sometimes die of "nothing," if I may so speak, indeed to be swept off suddenly, unexpectedly, almost without being sick; and in many cases of this kind the most scrupulous autopsy remains mute as to the interpretation oi the causes of death.-At a more advanced age it occurs not rarely that hereditary syphilitics develop a particularly serious, indeed malignant, condition, and that the reason of this gravity, of this unusual malignity, can be accounted for by nothing else than the state of constitutional debility of these persons, that is to say, by their infectious hereditary taint. To cite only one example (for I cannot here give the pathology), Dr. Jullien related to me quite recently a very curious observation of serious pneumonia in a young hereditary syphilitic. The case was that of a young man of twenty-two years, a hereditary syphilitic, small, lean, of a very feeble consti'i ion, dyst:ophic, anemic, etc., who when attacked by pneumonia, was carried off "in thirty-six hours."
2. A second type which these dystrophies of a general order quite frequently assume is that of infantilism, constituted principally, as everyone knows, by a pe nanent arrest of physical development, by smallness of stature, by slende ness of body and limb, by a sort of shriveling up, by a stunting of the individual.

How many hereditary syphilitics have I not seen undergo, at their twentieth year, the humiliation of being excluded from military service "for lack of height"! I knew, among a hundred examples which I might cite, the case of one family where, in six children born of a syphilitic father and a healthy mother (both above the average in height) three remain of such childish stature that they are not permitted to be soldiers.
3. Lastly, a third type is that of the rickety with the large protruding head, the crooked legs, the twisted spine, the vitiated pelvis, etc.-The rickets certainly are not, as Parrot believed, a product and an exclusive product of syphilis; they have no manifestation at all of a syphilitic nature; but, equally surely, they are a very common mode of expression of hereditary syphilis. For, and the more so as, in the name of clinical truth with which always rests the last word, a reaction has begun to set in to-day against the excessive reaction which the doctrine of Parrot provoked. And this clinical truth is that, in one way or another (it matters little) rickets are strictly tied to hereditary syphilis. Hereditary syphilis is not alone in producing them, certainly, but it produces them frequently, very frequently. This I have the right to affirm both from my reading and from my personal observation: from my reading, which has permitted me to collect a considerable number of ces where rickets were signally the consequences of a syphilitic heredity;-from my personal observation, which has established it for me from a multitude of children born of syphilitic stock.-Likewise, to cite this testimony only, our celebrated accoucher, Professor Pinard, said to me recently: "In all my practice, I have never observed a single case of rickets apart from the syphilitic heredity."
III.-Last Group. The hereditary syphilitic dystrophies, when they deviate considerably from the normal type, may end in what we call monstrosity. Certainly, the fact is rare and deserves only to be noticed in passing, but is on *"i: account none the less curious, none the less suggestive as an example of the intensity of forfeiture which the syphilitic heredity can inflict on the embryo. Though the question has only been brought forward very recently, a young physician has already been able to collect
twenty-three cases of this order, gleaned from the best sources, cases which are not contestable and, until now at least, not contested. I refer to the already cited treatise of Dr. Edmond Fournier.

Syphilis then is able to make monsters, that is certain.

However, there is nothing astonishing about this, and for two reasons, which are these: first, that the monstrosity is only the exaggeration, the amplification of the dystrophy. Now I do not, need to say, after what precedes, that syphilis is preëminently an infection producing hereditary dystrophies.-In the second place, if it has been known only a short time that syphilis can serve as cause to various monstrosities, there is for this a very simple explanation: that is, that no one ever investigated the possible relation between syphilis and the monsters.

On the whole, the various dystrophies which are under consideration all consist in malformations, in imperfections of organic development, which become to the individual, in degrees naturally very various, the causes of impairment, of inferiorization, of degeneracy.

Of degeneracy, yes, and the word is not an extreme one to use. Is not this a degenerate, for example, this miserable little hereditary syphilitic who is born in an abortive condition to die a few hours or a few days later, indeed to die from this sole reason that he has not the strength to live, struck at birth with the inaptitude for living?

Is not this also a degenerate, this child which survives, but puny, frail, weakly, always sick, and in short physically decayed?

Is not this a degenerate, thi., childish man so disgraced as to be excluded from the common lot, I mean the honor of bearing arms?

Is not this a degenerate, this rickety, deformed. erntesque crcature, hunch backed and feeble?

Are rot they degenerates too, all those who are weak $i:$ intelligence, because of hereditary syphilis, such $a ;$, according to the degree of their mental detect ure called backward, simple, defective, ill balanced, disordered, imbeciles, idiots?

Are not they also degenerates, all those whose nervous systems are weak, from hereditary syphilis, born or becoming hydrocephalous, neuropathic, nervous, hysterical, neurasthenic, epileptics, deaf mutes, etc.?

And so on.
Thus, very positively, the hereditary syphilitic influence terminates on many occasions in reducing persons whom it permits to live to the state of being inferiorized, decadent, delinquent, debased in various degrees, and under various forms. Very certainly, it constitutes, in relation to the race, that which it is very legitimate to call degeneracy.

## V

That is not all yet. For when that has been said about the individual impairments there arises immediately a related question which presents itself, and this question is none else, very naturally, than this:

What will be the offspring of these persons affected by these dystrophies? Will their offspring undergo the influence of the syphilitic heredity, or not?

Some words on this special point, which certainly is an integral part of our subject.

At the very first, for certain cases, the said offspring will not exist at all, will have no possibility of existing. Sterility indeed is the forced result of certain dystrophies, such as uterine or ovarian dystrophies, genital malformations, infantilism, idiocy, etc.

But when it shall exist what will it be, this posterity?

In countless instances it will be normal and unhurt by hereditary taint. That is even, I believe, the usual fact. But it is nevertheless established by evidence that the children of hereditary syphilitics may bear the imprint of their original taint. It is nevertheless proved that the syphilis of the grandfather may be transmitted to the grandson, in this or that dystrophic stigma, in the bridge of the nose, for example, or the eyes-as in the cases cited by Galezowsky, Antonelli, Strzeminski of Vilna, G. Pisenti, and others. So that, very certainly, there exists, as a consequence of syphilis, a dystrophic heredity of the second generation or, according to an expression newly introduced in medical language, a "second dystrophic heredity."

This we are in a position to affirm, though the question may still be new, from a whole series of recent researches and observations. So, for example, Dr. Bartholemy, who has studied and ransacked this subject with ardor for several years, has seen many times this second syphilitic heredity manifest itself in dystrophies the most diverse, but always recalling those which characterize the syphilitic heredity of the first gencration.

To specify, he hds observed, as an expression of what he calls "remote hereditary syphilis," the following:

Inborn puniness, congenital debility;
Slowness and difficulty of growth;
Arrests and imperfections of physical development, in forms the most varied;

Infantilism;
Delayed dental development, and dental dystrophies;

Strabismus;
Rickets and spinal curvature;
Malformations of the most diverse types: bulging skulls, hydrocephalus, cranial and facial asymme-tries;-crushing of the nose;-arching of the vault of the palate;-hare-lip;-non-descent of testicle ;-syndactylism;-hernias and above all umbilical her-nias;-birth marks, etc.;

Vascular troubles;-cyanosis;
Nervous defects:-nervousness, hysterics, morbid fears, infantile convulsions, epilepsy, mental weakness, even idiocy, etc.

Facts of this order and of similar significance have been produced in recent years by various observers, notably by Professor Tarnowsky, and by Drs. Etienne, Jacquet, Jullien, Gaston, Edmond Fournier, and others. For my part, I could cite a good number, all concurring in their testimony.

There is more. It is that we have sometimes seen the second heredity, instead of having a tendency to become attentuated, become severe with an intensity, a hurtfulness equal to that which so often characterizes the first heredity; it is thus that we have seen it, in imitation of this last, extend its action to a whole lineage of chiidren. You may judge from the three following cases, of which I wish to make special mention:
I.-Observation of Dr. Gilbert of Havre: four children born of a healthy father and a hereditary syphilitic mother. All four were afflicted with rickets to a large degree (curvature of the bones, deformed skull, etc.). Besides, one of them is an idiot.
II.-Observation of Dr. Caubet: issues of a healthy man and a hereditary syphilitic wife, four pregnancies terminating in this manner:

One miscar:iage ;
Two children still born;
The last pregnancy bringing a monster, literally a conglomerate of monstrosities (double hare-lip, absence of uvula, deformed ears, vicious conformation of the fingers, toes like claws, imperforation of the urethra, malformation of joints, birth marks, etc.).
III.-Observation of Dr. Etienne: fourteen pregnancies, issues of a family where a healthy wife is married to a hereditary syphilitic husband. Results summarized:

Six children dead (five of them by abortion); Five children affected with cerebral troubles; One child backward; Two children affected with dental dystrophies. Well, do not these facts recali exactly, and trait for trait, what we observe instantly as conseçuence of the first heredity? And the identity between these two orders of injuries, does it not testify to their common origin?

In any case, and whatever reserve may be imposed upon us in a question which is at once so new and so complex, there is a fact which ought to be considered as established, definitely established and of undeniable authenticity. This fact, important in every way, is the murderous action which the hereditary syphilitic influence is able to exert upon the unborn child.

I state precisely: in the manner of syphilis, hereditary syphilis can react upon the foetus in the most hurtful manner. In the manner of syphilis, it constitutes very certainly a predisposition to abortion, as well as to the birth of dead children or children destined to a speedy death.-Of this here is the proof:

For my own part, in thirty-four pregnancies occurring in families where one of the pair (most orten the father) was affected with hereditary syphilis, I have noted this:

Eleven cases of abortion;
Three cases of premature confinement;
Four cases of death occurring soon after birth.
Proportion of mortality: 53 per 100.
In a case observed by Professor Pinard, a hereditary syphilitic wife, married to a healthy man, had four miscarriages one after another without cause. and then bore a syphilitic child.

In a case related by Professor Tarnowsky, eleven pregnancies, where the father was a hereditary syphilitic and the woman healthy, terminated thus: eight children born dead and three surviving (of whom one is hystero-epileptic, another tubercular, and the last affecter. by ophthalmic goitre).

Adding up the results of various observations of this kind which I have been able to bring together, I reach the following figures, in a total of eighty-one
pregnancies occurring in families where one of the conjoints was affected by hereditary syphilis:

$$
\begin{aligned}
& \text { Abortions ................................... } 28 \\
& \text { Premature births (children dead). ....... } 3 \\
& \text { Childred dead after a brief delay......... } 7 \\
& \text { Surviving .................................. } 33
\end{aligned}
$$

That is to say, in round numbers and by percentage: 50 per 100 abortions or premature births;

And as to almost immediate mortality, 59 per 100. Consequently we find, or at least we can find, in hereditary syphilis the hurtful, abortive and foeticidal influence which syphilis exercises so powerfully on the foetus. Same cause and same effects in one case and in the other. This ought to be, this is.

That is yet one misdeed more, until then ignored, which it is fitting to add to the baleful balance sheet of syphilis.

It is even actually demonstrated that in certain cases-rare, in truth-syphilis has been able to transmit itself by heredity as syphilis to the second generation. See on this point the report of Dr . Edmond 1903.

## VI

Such is the balance sheet of syphilis as to its hurtfulness toward the individual, the family, the child, and the race, and such are the social dangers which it carries with it according to what a long experience of these sad subjects has taught me.

## NOTE.

## By G. H. Van Dyre, M.D.

Clinioal Lecturer in the College of Physicians and Surgeons, the University of Illinois, Chicago.
When this wonderful report was written hy Professor Fournier, the micro-organism which is the essential cause of syphilis had not heen discovered. Had it heen known, however, little change would have been made in the statements, for their accuracy is marvelous and could only come from one whose knowledge was very complete and exact.

In 1903 Metchnikoff demonstrated that syphilis could he implanted in the hody of the higher apes. But Klingmuller proved that the virus properly filtered would not inoculate. In the light of these facts, the organism, which had heen diligently sought after for years, was searched for with renewed interest, and thus it was that Fritz Schaudinn in 1905 demonstrated beyond douht that the agent in conveying the disease was the Spirochaeta Pallida. This is a very small organism, corkscrew i.l shape, very fine, thread-like, motile, light in color, only seen hy a special microscope. One drop of the virus contains many million germs, which are likely to gain access to the body at a slight defect in the skin or mucous memhrane. But like the Gonococcus, which causes gonorrhea, and like many other germs of hurtful character, these soon perish if exposed to air and sunshine.

Syphilis prodnces changes in the blood that are readily recognized hy tests, although no outward manifestations are seen. From these tests we learn that about 35 per cent of invalids for whose sickness no cause is discernihle, are sick because of this disease.

Concerning the treatment of syphilis, the late and much vaunted Salvarsan, or "606," is not applicable to all forms of the disease, and when applicable, only hastens the relief of the acute symptoms. A cure is still made more secure by the slower old-time remedies.

## NOTE.

> By David Starr Jordan, LL.D.
> President of Leland Stanford Junior University. President of the American Vigilance Association.

The little animal organism, spirochæta, devours the capillary walls in whatever part of the body it comes, and the nervous system most of all. Thus a man becomes "vermoulu," worm-eaten in life, as in Ibsen's Ghosts.
"It follows from the nature of marriage, that next to murder, adultery is the greatest of all social crimes."
-Charles Hodge, D.D.
"The idea of a campaign against prostitution and venereal diseases, in hope of eradicating both evils, should stand in the forefront of all demands of civilization."
-Iwan Bloch, M.D., Berlin, Germany.

## THE DOOM OF LUST.

Thus will I cause lewdness to cease out of the land. Ezekiel 23:48.

O God of love, they murder love, Who break thy chaste command. But thou hast promised to destroy All lewdness from the land.

The blind because their fathers sinned, Upraise their sightless eyes.
The crippled, dwarfed, and imbecile Join with the maniac's cries.

The wives ashamed, whose husbands vowed
To cherish, love, and keep-
Heart-broken, mutilated, killed,
Before thy throne they weep.
Officials, landlords, agents stretch
For filthy gain their hands.
The slaughter house for girls and boys
Pollutes the fairest lands.
O God of love, they murder love,
Who break thy chaste command.
Make haste, Redeemer, to destroy
All lewdness from the land.
Ernest A. Bell.


