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PROFESSOR SIMPSON. PRESIDENT. IN THE CHAIR.

The President delivered his Inaugural Address.

The Marriage Question from the Standpoint of Gynæcology.

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GENTLEMEN,—My first duty in taking the chair to-night is to offer you, as I now do, my heartfelt thanks for the honour you have conferred upon me in choosing me to be President of the British Gynæcological Society. Young in years, the Society is already great in its achievements, and whilst the position in which you place me is one that any

gynæcologist might deem it an honour to attain, the distinction is, on this occasion, all the greater that for the first time you have called for a President from beyond the Tweed. I am well aware that I am not the first Scotsman to occupy this chair. There are too many of my fellow-countrymen in this section of the empire to have made it possible for seven years to elapse in the history of such an institution without having one of them to head it. Since the James whom we call Sixth, and Englishmen call First, crossed the Tweed to put on the English crown, it has been the way of many of James Stewart's countrymen to cross that classic stream for good. Among the southward-wending pilgrims there have not been wanting distinguished members of our own profession, and representatives of our special department. To refer to only two of these, we see, about midway between James's time and ours, a Lanark doctor settling in London, not merely to practise, but to lay the scientific foundations of British midwifery and to show how the science and art should be taught; followed a little later by a younger practitioner from the same county, who carried on the work of observation and research, of instruction and illustration. They were friends and fellow-workers, and if in the rivalry of practice the younger outstripped the elder in popularity among the upper classes, it was not because William Hunter was possessed of more intellectual power or greater manual dexterity than William Smellie, but, as Hunter's French eulogist, in the "*Académie Royale des Sciences*" explains, Smellie "had not added to his talents the art of rendering himself agreeable to a sex which, accustomed to the language of flattery, is astonished to hear that of truth, even from the mouth of its physician, and which wishes that he would rather take trouble to please her than to cure her—a wish," he added, "that is doubtless excusable, seeing that the faults of women are the work of men." In their day the gynæcological section of our subject was completely overshadowed by the obstetrical, as the whole had been but a short while previously differentiated from general medicine and surgery. But when the time had come

in the mighty progress of our art, that you did well to mark by instituting this Society, the northern members were not surprised to see among its earliest presidents a fellow-countryman whose abilities have won for him a prominent place among the successors of Smellie and Hunter, though the centre of his activity lies not in London but in Birmingham.

The temptation is near on this occasion to try to sketch what gynæcology has owed to Scotland and to Scotsmen. Were I to do so, however, I should have to make such special mention of one particular name as might seem indelicate in one who is near of kin; and I only allude to it now to express the belief that I do not misinterpret your mind if I recognise in the compliment you pay to me a tribute to the memory of Sir James Young Simpson, and a token of your admiration of his worth and work. It enhances to me the pleasure of the position to be able to make this recognition.

CONJUGAL RELATIONS.

If obstetrics long overshadowed and kept to itself as a sort of appendage the diseases of women, it was fortunate for the subsidiary section, when it began to assume the proportions of a complete department, that it took to itself the designation of Gynæcology. This convenient and comprehensive term calls us to the study not only of morbid processes in individual women, but of all that concerns the well-being of the sex. So I propose to direct attention now to the conjugal relations, for in all our treatment of women's diseases we have it in view, immediately, or more remotely, to render them capable of their highest function of motherhood.

It is the more necessary for gynæcologists to consider the subject, that in recent times it has been freely treated of in all kinds of newspapers and magazines by writers of all varieties of mind. A year or two ago one of the daily papers intimated that it had received as many as 27,000 letters from various correspondents on the marriage question.

When the laity are venting all sorts of ideas, derived from sources that range from supernatural revelations to animal instincts, the trained physician may well be expected to express the opinion that will correspond to the result of scientific observation and philosophical reflection. This may especially be expected of the gynæcologist, for in the process of reproduction the *rôle* of the female is of higher import than the *rôle* of the male, and it belongs to him to consider under what conditions she may fulfil the function with greatest safety to herself, and with best hope of producing a numerous and healthy offspring.

"No excuse is needed," says Darwin, in dealing with the effects of sexual selection, "no excuse is needed for treating this subject in some detail; for as the German philosopher Schopenhauer remarks, 'The final aim of all love intrigues, be they comic or tragic, is really of more importance than all other ends in human life. What it all turns upon is nothing less than the composition of the next generation. . . . It is not the weal or woe of any one individual, but that of the human race to come, that is at stake.'"

The union of the sexes that causes impregnation comes about under the impulse of a mutual attraction so strong, that the great naturalist whom I have just quoted, in the application of the principle of sexual selection to evolution, is led to "the remarkable conclusion that the nervous system (the medium of appreciation of sexual pleasure) not only regulates most of the existing functions of the body, but has indirectly influenced the progressive development of various bodily structures and of certain mental qualities. Courage," he says, "pugnacity, perseverance, strength and size of body, weapons of all kinds, musical organs, both vocal and instrumental, bright colours and ornamental appendages, have all been indirectly gained by one sex or the other, through the exertion of choice, the influence of love and jealousy, and the appreciation of the beautiful in sound, colour or form, and these powers of the mind manifestly depend on the development of the brain."

This passion, so potent in the propagation if not in the production of the race, we ask first, Is the gratification of it a necessity for any individual? And Physiology answers, No. This is not an appetite, like that of hunger or thirst, which must be satisfied else the individual will starve and die. In its development it is correlated, not with the maintenance of the individual, but with the multiplication of the race. To gratify the appetite apart from the correlated function is not natural, but morbid. When, for instance, the historian tells us how the Duke of Alva set out to crush the Netherlands with an army of ten thousand picked veterans, escorted by two thousand prostitutes—four hundred on horseback like princesses, and others on foot, but also well got up—we see we are in a sphere where physiology is shut out, and pathology holds all the field. The possession of the great inhibitory apparatus within the cranium of man, which distinguishes him from brutes, demands that the extended convolutions of his cerebrum shall not be disturbed in their circulation and activities by the flushes of his ganglionic centres, but shall hold these in control, and guide them as reason directs for the attainment of their proper end. It is only when the lower is duly regulated by the higher spheres of the nervous system that the normal development of the individual progresses, and that when maturity is reached the bodily vigour is maintained and the conditions established for propagation of a healthy race.

CELIBACY UNPHYSIOLOGICAL.

It is of importance here to remember that the condition of celibacy is not favourable to the health of communities or of individuals, the interesting and valuable statistics furnished by Bertillon in his article on Marriage in the *Dictionnaire Encyclopedique des Sciences Médicales* bringing this out in various points of view.

1. *Mortality* is higher among the unmarried than among the married. The tables in which Bertillon demonstrates the

depreciation of the insurance value of the lives of the unmarried as compared with the married are drawn not only for France, but also for Paris, for Belgium and for Holland. For England and Sweden he could not obtain the proper data. The figures in the various columns of his extended table are so closely confirmatory of the general results, that it will suffice to look at the French table of the mortality of both sexes at different ages, as that is affected by their being on the one hand bachelors, husbands, widowers, or, on the other, spinsters, wives, widows.

Proportion of Deaths per 1,000 at different ages of the unmarried, married and widowed.

Ages.	Bachelors.	Husbands.	Widowers.	Spinsters.	Wives.	Widows.
15—20	6.89	51.32	774.	7.53	11.86	12.31
20—25	12.88	8.92	49.6	8.32	9.92	23.62
25—30	10.17	6.24	21.84	9.02	8.98	16.9
30—35	11.51	6.82	19.17	9.87	9.36	15.03
35—40	13.15	7.52	17.50	10.87	9.29	12.73
40—45	16.62	9.55	18.89	13.28	10.14	13.30
45—50	19.60	11.47	22.2	15.71	10.69	15.20
50—55	25.8	15.61	26.8	20.97	14.11	18.71
55—60	32.1	21.5	34.17	26.90	19.29	24.47
60—65	45.92	32.6	47.5	40.52	30.75	37.07
65—70	58.5	44.8	62.97	58.3	45.3	53.5
70—75	85.1	71.5	95.4	85.5	72.67	86.1
75—80	123.	114.5	143.9	140.5	109.4	126.7
80—85	202.7	182.8	221.8	222.5	172.5	198.
85—90	268.4	228.6	263.05	305.	205.1	264.
90—95	282.	279.	319.	314.1	256.3	308.
95—	480.	357.	385.	387.7	416.	324.

These figures give us the proportion of deaths per thousand of the several groups at successive quinquennial periods of life. If, for the moment, we leave out of sight the deaths in the first quinquennium, where the individuals were under 20 years of age, we observe that the mortality of the central group—the married people—is markedly less than the mortality of the group on either side. This is more distinctly seen in the case of the men, among whom, between the ages of 20 and 25, there is a mortality of 12.88 per thousand among bachelors and 49.6 among widowers, and only 8.92 among

married men. The difference is still more striking at a more advanced period of life, as between the ages of 40 and 45. At that age there is a mortality among married men of 9.55 per thousand, whilst among bachelors the mortality amounts to 16.62, and among widowers to 18.89 per thousand. It can, as Bertillon further indicates, be put in another form. If we take the numbers in a community that at a given time would furnish 100 deaths among the married men, and ask what is the mortality among the same number of bachelors and of widowers, we find that for 100 married men who die between the ages of 30 and 35, there die of bachelors 169 and of widowers 281. Between the ages of 35 and 40 the proportion is 175 bachelors and 233 widowers to 100 married men; between 40 and 45, 174 bachelors and 198 widowers; between 45 and 50 the figures become 171 and 194; between 50 and 55, 165 and 172. The figures show that among bachelors there is a rise in the relative mortality till between the ages of 35 and 45, after which it gradually declines.

The influence of celibacy in the female sex is not at once so striking, though if we except the two earliest ages—all those under 25—we recognise that the conjugal union gives more favourable life prospects than spinsterhood. At the age of 45 to 50, *e.g.*, while the mortality among a thousand married women is 10.69, among a thousand spinsters it amounts to 15.71, and amongst as many widows to 15.20. Where a given number of wives at that time of life would furnish 100 deaths, the same number of unmarried women would yield 131. That the difference in the mortality of women at the earlier ages does not show so much in favour of the life-chances of married women is due to the mortality of parturition, and especially to the higher mortality of first labours.

The result of Bertillon's statistics is to show that the conjugal association, provided it is not prematurely entered on, is salutary to both sexes, though it is the husband who benefits most from the union. The dangers of child-bearing neutralise its benefits to the female up to the age of 25 in

France, and in Belgium and Holland even up to the ages of 40 or 45. "The comparison," he says, "of the vitality of married women and widows above the age of 50 with that of spinsters is very significant. It shows that the dangers of maternity are not prolonged beyond that time of life. A woman who by celibacy has deprived her organs of their special function, who has denied to her youth the pleasures of love, and the labours and joys of motherhood, has not thereby insured her old age against the dangers peculiar to it, but on the contrary, she remains more exposed to them. Love and motherhood, in the salutary conditions of marriage, far from exhausting vitality, preserve and protect it in the present and in the future, because in France the mothers of families, wives or widows, at every period of their existence, after the age of 25, pay a smaller tribute to death than the spinsters of corresponding age."

There are other directions in which it can be shown that those who enter on the marriage relation fare better than the unmarried, as for instance, when we look at—

2. The influence of marriage on the *tendency to suicide*. One might expect, as Bertillon says, "that family burdens, cares and miseries, disappointments and infidelities, would necessarily go to aggravate the part that the married must pay to this redoubtable fatality, and that the care-free and egotistic celibate must have the advantage as regarded suicide." But here, again, his statistics tell in favour of the married, for they show that among a million people in a year, there are 173 suicides among the unmarried to 154.5 among the married; or, to put it in another form, the population that in a given period would furnish 100 suicides among the married, would yield 112 among the unmarried.

3. The relation of marriage to *insanity*. The same statistician shows that marriage seems to exert a preservative influence against the development of insanity, when he finds that among ten thousand people, the proportion who become insane among the married is only 2.02, against 3.68 among the unmarried and 3.1 among the widowed. In this instance

it is especially the female sex that is benefited, for among men the proportions are 2.17 for husbands, against 3.95 for bachelors and 3 for widowers, while among women the figures are 1.9 for wives, against 3.4 for spinsters and 3.13 for widows.

4. The relation of marriage to *criminality*. He has besides drawn up a table to show the influence of the marriage state on the proclivity to crimes of all sorts, against person or property, from which it appears that if the number of unmarried criminals be taken at 100 at a given time, the proportion among the married would be 49.25 accused of crimes against the person, and only 46 instead of the 100 accused of crimes against property. Here, also, it is women who derive the greatest benefit from the civil institution. The number of inhabitants that would yield 100 husbands accused of crime would give 170 bachelors; whilst the number that would yield 100 wives thus accused would give 240 spinsters. "From this point of view," says Bertillon, "if woman is to attain the degree of moral perfection of which she is capable, she has even more need of marriage, of conjugal reason, than man."

When such statistics are before us we are prepared for an outburst like this from Thulié (*La Femme*), who writes from a purely natural history and evolutionary stand-point, in dealing with the question of voluntary sterility, and asks: "This sterility, which is a shame in the eyes of men who obey natural instincts, and a glory for the ignorant metaphysicians of Christendom, what is it for modern sociologists who base their doctrines on the knowledge of man and not on revelation?" and he answers, "From the point of view of the individual it is an infirmity; or if the sterility be really voluntary, it is a fault which deprives the human being of joys the most profound and pure, and removes at the same time the most powerful impulse to exertion and activity. From the point of view of society it is for the races affected by it a fatal decrepitude, and after the lapse of a longer or shorter period their disappearance before the strong and prolific races.

From the point of view of humanity it is a danger, or at least a delay, in the progressive evolution of the race." At any rate we can see that those who try to evade the laws of physiology, which require the multiplication of the race, do so under penalties such as nature teaches us always to expect to follow any rebellion against her laws.

PHYSIOLOGICAL CONDITIONS OF MARRIAGE.

Passing on to discuss the "physiology of marriage," we must examine the effects of different customs (1) in respect of fertility, and (2) in respect of the offspring. If we try to find out what we should regard as the normal physiological condition of conjugal union, we must look at the various methods that have received the sanctions of law or custom in different races, and note which gives the greatest security—*first*, for fertility, and, *second*, for the life and development of the products of the union. There are other secondary social and moral results, and there are also consequences of the different forms of union to the individuals concerned, which would all have to be taken into consideration in a wide survey of the subject. But we confine our attention now to those aspects of it which fall within the necessary study of the physiologist and the gynæcologist.

COMMUNAL MARRIAGE.

Of all the methods that have been sanctioned or proposed for the propagation of the race, the worst is that which has been designated the "communal" or "promiscuous" or "free-love" union of the sexes. Westermarck, in his recent elaborate work on the "History of Human Marriage," tries to prove that no such custom prevails or has prevailed, though Lubbock, Bastian and many others had formed the hypothesis that such had been the case with primeval man. But then his eagerness to establish his own hypothesis—that we derive our origin from monogamous apes—leads him to minimise the evidence on the other side ; and even if it be,

as he maintains, a divergence from the archaic custom, something very like communalty prevails among North American Indians and South Sea Islanders, where it is seen to eventuate in the sterilisation of the women and death or destruction of the infants. So that Thulié says of it, "Children are scarce where the man is only a fertiliser." The mischief of it is seen nearer home in the promiscuity of abandoned women. Were London decimated, no physiologist could expect, as no philanthropist could wish to see its ranks filled up by the offspring of its eighty thousand prostitutes. "Il ne pousse pas d'herbe dans les chemins où tout le monde passe," says Bertillon.

POLYANDRY.

Polyandry is perhaps not far removed in its deleterious effects from communalty. It is said to prevail in some poor regions, as in Thibet and among the Esquimaux, where the co-associates are usually brothers, the eldest of whom chooses a wife for the party. This kind of union is incompatible with fertility. The woman may be mistress of a household, but she has all the responsibility, trouble and fatigue of the management, and when she dies in childbed, or soon after, the child so often perishes that the custom has grown up among some polyandrous people of burying with the dead mother the child that has not arrived at the stage of development when it can feed itself.

POLYGyny.

Polygamy, or rather polygyny, though a distinct advance on polyandry, is still, when measured by the rule we are applying, an unphysiological institution. The women of the seraglio are nowise fertile. The master may be the father of many children, but the individual wives have relatively few; and hence it is found that the birth-rate in polygynous countries is inferior to that of the populations where monogamy prevails, while the infantile mortality increases. There is thus a tendency to diminution in the numbers of poly-

gynous populations, who are often warlike in character, and keep up their supply by raids on neighbouring tribes or by the purchase of slaves.

MONOGAMY.

Bertillon defines marriage very fully as "a synallagmatic (mutually consenting) and authentic (openly acknowledged) contract to constitute a family, by which the pair, besides the sexual relations, assure each other of community of life, of effort, of interest and of conscience, with the view of mutually providing society and material and moral support, and of securing the proper upbringing of their children." It is in such a monogamous union—in obedience to the law of "one with one, mutually consenting and openly contracting"—that we find the surest guarantee for the maintenance and multiplication of the race. The products of such a union are more numerous; they are healthier; they have better chances of being reared successfully. This will come out more clearly if we look at some of the consequences of infraction of this great law. Some of these consequences may fall on either of the individuals who break through the fence that nature has set around the procreative processes. But we concern ourselves here with the consequences to the female.

DANGERS OF INFRACTION OF LAW.

We ask, what are the risks of a woman yielding herself to a seducer, *i.e.*, to a man who has not openly declared his readiness to assume marital responsibility?

(1) She may become tainted with *syphilis*. Of course this might happen to a woman formally married, who had not been careful to insure herself against damaged goods in the making of her bargain. When the day comes for the righting of the wrongs of women, the law will do something to protect her from this injury, or compensate her where it has been inflicted on her innocence. Assuredly, if it had been the rule to have this disastrous element introduced into the marriage contract by the wife, instead of being, as is the case,

the rare exception, we men would long ago have found legal means of freeing ourselves from partners whose condition was a danger to us and to our offspring. However this may be, the unmarried woman is in danger of infection, whether by inoculation from a primary sore, or transmission through a tainted ovum; and how mischievous the syphilitic virus is in aggravating many female disorders, and in lessening her powers of reproduction, is but too well known to every general practitioner.

(2) She may contract a *gonorrhœa*. Up till a recent period this would have been regarded as a comparatively trifling ailment; and in some text-books on surgery it is still too slightly dealt with. But since Noeggerath published his remarkable pamphlet in 1872, on "Latent Gonorrhœa," gynæcologists have become more and more alive to the pernicious effects of this often insidious malady; and Professor Sinclair and others have shown its virulence in initiating some of the most painful and protracted illnesses of women, and in leading, all too often, to their hopeless sterilisation.

(3) She may become *pregnant*. Escaping the pathological risks of illicit intercourse, the physiological result may follow and she finds herself impregnated. There is no time at which she can be sure that conception will not follow the insemination. If she counts on an agenic period she may be mistaken; if on preventive measures, they may fail her; and that which to her married sister brings the brightest hope, befalls her as the darkest dread.

In her unsheltered, solitary state, the ordinary dangers of pregnancy and parturition and the puerperium are all aggravated by many degrees. The woman who has become impregnated within the physiological limits is surrounded with all the guarantees for health and safety. She has a nervous system that is calm, or subject only to the exhilaration of anticipated joy; her circulation goes on steadily, or is healthfully stimulated at times to more activity; food, clothing and every comfort are at her command; she can give due attention to the state of her emunctories. On the other hand,

nervous depression ; circulatory disturbances ; imperfect food and clothing, and frequent contradiction of the ordinary conditions of health, are the lot of the woman to whom pregnancy has come outside the limits. Hence the tendency to melancholia, to convulsions and other grave disorders of gestation, and the risks of a higher child-bed mortality ; and where her life is spared she is more likely to come out of her lying-in room the subject of disease or damage that may be a source of life-long trouble.

Then when we turn to consider what the chances are to her infant, we see that the risk is great of its being still-born, or that it may be delicate and difficult to rear. In France the difference between the still-birth-rates respectively, of legitimate and illegitimate children, is enormous. According to Bertillon the proportion is as 100 to 193. Transgression of the law that requires open recognition of the union between the parents almost doubles the mortality to the progeny at birth. If we follow the fate of the living children born of unmarried women, we find that whilst in 1,000 legitimate births 35.12 of the infants die in the first week, in 1,000 illegitimate births 63 of the infants die within the week. Within a month the mortality among legitimate children amounts to 74.7 per 1000, amongst illegitimate to 170 per 1,000 : and while the legitimate children have a mortality of 175 per 6,000 in the first year after birth, the mortality of illegitimate children within the same period is 337 per 1,000.

The subject has been pursued further by Thulié, in tracing the deleterious influence of bastardy on the child and the adolescent. But gynæcology has regard only to the woman and her nursling, and looking simply at the dangers that overshadow her and it when conception occurs without the marriage bond, we can see that this natural law, stern as it seems, is like all nature's other laws, beneficent in its operation when it demands that any pair who propose to unite for the propagation of the race should make known their intention, and should thenceforth keep themselves for each other and for no other. Obedience to this law, and nothing else,

will banish syphilis and gonorrhœa ; it will lessen the sufferings of pregnancy, which have sometimes been likened to a prolonged disease ; it will diminish the dangers of the lying-in-room, which may be fatal as a battle field ; it will reduce the mortality of infants at birth and in the early periods of infancy ; and it will lead to the production of children that will not only live and survive, but that are capable of higher stages of development. The French anthropologist whom I have last referred to, avers " that the more that races become elevated, the more that individuality increases, and the more that the monogamic knot becomes securely tied—not only by the force of laws, but especially by the influence of custom—the more also will woman become more fertile in the large sense of the term—that is to say, the children whom she bears will have an ever-increasing physical vigour and intellectual capacity."

It is no new ground we enter on in dealing with this great theme. Long ago, in the time of Nero, a Roman stoic indicated the true position in which the philosopher should stand. This Caius Musonius Rufus, maintaining that the same training and education must be suitable for both sexes, and applying his principle of equality to sexual relations and to marriage, argued that what was wrong in a woman was equally wrong in a man, or rather was more disgraceful to a man, inasmuch as he claimed to be a stronger being, and therefore more capable of controlling his passions. He urges that the whole of civilisation rests upon the institution of marriage. " For," says he, " the man who takes away marriage from the human race, takes away the household, takes away the State, takes away the human race."

To have determined the kind of marriage relation that is most conducive to successful propagation does not, however, exhaust the duty of the gynæcologist, who is consulted as to the best conditions under which the relation may be entered on. He has to consider further, *e.g.*, the questions of—

(1) The marriageable *age*.—Now in regard to this point, if we turn again to Bertillon's table, showing the relative mor-

tality per thousand at different ages of the single, the married and the widowed, we can see that the relation of the figures in the first line, especially in the case of men, presents a striking contrast to the figures in all the lines that follow. The ages of the individuals in that first line run from 15 to 20. At all the ages beyond, as we have already seen, the marriage relation exerts such a favourable influence on the life conditions that the mortality among the married men is far below that of the bachelors. But, on the contrary, when marriage is entered on before the age of 20 it has a prejudicial influence on life, and whereas the mortality among *un*married youths between the ages of 15 and 20 is only 6.89 per 1,000, those who marry under 20—usually between 18 and 20—die at the rate of 51.32 per 1,000. Where among the unmarried youths the mortality is only 14, among the married it mounts to 100. Bertillon believes that the beneficial influence of marriage which is so marked at the age of 25 and upwards, is “still considerable” at 24, “still manifest” at 23, perhaps “still sensible” at 22; but would cease at 21, and be replaced by an aggravated mortality at 20. “Who can object,” he asks, “to the conclusion that these early marriages are deadly, that the law which permits them is a snare which the ignorance of the legislator has spread for our youth, and that this bad law should be abrogated”?

The danger of early marriage is not so pronounced in the case of women, and the beneficial influence does not begin to show itself so early as in men. The table shows us that the proportion of deaths per thousand for the unmarried between 15 and 20 years of age is 7.53, and for the married at the same age 11.86. There is already an improvement between the ages of 20 and 25, at which the mortality among the unmarried is 8.32, and among the married 9.92. It is the dangers of parturition, and especially of first labours, that keep up the mortality among married women during their reproductive life; but we can see that these dangers become attenuated as they advance in years, and the figures show us very distinctly how specially dangerous it is to enter premar-

turely on the reproductive career. Whilst the relative mortality of spinsters and married women between the ages of 20 and 25 is as 100 to 119, their relative mortality between the ages of 15 and 20 is as 100 to 158 in France. The proportion in Holland is as 100 to 208, so that there a young woman marrying before the age of 20 doubles her risks of death. When we know besides that the products of these early marriages are apt to be more feeble and difficult to rear, and that women who marry early are likely as a rule to have fewer children, we conclude that it is not advisable for a woman to contract a marriage before the age of 20. In general terms we may say that after an individual has passed the first septennium of life, and has got the permanent teeth, during the second septennium the building up of the system goes on which prepares for the evolution of the sexual apparatus. This occupies the third septennium, so that it is only at the age of 20 or 21 that the pelvic organs with the associated mammæ are fairly ripened and capable of carrying out their proper function. And as it has required all these years for the full physical development of the woman, so in her psychical training we cannot expect of her at an earlier period to be able clearly to apprehend the relations on which she is entering, and intelligently to face the lofty requirements of motherhood. Of course in all these data we speak of averages, and in the corporeal and mental development of women we may find diversities in the dates of their completion just as there are differences in the date of the eruption of the first teeth in infancy, which we usually look for at the seventh month, though in some infants they appear earlier, and in others later. So we may meet a wise and well-developed woman of 18, whose marriage we might conscientiously sanction, whilst we might have grave doubts as to its propriety with a giddy girl of thirty. "In Woman," says Matthews Duncan, "the age of maturity is 20 to 25; in men it is later, probably by at least five years, and you will pardon the interpolation here of the reflection, well worthy of being fully dwelt on, that this late ascertained physiological law

tallies with the old and wisest counsels as to the nubility of men and women—a part of the grand subject of morals and medicine. At this age a woman has the lowest risk of sterility, the greatest likelihood of having healthy children that will long survive, the greatest likelihood of herself surviving childbirth, the lowest risk of having abortions, of having excessive family, of having plural pregnancy, and of bringing forth idiots.”

It is not only in the ill effects on the individuals that the mistake of premature reproduction appears, but also in the imperfect development and low vitality of the products of such unions—evils that show themselves in modified forms, again, in the children of those too advanced in life. The differences of the two classes are summed up by Dr. Strahan in his recent work on “Marriage and Diseases,” as follows :—“The children of *immature* parentage are specially liable to death during infancy from wasting, scrofulous and convulsive affections. They are liable, in a remarkable degree, to idiocy and imbecility of a low type, and to physical deformities and imperfections. Large numbers of them succumb to tubercular disease about the age of puberty and adolescence, and few of them attain even advanced middle age. The genital organs are ill-developed and often deformed, and a great number of them are sterile. They are also notorious for their lack of energy and courage—hence the class of criminals to which they give the greatest number of recruits is that of thieves and other petty offenders. The children of the *senile* are, as a class, ugly, small of stature, stooping, which, together with the absence of subcutaneous fat, gives them a look of old age while still young. Idiocy is less common amongst them than weak-mindedness amounting to imbecility, which is often accompanied with more or less perversion of moral feeling, and a plentiful supply of deep, low cunning. Many of them die between the ages of puberty and adolescence of tubercular disease, few of them live past middle age, and great numbers of them ultimately become insane and criminal. They are nervous, irritable, passionate

and horribly cruel, and are the perpetrators of most of those fiendish barbarities the recital of which, from time to time shock the civilised world."

(2) Physical bars to marriage.—Besides the determination of the age of nubility, it belongs to the gynæcologist to consider what physical conditions are to be regarded as contra-indications to the marriage relation. Regularity of menstrual flow may usually be taken as a sign of fitness for procreation, though it may consist with morbid conditions, such, for example, as deformities of the pelvis, that would render the process dangerous to both mother and child, and that would make it inadvisable for the affected individual to marry. The irregularity or absence of the flow ought always to be taken note of as a possible indication of the presence of some condition that will inevitably cause an infertile union. Some of the associated conditions may be remedied, such as an imperforate hymen; but we have all seen cases where the marriage knot should never have been tied, of congenital atresia vaginæ, or infantile, or otherwise imperfectly developed uterus, and the fruitless union has been a mutual disappointment. From such distress the gynæcologist could, in almost every instance, save the parties, if only people were taught enough of physiology to understand the circumstances that ought to lead them to seek his counsel. Besides the malformations of the generative apparatus, there are other organic defects or constitutional tendencies that ought to make our patients pause before they encounter the risks of reproduction. Dr. Robert Barnes has repeatedly, with characteristic lucidity and vigour and with abundant wealth of illustration, demonstrated how searchingly a pregnancy will test the vital powers of women, calling out latent tendencies, aggravating already existing disorders, and adding an element of danger to otherwise trifling maladies; and there are some of these—such as a recently acquired incompetency of the cardiac valves, especially the aortic, in which to withhold a warning as to the dangers of pregnancy and parturition would be a downright cruelty.

In regard to this matter, also, we have not only to keep in mind the consequences to the wife, but to anticipate the influences on the offspring. This opens up the wide field of heredity, which bids us remember that a woman who is the subject of some infirmity may not only suffer herself in the reproductive process, but may transmit her weakness to her children. So great is this risk in the case of mental disturbances that Maudsley has said, "If we are seriously minded to check the increase or lessen the production of insanity, it would be necessary to lay down rules to prevent the propagation of a disease which is one of the most hereditary of diseases." Strahan insists that "All men and women who have been insane once and have a bad family history, those who have been twice insane, even if the family history be good, and all who are confirmed epileptics or drunkards, should be prevented by the State from becoming parents; for," he maintains, "they have no greater right to carry suffering and contamination amongst the people, and throw expense upon the State, than has the person suffering from small-pox to do so by travelling in a public conveyance." It is not only in the aggravation and propagation of neuroses, such as insanity, epilepsy, drunkenness, idiocy, deaf-mutism, and such like, that we see the ill-effects of injudicious unions. They are seen also in the transmission of dangerous diatheses, such as the cancerous, tuberculous, syphilitic and rheumatic, which are apt to determine the production of children puny and prone to death, all the more if the parents have any close degree of consanguinity, or if they are both in any marked degree the subjects of the diathetic influence.

(3) Regulated marital intercourse. The gynæcologist has to consider not only what may be the proper age for entrance on the reproductive career, and the physical conditions, local or constitutional, that may be an embarrassment or even an actual bar to the process, he has to be ready to indicate the conditions under which it may be healthily carried out. According to Herbert Spencer, the progressive evolution of

the race proceeds under the varying influences of what he speaks of as individuation and genesis. In the former term he includes all the race-preservative processes by which individual life is completed and maintained ; in the latter the processes that go to the formation and perfecting of new individuals ; and he shows that individuation and genesis vary inversely—genesis decreasing as individuation increases, but not quite so fast, so that progressive evolution in the direction of individuation is associated with a diminishing rate of reproduction. This might at first sight seem to sanction the idea that the married pair might be encouraged to rapid reproduction for the multiplication of the family. But we have to keep in mind what has been indicated by Geddes and Thomson in their remarkable work on "The Evolution of Sex" that "the survival of a species or family depends not primarily upon quantity, but upon quality. The future is not to the most numerous populations, but to the most individuated." This consideration suggests to us the warning that the pair who would build up a family must see to the production not of many children but of a moderate number of children, who are more likely to be healthy, and for whose upbringing they are more likely to be able to provide. The experience of every physician must confirm the authors I have just quoted, when they deem it "essential to recognise that the ideal to be sought after is not merely a controlled rate of increase, but regulated married lives. Neo-Malthusianism might secure the former by its more or less mechanical methods, and there is no doubt that a limitation of the family would often increase the happiness of the home, but there is danger lest, in removing its result, sexual intemperance become increasingly organic. We would urge, in fact, the necessity of an ethical rather than of a mechanical 'prudence after marriage,' of a temperance recognised to be as binding on husband and wife as chastity on the unmarried. When we consider the inevitable consequences of intemperance, even if the dangers of too large families be avoided, and the possibility of exaggerated sexuality becoming cumu-

lative by inheritance, we cannot help recognising that the intemperate pair are falling towards the ethical level of the harlots and profligates of our streets."

THE DIM AND DISTANT FUTURE.

Gentlemen, if William Hunter's eulogist was rather gallant than absolutely accurate in saying that "the faults of women are the work of men," there is enough of sober truth in the averment to suggest to us the obligation that lies on us as men as well as gynæcologists, to do our utmost to mitigate the ills that come to women so often from their submission to the stronger sex. As this Society has already done good service in the discovery of means to recognise and remedy the diseases of women, so we are confident it will continue and extend its beneficent operations. But gynæcology and gynæcologists will only have rendered full service to their subject when they have secured such intelligent apprehension of the laws that regulate the physiology of reproduction, and such implicit obedience to these laws, that a race shall have been evolved that will be independent of their aid. The time is long and the way far to such a consummation, but our Society and we ourselves shall only achieve our best while we keep steadily in view the highest of ideals.

Dr. ROBERT BARNES proposed a vote of thanks to the President for his able and most interesting address.

Dr. ROUTH, in seconding the vote of thanks, said he thought the Society had reason to feel much obliged to Professor Simpson for his highly eloquent and instructive address—a history for gynæcologists of great value and interest. To him, especially, it had been very gratifying to find that the views brought out by the French statistics quoted, confirmed conclusions exactly analogous to those enunciated in a paper by himself on "Procreative Power" published in the *London Journal of Medicine*, years ago. His (Dr. Routh's) paper proved the several points by recourse to higher mathematics. But, much as he admired Professor Simpson's paper, he was afraid few ardent lovers would allow reason to preclude the

marriage of diseased persons. We had not yet reached that acme of common sense. Nevertheless, Professor Simpson's address was excellent in all its details, as well as worthy of this Society, which therefore owed him its very best thanks.

The vote of thanks was accorded by acclamation, and was briefly acknowledged by the President.