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BIRTH CONTROL



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# The Truth About Birth Control

(A Guide for Medical, Legal & Sociological Students)

By

**GEORGE RYLEY SCOTT**

*Fellow of the Royal Anthropological Institute  
& College of Physiology  
Philosophical Society  
Zoological Society  
& British Society  
Study of Sex  
chology*

*tion comes virtue"*

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"The world will turn when we are earth,  
As though we had not come nor gone ;  
There was no lack before our birth,  
When we are gone there will be none."

OMAR KHAYYÁM.

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With the exception of part of the chapter entitled "The Eugenic Side," originally published in *The New Age*, and to the Editor of which the Author expresses his sincere thanks for permission to reproduce, the text of this book is now printed for the first time.

## PREFACE

THE aim of this book and coincidentally its *raison d'être* may be expressed in a couple of hundred words. There is, in the author's opinion, need for a work which deals dispassionately and thoroughly with the physiological, psychological and sociological aspects of contraception. At present there is in existence no such book. The tome issued by Dr. Marie Stopes, though exhaustive enough in its survey of the practical and historical aspects of contraception, is the exact reverse of dispassionate; its author has definitely and fanatically ranged herself with those who ceaselessly advocate birth control methods on humanitarian and eugenic grounds, and in common with every writer whose aim is indisputably propagandistic, Dr. Stopes allows emotion to kick out scientific analysis. With more or less point this same criticism applies

to every practical handbook that has come to my notice. In fact some at least, the work of pamphleteers, are merely glorified advertisements of contraceptive appliances, or rococo trade catalogues. Other birth control books are frankly partisan tracts; or collections of essays which succeed admirably in saying precisely nothing at much length or in evading the issue altogether.

In addition, and subordinate to the main thesis, I have set out to show (1) that the opponents of birth control may spare themselves the discomfort of getting hot under the collar at the thought of unrestricted birth control propaganda which, as will be abundantly proved, fails abysmally in its ultimate objects; (2) that the contraceptionists and Malthusians themselves might with much profit renounce their creeds for the single reason that the diseases they propose to remedy do not exist; and (3) that the only grounds on which birth control is justifiable are frankly individualistic, on which precise grounds only and to the extent indicated in the following pages I subscribe myself in its favour.

GEORGE RYLEY SCOTT.

## CHAPTER I

### THE PRESENT POSITION

It may as well be accepted and acknowledged, distasteful as the fact to some may well be and actually repugnant to others, that the majority of the inhabitants of this world try to avoid parenthood—by contraceptive methods or by abortion. The unwanted child is nothing new. In the most primitive races, where the sexual act is unconnected with procreation, infanticide flourishes; in more civilized communities abortion is rife; in modern Western civilization conception control methods are largely superseding abortion. It is commonly asserted that contraception was unknown until recent years, but in this I am inclined to think there is much error. True, the chemical pessaries, the rubber caps, and the sponges are recent introductions, but the method employed by Onan is old enough in all conscience, and there

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are grandmothers living to-day who, could they be induced to speak the truth, would admit that the married maidens of their day knew that the end of the month was a relatively "safe period." But precisely how widespread was the practice in the past it is impossible even to guess at, just as to-day there is no satisfactory data on which to base a trustworthy estimate. For we are dealing with something which is publicly ignored and repudiated while it is privately accepted and practised.

It may be taken as an axiom that birth control has come to stay. Nothing that any party, however powerful, can do will suffice to suppress or to stamp out its practice. There is amongst the public much confusion as to the legal position, occasioned doubtless by the somewhat surreptitious way in which birth control appliances are advertised and the customary method of adopting, when purchasing such appliances in chemists' shops, the furtive air of a thief.

In reality the position is clear. Contraception itself and the sale of contraceptive appliances are quite legal in Great Britain. There is no law on the statute book, and there

never has been any law, which refers or did at any time refer specifically to birth control appliances as being illegal. Abortion is a criminal offence, but contraception is not abortion. It is true that there have been instances where action has been taken against the dissemination of birth control methods, notably the Bradlaugh case, but in all such cases any attempts at suppression or prosecution have been instigated on the grounds of the publication of obscene or indecent literature. And certainly a repetition of the Bradlaugh prosecution would be impossible in this country to-day.

This does not by any means signify that there is no opposition. To the contrary, opposition is continuous, powerful and well-directed. It is, of course, largely ecclesiastical. The Catholic press maintains a steady bombardment, and on occasion the Sunday papers give help by urging the need for stopping birth control propaganda on national grounds.

Efforts are recurrently made to link contraception with indecency, obscenity and immorality. The bishops presumably are attempting to take a leaf out of Anthony

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Comstock's book. For as long ago as 1873 Comstock succeeded in bracketing contraception with obscenity in the notorious Section 211 of the Penal Code of the U.S.A.<sup>1</sup> And to this day the Comstockians throughout the length and breadth of the States wage incessant warfare on the birth control movement, supplemented by the never-ceasing efforts of the various religious organizations, and in particular of the Roman Catholic Church, with the result that any writer who attempts to deal frankly with the subject of birth control, other than its vehement denunciation, is in dire peril of being haled before the courts for confecting pornography.

Despite all these efforts at suppression and despite, too, the fact that it is a crime to sell

<sup>1</sup> Strenuous efforts are being made by American contraceptionists to get the position altered, but unfortunately there is a split in the attacking forces. The Voluntary Parenthood League, under the leadership of Mrs. Dennett, demands the deletion from the Comstock Law of all references to contraceptive methods and appliances; the birth control movement organized by Mrs. Margaret Sanger is demanding legislation to allow and to foster the dissemination of instruction and information by medical men and in medical publications only.

contraceptive appliances, there is one such appliance obtainable for the asking at almost every drug store in the land. The same thing applies in France.<sup>1</sup> In 1920 the sale of literature relating to contraception and of birth control appliances were made criminal offences. And yet the condom, presumably on the grounds that it is a preventive of venereal disease, is sold openly by very nearly every chemist in the country.

In view of all this it is somewhat surprising that the clergy and its attendant pack of moralists waste time and energy in attempting to suppress something which is wholly and manifestly unsuppressible. For were birth control methods declared illegal in every civilized country the world over, and were the

<sup>1</sup> The U.S.A., France, Belgium, and Sweden appear to be the only countries in the world having specific legislation against birth control propaganda and the exposure or advertisement of appliances for sale. In other Continental countries, notably Germany, there is always the risk of ecclesiastical or other attempts being made to secure prosecution under the laws relating to "obscene literature." Russia is in the unique position of providing State instruction in contraceptive methods.

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sale of all appliances absolutely prohibited, the practice would not be stopped. There would remain available, with the certainty that its practice was undetectable, the oldest, the most common, and perhaps the most effective method in the world.

For years the attitude of the medical profession generally has been one of frank hostility. Doubtless the action of the General Medical Council in removing from the Medical Register one Dr. H. A. Allbutt, for the publication in 1887 of a pamphlet on birth control,<sup>1</sup> did much to deter others from giving publicity to any views on the subject. But with the realization that contraceptive methods have most emphatically come to stay, the more enterprising medicals are giving to the subject some attention, and not a few have had the courage to state bluntly their approval, in certain circumstances, of such methods.

<sup>1</sup> H. A. Allbutt, *The Wife's Handbook*, 1887.

# PART I

## CHAPTER II

### THE PHYSIOLOGY OF CONCEPTION

#### I

REPRODUCTION is of two kinds, sexual and asexual. In unicellular organisms, which constitute the lowest form of life, the asexual mode of reproduction, usually by simple fission or budding, prevails. Actually one may say that the unicellular organism never really perishes, as it merely divides into two smaller cells, which in turn repeat the mitosis. There are strong grounds for assuming that the virtual immortality of the single cell is largely conditioned by its solitary existence in a favourable environment. It is significant that somatic cells taken from animals or human beings and placed in a suitable environment can be kept alive for long periods.

If, as becomes increasingly evident from the trend of modern biological research, the life of any organism is merely the time taken to accomplish a specific chemical process, we are confronted with a staggering explanation of life and of reproduction which smashes to the knees every metaphysical or theopneustic explanation. There are facts connected with the phenomena of parthenogenesis which let light on this thesis. It is evident that parthenogenesis is a stepping-stone between fission and bi-parental reproduction. In every asexual form of life the cell is never differentiated in male and female; in parthenogenesis and in bi-parental reproduction there can, with relatively few exceptions, be reproduction only when the male spermatozoön unites with the female ovum. There are, however, certain organisms where the ova, through the incidence of certain favourable circumstances, can develop into new individuals without the aid of the male spermatozoa. There are others where reproduction is sometimes sexual and sometimes parthenogenetic.

Of extraordinary interest and vast significance were Loeb's marvellous experiments

with the sea urchin and the starfish. It is unnecessary to detail here these experiments; suffice it to say that by means of chemical action the unfertilized ova of those organisms were induced to conjugate.

Plant-lice, sometimes called aphides, normally reproduce parthenogenetically, no males being produced at all, but as autumn approaches with its colder atmosphere there appears a wonderful change. No longer are females exclusively bred in their shoals; males begin to appear and thenceforth reproduction becomes just as exclusively sexual. But change the plants bearing the aphides to the warm atmosphere of the heated greenhouse and the males disappear. In such conditions parthenogenetic reproduction may apparently be continued, not indefinitely without chemical changes, but for a very considerable time.

Now let us turn for a moment to the experiments made by Northrop with flies. The freshly-laid eggs were deposited on sterilized yeast and the temperature raised and maintained at 80° Centigrade. The flies lived 2½ days. By reducing the temperature the duration of life was lengthened, reaching in a

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uniform temperature of 10° Centigrade 177 days.

On record are a considerable number of similar or allied examples. The trend of all is in the same direction: that life in any one form is conditioned by chemical and environmental action. The removal of the thyroid gland from the tadpole ensures its continued existence as a tadpole: the feeding to the tadpole at any stage in its existence of thyroid or of inorganic iodine, as Schwingle demonstrated, induces prompt metamorphosis.

The multicellular organism differs from the unicellular organism, apart from its mode of reproduction, in consisting of two kinds of cells, what are known as germ cells and somatic cells. The germ cells concern themselves exclusively with the business of reproduction; the somatic cells build up the various organs and tissues of the body.

Whenever and wherever sexual reproduction takes place two distinct kinds of germ cell must be existent: the male germ cell or sperm and the female germ cell or ovum. Not of necessity does this imply the existence of two distinct individuals, male and female; both

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sperm and ovum may be produced by the one organism, as in all true hermaphrodites. Thus the snail, the tapeworm, numerous coelenterates, sponges and worms, and certain molluscs and crustaceans are completely hermaphrodite.

### II

In man as in all mammals reproduction is essentially sexual. The term hermaphrodite as applied with ridiculous looseness to man is meaningless. There is no such thing as actual hermaphroditism in mankind. What is rather ambiguously termed partial hermaphroditism there is true enough. But this, strictly speaking, refers to the presence in every sexed individual of latent characteristics of the other sex.

Every normal male on attaining puberty produces active spermatozoa. He produces them not in thousands but in millions. Lode estimated that the average healthy man in the thirty years which constitute the normal reproductive period, produces 339,385,500,000; and although admittedly there must be wide

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individual variations and not a little guess-work in the calculation, certain it is that the number produced is well-nigh inestimable. The spermatozoa are formed in the testis, and while there are inactive. Their movement is only possible through the medium of a suitable fluid, which fluid, a secretion of the seminiferous tubules of the testis with contributory secretions from the prostate and other glands, collectively known as the seminal fluid, contains in a state of motility the spermatozoa. The semen in itself is useless so far as fertilization goes, and the idea widely disseminated amongst the laity that semen introduced into the feminine uterus necessarily involves conception is fallacious. Only when active spermatozoa are present in the seminal fluid is impregnation possible. Shaped like a tadpole,<sup>1</sup> with a flattened, elliptic head having at its extremity a cutting edge; an abbreviated cylindrical body; and a long vibratile tail; measuring at its extreme length not more than one three-hundredth-of-an-inch; the spermatozoön, by means of its tail, propels itself in the

<sup>1</sup> Not every species of spermatozoön is of this shape or possesses motility.

ejaculated seminal fluid in its search for an ovum.

Now unless the male and female of the species come together in sexual congress the activities of the spermatozoa will be wasted. The living matured ovum is only found in the ovary, the Fallopian tubes, the uterus or adjacent genitalia of the female. In every normal woman, lying laterally in the pelvis, are two ovaries, possessed of two apparently independent functions: to wit, reproduction and glandular secretion. The secretion, though of vital importance, does not concern us here: we are occupied solely with the reproductive function. The ovaries then contain large numbers of immature ova, which ova, as they ripen, detach themselves from the ovary itself, each in turn being ready for impregnation by a spermatozoön.

It is rare that two ova mature simultaneously. Usually the ripened ovum is sucked into the Fallopian tube which connects the ovary with the uterine cavity, and thence travels to the uterus, eventually descending the cervical canal and ultimately being carried with the vaginal discharge outside the vulva.

This process is known as ovulation, and is popularly confounded with menstruation. For ages the alternative theories reigned that ovulation was dependent on menstruation and that menstruation induced ovulation, but the newer gynæcological school inclines to the idea that while both ovulation and menstruation are dependent on the action of the ovaries, the one is independent of the other. Thus a woman who has never menstruated may become pregnant. Thus, too, there may be entire absence of ovulation in a woman who menstruates regularly.

In the rabbit, as Heape proved by extensive experimentation, ovulation occurs after copulation, and the absence of copulation during œstrus leads to degeneration of the ripe ova. Often enough the repetition of segregation of the doe at her period of œstrus on several successive occasions causes follicle degeneration to such an extent that permanent sterility ensues.

The menstruation of women is homologous to the proœstrum which is well-nigh universal amongst lower mammalia, although only in monkeys and baboons are the indications

precisely similar. Recent anthropological research presents evidence that cannot be logically refuted of a seasonal sexual activity in primitive races of mankind precisely similar to the seasonal sexual activities of animals. It is only the incidence of civilized clothing, modes of living, morals and the evolution of modesty that have led to the loss of this periodical sexual season and coincidentally the loss or submergence of the tropistic character of the coital act itself.

In all animals the time of sexual desire is the period of œstrus which immediately follows the vulvular discharge. Analogous to this in woman is the period immediately succeeding the menstrual flow, when there are strong grounds for supposing the likelihood of conception is considerably intensified.

It is necessary to distinguish clearly between impregnation and conception. The confounding of the two has led to the propagation of a number of fallacious ideas. When one of the huge number of spermatozoa ejaculated into the female vagina penetrates the cervical os and meets the waiting ovum impregnation immediately occurs. But impregnation does not

necessarily imply conception, just as insemination does not necessarily imply impregnation. If the impregnated ovum fails to attach itself to the uterine wall, conception cannot occur. If, however, this attachment does take place, the moment marks the act of conception, though again it by no means follows that pregnancy is assured.

### III

Apart from artificial insemination, which is restricted to the breeding of animals, the only way in which the spermatozoön of the male and the ovum of the female can be brought together is through the sexual act. Coitus neither necessarily implies insemination nor impregnation. Through deficiencies in the act itself, or in the seminal fluid, there may be no result whatever. As all this has an enormous bearing on the subject with which this work is concerned, and as a thorough understanding of the factors governing the sexual act is essential to full comprehension of the causes of sterility, it becomes necessary, at this juncture, to go into the matter with some thoroughness.

The mechanism of coitus, while mainly reflex, is influenced tremendously by psychological disturbances. For instance, although erection may be induced by irritation of the penis as in masturbation, this erection is heightened, intensified and orgasm influenced by coincident libidinous thoughts. Or erection may be induced by kissing, by hugging, or even by the mere sight of a woman. Thus given the necessary stimulation, either cerebral or peripheral of the centre of erection situated at the foot of the spinal cord, there is an influx of blood into the veins of the penis, which organ becomes congested, rigid, tense, and is elevated mechanically. Then by a continuous squeezing process are the spermatozoa, the secretions of the seminal vesicles, and those of the prostate, forced forward into the bulbous urethra, thence they are urged through the penis, ultimately being ejaculated from the glans. Orgasm, as the moment when the pleasurable feeling reaches its apex is known, occurs *before* ejaculation : it is coincident with the spermatozoa from the testicles and the glandular secretions being urged into the posterior urethra.

In the female a somewhat analogous process takes place, with the essential difference that coitus can take place without any preceding peripheral or cerebral stimulation. It is, however, exceedingly doubtful if orgasm can be experienced without such preliminary excitation. The stiffened penis, by friction with the mucous membrane of the vagina and particularly with the clitoris, induces engorgement with blood of the entire genitalia, arousing feelings of pleasure which only culminate in actual orgasm when the Bartholin and other glands ejaculate their secretions.

In its state of normalcy the penis is useless as an organ of copulation. But let it, through erotic psychical excitation, or irritation, or tropistic tactile stimulation, become erect, its intromission into the vulva of the female is usually followed by ejaculation of the seminal fluid bearing with it many thousands of active spermatozoa. The mere ejaculation of semen, granting all other conditions are favourable, into the vagina is not usually in itself sufficient to ensure conception, for cases of vaginal pregnancy are extremely rare. The semen must, in the vast majority of cases, to have any

chance of causing impregnation, penetrate the uterine cavity.

Now to reach the uterus the semen must go through the cervical canal; thus the condition of this canal, and particularly the state of the cervical os, have much to do with the ability to conceive. The size of the os varies greatly in different women, in some being of the diameter of a knitting-needle and in others allowing easy entrance for the finger. Obviously the intromitted penis which in coitus touches the cervix at the moment of ejaculation is likely, where the os is wide open, to throw the semen into the uterus, whereas with the finely bored os, possibly more or less blocked with uterine secretion, the possibility of entrance is considerably diminished. In addition, the idea that the part of the woman in coitus is invariably a passive part is fallacious. It is true that many women never, and many others seldom, experience actual orgasm. It is further true that orgasm is not necessary to conception. But undoubtedly orgasm at the moment of the male's ejaculation greatly increases the possibility of conception. Female orgasm is invariably attended by a suck-

ing motion of the uterus which draws in the semen. Where the os is gaping open, as in most multiparous women, it makes little difference, orgasm or no orgasm, but in all cases where the os is of small diameter, and particularly where it is partially blocked by cervical secretion, the likelihood of the semen reaching the uterus is during orgasm increased by a hundred to one.

It cannot be too strongly impressed that wherever the spermatozoön impregnates the ovum conception is possible if the fertilized egg can find suitable environment for development. Thus the widely disseminated idea that conception can only occur in the uterus is a fallacy. It can and does, very rarely it is true, happen in the vagina itself; it occurs occasionally still more rarely in the ovary; it usually takes place in the Fallopian tube. Nor need impregnation take place at the exact moment of insemination. Though easily killed, the spermatozoa, in a suitable environment, and particularly if deposited in the posterior fornix, may remain active for as long as seventeen days.

The secretions of the vagina have much to

## THE PHYSIOLOGY OF CONCEPTION 23

do with this, for though the normally acid condition means death to the spermatozoa in a matter of a dozen hours, not all women have this acid vaginal secretion; moreover it may be acid at one time and alkaline at another. Generally speaking, an alkaline condition, so long as it is not abnormally alkaline, enables the spermatozoa to live for an extended period, and if through any chance at some time during the period of life, either through suction or uterine movement, a spermatozoön enters the uterus and there meets the healthy mature ovum, or conversely the ovum passes along with an ordinary leucorrhœa into the vagina, impregnation and possibly conception may conceivably occur in either case.

## CHAPTER III

### STERILITY AND ITS CAUSES

#### I

THE advocates of contraceptive methods, likewise their most determined and implacable opponents, consistently and continually overlook the effects on their arguments of impotency and sterility as primary influences affecting the birth-rate. There is not the smallest room for doubt that in thousands of cases elaborate preventive measures are adopted where such measures are totally unnecessary, that in thousands of others there are whispered or openly-hinted accusations of practising birth control methods where no such attempts have ever been made to interfere with Nature's course; in short it is the commonest thing in the world for contraceptive measures to be praised or blamed—according to the precise view of the speaker—for effects which they have done nothing to produce. The

relation of this to the problem of birth control will be more fully considered in a later chapter.

In the male, impotence, contrary to general opinion, is extremely common. Not that any very considerable number of men are congenitally impotent, but a vast number suffer from temporary impotence; indeed it is no exaggeration to say that it is rare to a degree for a male to go through the reproductive years between eighteen and fifty without being impotent on many occasions. Impotence must not be confounded with sterility. A man may be extremely fertile and yet quite impotent, and a remarkably potent man may be sterile. Impotency, strictly speaking, is a disease or a disability connected with the copulatory act. In the female it is just as rare as in the male it is widespread. The reason for this is plain to see.

The part of the woman in coitus is, so far as physical action is concerned, largely a passive part; whether or not she experiences orgasm does not interfere with the sexual act itself, it only affects the pleasure of the woman and in some cases her chances of conception. It is passive insomuch as her lack of desire does

not prevent the act; so long as the male is sexually excited it is possible (except in certain physiological and pathological conditions which we shall consider later) for the coital act to be performed. The woman may be averse to the act; she may be violently predisposed against it as in cases of rape; she may even be unconscious of it. But not by any means does this apply to the male. Preceding every coital act must of necessity be a period of tumescence. Erection, without which coitus is impossible, must be induced either by cerebral stimulation, by spinal irritation, or reflexly by irritation of the genital organs. Even then the sexual act may not be completed. Its completion depends upon the ejaculation of the seminal fluid, a reflex action which even after erection through the incidence of any one of a variety of causes may not be possible. It is not sufficient that the man may be sexually excited: it is the commonest thing imaginable for the victim of inordinate erotic passion to be incapable of both erection and ejaculation.

Thus impotence implies the presence of one of two things, either of which is in itself sufficient: inability to copulate or inability to

inseminate; the one implies absence of erection, the other absence of ejaculation.

The amount of semen produced by different individual men varies immensely. Moreover, in the same individual it varies tremendously from time to time. It is supremely doubtful if any man can habitually ejaculate four times in one day, and though many men have doubtless performed the sexual act several times in a single night and very many others are in the habit of masturbating numerous times daily, after the third or fourth emission it is unusual for erection to be followed by ejaculation.

Apart from such cases, however, and apart in addition from instances of impotency induced by overwork, anger, disgust, fear of contracting venereal disease, excitement, anticipation of failure, or other emotional factors, there are numerous physiological and pathological causes.

Thus the semen may be produced and yet ejaculation be impossible. Cases of malformations or abnormalities in connection with the genital organs, such as absence of penis, mutilation, ossification or elephantiasis of the same organ; fracture resultant from coitus or

chordee; though rare, are none the less occasionally met with.<sup>1</sup> Chronic stricture or induration, causing maldirection of the penis and making coitus impossible is much more common. Hyperæsthesia, through long-continued masturbation, may render normal coitus an insufficient stimulus to orgasm. Obesity to a marked degree, with a protruding abdomen, may altogether prevent intromission; hernia may lead to the penis itself being buried; enlargement of the dorsal vein, abbreviated frænum, anorchidism, cryptorchidism, hydrocele, hæmatocele, are all causes of male impotence.

Anything which has a weakening effect on the lumbar centres is liable to induce atonic impotence, which is marked by weak erections or premature ejaculations. Diseases, such as diabetes, anæmia and rheumatism, are liable to cause such a condition. So is long-continued drug taking. Alcohol, tobacco, cocaine,

<sup>1</sup> Not always, however, do chronic abnormalities of the sexual organs indicate impotence. In *Taylor's Principles and Practice of Medical Jurisprudence* (7th ed., Vol. II, p. 8) reference is made to a sexual monster having two distinct penes who could perform the sexual act with either organ.

morphia, opium, excessively used, have anaphrodisiac effects. An inflamed and irritable condition of the prostatic urethra, resulting from gonorrhœal inflammation, markedly acid urine, sexual excess, long-continued and excessive masturbation, or continual ungratified sexual passion, may cause temporary or permanent impotence.

Prostatorrhœa resulting from gonorrhœa, sodomy, habitual masturbation, causes partial or complete impotence; spermatorrhœa is with certain exceptions indicative of absolute impotence signifying inability to secure erections.

Similarly in the female impotence may be due to tough, unruptured or imperforate hymen; stenosis, organic or acquired, of the vaginal canal; agglutination and adherence of the labia pudendi; cicatricial contraction; absence of vagina; Hottentot apron; hypertrophy of the clitoris; occluded vagina. A rarer condition is the atrophic shrinking of the vulva and perineum, named *Kraurosis vulva* by Breisky, usually rendering attempted coitus so excessively painful that it becomes impossible. More common but rather of a

psychological nature is vaginismus, where attempted coitus by the male induces spasmodic contraction of the vaginal orifice rendering intercourse impossible.

By far the majority of cases of impotence in the female, and of complete impotence in the male, are due to pathological causes. Undoubtedly the most prolific cause of all is gonorrhœa. Fürbringer estimates that gonococcal infection is responsible for fully fifty per cent. of all cases of impotence in man: the percentage in woman is probably even higher. Gibbons puts down as due to gonococcal infection fifty per cent. of all cases of absolute and relative sterility. It must be remembered that gonorrhœa is a far commoner disease than is syphilis, and that in many cases of supposed cure there has been left behind trauma or induration sufficient to cause impotence. Bright's disease, tabes, albuminuria, diabetes are all causes of impotence.

Peculiar to women are the various dyspareunic phases induced by hyperæsthesia due to inflammation resulting from abrasions of the vulva, retrodisplacement of the uterus, pro-

lapse of the ovaries, rectal disease, fissures in the neck of the bladder, vulvitis or vaginitis, cysts of the vulva and hymen, urethral caruncles, hypertrophy of the clitoris, uterine tumours, anal fissure. Not always is the pain resulting from penal intromission when one of these conditions is present, sufficient to actually prevent coitus, but usually it causes the woman to refuse further attempts, or at most to submit only in circumstances which are neither more nor less than licensed rape.

In the vast majority of instances woman's initial complete participation in the sexual act is accompanied by temporary dyspareunia. Many a rough, inconsiderate, sensual, or careless husband, during the honeymoon period, aggravates this initial dyspareunia to such an extent as to induce vaginismus. Unless the trauma incident to the first coitus is given a chance to heal there may, through carelessness and sexual excess, arise a case of permanent dyspareunia.

Frigidity or *anæsthesia sexualis*, though by no means necessarily involving sterility, is a very considerable contributory cause. In the overwhelming main it represents the natural

state of young women before initiation into the sexual act; it persists in at any rate a partial form in at least twenty-five per cent. of married women throughout their marital lives; it is acquired after the first ten years of married life by seventy-five per cent. of women. Wherever physiological or pathological factors inhibit or largely destroy the pleasurable feeling accompanying normal coitus, a condition of frigidity is likely to ensue. Thus there may be such disproportion between the male and female genitalia as to practically prevent any pleasurable stimuli and certainly any orgasm: the vagina may be either physiologically, or through lacerations following labour, too large, or conversely the penis may be undersized or atrophied. Then again through sexual indulgence the vagina becomes distended and indifferent to any ordinary stimulation: prostitutes and habitual masturbators of long practice rarely experience orgasm, and often enough are entirely incapable of obtaining through normal coitus any sexual feeling at all. Similarly the victim of excessive sexual passion is, according to Rohleder, often sterile. Oft-repeated and

promiscuous coitus, for the nymphomaniac can rarely receive satisfaction from one man, leads inevitably to pelvic inflammation, if not to gonorrhœa, with vaginal weakness involving loss or expulsion of the semen.

Then again, strange though it may sound, not a few men and women both, are ignorant of how exactly to perform the sexual act. Incomplete coitus with no penetration to the cervix may go on for considerable periods. Huhner mentions cases "where coitus has taken place in the rectum or even urethra, and the hymen itself remained intact for years."<sup>1</sup>

## II

In the male sterility exists where either there is complete absence of seminal fluid, a condition known as aspermia; where the seminal fluid, although existent, contains no spermatozoa, known as azoö spermia; or where the quantity of semen is so diminished or enfeebled as to prevent conception, known as oligozoö spermia. It is impossible to estimate

<sup>1</sup> Max Huhner, *Disorders of the Sexual Function in the Male and Female*, 2nd ed., p. 192.

with any pretensions to accuracy the extent to which the male population of civilized countries is affected with sterility. Authorities differ considerably in their estimates. Thus Engelmann puts it at twenty-five per cent., Duncan reckons it at twelve per cent., Noeggerath goes as low as eight per cent., while Huhner veers to the opposite extreme with fifty-nine per cent. But although statistics and estimates are little removed from actual guess-work, there is not the slightest doubt that a very big number of men in the height of their reproductive periods are absolutely or relatively sterile; that the bulk of older men are totally sterile; and, that as regards both, the proportions are increasing annually.

It follows naturally and inevitably that impotence, insomuch as although spermatozoa may be abundant they cannot be deposited in the female vagina, practically implies sterility, the converse by no means holds good. Thus every basic cause of impotence is a potential cause of sterility. But there are many additional ones.

Though rare, there are cases where the testis are actually absent. Cryptorchidism, or un-

descended testicles, is equally rare. Both cause sterility. So, too, does epispadias or hypospadias.

But while absence of semen is usually only a temporary condition, except where abnormalities or malformations are present, absence of the vitally necessary spermatozoa is common to a degree. Then, too, in fecundation the quality of the spermatozoa is just as important as is their presence. Dead or enfeebled organisms are useless.

The spermatozoa, generated in the testicles, only form one portion of the seminal fluid. The seminal vesicles, the vas deferens, the prostate, Cowper's glands, and the lining of the ejaculatory ducts all contribute their secretions to the fluid. Without this fluid the spermatozoa are helpless; the fluid by itself is useless.

It is not unusual for spermatozoa to be present in the semen even before puberty, but rarely in a virile state. Though there are great variations, the average age at which the male is capable of fertilizing is eighteen, there usually being a steady increase in power up to the age of thirty, after which there is a decline,

at first remarkably minute but increasing gradually until sixty, at which age comparatively few men can fertilize. By sixty-five to seventy all sexual power, except in very rare instances, is absolutely extinct.

Obviously it is at the period of greatest virility, roughly twenty to thirty, that the spermatozoa are present in the biggest quantities and at their highest power. Before and after these ages, generally speaking, they are fewer in number and weaker in motility and fertilizing power. The presence in the semen of a few weak spermatozoa is, so far as possibilities of fertilization are concerned, in no way different to their complete absence. Thus Cooper reports that in the semen of a man of sixty-two, on examination within half an hour of ejaculation, there were spermatozoa in "normal quantity but smaller than usual and without movement."<sup>1</sup> This bears out the statement of Pajot that the spermatozoa found in the seminal fluid of old men are totally different from those found in the ejaculate of a young man in normal health.

<sup>1</sup> Arthur Cooper, *The Sexual Disabilities of Man* (Lewis, 1920).

Not alone age, however, affects the number and quality of the spermatozoa. Sexual indulgence, often repeated and without adequate intervals, is sufficient to greatly diminish or exhaust altogether the available supply. Thus on examination of the semen emitted by a student after an orgy of sexual indulgence Liegeois could find no traces of spermatozoa. A subsequent examination, after a period of twenty-one days' abstinence, revealed their presence in huge quantities. Apart from the possibility of dislodging the fertilized ovum, oft-repeated coitus very often prevents conception owing to the spermatozoa being either immature or absent. Similarly alcoholic excess, albuminuria, prostatic, urethritis, diabetes, obesity may cause complete or partial sterility.

For these reasons it will be apparent that the responsibility of man for childless marriages is probably hugely in excess of popular valuation. The more true is this as the mere fact of the ejaculation of live spermatozoa into the vulva is not in itself, in the huge majority of instances, granting a healthy state of the female organs and the presence of a mature

ovum, sufficient to ensure conception. As regards most women the semen must be deposited in the immediate neighbourhood of the cervix, otherwise there is great risk of the spermatozoa being destroyed by the vaginal secretion. It is owing to this that, as Huhner states, the condom test recommended and adopted by most gynæcologists is by no means reliable. This test takes no account of the male's ejaculatory powers: it overlooks entirely the important fact that stricture or hypospadias may be enough to cause the deposition of the semen in the region of the vulva, or at best in the lower portion of the vaginal canal.

Common as is sterility in man, it is infinitely more common in woman, and it would appear that every step forward in civilization's march is marked by an increase in the percentage of sterile women. Any condition, physiological or pathological, which prevents the maturation or release of the ovum on the one hand, or the entrance into the uterus of the living spermatozoa on the other, is sufficient to cause sterility. From puberty to the menopause, the normal female should be able to conceive.

Apart from the temporary physiologically suspended functioning of the ovaries through pregnancy and lactation, there may also be temporary suspension of activity induced by cretinism, anæmia, or chronic exanthemata; by excessive drug taking; or there may be complete cessation through organic or specific disease.

Although the average woman knows nothing whatever of their functioning, the proper working of the Fallopian tubes is absolutely essential to fertility. Bi-lateral tubal occlusion, the result mainly of inflammatory processes, is a certain cause of permanent sterility. The condition is far more general than the laity and indeed many medicals of the "country practitioner" type are disposed to think. It almost certainly follows invasion by the gonococcus; it results often enough from infection by streptococcus or staphylococcus induced by abortion or miscarriage; and in some instances by labour; it may result from severe lacerations of the genital organs or passages. For this reason the fact of having given birth to a child is not, as is generally thought, a certain sign of continued fertility :

a huge number of multiparous women are permanently sterile.

Ovarian disease is not uncommon. The presence of pelvic inflammation may cause the lesions induced through the bursting of the Graafian follicles to promote interference with ovulation.

If from any cause whatever the seminal fluid carrying the spermatozoa is prevented from entering the cervical canal, the odds are there will be no impregnation. There may be stricture of the cervical canal itself; or what is far more frequent, inflammation of the mucous surface or of the cervical tissue, characterized by a pathological discharge. Not every leucorrhœa is indicative of cervicitis, for it must be remembered that the uterus and the cervix normally give rise to a thin, translucent, more or less continuous discharge, the purpose of which apparently is to keep the vulva in a moist condition. It is the thick, stringy, opaque mucus induced by some infective organism, which may be the gonococcus, the streptococcus, the staphylococcus, or the colon bacillus, which blocks the cervical canal or the external os, or both, and thus presents an

effectual barrier to the entrance into the uterus of the spermatozoa. So effective is this barrier of mucus that in the nulliparous woman, with her small canal and diminutive os, it is almost impossible for the most virile spermatozoön to surmount it. Even the wider entrance presented in the multiparous woman would be effectually occluded in cases of chronic cervicitis except when orgasm occurred simultaneously with the male's ejaculation.

The importance of orgasm as a means of facilitating conception cannot be too greatly stressed.<sup>1</sup> In most instances the male ejaculates long before the woman has experienced orgasm, and there can be little doubt that this alone, in a not inconsiderable number of cases, prevents conception. Ordinarily the glans penis is much more sensitive than is the

<sup>1</sup> Although the suction-like action induced by orgasm greatly increases the likelihood of conception, it must not be thought, as Rohleder and certain other writers seem to infer, that absence of passion or orgasm during coitus necessarily implies sterility. It does no such thing. There are on record innumerable cases where conception has resulted when there has been no penetration and when the hymen has been unruptured.

female clitoris, hence the premature orgasm of the male. It is tolerably certain that at the moment of orgasm there is a descending movement of the cervix and coincidentally a widening of the os which facilitate greatly the entrance into the uterus of the semen.

Here we lay bare a reason, though an almost universally overlooked one, for the increased fertility of the Jews. The Ancient Hebrews were perhaps the first to get some inkling of the connection between female orgasm and conception, and in consequence made circumcision a holy rite. There are plain indications of this knowledge in the Book of Genesis. The removal of the protective foreskin hardens and makes considerably less sensitive the glans, with the result that ejaculation can only be induced by prolonged and increased stimulation, this delay in turn greatly increasing the chances of the female orgasm and male ejaculation being coincidental.

Often enough the spermatozoa when they actually reach the uterus are inert. The normal vaginal secretion is definitely acid: an unfavourable environment for spermatozoa. Thus unless the seminal fluid is ejaculated

either directly into the cervical canal or in the immediate vicinity of the external os so that it is able to easily and quickly penetrate the cervical canal, where the spermatozoa usually live for a matter of days, the chances are that any extended delay will destroy their motility.

Even when the spermatozoön has successfully entered the uterus, found its way into the Fallopian tube and there met the mature and waiting ovum, impregnation may not be followed by conception. In any consideration of the factors governing conception the conditions of the uterine cavity and the cervical canal leading to this cavity are of the vastest importance. The mucous membrane which lines the cervical canal contains a considerable number of glands which secrete the mucus that normally pervades the whole of the lower genitalia and which in pathological conditions give rise to an offensive leucorrhœa.

Any condition which induces severe inflammation of the uterine mucosa is pretty sure to interfere with either impregnation or embedding. So much so is this the case that the gynecologist recognizes that the restoration of the uterine mucosa to its normal healthy

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condition is of paramount importance in the treatment of all cases of sterility apart from such as are resultant from structural causes. Thus one of the most prolific of the various causes of sterility is salpingitis, which may be induced by gonococcal or puerperal infection. The uterus itself is not infrequently diseased; it may be atrophied, it may be infantile, it may be displaced: any one of which conditions can cause sterility or induce abortion.

Where the membranous lining of the body of the uterus is chronically inflamed, inducing a thickening of the membrane known as endometritis and a continuous muco-purulent secretion; or the shedding of the lining as in membranous dysmenorrhœa, the fecundated ovum is prevented from becoming embedded in the uterine wall. In a similar way retroflexion of the uterus by its congestion and the resultant thickening of the endometrium prevents often enough the fixation of the fertilized ovum.

The infantile uterus, often mistaken and treated as a case of anteflexion, is, strictly speaking, neither more nor less than restricted uterine development. It causes sterility

because the ovum even if impregnated cannot develop in such an environment. Often enough, too, it effectually prevents insemination or even intercourse, through the dyspareunia so often associated with it.

Retroversion, anteversion and prolapse of the uterus all induce sterility, for pregnancy where it occurs at all is usually succeeded by early abortion.

It is by no means rare for childbirth itself to be followed by sterility. The idea that because pregnancy has resulted once the continued fertility of the mother is certain is a gorgeous fallacy. Lacerations of the cervix are remarkably frequent at parturition, and not by any means always are they surgically repaired. It is a fact that pregnancy occurs and goes to term in thousands of women with such lacerations. But occasionally the tear damages severely the internal os, and the fertilized ovum as it gains in weight prolapses, the state of the cervix alone deciding whether there is cervical pregnancy or abortion. In ninety-nine out of a hundred cases it is abortion.

Again the return of the uterus approximately

to its state of normalcy after parturition is not always complete. Occasionally there is subinvolution, where the organ never returns to normal but remains permanently enlarged and congested. This condition, and also that of puerperal atrophy of the uterus, both cause sterility either by preventing conception, or when pregnancy results, by promoting abortion.

### III

It has been indicated that the ovaries control ovulation, and it therefore of necessity follows that anything which interferes with ovarian activity is likely to interfere with ovulation. There are the strongest possible grounds for supposing that in woman ovulation is normally spontaneous. For long it was supposed that ovulation occurred regularly so long as there were no physiological or pathological conditions which prevented the maturing of the ova and the rupture of the Graafian follicles. It is, however, becoming more and more certain that there are in addition other causes which exert powerful retarding influences on ovula-

tion. It is relatively certain that an increasingly large number of women are temporarily or permanently sterile through the ova failing to mature or through the ripened ova degenerating. Either of these conditions may be induced through environmental or nutritive conditions altogether divorced from physiological or pathological factors.

Reynolds and Macomber, and Chalmers Watson, have demonstrated that the absence of certain nutritive elements in the food given to rats induces sterility, the former researchers proving that a deficiency of either proteins or calcium will promote sterility in both male and female. By no means is underfeeding the sole or indeed the main factor in causing infertility: the infertility of highly fed and conditioned exhibition cattle, horses, dogs, fowls, is notorious. Nearly a century ago Doubleday stumbled on a remarkably important fact, to wit, that in plant propagation a superabundance of manure exerted on fertility just as prohibitory an influence as did an underdose, and though from this discovery he drew altogether unjustifiable deductions, the basic fact is one of enormous importance.

Change of climate, of conditions, of nutrition, all have their effects on the functioning of the ovaries. In this connection Gibbons says :

“ It is evident that upon the general healthy condition of the ovary will depend the normal ripening and extrusion of the ova, and that if for pathological reasons there is not a proper supply of nutritious blood, the ova will be lost through degeneration. In those ovaries where there are apparently healthy ova, as well as those in which degenerative changes are taking place, the cause seems to be associated with defective nutrition, or to want of vitality on the part of the ovum, or inability to assimilate the nourishment provided. There can be no doubt that the ovaries are influenced by the general condition of the body, and that in cases of emaciation, from whatever cause, ovulation may cease, and there may be rapid degeneration of all ova.”<sup>1</sup>

Ovulation being in every case a chemical action, which may be spontaneous as in

<sup>1</sup> Robert A. Gibbons, *Sterility in Woman*, p. 61.

woman, or may require additional stimulus as in the rabbit, the cat, the ferret, and other animals, where ovulation only occurs after copulation, it is easy to see that any interference with such chemical action will cause temporary or complete sterility. Reynolds and Macomber, from their experiments with rats, inferred that nutritive deficiencies resulting in decreased fertility varied considerably in their effects on individual specimens of the same age and parentage; and it is by no means an improbable inference that the reaction of the individual to other factors affecting ovulation will show corresponding variations.

But while it is evident there is, in woman, no actual nor essential connection between ovulation and menstruation, and while ovulation may and undoubtedly does occur in the virgin, it is a fact that it is helped and on occasion induced by the experiencing of sexual orgasm. The idea of the woman anxious to avoid child-bearing that by restraining herself so as to suppress actual orgasm she will prevent conception has some foundation in fact.

Now when we come to consider the possibility of continence inducing a condition

of sterility we are treading on shaky ground—we leave the region of fact and can only frame a tentative hypothesis. This much we know: in the rabbit, where copulation must precede ovulation, as Heape demonstrated, continence causes sterility. Further, every dog breeder knows that failure to mate a bitch for several consecutive heats is liable to cause her to prove barren when ultimately she is mated, as many a breeder has found out to his cost. The bitch does not ovulate after coition, but like woman ovulates spontaneously and independently of copulation.

From these facts I am firmly of opinion that there is at any rate a *primâ facie* case for the formulation of a hypothesis that continence in woman as in lower animals leads in many cases to temporary or permanent sterility. If this is so there is opened up an alternative explanation of many childless marriages where apparently birth control supplies the only feasible reason. In this connection it must be remembered that to-day the number of early marriages is vastly less than in former generations.

## CHAPTER IV

### WHAT CONTRACEPTION IS

#### I

ESSENTIAL is it that contraception, or the prevention of conception, should not be confounded with abortion, or the destruction or dislodgment of the ovum after impregnation. The one is a legal method of avoiding child-birth; the other, except in certain circumstances which will be specified later, is a criminal method.

From a careful study of the preceding chapters it will be abundantly evident that there are many physiological and pathological factors which prevent conception irrespective of any desire one way or the other on the part of the individual. In some cases it is the male who is at fault, in other cases it is the female, more rarely both are simultaneously sterile.

When, therefore, either the male or the female with or without the knowledge or consent of the other partner, takes conscious measures to simulate the factors which induce sterility he or she is practising contraception.

The basic principle of every contraceptive measure, whether or not the individual practising it is aware of the principle, is the prevention of the union of the live spermatozoon with the mature ovum. The spermatozoa may be actually prevented from entering the vulva at all; they may be prevented from penetrating the cervix; they may be destroyed in the vagina; the ovum, after impregnation, may be prevented from embedding. Under one of these headings every known contraceptive measure may be classified.

The border line between certain contraceptive methods and abortion in the incipient stages of pregnancy is by no means clearly defined. Thus Dr. Norman Haire dubs the "Gold Spring" pessary an abortifacient. It becomes necessary, therefore, to give some attention to abortion and the law relating thereto.

## II

Strictly speaking, anything, whether it be physiologically, pathologically or artificially induced, which dislodges or destroys the ovum after embedding is abortion. The law plainly indicates that any attempt by any person to abort the contents of a pregnant uterus is a crime.<sup>1</sup> In fact, as regards the attempt by another party to induce abortion either mechanically or by the sale of drugs, the success or otherwise of such an attempt matters little, provided the motive can be proved. Sections 58 and 59 of offences against the Person Act, 1861, 24 & 25 Vict. c. 100, read as follows :

“ 58. Every woman, being with child, who, with intent to procure her own miscarriage, shall unlawfully administer to herself any poison or other noxious thing, or shall unlawfully use any instrument or other means

<sup>1</sup> Not always has this been so. The law as it stands at present is a modification of the Statutory Act of 1803; an act plainly the result of ecclesiastical influence.

whatsoever with the like intent, and whosoever, with intent to procure the miscarriage of any woman, whether she be or be not with child, shall unlawfully administer to her or cause to be taken by her any poison or other noxious thing, or shall unlawfully use any instrument or other means whatsoever with the like intent, shall be guilty of felony, and being convicted thereof shall be liable, at the discretion of the Court, to be kept in penal servitude for life or for any term not less than three years—or to be imprisoned for any term not exceeding two years, with or without hard labour, and with or without solitary confinement.

“ 59. Whosoever shall unlawfully supply or procure any poison or other noxious thing, or any instrument or thing whatsoever, knowing that the same is intended to be unlawfully used or employed with intent to procure the miscarriage of any woman, whether she be or be not with child, shall be guilty of a misdemeanour, and being convicted thereof shall be liable, at the discretion of the Court, to be kept in penal servitude for the term of three years, or to be imprisoned for any term not

exceeding two years, with or without hard labour.”

The only ambiguity is in the use of the word “unlawfully.” No definition of “lawful” abortion is given; but there are grounds for supposing that where two or more physicians agree that abortion is justifiable as the only means of saving the life of the mother or of the child such an abortion would rank as “lawful.” Apart from such circumstances, every attempt to dislodge the impregnated ovum after conception becomes a criminal offence. The consumption of strong purgatives, the swallowing of washing soda, of lead in the form of diachylon pills, of aloes, ergot, quinine, borax, Indian hemp, oil of savin, rue, potassium permanganate, sulphate of iron, colocynth, phosphorus; the violent contortions and exercises such as running, jumping, dancing; vaginal injections; the employment of a uterine probe; abdominal manipulations: all come under the definition of criminal abortive methods.

It is, however, one thing to make a law; it is quite another thing to enforce it. As in

the huge majority of cases it is manifestly impossible to prove that the embedding of the ovum has been prevented or that in its initial stages the embedded ovum has been dislodged by artificial methods, it is supremely doubtful if in such cases any charge of criminal abortion could be sustained.

So much so is this the case that it is rare for any such charge to be made. Except in the event of the mother's life being in danger or of her death, the matter seldom comes into the courts. This gives a false impression. Nearly every individual is fully aware that abortion is a crime, and the fact that prosecutions are rare gives rise to the idea that abortion itself is rare. Nothing could very well be further from the truth. In every civilized country the world over abortion has taken the place of the infanticide universally practised amongst savage races. Though, of course, it is quite impossible to get any exact figures, it is tolerably certain that there are at least as many abortions as births, though not by any means all are criminally induced. There are, too, indications that abortion, both pathological and self-induced, is increasing

rapidly in its prevalence. Since contraception was made a criminal offence in France in 1920, it is computed that the number of abortions has increased enormously. In America the position is almost as bad. Child, writing in 1922, says :

“ Twenty years ago, on my service at the City Hospital, the admissions to which come from a large area populated by the middle and lower class of manual workers, it was a rare occasion to admit a woman suffering from a criminally induced abortion. To-day my wards are often crowded by this class of patients, on many of whom the abortion was self-induced.”<sup>1</sup>

This probably gives only a faint idea of the extent of abortion in New York, as the American law<sup>2</sup> differs from ours very con-

<sup>1</sup> C. G. Child, *Sterility and Conception*, New York, 1922, p. 8.

<sup>2</sup> The law varies considerably in different States, for a State statute takes the place of common law. Thus in Pennsylvania and South Carolina any interference after commencement of gestation which causes death of the embryo constitutes a crime.

siderably. It is not until after the commencement of quickening, usually during the fifth month of pregnancy, that by common law any interference with the object of causing a miscarriage is deemed to come under the heading of criminal abortion. As in the overwhelming main abortions are induced before quickening commences, it is obvious that there are a huge number which never so much as come under medical observation.

### III

As I have shown in the preceding chapter, there are numerous physiological and pathological conditions which prevent the woman carrying her child to term, and that as a result of these conditions abortion is frequent and at all stages of pregnancy. These causes, which may be termed uninduced, and include the effects of chorea gravidarum, Bright's disease, many specific fevers, and notably syphilis, end in abortion. Where the woman is known to be pregnant and abortion results, the miscarriage is obvious, and unless brought about

by skilled hands it is easy for a medical man to tell whether it is a result of criminal interference with Nature or of physiological or pathological conditions. But for every one such case there are a thousand where abortion occurs immediately after conception or at a comparatively early stage of pregnancy. In such cases it is quite impossible, as regards the huge majority, to discover, even were an examination made, that such abortion has been criminally induced. Indeed, rarely is any such examination entertained. For obviously where there is no suspicion there is no examination.

Abortion is induced in one of two ways : (1) by physical movements or manipulation, and (2) by drug taking. As regards abortion induced by physical movements it need not necessarily be intentional. Immediately after conception excessive coitus may be sufficient ; violent exercise in some cases dislodges the ovum ; during pregnancy a severe fall or other accident may kill the foetus or cause premature birth of a child that cannot survive. Knowledge of these facts has caused women anxious to avoid child-bearing to resort to all manner

of violent movements, from running, jumping, and riding, to abdominal manipulation. Generally speaking, however, such methods are largely useless, and only occasionally meet with success. These crude methods are looked upon by the laity generally as legitimate, and many advocates of birth control even refer to them as contraceptive devices, with no indication as to their actual classification under abortive methods, and their consequent illegality.

The bulk of the cases that come into the Courts are concerned with instrumental interference after the commencement of quickening, usually by some unscrupulous medical man. How many such abortions occur annually it is impossible to estimate, but the number must be a considerable one. Performed by a skilled surgeon, the operation involves little risk of failure; and it is probable that instrumental interference is only adopted when other absolutely safe measures have failed. There is, for instance, an injectional method which, although by no means certain in its results, is often successful and is accompanied by no risk to the woman.

When, however, the woman herself, her husband, or an unskilled quack or midwife, by the use of a twig, a hairpin, a skewer, or even a bougie or catheter, attempts to induce abortion, the result often enough is death to the woman and subsequent detection of the culprit. Not only is there liability to ruptured membranes and gangrene, but the bladder may easily be penetrated in error.

The quacks, however, usually leave all instrumental interference alone: they are far too afraid of detection. Their method is to sell under fancy names and at fancy prices various drugs, the object of which is to cause the uterus to expel its contents. It is a certain thing that for this express purpose every year there are swallowed enormous quantities of emmenagogues and ecbolics with in many cases injurious results. *For it may be taken as an absolute fact that the dose of any drug that is sufficient to induce abortion is likewise sufficient to put the life of the woman who takes it in serious jeopardy.*

In many instances, through ignorance, drugs are used which have distinctly poisonous effects without the slightest chance of bringing

about abortion; in other cases the uterus is emptied at grave risks to life. The drug and the dose which will cause abortion in one woman will be strikingly ineffective in another, hence the uncertainty and the risk. Usually the vendors of these drugs protect themselves by selling them as medicines for use in menstrual irregularities. Thus cantharides, ergot, savin, oil of tansy, iron sulphate, could not possibly have any abortive effects except in large and decidedly dangerous doses.

English law, as I have already pointed out, does not explicitly recognize such a thing as justifiable abortion. Where, however, in the opinion of *two* medical men the life of the mother absolutely depends on the sacrifice of the foetus, in accordance with the principle adopted by the medical profession, abortion is justifiable, and it is supremely doubtful if ever any action at law would be taken in such circumstances. But as the law stands to-day, under no other conditions, not even in cases of rape, could abortion be divorced from its criminal concomitants.

## CHAPTER V

### METHODS OF PREVENTING CONCEPTION

#### I

THE methods of minimizing the risk of conception are many and varied. What acts admirably with some persons and in certain circumstances fails abysmally with other individuals and in other circumstances.

For simplicity's sake it is best to group these various methods under three different heads: (1) where no appliances or chemicals are required, (2) mechanical, (3) chemical.

Certain methods can only be put into operation by the male; others are similarly restricted to the female; others again owe their prospects of success to combined and simultaneous action by the two parties to the sexual act.

Of the first group by far the most common method and likewise the oldest is known as

*coitus interruptus*. This was the sin of Onan referred to in Genesis (xxxviii. 8, 9, 10). At the moment before actual ejaculation the male withdraws his penis from the vagina, thus causing the semen to be ejaculated outside the vulva.

The reason why this method so frequently fails entails in its finding no protracted search. Essentially is the sexual act, so far as the man is concerned, one of intense passion, and as the moment of orgasm, representing the very height of coitus, approaches, it requires a supreme effort of will to withdraw. With the best intentions in the world many fail; others after making to their partners promises of withdrawal, in the excitement of the moment forget such promises. When, in addition, it is remembered that to be successful the act of withdrawal must be complete, as the ejection of the seminal fluid containing live spermatozoa into any portion of the vagina, or even of the vulva, *may* be sufficient, in certain circumstances, to bring about conception, and that it is possible for drops of semen to escape from the penis quite unnoticed during erection and before the approach of actual orgasm, the

cause of so huge a number of failures resulting from this method of contraception will be readily apparent.

Coitus being in the main a mechanical act, demonstrably similar in all except the possibility of conception, to masturbation, and the apparent injuries resulting from the act being either due to its too frequent repetition, to abrasions, or to the contraction of venereal disease, many authorities have been led to affirm that the practice of *coitus interruptus* cannot have any ill effects. Thus Havelock Ellis says :

“ It is undoubtedly true that *coitus interruptus*, since it involves sudden withdrawal on the part of the man without reference to the stage of sexual excitation which his partner may have reached, cannot fail to produce frequently an injurious nervous effect on the woman, though the injurious effect on the man, who obtains ejaculation, is little or none. But the practice is so widespread that it cannot be regarded as necessarily involving this evil result.”<sup>1</sup>

<sup>1</sup> Havelock Ellis, *Studies in the Psychology of Sex*, Vol. VI, p. 551.

Now while the predictions by many writers, including not a few physicians, that lunacy and a host of terrible diseases follow inevitably from the practice of withdrawal are ridiculously exaggerated and palpably absurd, here I fear Ellis has been led somewhat astray by thinking that the ejaculation achieved after withdrawal is precisely the same as that incident to normal coitus. It is no such thing. The evil results of *coitus interruptus*, which of course are not immediate but only occur after years of constant practice, are the cumulative results of oft-repeated congestion of the seminal vesicles and of the prostatic urethra. In time this congestion becomes habitual. To anyone with a thorough understanding of the mechanism of the coital act it is easy to see how this congestion arises. In normal coitus the distended seminal vesicles are completely emptied of their contents and the congested mucous membrane of the prostatic urethra is totally deplethorized. But not by any means is this so when withdrawal occurs. Here the seminal vesicles are left partially occupied by secretions, and the mucous membrane of the prostatic urethra in

a state of partial congestion. In time, through the continual repetition of these conditions, there arises a pathological hyperemia of the posterior urethra and congestion of the verumontanum, marked by chronic irritability, causing at first rapid and premature ejaculations and ultimately actual impotence. But the extent of the congestion and its effects vary enormously in individuals: hence the danger of drawing erroneous and unwarranted conclusions from isolated and possibly abnormal cases.

The effects on the female are not nearly so severe. In fact the danger of injury is largely a psychological one. It resolves itself in the main into whether or not she obtains sexual satisfaction. Orgasm is much slower in the woman than in the man, and for this reason it is rare that the male's orgasm coincides with the female's. This, however, may have nothing to do with the practice of withdrawal. Many men have quick or premature ejaculation, and so far as they are concerned the act is finished long before the woman has approached orgasm. Therefore she is just as likely to fail to secure sexual satisfaction where coitus is

completed normally as where there is withdrawal. And in such cases there may be induced in time a marked congestion of the genitals.

There is, however, another form of psychological disturbance which is brought forward by some as an evil resulting from *coitus interruptus*. The woman fears her partner will fail to withdraw quickly enough, and this not only militates considerably against her own enjoyment and possibly precludes an actual orgasm; but through constant repetition may in time cause neurotic disturbance. As, however, any woman who suffers in this way can easily herself use a mechanical contrivance, or may adopt an analogous practice to *coitus interruptus* of the male, I am inclined to think the cases where the woman suffers psychological injury of this nature are rare.

The benefit accruing through the absorption by the vagina of seminal fluid has never been demonstrated. I have looked through such evidence as I can find bearing on the matter, and there appears to be nothing in any way conclusive one way or the other. The

tales of married women who age prematurely through the practice by their husbands of *coitus interruptus* are hardly worth serious consideration : it is impossible to be sure that any such instances are anything except fortuitous.

Although *coitus interruptus* is looked upon as purely a male act, there is an analogous method on the part of the woman, to which I have already referred, whereby at the moment of the male's ejaculation, by a twist and backward jerk of the body she can contrive to disconnect the vagina and penis so that the ejaculated semen does not enter the vagina. It calls, however, for much niceness in the matter of calculation, much alertness of mind and dexterity of movement, and granted all these may easily enough fail.

*Coitus reservatus*, or male continence, is perhaps the most reliable of all notoriously unreliable methods *if and when* it can be properly carried out. It consists in the prolongation of the sexual act for a period of an hour or more, during which period the woman may have several orgasms thus securing complete sexual satisfaction, the male restraining

his own orgasm and allowing the erected penis to resume normal proportions before withdrawal. Obviously the method is not one for every man; and there are indications in the literature referring to the practice that some training is necessary. In comparatively recent times *coitus reservatus* obtained some notoriety through its general practice by the members of the Oneida Community, a religious order founded in 1845 as the Putney Corporation or Association of Perfectionists by one John Humphrey Noyes, and later known as the Oneida Community, through settling at Oneida in Madison County, New York State. Until 1879, when ecclesiastical pressure and pending legal action caused Noyes to renunciate his system of sexual morality with its complex marriage system, male continence, as *coitus reservatus* was somewhat euphuistically described by Noyes, was generally and continuously practised, and at puberty the males were carefully instructed and initiated in the method.

Before closing this section it is necessary to refer to certain so-called methods which, although based on fallacies, have secured so

widespread a recognition as to be relied on by huge numbers of people.

Chief of these is the belief that there are certain periods when coitus can be enjoyed with impunity. These are known as "safe periods." Now the only real safe period during the female's reproductive years, assuming that she is capable of conception, is from the time of impregnation to the birth of the child. But the idea long ago got abroad that during each month there is a period of a couple of weeks during which the female may have coitus without the slightest fear of conception resulting. The clergy, reinforced by certain religiously inclined medicals, more perhaps than anyone else, have popularized this method through their contention that it is a "natural" method of avoiding conception, and that there is no sin attached to the limitation of intercourse to such "safe periods."

Thus Dr. Halliday G. Sutherland says :

"If sexual congress be strictly confined to the week preceding a menstrual period, there is very little chance of pregnancy."<sup>1</sup>

<sup>1</sup> H. G. Sutherland, *Birth Control Exposed*, Palmer, 1925.

Thus, too, Lady Barrett<sup>1</sup> quotes Seigel's paper, published in 1916 in the *Munchener Medizinische Wochenschrift*, where he states that after the twenty-second day of the menstrual cycle there is, until the end of the cycle, a condition of absolute sterility.

The theory is based on the principle of ovulation. The ovum, after its detachment from the ovary, if it fails to become impregnated, passes eventually through the vagina and outside the vulva. This usually occurs a few days after the cessation of the menstrual flow, and thus has been born the theory that if intercourse is confined to the latter half of the month conception cannot occur owing to there being present in the uterus no ovum to be impregnated.

Now were ovulation and menstruation coincident there would be something in this theory. But they are not coincident, and in consequence the incidence of the menstrual flow is no *sure* indication that ovulation is likewise occurring. The observations of Leopold and Ravenna, as given by Gibbons, are of special interest and value :

<sup>1</sup> F. E. Barrett, *Conception Control*, Murray, 1922.

“ They carefully investigated twenty-four cases in which the history was clear. They found in half the number ovulation was coincident with the commencement of menstruation ; in four, it took place shortly before the beginning of menstruation ; in one, it followed between the periods ; in three, ovulation occurred without menstruation ; and in two, menstruation occurred without ovulation. In the twelve cases, they have reason to assume that ovulation commenced on the first day of menstruation, as the corpora lutea were in entire correspondence with the commencement of the last period. They consider that the fact of finding two almost ripe follicles in the ovary that ovulated eight days previously, goes to confirm the hypothesis that the ripening of the follicles does not take place periodically, as many maintain, but instead of that, is effected suddenly. From that it may be deduced that ovulation takes place suddenly, and not at the appointed time, and that it does not always occur at regular intervals, as is the case with menstruation.”<sup>1</sup>

In addition, females are liable to wide

<sup>1</sup> R. A. Gibbons, *Sterility in Woman*, p. 60.

variations, and not only do these variations occur between different individuals but in the same individual at different times. The state of general health, uterine disease, physiological conditions, nutritive factors, all affect ovulation, and it is these very conditions which Dr. Trall entirely overlooked in elaborating his system whereby he claimed every woman could ascertain her "safe period."<sup>1</sup> The actual truth is that fertilization may possibly happen as a result of the coital act during any part of the interval between successive menstruations.

Beyond any doubt reliance on this method has resulted in thousands of pregnancies where both parties to the sexual act thought they were taking adequate precautions against conception.

It is tolerably certain that where the female orgasm coincides with the male orgasm there is, apart from additional pleasure, greater likelihood of conception. It is from this fact that has sprung the idea that the woman by simulating extreme passivity and thus avoiding orgasm altogether may actually prevent con-

<sup>1</sup> R. T. Trall, *Sexual Physiology*, 1st ed., 1868.

ception. So widespread is this idea that numerous women rely upon it absolutely until to their consternation they find themselves pregnant. Here is a noteworthy example of how, from an indubitable fact, there originates a stupendous fallacy. The fact that conception is more likely at a time of mutual orgasm by no means implies, as is assumed, that the absence of orgasm averts impregnation. During orgasm, and especially during mutual orgasm, there is given to the spermatozoa additional motility rendering one of the many sperms the more likely to meet the ovum. But orgasm or no orgasm, so long as the spermatozoa is in any part of the uterine cavity or even in the vagina and in a motile and living state, there is danger of conception. Thousands of women conceive regularly who are naturally passive, never experience orgasm, nor pleasure even, during coitus.

The spermatozoön and the ovum are essentially delicate things, easily injured and rendered inert, and if, after the union of the two, this fertilized cell is injured or dislodged from its position so as to be expelled through the vaginal orifice, there can, of course, be no

conception. In efforts to bring about this, mainly unconscious of any reason for the methods employed, from times remote and in many countries, women have employed divers methods with varying success. Speaking of these methods Dr. Trall, as long ago as 1868, said :

“ It is well known that, very soon after impregnation, or even conception, any sudden and violent motions which agitate the pelvic viscera and cause the uterus to contract vigorously, will prevent pregnancy. Drastic purgatives will have the same effect, and are occasionally employed to produce abortion; sometimes violent coughing or sneezing will have the same effect. Running, jumping, lifting and dancing are often resorted to successfully, immediately after connection. Vaginal injections of cold water, or quite warm water, employed within a minute or two after coition, prevent pregnancy in a majority of cases.”<sup>1</sup>

Undoubtedly if these measures are adopted

<sup>1</sup> R. T. Trall, *Sexual Physiology*, 1st ed., 1868, pp. 208-9.

*immediately* they will in certain cases prove efficacious. The vitally necessary point is their *adoption before conception*. I am disposed to think Dr. Trall erred in adding the words "or even conception," for it is supremely doubtful if anything short of violent and painful manipulatory movements of the abdomen, liable to be extremely injurious, the employment of chemicals equally dangerous, or the use of a catheter or other instrument, all of which methods, strictly speaking, come under the heading of criminal abortion, would dislodge the impregnated ovum *after conception*. Exactly how soon after impregnation conception occurs is not known. Authorities differ in their opinions and doubtless there are considerable variations in individuals, but the interval is certainly not an extended one.

The success of all such methods rests on the assumption that conception occurs in the uterus. Often it does, but more often it occurs in the Fallopian tubes, and on occasion in the ovaries, when of course all ordinary methods of dislodgment will necessarily fail.

Sufficient has been said to clearly indicate the unreliability of any such methods of

preventing conception. In no case can the woman be *sure* that she has succeeded. Moreover, few women, unless in dread fear of pregnancy, are disposed to get out of bed and commence running and jumping, or swallowing nasty tasting purgatives, at a time when the disposition is naturally towards rest and sleep. And when adopted their continual employment is bound to have deleterious effects.

## II

Of the methods calling for the employment of mechanical means, the most commonly adopted, the simplest and unquestionably the most effective is the condom or sheath, vulgarly termed in England the "French letter," and referred to in Continental countries as an appliance of English origin. There is some dispute as to whether the device was originally intended as a preventive of pregnancy or of venereal disease. Certainly it is largely used the civilized world over for both purposes, though it is a long way from being infallible in either the one case or the other.

This sheath, originally made of linen, is now constructed either of the cæcal membranes of

various animals or of rubber.<sup>1</sup> Its principle is simplicity itself. It is shaped like a finger and fits over the penis, retaining in its closed end the ejaculated fluid, and thus effectually preventing the spermatozoa coming in contact with the ovum. These sheaths, which are procurable at almost any chemist's shop, are not costly, ranging from three shillings to thirty-six shillings a dozen, and, if treated with care, washed in a mild antiseptic, and carefully dried, each sheath of the more expensive brands, at any rate, may be used several times.

There is, however, no getting away from the fact that the condom, owing to its excessive thinness, is liable to break or tear, or again it may become displaced, allowing the semen to escape into the vagina. Before use every sheath should be blown out and examined diligently for any puncture; indeed it is advisable to fill the expanded sheath with water. Even with all these precautions it may and often enough does burst. Again the condom may tear or burst through sheer

<sup>1</sup> Casanova mentions the device, referring to it as the "*redingote anglaise*."

carelessness in its use. It should not be drawn tight over the penis, but a sufficient margin allowed for the reception of the seminal fluid. In addition, it is advisable to smear lightly both the penis and the exterior surface of the sheath with vaseline or olive oil.

Naturally the insertion of a piece of membrane or rubber, however thin it may be, between the sensitive glans penis and the almost equally sensitive vulva, diminishes considerably the sensation. For this reason alone many people, and particularly men, are reluctant to use the sheath, and often enough are only induced to do so through the fear of contracting venereal disease.

Again it is not every man who *can* use it. I have known many who could not maintain erection and found it absolutely impossible to experience orgasm even with the finest membranous sheath. Others find the thin skins suitable but the rubber sheaths unsuccessful.

Amongst women, perhaps the most popular method is the insertion in the vagina, close up to the os uterus, thus blocking the passage into the uterus of any seminal fluid, of a plug of cotton-wool or other soft material, or of

a sponge. Opinions differ as to whether cotton-wool or a sponge is the more efficacious, but the principle is the same whatever precise material is employed. The method has one virtue which gives it vast recommendation: its inexpensiveness. True, many purchase specially prepared sponges or plugs to which are attached strings for the express purpose of facilitating removal, but this is quite unnecessary. There is an advantage and no small one in the use of cotton-wool or other cheap material: it can be burned after use. The sponge, on the other hand, is used again and again, entailing the additional trouble of cleansing and disinfecting each time, a process that is not always thoroughly carried out by the ignorant or careless. As an additional safeguard many women use with the sponge or plug some chemical designed to destroy the spermatozoa. The Malthusian League, in its advocacy of the cotton-wool plug, recommends that before use the ball of wool should be smeared with a mixture of boric acid powder and vaseline, and that the woman should syringe *before* pulling out the plug. Similarly quinine powder, alum, and vinegar are

employed. The dangers attendant on this method are liability to incomplete occlusion of the cervical orifice, or displacement of the plug or sponge itself during coitus.

A method widely in vogue on the Continent, and particularly in Holland, is the use of the "Dutch" cap pessary, otherwise called the Mensinga check pessary, through its invention by Dr. Mensinga as long ago as 1888. Constructed of rubber, fixed on a metal rim, and in the form of a concave cap, it is pushed well into the vagina and in its proper position occludes the whole of the vagina near the cervix, thus absolutely obstructing the opening into the uterus. Essential is it, however, that the pessary, which is made in a number of sizes, should fit perfectly and securely, and this can rarely be ensured without the assistance of a medical man. In this connection the Malthusian League in its booklet<sup>1</sup> says:

"A woman should be given the largest size

<sup>1</sup> This booklet, entitled *Hygienic Methods of Family Limitation*, compiled by a committee of the Malthusian League, is supplied gratis on application to members of the public over twenty-one years of age who are "married" or "about to be married," and who sign a declaration to that effect, and that they

she can take with absolute comfort, for that ensures that the whole rim of the pessary will be pressing on the walls of the vagina, thus leaving no opening for the male fluid to get past the rim and into the womb."

This means, as Dr. Stopes has pointed out with truth, that the vagina must be stretched, and this continual stretching is not without its harmful effects, while the prevention of the penis coming into contact with the more sensitive portion of the vagina, in addition to the unnatural widening of the opening, interferes considerably with the proper performance of the coital act: in fact it is questionable if a man with a small penis could actually experience orgasm. Apart from this, however, the Mensinga pessary may easily become dislodged, it may not fit quite securely. Certainly it by no means justifies the eulogistic recommendation of the Malthusian League as "the most reliable of all methods."

consider "the artificial limitation of the family justifiable on both individual and national grounds," and undertaking to keep the information contained in the leaflet "out of the hands of unmarried persons under twenty-one years of age."

Much smaller is the dome-shaped rubber cap pessary intended for adjustment so as to cover the cervix only, thus blocking the entrance to the cervical canal. Many are the variations of this pessary put on the market by different firms, but the principle is in all cases the same. The cap does not block up the vagina; it only covers the cervix, and thus allows what is almost indistinguishable from the complete coital act. Dr. Stopes is enthusiastic in its favour, recommending a variety known as the "Pro-race"; whilst Mrs. Margaret Sanger is equally enthusiastic over the virtues of the "Mizpah," a rubber pessary in two parts, the soft cap being detachable and leaving the ring in position on the cervix. Other variations of the same idea are metal caps of various designs.

While these caps avoid any stretching of the vagina, a much greater risk of imperfect fitting or dislodgment applies than does to the Mensinga pessary, and here again it is decidedly inadvisable for any woman to attempt to select or to fit for the first time one of these caps. Either a doctor or a nurse should make the selection and do the fitting.

Obviously, however, the woman cannot be calling in professional aid every time she wishes to employ the cap, and although in most cases a little instruction will do away with the necessity for this, there are numerous women who cannot fix the cap themselves; the vaginal canal may be too long or the fingers may be too short. Taken altogether, so many and so enormous are the risks of failure with this method that it is doubtful if Dr. Stopes could possibly have selected an appliance which could fail to have a less inhibitory influence on the possibilities of conception.

An ordinary soft rubber ball of suitable diameter, such as children use in play, is employed somewhat widely on the Continent: it was originally recommended by Nystroem and is specifically mentioned by Hardy.<sup>1</sup>

In connection with every one of these occlusive methods it should be remembered that the slightest opening is sufficient to enable the motile spermatozoa to get past the artificial barrier and penetrate the cervical os. In considering the causes of sterility I have already indicated how the presence of mucus

<sup>1</sup> G. Hardy, *How to Prevent Pregnancy*, Paris, 1916.

in a narrow os may well present a most thorough barrier to the spermatozoa. But without this barrier of mucus the tiniest opening affords no protection whatever. Even where the os is of such a narrowness as to merit the term "pinhole," this does not in itself, as some writers who ought to know better assert, prevent the entrance into the uterus of the semen.

So far we have been concerned with methods restricted to either the plugging of the vagina or the covering of the cervix. There is yet another plugging method which, although comparatively little known in England, is widely used in the U.S.A. and in Continental Europe, to wit, the plugging of the uterine canal itself by means of appliances specifically constructed for the purpose and for the most part made of metal:

Although the Malthusian League, in its booklet, makes no mention of these metal studs, and Dr. Stopes only mentions them to condemn them, by no means is it an extravagant assumption to claim for some at least of these devices a degree of reliability equal at any rate to that of the rubber

pessaries, the sponge, or the condom. Their disadvantages lie in the difficulty experienced in keeping them in position, the risk of trauma of the cervix or of the uterus through their continued use, and the necessity for frequent and thorough sterilization.

Of this class there is one deserving of special mention. It is the "Gold Spring" Stud Pessary, sometimes called the "Wishbone" Pessary in deference to its shape. It is specially constructed to avoid the drawback commonly associated with the ordinary stud pessary, the stoppage of secretions or discharge from the cervix. Constructed of gold, silver, or platinum, it consists of a cup-shaped button to which is attached a piece of coiled wire, terminating in two strands which by springing apart hold the pessary permanently in position. Its cost, ranging from a couple of pounds upwards, restricts considerably its sale; but a much greater objection lies in the fact that both its insertion and removal call for the services of a skilled medical man. Moreover, so long as this spring stud is in position, it requires occasional examination. But it is, despite its manifest dis-

advantages, perhaps the most effective of all occlusive instruments, as it serves a dual purpose: it seeks to prevent the entrance of the seminal fluid, and should, after all, impregnation occur, to prevent the embedding of the fertilized ovum.

Strangely enough the "Wishbone" Pessary was originally invented and advertised as a cure for sterility, but it is a matter for wonder that any competent medical man should recommend such an appliance for such a purpose; obviously it would almost certainly prevent the embedding of the ovum after fertilization. It is interesting to note that Dr. Norman Haire has condemned the appliance as an "abortifacient," and "very dangerous."<sup>1</sup> As opposed to this opinion is that of Dr. R. H. Vercoe, who recommends the "insertion of the spring wishbone pessary in cases where temporary sterilization is advisable."<sup>2</sup>

In addition to the fact that no one of the methods which rely on mechanical occlusion

<sup>1</sup> Report of Meeting of Royal Society of Medicine in the *Lancet*, November 12th, 1921.

<sup>2</sup> *British Medical Journal*, August 19th, 1922.

of the cervical canal is very trustworthy, there is attached to the lot one common drawback; the damaging point that interference to some extent with the uterine discharge cannot be avoided. Always is there, even in the perfectly healthy woman, a slight discharge; in many is there besides a more or less constant leucorrhœa. With this discharge, whether it be normal or pathological, there should be no interference.

### III

There remain the various methods of destroying or attempting to destroy the spermatozoa injected into the womb by the male in the act of coitus. Many women prefer these chemical methods to any mechanical devices, or to *coitus interruptus*, there being of course no interference whatever with the full enjoyment of the sexual act.

Most of these "soluble pessaries," as they are called, are quite useless as destroyers of the spermatozoa; others are positively injurious to the delicate linings of the vagina and uterus. For the fact remains that whatever chemical

is strong enough to destroy the spermatozoön is strong enough to injure the vagina and the glans penis.

Usually it is quinine sulphate that is mixed with the cocoa butter which generally forms the basis of the soluble pessary. The pessary is pushed into the vagina a few minutes before coitus. But quinine, if it has no irritating effect on the woman, often enough has such an effect on the much more sensitive membrane of the glans penis and may in some cases produce inflammation.

Powdered alum was used long before the introduction of quinine, and in addition was widely employed in some countries for another sexual purpose foreign to the scope of this work. Its astringent properties render it inadvisable for anything more than occasional use.

Many women prefer to syringe immediately after coitus; various disinfectants such as lysol, carbolic acid, potassium permanganate, vinegar, salt, alum, lactic acid and other chemicals being employed in the water used.

The Malthusian League, in its booklet, recommends the syringing with one of the

following : “ (a) a pint of warm, soapy water ; (b) a pint of warm water, well mixed with six tablespoonfuls of vinegar ; (c) a pint of warm water in which has been *completely* dissolved as much permanganate of potash crystals as would lie on a threepenny bit.”

Now whatever be the chemical used it is liable to fail. If the seminal fluid has entered the uterine cavity no amount of douching will dislodge it, for the simple reason that the douche will fail to reach it. Moreover the syringing must be done *very thoroughly* and it must be done *immediately after coitus*. Neglect of the one or the other may easily enough promote failure, and neglect is easy and it is frequent, for no woman is in the mood to get out of bed and syringe herself at a moment when she is inclined for rest and sleep. She may do it a dozen, or a score, or a hundred times, but sooner or later inevitably the time comes when she neglects it, and one such instance may be quite sufficient to cause conception.

The advantages of the use of plugs, sponges, rubber and metal pessaries, is that this syringing at a time when the woman is

peculiarly indisposed for it is altogether unnecessary. But this does not mean that it can be dispensed with altogether without some attendant risk. In every case where the seminal fluid is ejaculated into the vagina there is danger of conception while the fluid carrying its motile spermatozoa remains there: that is, for a few days. According to Huhner, the normal vaginal secretion is death to most spermatozoa within one hour: exceptionally virile organisms may exist two hours. But once the spermatozoa penetrate the cervical os the tale is a different one. Haussmann discovered motile spermatozoa in the mucus seven days after coitus, and in another instance three days after, despite douching with carbolic acid; while Percy traced virile spermatozoa in the cervical mucus eight and a half days after copulation.

Even if the mechanical obstruction fits perfectly, the moment this obstruction is removed there is risk of semen entering the uterus and impregnating the waiting ovum. It is for this reason that *before* the removal of the plug or pessary contraceptionists recommend that the vagina should be

thoroughly syringed with soap and water or soda and water.

Now continual syringing, and especially syringing with disinfectants or other chemicals, is cumulatively harmful. The normal definitely acid vaginal secretion is, as Dr. Fothergill has pointed out,<sup>1</sup> extremely valuable: it has a protective influence over the uterus by virtue of the fact that it is inimical to the existence of the majority of the septic and pathogenic organisms that are so prone to attack the vagina and other membranes. For not only does the presence of the vaginal bacillus, characteristic of the normal secretion, mean death to the spermatozoa, it means in addition death to the dangerous streptococci and staphylococci. Syringing of any kind, even where nothing but water is used, removes this vitally necessary secretion. Where chemicals are used in the douche, which is nearly always, it may easily enough cause vaginal urethritis, and in any case in time induces gross insensitiveness of the vulva, until there is incapacity to derive any sensation from the coital act. This condition is

<sup>1</sup> *British Medical Journal*, April 20th, 1918.

frequently met with in prostitutes who have had constant recourse to disinfectants.

## IV

No contraceptive method yet discovered is foolproof. There are many methods which, if properly carried out, will succeed. The enormous percentage of failures is due not so much to the faults of the methods employed as to the lack of skill or care on the part of the individual. *Provided the most suitable method is selected and carried out with due regard to its every detail, skilfully and consistently, the odds against failure are big. But with the majority of men and women this, simple as it sounds, is quite impossible of accomplishment.* It calls for sanity, accuracy, attention to details; in short it calls for all the qualities needed for the carrying out of a scientific experiment. To ask for such an attitude when a man or a woman is in the throes of sexual passion is to ask for the moon to play football with. At such a moment sanity, care, preparedness are thrown to the winds. Indeed, for this precise reason, were it not for the other factors so powerfully affecting

fertility that I have outlined in the third chapter of this work, birth control methods for the huge majority of the married would at best be only partially successful.

It is obvious that the actual selection of the best method for any individual is only determinable by the person concerned in consultation with a doctor or one versed in gynæcology. Women vary so much and men vary so much that the method which suits one may be wholly unsuitable or disagreeable to another.

The Malthusian League and Dr. Stopes both advise the adoption of two methods simultaneously. Thus the male uses the condom and the female a soluble pessary; or the male withdraws and the female uses a sponge. Undoubtedly this minimizes tremendously the risk of failure. But it is not infallible.

Again a point which most birth control advocates and most anti-Malthusians alike overlook is the fact that the virgin female cannot possibly adopt any contraceptive measure.<sup>1</sup> This fact alone ensures the continuation of a considerable birth-rate.

<sup>1</sup> There are of course, obviously, exceptions to this, such as cases where physiological conditions or

It is a well-known statistical fact that the bulk of marriages result in one birth at least, and that the initial pregnancy is usually within the first eighteen months of married life. When it is remembered that until after the honeymoon period and the healing of the ruptured hymen the female is physiologically prohibited from the employment of *any measures* against conception, the significance of this fact becomes apparent.

Apart from the additional point that the passionate period of the newly-married state is rarely one for the tempering of intercourse with precautionary measures, whatever birth control devices are adopted devolve solely on the husband who is not intimately associated with the fruits of unrestrained passion. Moreover, a large number of men are strongly opposed to the adoption of the only methods available to them: to the condom on the grounds that it restricts hugely their pleasure; to withdrawal in many cases for the same reason and in many others through the widespread notion that it induces spinal trouble, impotence, masturbatory practices simulate post-coital conditions, but they are rare.

and ultimately actual insanity. In addition, the condom is by no means infallible; while withdrawal, so far as is concerned the young man on his honeymoon, imbued with long-restrained sexual passion, with a minority of exceptions, fails completely: with the best will in the world he cannot keep that effective control so vitally necessary for success.

Few there are who sufficiently realize the number of women who, through various physiological and pathological causes, are extremely likely to conceive. Many a woman has been advised by a friend to wear a rubber cap, and entirely unaware that through having a lacerated cervix the cap could not possibly cover the opening, has taken the advice given only to become pregnant at the very first coitus. Many a woman with a widely-stretched cervix is restricted to the use of a large Mensinga pessary, and even then runs a very considerable risk of conception resulting. Others suffering from *prolapsis uteri* (commonly known as falling of the womb) cannot use a pessary at all, big or little.

## CHAPTER VI

### STERILIZATION : THE ONLY SURE METHOD

APART from those cases where one partner to the act is physiologically or pathologically impotent or sterile, and where abortion is induced, nothing less than sterilization of either the male or the female will ensure the coital act being persistently unfruitful.

The old method of castration to sterilize the male is now rarely adopted; indeed only in cases of testicular disease, in prostatic hypertrophy, or in advanced age is it in any way justifiable. Precisely similarly with the removal of the woman's ovaries, only where there is chronic ovarian disease is this operation performed. The comparatively recent discovery of the tremendous influence of testicular and ovarian secretions on the metabolism has shown how damaging were the effects of the old methods of castration and ovariectomy.

There was, too, in the case of the female the risk of failure. And no small risk was it at that. Many cases of pregnancy occurred after the supposed removal of the ovaries, for if even a small portion of one ovary is left it is usually sufficient to carry on the work of ovulation with the risk of recurrent pregnancies.

The only thoroughly effectual and safe method is the resection of the Fallopian tubes. By removing the channel by which the matured ovum reaches the uterus the possibility of conception is totally removed without in any way interfering with the internal secretions of the ovaries. There is, however, a drawback: the operation is an expensive one.

In the male the matter is much simpler. It consists of ligature of the *vas deferens* on each side, an operation involving neither danger nor great expense. Nor does it cause any appreciable deformity. It is performable under local anæsthetic and incurs no convalescent period.

Objections are made against these methods on the grounds that permanent sterilization is undesirable—the individual may change his or her mind and wish to have children, entailing

consequences little removed from actual tragedy.

To get over this investigators are concentrating on two other possible methods, to wit, radiography and the creation of immunity. It is a well-known and frequently proved fact that exposure to X-rays or Rontgen rays induces sterility without affecting sexual potency or desire. Experiments conducted some years ago at the Central X-ray Laboratory of the Vienna General Hospital by Kriser successfully caused azoöspemia in a male patient. This induced sterility was, however, not permanent, and similarly, experiments on women conducted by Frankel showed that menstruation and pregnancy returned within a short period of the cessation of X-ray dosage. Apart from the fact that the determination of the precise dosage required in each individual case for the inducement of sterility without harmful effects to other tissues is a matter of much niceness, it is evident that owing to the results being only temporary and the actual length of time operative being unascertainable frequent examination of the male's seminal fluid would be essential.

The possibility of creating in the woman by a process of immunization a spermatoxin has fascinated many biologists. The fact that prostitutes of many years' practice are able to avoid pregnancy without employing the ordinary contraceptive methods, and that married women of proved fertility show a decidedly decreased liability to pregnancy with the passing of years of sexual relationship, first suggested to researchers the possibility of continued absorption of spermatozoa creating something akin to immunization. Experiments on animals, notably rabbits and rats, were successful to the extent of producing temporary sterility. Although as yet the method is not one of much practical value, there are indications which lead one to look on future developments through an optimistic pair of spectacles.

At the moment, however, the only sterilizing methods that are certain, safe and permanent, are vasectomy in men and tubal occlusion in women.

## PART II

### CHAPTER VII

#### THE ECONOMIC ASPECT

##### I

EVER since the year 1798, when the Reverend Thomas Robert Malthus published the book which was to earn for him undying fame, there scarcely passes into oblivion a single month without someone getting up on his legs and solemnly chanting the warning that formed the sum of Malthus's first slight essay and, after sumptuous decoration, the basis of the huge tome that eventually superseded it.

Compressed to the dimensions of a single sentence the disturbing discovery of Malthus was that human beings breed much faster than

the food can be produced with which to feed them. Thus, parson Malthus argued, the excessive multiplication of human beings brought in its train disease, vice and war. Without these checks on population growth the world would quickly be filled with hordes of human beings starving for want of food.

In his first book Malthus presumably had no remedy to offer. Its success, however, encouraged further research, and in the second and vastly fatter volume remedies were propounded, to wit, continence and postponement of marriage.

Since that day numerous others have elaborated the Malthusian concept, and have time and again worked out with staggering industry precisely how in the course of years the population of the world will have increased to such an extent that there will on its surface be barely standing room for anyone. For according to the Malthusian theory the population of the world, if unchecked, doubles itself in every quarter of a century.

On these grounds is it that a number of birth controllers attempt to justify their

propagandism. Under the title of Malthusians and Neo-Malthusians they provide for the disease which Malthus diagnosed a remedy at which he would have held up both hands in outraged horror.

The trouble with Malthus was that he knew nothing about biology and nothing about economics. Had he possessed any such knowledge he might have saved himself the trouble of writing his two books and incidentally of causing an unconscionable number of people to get hot under the collar at the idea of the earth eventually resembling a gigantic rabbit-warren. With precisely the same lamentable lack of biological and economic knowledge are his disciples afflicted, and this same criticism may be extended to include the Neo-Malthusians from Dr. Drysdale downwards,

As organisms become more complicated and longer-lived their rate of reproduction declines. The truth of this may be taken as axiomatic. Sexless organisms reproduce by mitosis at a terrific rate.

From sterility to reproductivity and thence to sterility represents the life cycle of every

organism known, whether sexually reproduced or otherwise. It is a gratuitous assumption that multicellular reproduction from Nature's point of view represents any advance on cell division. In truth there is an accumulation of evidence to show that the one only appears on the breaking down of the other. Child's theory that in sexual reproduction the weakened germ cells merely go through a process of rejuvenation induced by conjugation has much in its favour.

In certain groups of Protozoa, notably *Paramæcium caudatum*, mitosis is alternated with conjugation, and from a long series of experiments conducted by Maupas the significant fact was established that failure in the occurrence of conjugation caused death. By extensive experimentation Calkins went appreciably further. He discovered that extinction could be avoided or rather put off by artificial stimuli; in other words environmental change would have precisely the same rejuvenating effect as a change in the mode of reproduction. By these means Calkins succeeded in producing 742 generations of *Paramæcium* without once having recourse to

conjugation. In certain favourable environmental conditions *Colpoda steini* can apparently continue reproducing by cell division for ever, but an alteration in the chemical contents of the water results in conjugation.

It is unnecessary to give further examples. The point deducible from these and other researches is that as the organism reaches senility the necessary renewal of vitality for the continuance of life must be induced by chemical changes, and apparently these are dependent on either environmental peculiarities or conjugating processes. The unicellular organism in the fullness of its vigour can reproduce itself by mitosis; the weakened, dying cell can only evade extinction by union with another cell.

It may be wondered what on earth has all this to do with human beings. The connection will be apparent after a little further investigation.

The root principle which has just been enunciated applies to the higher animals, which biologically only differ from low organisms in complexity and size. In the *Planaria velata* which although a worm is by

no means one of the lowest forms of life, there is, as Child amply demonstrated, the power of breaking up into fragments any one of which possesses the function of developing into a new individual. Undoubtedly the weight of evidence is in favour of ovulation in vertebræ being a somewhat analogous process where the union of the matured ovum with the spermatozoön results in the formation of the new individual.

Now in low organisms, as Loeb, Delage, Hertwig, Bataillon, and others have repeatedly demonstrated, this process of fertilization can be dispensed with. The unfertilized ova of sea urchins, by chemical treatment, were induced to develop into complete individuals. Allied to these experiments and equally significant are those of Stockard, where by tampering with the temperature of the water in which fish embryos were developing was induced the production of twins, double monsters, and other abnormalities.

I am not going so far as to assert that with human beings it will ever be possible or desirable to eliminate the male in the work of reproduction; but I think there can be no

reasonable grounds for denying that chemical and environmental influences have enormous effects on the incidence of fertilization.

Between potential fertility and actual fertility there may be a gulf of tremendous magnitude. In the lower organisms and in animals of all kinds in their primitive state the difference is often small enough. But in domestic animals, in species turned into unaccustomed or inimical environments, and in man, the difference is profound. Thus animals confined in Zoological Gardens, though losing none of their fondness for copulation, rarely breed. Certain domesticated animals and birds on occasion show spurts of vastly increased fertility, but these are usually followed by conditions well-nigh approaching absolute sterility. An excellent example of this is furnished by the domestic fowl. In its original wild state the female *Gallus bankiva* produced from eight to twelve eggs annually, and the probability is that each egg produced a chicken. To-day the average egg production of a pullet is 120,<sup>1</sup> showing a

<sup>1</sup> There are notable exceptions. Certain highly-bred exhibition strains of purely ornamental fowls lay as

steady decline until in the eighth or ninth year laying will cease altogether. Each new variety will not only lay in its pullet year its 120 eggs, but every egg will probably be fertile and produce an easily reared youngster. But as the variety improves in purity, in other words as it becomes more inter-bred, there is a steady decline, not necessarily in the number of eggs produced but in fertility and in the vigour of the chickens hatched. So much so is this the case that it may be laid down as an absolute law that the older and more pure the breed the more difficult is it to secure fertile eggs and rearable chickens. The Black Spanish fowl, at one time an excellent layer and widely bred, to-day is almost extinct, is supremely delicate and a notoriously bad layer. The Minorca is in much the same boat. So are a score others. The Sebright Bantam, a bird of wonderful beauty and bred to extraordinary perfection of markings, is so delicate that none but an expert rearer can hope to bring the chickens

few as 40 eggs in their pullet year; others bred expressly for egg production reach as high as 200 to 280 eggs per annum.

to maturity, and even in his hands the losses are prodigious.

Every breeder of exhibition poultry knows that those birds which are free to roam far and near, badly housed or let roost in the trees, scantily fed, will prove much more fertile than if confined to a small run, provided with an elaborate modern scratching-shed and fed on expensive food. It is because of this that to improve fertility the breeder of experience frequently gives his fowls free range. In addition, while in strict confinement a male bird can rarely fertilize more than ten females, on free range he can with safety be given double that number.

Much the same thing holds with dogs. The inter-bred Mastiff often proves barren; the puppies when secured are exceedingly difficult to rear. The pampered and artificially kept Pekinese is often sterile, produces few puppies at a litter, and these require the utmost care if they are to be reared.

Well, and what follows from all this? Simply that in-breeding, environment, nutrition, age, all have their effects on fertility. In-breeding in animals and birds is equivalent

to continued fission in low organisms: there comes inevitably a time when crossing, or failing this either environmental or nutritive change, is just as necessary as in the case of the *Paramæcium*. From time to time, true enough, efforts have been made, notably by Huth,<sup>1</sup> to prove that in-breeding is not detrimental either to fertility or to the constitution of the progeny.<sup>2</sup> But the cases where continued in-breeding apparently has been beneficial, which have been made so much of, have probably been explainable by nutritive or environmental factors which have been entirely overlooked.

## II

When we come to consider human beings we see the same broad principles are every-

<sup>1</sup> Huth, *The Marriage of Near Kin*.

<sup>2</sup> There is, on the other hand, apart from the experience of live stock breeders, considerable evidence in relation to the human race that marriages between near relatives are often sterile. According to Kisch, Gohlert in an extensive inquiry discovered that of 175 Royal marriages of near kin, 57 or 32.6 were completely barren.

where applicable. There can be no doubt that originally woman was potentially much more fertile than she is to-day. It is highly probable that at one time two, three, or more children at a time was the rule and not the exception.<sup>1</sup> The records of families numbering figures potentially unattainable at the normal rate of reproduction give credence to this supposition. Even to-day the average healthy woman is potentially capable of giving birth to at least thirty youngsters, making no allowance for possible twins.

Now at an overgenerous estimate the average number of children borne by a married woman to-day, during the whole of her reproductive period, may be put at three. According to Pell,<sup>2</sup> who is quoting figures gathered by the French Ministry of Finance, "there were in the year 1890 2,000,000 married couples in France without children; 2,500,000 with only one child; 2,300,000 with two children; 1,500,000 with three children;

<sup>1</sup> According to Veit, who investigated 13,000,000 births in Prussia, the incidence of multiple pregnancy was as follows: twins, 1 in 89; triplets, 1 in 7,910; quadruplets, 1 in 371,125.

<sup>2</sup> C. E. Pell, *The Law of Births and Deaths*.

and only about 1,000,000 with more than three." In two hundred years the average number of children per marriage in France has declined from seven to two.

What is the reason for (1) the fact that the actual fertility is so far below the potential fertility; and (2) the remarkable decline in recent years? At once all, both advocates and opponents, shout birth control. But while admittedly and undeniably birth control has had its effects, the idea that it is solely or even mainly responsible becomes on examination ludicrous.

Whatever effect contraceptive measures may have to-day, and I am inclined to submit they are tremendously exaggerated, the fact remains that long before the majority of people had any notion of such a thing as birth control, the difference between the potential capacity for child-bearing and the actual number of births was stupendous. Even with abortion thrown in as a factor with some influence there still remains a huge leeway.

Perhaps the first man to get a glimpse of the real reason was Thomas Doubleday. True it was no more than a glimpse, for while Double-

day's basic assumption that the evils which Malthus considered necessary to keep the earth from being overrun were to the contrary the actual causes of the high birth-rate, had in it a big element of truth, his hypothesis that any race or species when threatened with extinction made frantic and successful efforts for life by a sudden and enormous increase in fertility was as fallacious as was the assumption he aimed to contravert.

This idea that there is some controlling power watching the development of each species, and that when any one is at the last gasp possibilities of survival are enhanced by vast multiplication in the number of offspring, since Doubleday's time, has been uprooted, embroidered and given the hall-mark of popular approval. Actually no such power exists.

What does happen is merely a variation of what happened in the case of the *Paramacium* considered above. Under civilized conditions of life, with an unnatural environment, unnatural food, the potential rate of fertility is lowered. It is lowered in the precise ratio of the departure from those conditions which

are highly favourable to fertilization. Thus in the highly artificial life of the society butterfly fertility is at an exceedingly low ebb : in the nearest approximation to primitive life it approaches to some degree the potential fertility. The average rate of child-birth amongst the French Canadians is ten per female. In the working-class homes in civilized countries the birth-rate is very considerably higher than amongst the rich. This, say the socialists and the eugenists, is because the rich practice contraception and the poor don't. In the main it is no such thing. It is simply that the hard-working, well-exercised, homely-fed woman, provided she is not actually reduced through poverty to actual ill-health, is more fertile than is the society woman ; just as the cur-dog in the street is infinitely more fertile than is the pampered Pekinese ; as the nondescript fowls scratching on the farmer's dung-hill, and getting a meal the Lord knows when are a hundred times more fertile than are the prize-bred Brahmas strutting about the fancier's well-kept run.

Now although this does much to explain the variation between the potential birth-rate

and the actual birth-rate, and although in its cumulative influence it has some bearing on the point, it by no means explains, even when coupled with the widespread and tremendous effects entirely overlooked by both birth controllers and their opponents of the huge loss of virile reproductive man-power through the late war and the coincident enormous spread of venereal disease, the extraordinarily rapid decline in recent years. The birth-rate in the United Kingdom in the period 1871-1875 averaged 35.5 per 1,000 population. Since that time there has been a steady fall, reaching in 1926 the phenomenally low figure of 17.8, a figure lower even than that of France, 18.8, and, with the exception of Sweden 16.9, probably the lowest in the world. There is, of course, the death-rate to be taken into consideration, which shows an equally marked decline from 24 per 1,000 in 1870 to 11.6 in 1926. But this, after all, does not alter the fact that England's population at the moment is practically stationary. In itself this is no guarantee that it will remain stationary: a fact which Malthusians quite overlook. England's population, if statistical figures are

anything to go by, has been stationary before : in the fourteenth, fifteenth and sixteenth centuries.

The factors affecting the birth-rate are : (1) celibacy ; (2) late marriage ; (3) fertility ; (4) sterility ; (5) abortion ; (6) birth control.

Celibacy and postponement of marriage may be taken as one, for it is questionable if any considerably increased number of either men or women avoid marriage altogether. What is pretty general is postponement of marriage. True it is the custom to dismiss this factor cursorily. Pell, for instance, dismisses it as affecting the problem scarcely at all, but he has a habit of doing this with everything that weighs against the hypothesis he somewhat fanatically sets out to prove. It is a well-known biological fact that the height of a woman's reproductive period is fairly early, and with modern artificial standards of life there can be little doubt that in the overwhelming main her period of fertility, as distinct from her period of reproductivity, is distressingly short. Thus every year by which marriage is postponed decreases, contraceptives or no contraceptives, her chances of con-

ceiving.<sup>1</sup> In the article on "Population" in the *Encyclopædia Britannica*, it is stated:

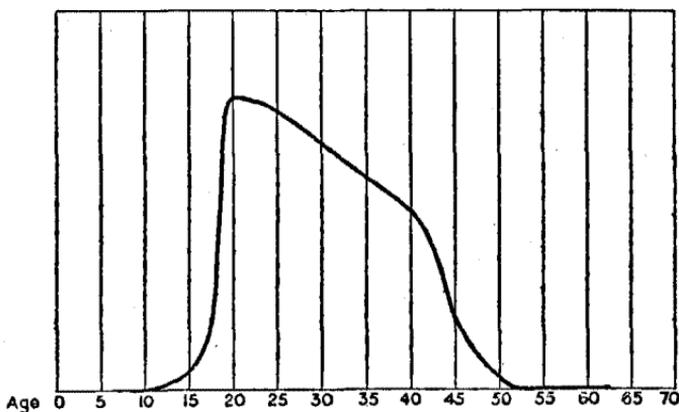
"A Swedish return of 1896-1900 shows that the annual births per thousand wives of 20-25 are fewer by nearly 17 per cent. than those of wives under 20. Between 25 and 30 the number falls off by one-fifth, and after 40 by about 44 per cent."

Precisely the same thing applies in relation to animals and birds, as every experienced breeder well knows.

The rise from sterility to the height of sexual power and gradual decline to the

<sup>1</sup> It has been pointed out that postponement of marriage cannot affect the matter, as the *average* age of marriage shows little variation. Thus Sir Arthur Newsholme points out (*Medical Views on Birth Control*, 1926) that in 1896 the average age of spinster brides was 25.14 and in 1920 25.54. This is an excellent example of how fallacious arguments can be demonstrated and apparently proved by figures. For instance, taking 1,000 women, with 100 marrying at 20, 600 at 25, and 300 at 30, the average age of marriage is 26. Taking another 1,000 with 500 marrying at 20, 100 at 24, and 400 at 34, the average age of marriage would show no alteration, remaining at 26. *But in the one case there are 500 and in the other 100 marrying at 20, the age of greatest fertility.*

climacteric can be clearly shown by means of a graph.



A point that is rarely taken into consideration by investigators is the fact that the relative ages of husband and wife have some effect on fertility. Korosi, whose extensive inquiries have let considerable light on the subject, avers that a woman of 18-20 married to a man of 25-27 represent the ages at which the highest fertility is realizable; and that with the advance in the woman's age the desirable discrepancy in the ages diminishes until at 29 the woman, to give the best results as regards fertility, should marry a man of the same age as herself. After this age the man should be younger than the woman.

Now it is incontrovertible that the tendency of the present day, applicable to both sexes, is to an increase in the average age at which marriage occurs, and if there is any truth in Korosi's thesis, this one fact alone must be having its effect, and no small one at that, on fertility.

Connected to some extent with all this is the undoubted spread of continence, not be it said continence in the ordinary sense of the term, but continence in the marital state. It is a tolerably safe assumption that the majority of men to-day, during later married life, avoid intercourse with their wives. It is an unquestioned fact, though there are, of course, startling exceptions, that after a few years of married life most men tire of their wives and are led to seek illicit intercourse. In many cases, too, the wives themselves, through sheer fear of pregnancy *per se*, or of its interference with pleasure, or through distaste for the unending bother attached to the use of contraceptives, are disinclined for intercourse. Through the one cause or the other, or both, intercourse becomes an occasional practice punctuated by continually lengthening inter-

vals until it peters out altogether. This undoubtedly is one of the reasons why even the most fertile women, unless married to inordinately sensuous men, have in the old days even rarely had their full quota of children. To-day the thing applies to the *n*th degree. The increased affluence of the working man has had its effects. The day has gone when, whether æsthetically suited or not, a man had to be content with the fading beauty and vanished attractions of his wife, when bodily pleasures represented his sole form of amusement. He has the money to seek other more alluring arms in the shape of the gaudy *filles de joie* that parade industriously every sizable town, and to alternate fornication with other varieties of pleasure. The vast increase in divorce and coincidently of prostitution and other extra marital forms of intercourse speak eloquently of the truth of this.

As I have already been at some pains to point out, the diminished fertility which inevitably goes with the artificial modes of living common to civilization and which constitutes the discrepancy between potential fertility and actual fertility has, in addition,

some substantial effect on the tremendous recent decline. During late years the change in the conditions of the working-class nationals has been enormous—staggering in its immensity. It is no exaggeration to say that the position of the working-class woman to-day approximates in the matters of ease and luxury to the position of the middle-class woman of fifty years ago.

But what has, I think, been systematically overlooked by all observers of the problem is the very considerable extension of actual sterility. There is a difference between diminished fertility and sterility. It is a momentous difference. In the first part of this work I have gone at some length into the causes of sterility in both men and women. It is an undoubted fact that these pathological causes and to a lesser degree physiological causes are increasing rapidly. The number of actually sterile marriages is decidedly on the upgrade, and it is a relatively safe assumption, as I shall show in another chapter, that contraceptive measures are only responsible for a small percentage of these. It is here that in its full effect works the vastly reduced death-

rate. The increase in medical knowledge, the social conditions of modern life, and above and beyond all the improved sanitation and hygiene have together sufficed to rear a huge number of unfit persons. What under harsher conditions would die at birth or during adolescence to-day live and marry. The majority are sterile: they do not breed. What, in effect, we are doing is to rear annually a huge number of non-breeders.

It is obviously impossible to get hold of statistics in respect to abortion that are worth printing. Any figures that are available will be miles below the actual truth. In a country where abortion is a criminal offence no person is wilfully going to confess its practice. Undoubtedly, however, it is widespread, particularly amongst the middle and upper classes who are able to pay for the services of a professional abortionist. In working-class districts there are, despite sensational statements, few who can afford the fees, the women relying on drug taking and manipulatory measures.

There remains the case for birth control. Unquestionably contraceptive methods have

their effect, and a considerable one at that: an effect far in excess of what Pell is inclined to allow. Proof of this is supplied in the diminishing number of illegitimate births.

Thus we arrive at the conclusion that the decline in the birth-rate so noticeable in recent years throughout all civilized countries is due in the overwhelming main to the enormous increase of sterility and the widespread diminution of fertility in both sexes; that delayed marriage, abortion, and birth control, while all contributory causes, are not in themselves sufficient to bring about the universal heavy decline.

### III

In the Malthusian League we have a society taking the credit or receiving the blame (it is all a matter of viewpoint) for something with which, after all, it has had very little to do. The birth-rate for years has been declining, and for this decline the League takes full responsibility. The precise aim of the Malthusians is given by Dr. Drysdale in *The Neo-*

*Malthusian Ideal.* It makes interesting reading :

“ On purely Malthusian grounds the need for the diminution of the birth-rate disappears as soon as food can be found for all, so that as this result is obtained either by further reduction of the birth-rate or by improved efficiency of the race, our Malthusian object is attained.”

Thus we are brought up against another point, to wit, that the whole object with which the Malthusian League has been and is concerned is in reality a myth. For the basic idea of Malthus, divorced from the methods it is relatively certain that estimable clergyman would have vehemently denounced, is a myth. There never has been any genuine reason why population should exceed the possibilities of subsistence. The whole trouble, apart from their sidetracks into eugenics, from the point of view of the Malthusians, the Neo-Malthusians, and various other experts on the population problem, is a matter of food. In a paper read before the Sociological Society on February 23rd, 1926, Dr. Binnie Dunlop,

a prominent Malthusian, gave a representative view of this matter. He said :

“ Virtually the sole economic difficulty which besets man is the Malthusian one that he can only increase his food supply very slowly ; consequently, small families and willing work would eliminate poverty.”

Practically the same sermon is preached by another prominent Malthusian, Mr. R. B. Kerr, in a pamphlet entitled *Is Britain Over-Populated?* And on similar lines Mr. Harold Cox makes out a strong case for birth control.

The basic error which every Malthusian makes is the confounding of shortage of money with which to purchase food with shortage of food itself. The two are as far apart as are the Poles. The fact that the bricklayer does not have champagne is not that there is no champagne for him to get, but that he has not the money with which to buy it.

It is true that England might find it difficult within her own marches to provide sufficient essential food to support the whole of her population. But apart from the obvious fact that England, being so busy with the more

profitable game of making cloth, locomotives, and ships, has never made the slightest effort to grow this food, this is not the point at all. The essential point is, can the whole world produce sufficient food to support its population?

It is significant that the Malthusian League has entirely overlooked this. It is further apparent that were birth control the salvation of the world, there would be urgent need for its rigorous prosecution in every corner of the globe. Because civilized Europe and America have declining birth-rates and are therefore consuming less of the essential or (according to Malthusian arguments) limited food supplies of the world, China and India are not restricting their populations and may be assumed to be consuming more than their respective shares. Obviously where three men have a loaf of bread available for three days, it is useless for one to be existing on crumbs to eke out the supply if the other two are gobbling it up in slices.

There is then only the world supply of food worth any consideration. Is there any deficiency in the world's supply of food?

The Malthusians say there is a deficiency. And they point as proof to the starving poor. In this connection Dr. Binnie Dunlop says :

“ In 1876 the birth-rate and death-rate were still very high, and the average duration of life only about thirty-five years. Then the birth-rate fell or new mouths were added more slowly, and there steadily declined the proportion of persons dying prematurely from diseases consequent upon under-nutrition ; thus, steadily the death-rate fell and the average duration of life rose. The undernourished are doomed to premature death no matter how efficient and active the health services may be ; nothing can make a population increase faster than the food supply ; if there be ten additional persons and only food for eight, two must soon die. The high correlation between the birth-rate and the death-rate continued up to 1913 ; therefore, food shortage was still the cause of what was excessive in the death-rate up to 1913. Thus the whole of the fall of the death-rate from 1876 to 1913, the whole of the big reduction of poverty, the whole of the rise in the average duration of life from about

thirty-five years to over fifty years, must be attributed to the fall of the birth-rate steadily reducing the amount of the food shortage."

This view is a typical one. Wherever Dr. Dunlop mentions food shortage he does not mean food shortage at all. He means *shortage of money with which to buy food.*

The question of food supply is wholly bound up with finance, and if there is a shortage of food it is not due to any inability of the land to produce that food if given the chance; it is due to the fact that the inhabitants are not taking the trouble to produce the food. If England has given up growing food she cannot blame her financial competitors for following her example and giving attention to the far more remunerative work of manufacturing goods for sale in other countries.

The size of the world's corn crop is decided not by the needs of the inhabitants but by the amount of profit it will bring. A surplus means decreased profits and probably loss; a shortage means increased profits. Thus in times when Nature is in a bounteous mood part of the harvest is ungathered in the case

of perishable goods such as fruit; or gathered and stored for a rise in price as in the case of corn; fish is hurled back into the sea. Instead of praying to God for a bumper cotton crop the financier prays for an onslaught of boll-weevils.

Granted the removal of artificial limitation of production and the provision of the necessary man-power to do the work, the world's output of foodstuffs is well-nigh illimitable and would support adequately all the people that, birth control or no birth control, are likely to be born. The real trouble, therefore, like most troubles which beset the world to-day, is connected with high finance.

We ultimately reach the inevitable conclusion that not only is birth control not the primarily effective factor influencing the declining birth-rate, but that those who advocate its practice on economic grounds are propounding not only a fictitious remedy but a fictitious remedy for a fictitious disease.

## IV

“ In this way the medical profession, in whose hands the health of each community lies, would take the first step in the direction of an international control of population, and would thereby lay the basis for a genuine and permanent world peace.”

Thus Mr. C. P. Blacker in *Birth Control and the State*.

Than the assumption that universal birth control would end war no greater fallacy has ever been born. The causes of war which were operative a thousand or a hundred years ago have been modified, largely displaced, and superseded by others. This significant fact Mr. Blacker has wholly overlooked. He is still looking at the world as a struggling ground for room for subsistence, oblivious to the fact that war is the result of financial competition. Just as under existing financial conditions the individual can only be rich through the poverty of a hundred of his compatriots, so, too, the nation can only be

prosperous through the coincident lack of prosperity of some other nation. The rise of industrialism has smashed to atoms the old theories as to the cause of war. To-day the problem of finding markets for surplus products increases inevitably year by year, and ultimately only war can provide any prospects of giving industry a chance to market its surplus.

It is for this reason that the claim of the Neo-Malthusians that birth control will do away with unemployment is another gorgeous fallacy. To the exact contrary, any diminution of population in an industrial country is bound to *increase* unemployment for the simple reason that consumption, even as it is, is entirely unable to keep pace with production. Thus do the Neo-Malthusians bolster up their cause with economic arguments applicable to the time of Malthus himself.

## CHAPTER VIII

### THE PATRIOTIC URGE

It may be taken as a tolerable certainty that whenever and wherever someone or other, on Malthusian or other grounds, advocates the practice of contraception, there will follow as a matter of course the uprearing of some violent denouncer of every form of birth control on the grounds of the threatened destruction of the race. Since Roosevelt first sang the song of "Race Suicide" there has been no lack of patriots to chant the chorus.

Year by year, as the constantly declining birth-rates are published, the daily and Sunday press, in screeching articles and editorials, warn the public against the suicidal policy of birth control and call noisily for governmental interference. Presumably these cacophonous Jeremiahs are speaking in terms of cannon fodder. They look on the breeding of young men to carry the glory of the Union Jack as the main object of woman's travail.

It was the custom years ago to deplore any likelihood of Britain's normal crop of youngsters falling appreciably below the crops of other European countries. As a matter of fact it has so fallen—it stands at only one remove from the foot of the ladder. Sweden occupies the lowest position, with a birth-rate of 16·9; England with 17·8 comes next. There is, however, one consolation for the patriots. The other leading European countries are in scarcely better plight. France's birth-rate is only 18·8; Germany's tops it only ever so slightly with 19·5. But there are unfortunately other countries outside Europe. There is China. There is Japan. We do not know their birth-rates. No figures, at least no figures that do not stink of guess-work, are available. What we do know, however, is that they are enormous. We do know that while the birth-rates of England, France, Germany, and other countries are declining rapidly, the birth-rates of China and Japan show no signs whatever of any shrinkage. And the whole trouble, say the Imperialists, is this confounded birth control propaganda. But is it? Let us see.

No sane man is going to deny that contraceptive measures are having their effects. They are. But I submit these effects are grossly exaggerated, not only by those who wish to see birth control made a criminal offence, but also by those who, in the main, are responsible for its practice.

In the previous chapter I have shown that the compelling reason for the decline in the birth-rate is a biological one, and in that portion of the book dealing with the practical side of contraception I have emphasized the fact that at present there is not in existence any sure method, short of actual sterilization, of preventing pregnancy.

It is true that with huge care, and by the employment of two methods simultaneously, it is possible in the majority of instances to avoid conception. But it is further true that with human nature what it is *not more than one person in a hundred will go to the requisite trouble for years on end with never a let up*, it is here that they are almost sure to fail sooner or later. It must be remembered that one slip in fifteen months is sufficient, in certain cases, to cause a child to appear every

two years. And it is so easy for this slip to occur. Apart from the failures that are likely to occur, unknown and unpreventable, with every method even when the greatest care is taken and the keenest vigilance exercised, there is in addition the fact that at the moment when the partners in the act are overcome by the most violent passion, successful contraception calls on them to adopt artificial and sensation-lowering methods. Is it any wonder that at such a moment the one or the other throws caution to the winds?

Time after time statistical inquiries have been made into the incidence and results of control, and although these inquiries have necessarily been limited in scope they are remarkably illuminating. The Fabian Society sent out a questionnaire. Of the 316 persons from whom replies were received 242 were adopting restrictive measures and 74 were letting things take their course. The average number of children per family was, of the first class 2·7, and of the second 2·88. A similar inquiry undertaken by the National Birth-Rate Commission elicited 477 replies, of which 287 used restrictive methods. In this case the

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average number of children in the restricted families was 2.4, and where no restrictive measures were adopted 1.6. The third inquiry was conducted by Lady Willoughby de Broke, and here the averages were  $3\frac{1}{8}$  and  $2\frac{1}{2}$  respectively. Now the significant point in connection with these inquiries is that in two of them, where contraceptive measures were employed, the average number of children resulting was in excess of the average where no such methods were used.

The case of Holland is even more significant. It is extremely unlikely that there is any country in the world where birth control is more widely practised than in Holland. It has the distinction of having the first privately instituted birth control clinic, established as long ago as 1885, when, in any other country in the world, it is probable that any such step would have led to the instigator being clapped into jail. There are clinics in all the cities and they are controlled by the Dutch Neo-Malthusian League, which is recognized by the Government and was granted a Royal Charter of Public Utility in 1895. So much for the position of birth control in Holland. Natur-

ally one would expect Holland's birth-rate, if what the Malthusians and the anti-birth controllers say were true, to be the lowest in Europe, certainly lower than that of England where the practice of contraception is still surreptitious, than that of France where it is a criminal offence. But what is the truth? To the everlasting and eternal confounding of the arguments of Malthusians and anti-contraceptionists both, the truth is that Holland's birth-rate stands at 23·8, higher considerably than that of England, of France, of Germany, of the U.S.A.

NOTE.—Since the text of this book was written, provisional figures relative to the birth-rate for England and Wales during 1927 have been issued by the Registrar-General. England's birth-rate now shows a further decline, standing at 16·7. Figures for 1927 relating to other countries are not yet available.

## CHAPTER IX

### THE EUGENIC SIDE

#### I

NOR every eugenist is a birth controller, but most birth controllers are undoubtedly eugenists. In fact Dr. Drysdale has admitted that "the question of population is beginning to change from almost one of quantity to one of quality."<sup>1</sup> The relatively heavy birth-rate of the labouring classes in contrast with the small rate of increase amongst the wealthy and aristocratic sections of society is viewed with alarm by both birth controllers and anti-birth controllers, and used in turn and with gusto as an argument both for and against. Thus Blacker writes :

"At the moment the indisputable facts of the problem in this country are that we are over-populated, that contraception is practised

<sup>1</sup> C. V. Drysdale, *The Neo-Malthusian Idea*.

too much by the upper and middle classes—perhaps even by the skilled working classes—and not enough by the improvident unskilled masses at the bottom of the social edifice.”<sup>1</sup>

Dr. Stopes and the Malthusians are strongly in favour of teaching to the poor preventive methods so as to slow down their rate of increase and prevent the flooding of the country with what they are pleased to term “bad stock.” Others deplore the lack of babies amongst the rich, and lay the blame on widely practised contraceptive measures. Thus Lady Barrett says :

“The point for our consideration at the moment, however, is that if the production of all capable workers, whether mental or manual, is to be curtailed, and the numbers of the population maintained in greater proportion from the mentally deficient or criminal classes, the result must be national disaster. For in a very short time there will not be enough leaders of real capacity to occupy positions of initiative and responsibility in the various

<sup>1</sup> C. P. Blacker, *Birth Control and the State*, p. 61.

activities of the country at home and abroad, nor will there be an adequate supply of good practical work : a lowered standard of efficiency must result. From a national point of view, therefore, we regard the propaganda in favour of conception control to be a real and increasing danger.”<sup>1</sup>

To show clearly the basic fallacies behind this argument as well as behind the Malthusian advocacy of “quality not quantity,” it is necessary to dig into the fundamental errors of the eugenic theory itself.

## II

The fundamental principle upon which every theory of eugenics largely subsists is the popular assumption that “blood tells.” Hymned by Sir Francis Galton, founder of the modern school of eugenics, it has been chanted in turn by every advocate of selective human breeding.

Briefly stated, the theory is that the quality

<sup>1</sup> Florence E. Barrett, *Conception Control*, John Murray, 1922.

of children, physically and mentally, is dependent largely, if not entirely, on the qualities of their parents. Thieves give birth to thieves; murderers beget murderers; imbeciles are responsible for the multiplication of their kind. And thus and thus.

Owing to the fact that men and women are allowed to marry whom they please; that the disease-afflicted, the mentally unsound, the morally unfit, are forming unions with others of the opposite sex every day in the week, the ranks of the undesirable citizens are being inflated. Such is the contention of the eugenists. To end this deplorable state of affairs and at the same time to bring about a huge uplift in relation to the race as a whole, they have a carefully-thought-out remedy.

This remedy is the adoption of a system of State approved marriages, involving the segregation of the physically and morally unfit, and, as propounded by Mr. Wiggam and several others, the sterilization of the disease-stricken and criminally minded. What, in effect, the eugenists advocate is the application to the propagation of the human race of those

very principles which have been applied with such marked success to the breeding of animals and birds.

It is a widely-held belief that we, as a nation, are wrong in giving more attention to the breeding of our horses than to the breeding of our children. It is, in point of fact, to the breeding of horses, dogs, and fowls that is due the oft-repeated statement that "blood always tells," beloved of every student of eugenics, and elaborated with much effect by the before-mentioned Mr. Albert E. Wiggam in his belauded book, *The Fruit of the Family Tree*. By selective artificial breeding some wonderful results have been obtained. The race-horse, the heavy-milking cow, the 300-egg hen, numerous new breeds of dogs and fowls, the stoneless plum, and the spikeless cactus of Burbank, are amongst a few of these remarkable productions. In the course of a few generations a breed can be altered almost past recognition.

Of the truth of all this there can be no question. Every practical breeder knows that by rigorous selective methods alone can satisfactory and swift progress be made; that once

this system of selection be abandoned chaos results: in a few generations the beautiful horses, the distinctive dogs, the wonderful breeds of fowls, would all go back to the mongrelized forms from which, with much skill and patience, the breeder has rescued them.

Very well, says the eugenicist, let us apply in a modified form the same principles to the breeding of human beings. Examined superficially, the thesis sounds convincing enough. But the analogy is a dangerous one. It rests on an assumption which every competent biologist knows to be not only unsafe but actually erroneous.

The live-stock breeder is concerned solely with physiology. He is concerned, if his aim is the development of exhibition traits, with matters of physical conformation, with quality and colour of the coat in horses, peculiarities of plumage in fowls, and so on; or if his aim is utilitarian, with the breeding of cattle possessed of phenomenal milk-producing capacities, with the development of strains of sensational egg-producing hens. The eugenicist, on the other hand, is largely concerned

with mental properties; his main objective is not the production of men and women in numbers conforming to precise facial dimensions or bodily proportions, but the increase in the number of persons reaching a definite standard of intelligence or morality. Physical health is incidental.

Precisely here is it that the whole thesis breaks down. For mentality is not hereditary, or at any rate, its hereditary factor is so slight as to be negligible so far as any practical purpose is concerned. The eugenicist, like the psychologist, has been led astray by basing his hypothesis on the older biological concept that a mentality superimposed on a network of instincts is as truly hereditary as the colour of the skin, the shape of the face, the visceral processes. No clear distinction is made between instincts and habits, between purely cortical or neurological processes and physiological or peripheral activity. Only partially and indirectly do the mental qualities depend upon physiology: the popular slogan "a healthy mind in a healthy body" is largely nonsense. A man's philosophy is mainly conditioned by his environment: the lack of

an extra shirt may manufacture a snorting socialist!

Physical qualities are distinct from mental qualities, though even here is there danger of eugenists being led astray. The trend of recent biological research is all in the direction of proving the limitation of breeding possibilities. The Mendelian theory is an exploded myth; the isolation and inheritance of specific unit characters which form the basis of the hypothesis being non-existent. As one who has conducted much experimental breeding in connection with animals and birds, I say without the smallest hesitation that the production of the finest specimens seen at exhibitions held in this and other countries is largely accidental. No professor of genetics, obtaining his data at second-hand, no student of text-books on animal breeding, can get at the truth, for it is wilfully perverted or suppressed by practical breeders who wish to disseminate the idea that they have brought the art of breeding to something approaching mathematical certainty.

The truth is that every child, on emergence from the womb, is an animal devoid of con-

scious cerebration, possessed of nothing in the way of hereditary factors beyond the sum of autonomic physiological and anatomical correlations which ensure its development into a human being of a distinct type. Even the type itself is, in minor characteristics, amenable to environmental influence. The popular idea that different races inherit marked emotional and cortical concepts such as sportsmanship and patriotism in the English; cunning in the Japanese; parsimony in the Scots; cupidity in the Jews, is so much twaddle. It arises through a confounding of these acquired abstract qualities with inherent instincts. No abstraction can be instinctive, for an instinct is inherited as a biological factor. Thus there is no such thing as a born poet, or a born artist, or a born musician. Nor is the tendency to any precise form of mental development inherited. To say, for instance, that a child can inherit a tendency to musical expression is to say something almost nonsensical. To say that the child of a burglar inherits a tendency to commit burglary is rubbish. Yet to say that the one often develops musical talent and the

other as often becomes a professional burglar are true statements enough. In each case the error of assuming an inheritable factor lies in the inability to distinguish between cause and effect.

Environmental influence on mental attainments exceeds enormously the influence of heredity. The child of an artist, provided its environmental conditions duplicate those of its parent, will probably develop artistic talent, and has much better prospects of becoming an artist than has the child of a bricklayer. But that same child, transplanted at birth to Africa, on reaching adolescence, would, so far as mentality goes, be indistinguishable from the savages with which it lived, and would as likely as not have developed anthropophagy.

Millions of Europeans accept Christ as the most interpretative figure in Christian polytheism. Millions of Asiatics worship uncritically the one God, Allah. Transfer at birth an English child to Asiatic surroundings, alienating him from Western thought, language and symbolism, and at manhood he will be a worshipper of Allah. Transfer an Asiatic child to English surroundings, the

child will accept the Christian religion. Admittedly there are conceivable exceptions, but in nine cases out of ten the law will hold good. The biological factors of skin colour and racial physiognomy, being hereditary, will undergo only slight changes; but as regards mentality, twenty years of environmental influence will have a thousand times more effect than twenty centuries of ancestral accumulations.

At the time of fertilization the hereditary content is determined; and from then on through the pre-natal period, environmental influence is strongly at work. The newer school of biologists is giving more and more attention to the various factors affecting the embryo, such as injuries to the egg, nutritional conditions, and secretions of the ductless glands, particularly during the foetal period; and more and more evident does it become that human and animal freaks, giantism and dwarfism, are the result of alterations of physical and chemical stimuli, and are not, as was formerly supposed, of a hereditary nature.

Thus it is that any scheme of State control of marriage, beyond the limitations of

hereditary disease and physical disabilities, would be a complete failure. The man of genius, the man of talent even, can never be produced in the same way as is produced the pedigree race-horse. To the end of time his emergence from the ruck of mankind will remain largely fortuitous.

Sociologists, following psychologists, as psychologists have followed biologists, have been led astray. It is necessary for them to take into account the changed conditions of the age. The chief of these are (a) the restricted effects of parental example, and (b) the overwhelming influence of stereotyped forms of mind domination. The mental attitudes of the young of both sexes to-day owe nothing, so far as are concerned inheritable factors, and precious little as regards imposed beliefs, to their parents: to the contrary, these attitudes are largely conditioned by the radio, the cinema, and the Sunday and daily garbage sheets.

## III

Once is thoroughly grasped the myth of the eugenic theory, there topples incontinently to the ground much of the fine and impressive structure most of the contraceptionists have with infinite patience and industry built up. But from the ruins there stand certain points which the Malthusians, who are not positive eugenists, will set out with triumph: (1) the need for preventing the physically and mentally unfit from spawning the earth with weaklings and imbeciles, and (2) the advisability of birth control amongst the poor to prevent the breeding of children who through the incidence of environmental influence will be like their parents.

The blame for the perpetuation of the physically unfit rests ultimately not with those who bring them into the world so much as with modern humanitarianism. There was a time when the bulk of the weaklings were in the ranks of the rich, where through the expenditure of excessive care they were reared to a rickety maturity. The poor in those days

let all but the strongest die, as in less enlightened countries they do at this very day. In England, in America, and in most European countries, the infantile death-rate in recent years has decreased enormously. It is not that weak and crippled kids are no longer born—it is that a grandmotherly State has adopted the rôle of wet nurse, and makes frantic efforts in the interests of the nation to preserve and grow to adolescence every runt that comes out of a woman's womb.

With imbeciles it is another matter. It is supremely questionable how far insanity or idiocy is hereditary; indeed whether in strict truth it is hereditary at all. The researches of the past ten years have thrown sufficient light on the effects of defective nutrition, antenatal infection, and anomalies of the endocrine glands to shatter to bits much of the hitherto accepted hereditary explanations of insanity.

The denunciation of unrestricted breeding amongst the poorer section of the population overlooks the elementary fact that the poor of to-day are not necessarily going to remain poor. Nor are in turn their children necessarily going to remain poor. The eugenistic

birth controllers extol the need for decreasing the productivity of the poor on the grounds that the country is being peopled with "bad stock"; the women socialists screech out the right of the poor to practise birth control as well as the rich, apparently overlooking the fact that if there were anything at all in the eugenic theory they are virtually preaching a doctrine of self-extermination.

This everlasting talk of "good stock" and "bad stock" is extremely misleading. Apparently by "good stock" is meant rich and intellectual individuals, and by "bad stock" poor and ignorant individuals. Apart from the obvious facts that a world of rich people is impossible, seeing that, at any rate under the present financial regime, in order that one man may be rich many must of necessity be poor; and that a world of intellectuals would either quarrel eternally as to who should do the labouring jobs or alternately starve to death, the only "good stock" in the real meaning of the term are those who breed the biggest number of rearable children.

Were it not for the fact that the current

sociological system, with its rôle of a State parentage and an educational method which produces decorative idlers, largely prevents it, I should be firmly in favour of the encouragement of extensive breeding amongst the labouring classes and restricted breeding amongst the upper and middle classes. The scavengers of the country must come from somewhere, and there would always be a sufficient number of them climb out of their surroundings to supply enough intellectuals and rich onlookers. Lady Barrett's fear that "the diminishing fertility of the more capable classes is a national peril" is wholly exaggerated and fallacious. Had she substituted "labouring" for "more capable" she would have come miles nearer the mark.

## CHAPTER X

### THE RELIGIOUS VIEW

#### I

NINE-TENTHS of the organized opposition to birth control is in the hands of the clergy, and it may be set down as a solid fact that it is only with the decay of the power of the Church that the broadcasting of contraceptive methods has been possible. Had they had their way the parsons would have clapped into prison every man or woman who ever dared to open his or her mouth on the subject. As it is, the hesitant tolerance of the ecclesiastical authorities must not be confounded with approval. There is no such approval. It is not a matter of choice but of necessity.

This tolerance is well described by Havelock Ellis in a passage dealing with the attitude of the Roman Catholic Church (the italics are mine):

“Some have supposed that, since the

Catholic Church forbids incomplete sexual intercourse, this movement for the control of procreation will involve a relatively much greater increase among Catholic than among non-Catholic populations. This, however, is only correct under certain conditions. It is quite true that in Ireland there has been no fall in the birth-rate, and that the fall is but little marked in those Lancashire towns which possess a large Irish element. But in Belgium, Italy, Spain, and other mainly Catholic countries, the decline in the birth-rate is duly taking place. What has happened is that the Church—always alive to sexual questions—has realized the importance of the modern movement, and has *adapted herself to it, by proclaiming to her more ignorant and uneducated children that incomplete intercourse is a deadly sin, while at the same time refraining from making inquiries into this matter among her more educated members.* The question was definitely brought up for Papal judgment, in 1842, by Bishop Bouvier of Le Mans, who stated the matter very clearly, representing to the Pope (Gregory XVI) that *the prevention of conception was becoming very common.*

*and that to treat it as a deadly sin merely resulted in driving the penitent away from confession.* After mature consideration, the Curia Sacra Pœnitentiaria replied by pointing out, as regards the common method of withdrawal before emission, that *since it was due to the wrong act of the man, the woman who has been forced by her husband to consent to it, has committed no sin.* Further, the Bishop was reminded of the wise dictum of Liguori, 'the most learned and experienced man in these matters,' that *the confessor is not usually called upon to make inquiry upon so delicate a matter as the debitum conjugale, and, if his opinion is not asked, he should be silent.*'<sup>1</sup>

Thus sometimes by winking one eye and sometimes by shutting both, the priests of the Catholic faith manage to continue their denunciation from pulpit and press of the sin of contraception, arguing that procreation is the object of marriage, and that even in cases of danger to the woman through continued child-bearing continence can alone be

<sup>1</sup> Havelock Ellis, *Studies in the Psychology of Sex*, Vol. VI, p. 590.

countenanced. The Jews play the same tune. But the Mullahs of the Church of England have switched on a jazz record.

As medical evidence proved indisputably that there were cases where further child-bearing would seriously endanger the life of the woman, the high pontiffs of the Church found themselves with a hard nut to crack. They scratched their heads to the point of bleeding, and finally, after much manœuvring, evolved a solution. They conceded, and in this concession have even found support from so fanatical a Roman Catholic anti-contraceptionist as Dr. Sutherland, that where continence was impossible there was available in cases where life was endangered a natural method, to wit, the restriction of intercourse to the intermenstrual period when conception is popularly considered to be improbable.

Thus the Rev. F. B. Meyer, B.A., D.D., writing in justification of this view, says:

“The memorandum prepared by the Committee of Bishops contains this extremely important statement: ‘It seems to most of us only a legitimate application of Christian

self-restraint, that in certain cases (which only the parties' own judgment and conscience can settle) intercourse should be restricted by consent to certain times at which it is not likely to lead to conception. This is only under certain conditions: it is approved by good medical authority; it means self-denial and not self-indulgence. And we believe it to be quite legitimate, or at least not to be condemned.' ”<sup>1</sup>

In similar strain the Rev. Alfred E. Garvie, M.A., D.D. (Principal of New College, London), writes :

“ In the limitation of the association to the periods when conception is less likely to take place, there is an exercise of self-control; there is no interference with the natural process : *there is a readiness to accept the burden of parenthood, if it should come.* ”<sup>2</sup>

The final sentence (the italics are mine) is a scream. Those who deliberately restrict intercourse to the “ safe period ” are, says the

<sup>1</sup> *The Control of Parenthood*, p. 143.

<sup>2</sup> *Ibid.*, p. 162.

Rev. Alfred E. Garvie, ready to accept parenthood; but he majestically overlooks the obvious inference that they are trying their damndest to avoid it!

It may be a startling fact, but it is nevertheless a true one, that few clergymen know anything at all about biology. To the contrary, they believe or pretend to believe, the facts of life as presented in the Book of Genesis. Now whatever may be said in favour of the practice of restriction of intercourse to the end of the month, it cannot be truly described as a *natural* method. Its only hope of success lies in the fact that it is *unnatural*. No female animal will allow the male to have coitus during the anestrus period, and there are the strongest possible grounds for thinking that in a more primitive state, the same thing applied in the case of woman.

The Scriptural authority that is invoked against any interference with procreation is twofold. First comes the Hebrew injunction, "Be fruitful and multiply" as a positive command. Then comes Onan's punishment as an example of the wrath with which God views any preventive method. It will be well

to reproduce here the story of Onan as it is told in Genesis :

“ And Er, Judah’s firstborn, was wicked in the sight of the Lord ; and the Lord slew him.

“ And Judah said unto Onan, Go in unto thy brother’s wife, and marry her, and raise up seed to thy brother.

“ And Onan knew that the seed should not be his ; and it came to pass, when he went in unto his brother’s wife, that he spilled it on the ground, lest that he should give seed to his brother.

“ And the thing which he did displeased the Lord : wherefore he slew him also.”

Strictly speaking, the sin would appear to be the refusal on the part of Onan<sup>1</sup> to fertilize his brother’s widow in accordance with Hebraic law, and not the mere fact of practising *coitus interruptus*, as somewhat adroitly

<sup>1</sup> It is important that Onanism should not be confounded with masturbation. It is generally but erroneously considered that the two terms are synonymous ; in fact, in many dictionaries they are so treated.

the clergy have interpreted it. It seems strange that a body of sane men in these days should seek to denounce the whole contraceptive movement mainly on the authority of what is palpably little more than a fable.

## II

Ecclesiastical authority has a second and immeasurably a stronger string to its bow. It is embodied in a resolution of the Conference of Bishops of the Anglican Communion held in 1920. Thus :

“ The Conference urges the importance of enlisting the help of all high-principled men and women, whatever be their religious beliefs, in co-operation with, or if necessary, in bringing pressure to bear upon, authorities both national and local, for removing such incentives to vice as indecent literature, suggestive plays and films, the open or secret sale of contraceptives, and the continued existence of brothels.”

There is artfulness observable here. Birth control is linked up face by jowl with

“indecent literature” and “brothels.” At one stroke the sympathies of the Puritans, the moralists, the busybodies are enlisted. Those who could not be raked in by the dubious story of Onan, cheered to the echo at the suggestion of a crusade against vice. Every woman over fifty and every man over sixty, barring pathological cases, is a potential vice crusader.

In his basic argument I am inclined to believe blundering, freedom-killing Anthony Comstock was right. Virtue and ignorance are bedmates just as are religion and ignorance. Unlike the clergy and the Y.M.C.A., Comstock did not argue that with the right and the wrong paths clearly marked before them, religion would keep the chosen on the right path; he unblushingly affirmed that the only way to keep anyone on the straight and narrow path was to take damned good care there was no other path for the finding. In other words his fundamental points were that sin is more attractive than virtue, that indeed virtue *per se* does not exist, that neither man nor woman is to be trusted when Satan is beckoning at the door. And while the intelligentsia may hurl ridicule and invective at

Comstock or his disciples, they none the less must admit in strict privacy that he was fundamentally right. In its ultimate analysis virtue is only possible where ignorance flourishes. With the coming of education moral laws must take the place as an inhibitive factor of ignorance, and moral laws at their biggest and best only drive vice into the nooks and crannies.

To-day the Roman Catholic Church wields a far more powerful and extended influence in Western civilization than does any other religious body. Why? The reason I submit is simple enough. It is because the Catholic Church realized far more than did its rivals the truth of old Anthony Comstock's dictum. Every religious body, if it is to exist at all, must fight knowledge tooth and nail; the Catholic Church has put up and is continuing to put up the best fight.

To say that the average individual needs no such laws is to say something eminently foolish. Evidence of this need is there in all abundance for the seeking. It is only necessary for the Watch and Ward Societies, or the ecclesiastical authorities, to denounce a

book or a play as immoral, for the bookshops to be besieged with orders and for the box office receipts to soar sky high. Between those who want to decide for themselves how bad it really is so that they can thoroughly and conscientiously denounce it, and those who wish to be in a position to praise it, there are left in the cold only such as have not the money to satisfy their curiosity.

Coincidentally with the increase of education has come an increased knowledge of tabooed subjects. A single decade has seen an amazing change. Where ten years ago the whispered reference to *Three Weeks* as a naughty book sent the mistress with one copy to the W.C. and the servant girl with another copy under the bed, to-day the one or the other would look upon the book as a mild soporific. The rarity to-day is not the novel or the play dealing frankly and unblushingly with sex, but the one which leaves it alone—readers in the one case and the audience in the other gape uncomprehendingly. Thus the publishers of those expensive editions of *Casanova* and *The Arabian Nights* are compelled to add art plates bearing no connection

to the letter-press in frantic efforts to sell their wares at all.

The Puritans and Comstockians are frankly puzzled. They don't know where to begin. Every now and then, wildly and frantically, they reach into the stream with their muck rakes and land a catch. But such potterings make no appreciable difference. For every one that is pilloried a hundred others flaunt themselves gaily with thumb to nose and fingers spreadeagled. And more, what were scotched twenty years ago as immoral are in comparison with present-day novels little more than Sunday-school tracts. Fifteen or even ten years ago *The Mills of Man* or *Three Soldiers* would not have found a publisher in all England or America.

I affirm without hesitation that the present attitude towards sex, where every individual, from the adolescent to the senescent, is able to find a keyhole through which to peep, is coincident with, and largely the cause of, an astounding loss of virtue. It leads undoubtedly, and in this the moralists are right, to an increase in vice. The startling decrease in illegitimate births has nothing whatever to

do with a decrease in irregular intercourse. It is, moreover, too startling to be covered by the general decline in fertility, the more so as the vast bulk of irregular intercourse is at a time when fertility is at its highest. It merely signifies that the participants are more careful; that they have to a greater extent learned to avoid the results of their passion. There is a school of morals which professes that the way to encourage virtue is to utter a warning; that the individual who is warned will avoid the danger. This was all very well and good when ninety-nine out of a hundred believed in the reality of hell and heaven, when the warning could be pressed home with the fear of God's wrath and a perpetual torment to come. But the young generation is inclined to scoff at the devil and his fiery furnace, looking upon the tale much as the youngsters of a generation ago looked on the Bluebeard fable.

The result is that to-day the position is a thousand times worse than ever before. The spread of popular education, coupled with the meddlings of moralists and the clergy, have brought about a sorry mess. The public knows too much and too little. I have already

stated that Comstock realized years ago that virtue and ignorance flourish together. What he did not realize, and what the clergy have never realized, is that virtue and complete disillusion likewise go together.

Here lies the only solution. It is impossible to turn back. Did the clergy succeed tomorrow in inducing the State to create legislation to prohibit the publication of every obscene word or sexual reference, the result would be utter failure. Only by absolutely abolishing education and by destroying the accumulated lore of all the ages (an unthinkable solution) could the return to virtue in another generation be induced by restriction. The alternative is to tell everything, to remove all moral censorship as applicable to literature, art, and the stage. The solution may sound drastic: it would none the less prove beautifully effective. The artist's model mentioned by Shufeldt who disrobed immediately on entering the studio, as she found the nude form far less likely to excite than the attractively draped body, knew more of human nature than all the Bishops and Y.M.C.A. lecturers put together.

## CHAPTER XI

### THE EFFECTS ON HEALTH

EVEN when it comes to the consideration of the effects, beneficial or otherwise, on the health of the individual woman who practises contraception, or is the victim of it, the birth controllers and their opponents hammer at each other's skulls with noise and vigour. Dr. Stopes and her merry crew, with sagaciousness and apparently unerring truth, point out that continual pregnancies have a pernicious effect on woman's health, and that one can find proof of it in all abundance by observing the huge number of prematurely worn-out women decorating the slums of every big city. But the clergy, the moralists, the Y.M.C.A., and Dr. Sutherland will have none of it. They urge that the women in the slums are worn-out through causes unconnected with bringing babies into the world, and they bring forward suggestions, backed by medical evidence, that untampered-with sexual inter-

course has a hugely beneficial effect on the whole physical and mental structure of the woman: they very nearly, in their frantic efforts to wither their opponents' cause, make out by implication a *primâ facie* case for coitus as an essential part of every woman's life.

True, some ground has been given. The report of the National Birth-Rate Commission, which although absolutely opposed to contraceptive methods in any general sense, allowed that "No persons who are likely to transmit any serious physical or mental taint should have children," seemed unpickably sound, and to this the clergy, much in the manner of signing a document with a pistol to one's head, have been forced to submit.

But not one inch further will they go. God made women for the purpose of bearing children from the moment they become married, and children they must bear to the extent of God's goodwill. Whether or not on each occasion they suffer the torments of hell, whether or not they can afford to rear them, matter not at all. Procreation is natural and therefore, say the parsons and moralists, it cannot be harmful to the mother:

to the contrary any method of preventing the workings of Nature must necessarily be harmful to the individual practising it. To prove it there is the evidence provided by the calculated statements of distinguished scientists and medical men. Thus Professor Arthur Thomson says that the use of contraceptives, "while preventing fertilization, may also be the means of depriving the female of certain secretions which may exercise a far-reaching influence on her economy . . . as a rule we cannot interfere with the normal course of Nature without some consequent evil result. May this not be an instance in which for some apparent gain in one direction, the woman pays the penalty."<sup>1</sup>

There is caution observable in every line of the learned professor's argument, but not any caution is there in the medical opinions quoted by Dr. Sutherland. Thus Dr. Mary Scharlieb, Consulting Gynæcologist to the Royal Free Hospital, says :

"If you thwart or fail properly to satisfy any natural process, the results are inevitable, and always bad."

<sup>1</sup> *British Medical Journal*, January 7th, 1922.

And Dr. T. J. McCann, Surgeon to the Samaritan Free Hospital for Women :

“ It is a truism to say that one should not interfere with Nature, but it is one which many people have forgotten.”

As if doctors were not, in the interests of humanity, interfering with Nature every day in the year!

There is more evidence yet. The *Daily Mail* expert, Sir Arbuthnot Lane, is given by Dr. Sutherland as one who supports the view that certain substances absorbed during coitus are beneficial to the woman. To cap the lot Dr. Sutherland himself refers to atrophy of the ovaries occurring in the doe deprived of intercourse with the buck during her periods of œstrus,

Now apart from the fact that the theory of the secretions of the male being in any way beneficial to the female is by no means proven, and is in fact highly dubitable, the whole of the anti-birth controllers as well as the contraceptionists themselves seem to have overlooked the devastating implications that go of

necessity with any such theory. If this hypothesis is true then in one huge sweep is the whole of the case which with such vast care the anti-birth controllers have built up swept out of existence. For obviously they cannot have it both ways. They cannot preach the harmlessness of abstinence one day and the benefits of coitus the next. But in effect this is precisely what they are doing. In instance, Dr. Sutherland advocates absolute continence and states in his book, *Birth Control Exposed* :

“ There is ample evidence that absolute continence, so far from being injurious, is actually beneficial to physical health.”

And yet in the very same book, in his anxiety to prove the harm resulting from birth control, he has brought forward medical evidence to prove the beneficial effects of coitus on the woman !

Where then lies the truth? It is a fact, as I have clearly shown in another chapter, that certain contraceptive methods, however carefully carried out, and most methods carelessly

practised, are harmful, but this in itself is no ground for argument against contraception. Provided proper care is taken, and the right method employed there is no reason why any harm should result.

But while birth control need thus have no deleterious effects, and while the benefits derived from coitus are at the best not only problematical but infinitesimal, and in any case can, if existent, still be secured coincident with contraception by the adoption of certain methods; one thing stands out of the ruck of debatable points as being absolutely certain, to wit, the harmful effect on many women of oft-repeated pregnancies.

The following paragraph quoted by Dr. Stopes from the Annual Report of the Ministry of Health is revealing :

“ A substantial number of the 70,000 who gave birth to children in 1919 were so injured or disabled in pregnancy or child-birth as to make them chronic invalids.”

Apart from the considerable number of women who actually die through giving birth to the child; of the number who can only give

birth through cæsarean section; there are thousands who suffer dreadful lacerations. There can be no doubt that child-birth is often the cause of cervical cancer. Drs. Stewart and Young, in a paper published in 1926,<sup>1</sup> disclosed the significant facts that amongst a large number of married women suffering from cancer, while the average number of children borne by cases with cancer of the body was 2.43, in women with cancer of the cervix the average rose to 4.86. As a result of an exhaustive inquiry they stated :

“There is now a considerable amount of evidence to show that child-birth predisposes to cancer of the cervix of the uterus, apparently from the trauma incident to the process, though no relationship appears to exist between it and cancer of the corpus uteri.”

<sup>1</sup> Clara Stewart and Matthew Young, “Cancer of the Uterus,” *Lancet*, December 8th, 1926.

## CHAPTER XII

### THE INDIVIDUAL POINT OF VIEW

APPARENTLY we have come to a stop-gap. We have seen that every argument advanced either for or against birth control is equally fallacious; that the Malthusian justification of contraception to avoid over-population is at root nothing but a myth; that the fear of the patriots and Imperialists that limitation of families involves "race suicide" has no foundation; that the plea for better not more babies is unsound; that the religious objections are absurd. It would appear that we are back where we started. One may well ask, is there then to be no answer to the query of whether or not birth control should be practised? There is an answer. It is so obvious that the marvel of it is that it does not occur to everyone.

The trouble with the birth controllers and with their opponents is that in considering what should essentially be a private matter they concern themselves with the State, with

religion, with morals, with eugenics, with everything and everybody, in fact, except the point that matters. Birth control resolves itself into a problem for individual solution. Every married couple have the right to decide for themselves whether or not they shall practise contraception.

It is all very well for Imperialists to prate of duties to the State, but one wonders what sort of reception one would get from any patriots of whom one asked how many children they were going to rear? It is significant that in relation to members of the National Birth-Rate Commission, who are all out to increase the number of births, Pell found that "the average number of children per family among them is only 1.75, and that sixteen out of forty-one whom I was able to look up are childless." This prating of Imperialists is merely twaddle. The working woman, when giving birth to a baby, is no more thinking of the future of the British Empire than is the society butterfly forced by fate or accident into an unwanted accouchement.

The Church of England, the Catholics, the Jews, chant in unison that the first object of

marriage is procreation. Has ever a more gorgeous fallacy been promulgated? It is to this abysmal delusion, fostered by the religious teachings of two thousand years, that is due the moralist's attitude towards the childless marriage—his asking with something little removed from insolence what the couple got married for? Out of the hundreds of couples head over heels in love that take bridal vows each month, how many of them are thinking of the children they are going to bring into the world? All of them, chant the clergy. With all respect, fiddlesticks! I venture to assert that not five per cent. of such couples ever think of children at all. A couple genuinely in love with each other are too wrapped up in each other's charms, too blind to everything else on earth, too ecstatically happy in each other's embrace to think of children. They are marrying to get each other, mainly because there is no other way, short of courting social ostracism, in which they *can* get each other. It is, in short, because they are not thinking of children that they are all the more liable to have them. The safeguards are forgotten or break down in the

ecstasy of passionate love. Your sensual, lustful man, on the other hand, who knows no real love, but pursues any and every woman who crosses his path, is not the man to spawn the earth with his kind. He is far too calculating and far too careful.

At the time when Mr. Thurtle's bill was before Parliament there was much comment on the fact that it was left for the woman to decide whether or not she should practise birth control. And in this Mr. Thurtle was indisputably right. If anyone is to have the deciding voice it is unquestionably the one who has to risk life and health, suffer pain and discomfort, and in the case of the poorer classes be chained up for an extended period. But, say the anti-birth controllers, what of the case where the man wishes to have a child and his wife refuses? Obviously if he is so keen on the point he should use his tongue before he gets married.

There is only one logical and justifiable solution. If either partner is disinclined to have children the matter should be considered settled, and a legitimate case for the practice of contraception conceded.

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