

MEDICAL ANALYSIS OF A THOUSAND
MARRIAGES *

ROBERT LATOU DICKINSON, M.D.

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Among the large number of volumes on marriage, only two are based on case studies. The extensive social investigation by Katherine Davis¹ and the intensive psychologic inquiry by Gilbert Hamilton² elect to omit many of the medical and physical aspects of wedlock. A gynecologist-obstetrician lays stress on these very aspects in his forty year study of marriage.³ His analysis utilizes 1,098 records with observations ranging from less than one year to more than four decades—the average being seven years—and with entries distributed from childhood to old age (chart 1).

PURPOSE, TYPE OF PERSON, AND METHOD OF
OBSERVATION

The purpose of this search for the detail of success or failure in sex adjustment is the eventual making of useful schedules for sex education, for premarital medical instruction, and for texts on conjugal hygiene. Such a study and such a program are part of the new field of preventive gynecology and protective medicine.

The woman under observation is of the American cultural type. She is urban, of good family background and education, a homemaker with a child or two, married to a professional man of moderate income. The social and economic milieu represented averages well above the middle line of humanity in large cities. The inclusion of the few poor is balanced by the inclusion of the few very wealthy, and the few women of limited schooling are balanced by those having the degree of doctor of philosophy.

The material studied was drawn from the case histories of a gynecologist and obstetrician, selected from about 4,000 records of married women seen in private practice. As an anatomist and as a surgeon he was accustomed to getting information directly from the physical make-up. When pelvic structures looked one

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¹ Read before the Section on Obstetrics, Gynecology and Abdominal Surgery at the Eighty-Second Annual Session of the American Medical Association, Philadelphia, June 10, 1931.

² Davis, Katharine B.: *Sex Factors in the Lives of Twenty-Two Hundred Women*. New York, Harper & Brothers, 1929. (Eighty-seven per cent of 1,000 wives reported unequivocal happiness in their marriages.)

³ Hamilton, G. V.: *Research in Marriage*. New York, Macmillan Company, 1929. (The 100 husbands and 100 wives are known to include a relatively large proportion of the dissatisfied.)

⁴ Dickinson, R. L., and Beam, L. E.: *A Thousand Marriages: A Medical Study of Sex Adjustment*. Baltimore, Williams & Wilkins Company, September, 1931.

way or another, the doctor developed some working theories to correlate with questions about the emotional life. These questions brought answers, more questions, more answers. It therefore came about that data of the body, the mind and the emotional life were all collected together—always proceeding from body to mind. Stories of intensive personal experience were thus collected for about a fourth of all the married women patients, the others remaining simply medical case histories. It is characteristic of the fuller psychologic history that it began during a time of crisis in the patient and was

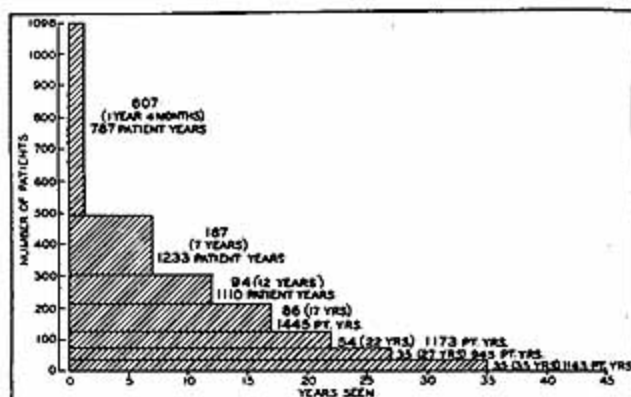


Chart 1.—Observation time for 1,098 patients studied for adjustment in marriage; Patients in five year groups. Base line represents forty-five years, the period of study for the series; each bar represents five year group of patients, seen for average number of years indicated.

frequently continued during periods of emotional stress. It therefore specializes in the acute condition.

One half first came to the doctor for problems of childbearing; one fourth for pelvic growths and inflammations; the remainder for miscellaneous causes presumed to be of pelvic origin. Acute illness is not usual, and, so far as is known, only seven are dead. Menstrual disturbance, usually minor, is noted in about every other one. Fifty-six per cent are pronounced by the doctor as in good general health or are presumed to be in good health since there are no complaints or entries to the contrary. Twenty-seven per cent are below par, chiefly with nervousness of varying degree; this includes those with minor chronic disability, such as apparently arrested tuberculosis. The remaining seventeen per cent are seriously impaired in health; of these some are ill with varying degrees of nervous disorder and seventy are mentally disturbed; there are fifty-four cases of psychoses, four of epilepsy and twelve of insanity to the point of segregation at some time, or one case of institutional insanity in ninety-one cases. The total incidence of venereal disease, usually gonorrhea, is 94 times in 1,098 patients, or 1 in 12.

This incidence of mental disease is not comparable with published estimates for total population because the base of computation is different. But the state's expectation of mental disease to the point of hospitalization for native-born females approximates four cases per hundred.⁴ Without statistical comparability, this means that in this respect these patients are rather better off than the run of humanity. There is no way of establishing precise degrees of mental stability.

It is amply demonstrated that the group is socially normal in the ordinary relationships of work and life. The general conclusion is that persons of prolonged education, with the usual background of such persons,

dominate; so that it represents what casual description would call a superior type.

The desire for fertility furnishes the most abundant of all the data. The first child was born at about 26½, and the typical woman wanted more. Fear of pregnancy is a difficulty in mating with 300 couples; and abstinence from sexual union for prolonged periods is customary for this reason in forty-two cases.

Throughout the series, conception is controlled, positively and negatively, the responsibility for prevention being assumed by husband and wife in about equal proportions (chart 2). That control is generally successful is shown by the facts that less than one fourth of the couples reported any failure in method and that three fifths of all pregnancies were deliberate. This degree of success is the more striking in that the bulk of the patients represent the era before medical instruction in contraception was general.

The average fertility, taking women over 40 as the norm, is 224 pregnancies per hundred women, of which 63 resulted in abortions and 161 in living children.

Chart 3 shows the total record for all ages, of 855 women, in terms of 100.

These are skewed data, since gynecologic practice always has a large percentage of women coming for sterility, about 25 per cent as against 10 to 15 per cent in the general population. A class known to be low in fertility is not strictly comparable with the census or other available figures. It is suggestive, though not comparable, to read at the same time the birth statistics from similar social groups:

The fertility of 2,294 Vassar alumnae, published in 1924, and of 4,550 Smith alumnae, published in 1926, is estimated as 190 children per hundred married graduates; that of 10,636 Harvard alumni, published in 1926, is 210 children per hundred married men. These

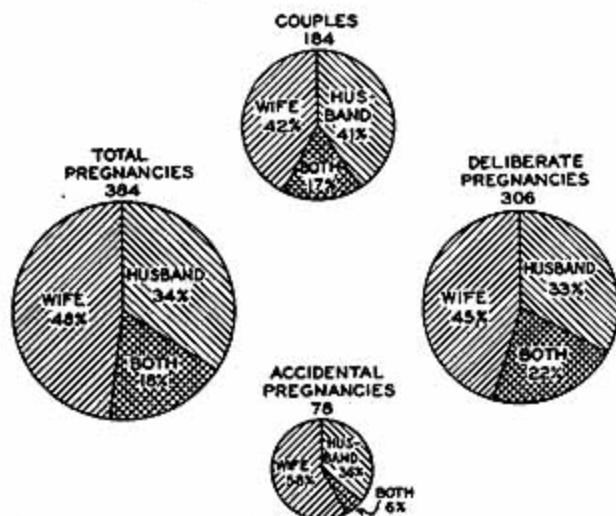


Chart 2.—Controlled fertility: The method of control usually practiced when prevention of conception is desired, whether by wife, husband or both together, is shown in the circles representing first total couples reporting; second, 384 pregnancies; third, 306 deliberate pregnancies; and, fourth, 78 accidental pregnancies. The last circle is the only one that shows anything about the relative success or failure of particular methods.

alumni figures include reports of unfinished families. The fertility of men of Who's Who caliber is now estimated at about 2.7 per capita.⁵

Sterility was the cause for many consultations. One third of all wives bore no living child. The causal factors of sterility even in a single case are from two

4. Pollock, H. M., and Malzberg, Benjamin: *Ment. Hyg.* 13:132 (Jan.) 1929.

5. Huntington, Ellsworth; and Whitney, L. F.: *The Builders of America*, New York, William Morrow & Co., 1927.

to four, and are too multiple to be here considered; so far as is known they are distributed in this series with fair evenness between husband and wife. Health and nervous balance make no difference in fertility, but there is some tendency for coldness in the love relation to show on the side of the less fertile, and for the satisfactory or at least the not-complaining marriage to show more children (chart 4).

CLASSIFICATION, THEORY AND PREMISES

Turning now to precise classification of the cases in the simplest form, 820 women are married and living

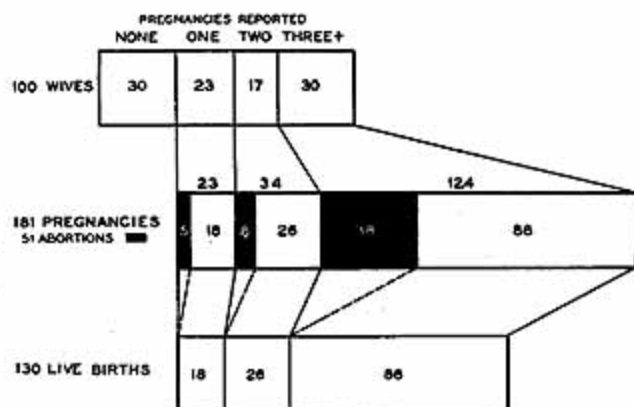


Chart 3.—Pregnancies and outcome: First bar represents distribution of 855 women married over nine months, in terms of 100 wives reporting either no pregnancies or one, two, three or more apiece. Second bar represents distribution of 1,549 pregnancies, using same unit of measure as the wives. The third bar shows the distribution of 1,114 live births, after the deduction of 435 abortions, shown in the black portions of the second bar.

with their husbands, 40 are widowed, 40 are separated or divorced and 200 have been added later as a control group. Of those living with their husbands, 50 brides are excluded and the remaining 770 have been checked on many points, first on the single question: Is the marriage sexually satisfactory?

In round numbers, the answer to this question is distributed in a fifty-fifty ratio. Widows and the separated may also be excluded, since the first look at marriage as past happiness and the second have ended it. This means that 365 made no complaint of any kind and that 30 can be distributed sometimes yes, sometimes no; the remaining 375 were willing to discuss with the doctor what they thought was wrong.

Within the group of those couples dissatisfied with their sexual adjustment are three classes: those in the early stage of experiment, those who want more sexual experience than they are having, and those who want less or, at least, less from the available source in the habitual form.

The average frequency of coitus is the familiar "twice a week"; but this average is made up of instances ranging widely: from 16 per cent reporting "daily or oftener" to 11 per cent reporting "yearly or less." Three fourths of all reported coitus at least once a week, with the single largest group, 23 per cent, at "two or three times" (chart 5).

The habitual duration of intromission is an instant in 12 per cent, under three minutes in 6 per cent, from 5 to ten minutes for 34 per cent, from fifteen to twenty for 17 per cent, and a half-hour or more for 9 per cent.

Duration of orgasm averages under fifteen seconds. The most frequent complaint is that the woman does not reach orgasm. Of 310 patients reporting, more

than a fourth had never experienced orgasm with the husband and 14 per cent were having it only "rarely" or "not now." This is to say that, in any five women, two had it, two did not, one had it "sometimes" (chart 5).

The habit of not-orgasm has as a corollary some grade of negative feeling which eventually turns against coitus, perhaps also against the husband in other aspects of marriage. Counting the attitude toward coitus of 329 patients reporting, it is positive (pleasurable, pleasant, agreeable), 49 times; indifferent, 105 times, and negative (dread, disgust, revulsion), 175 times. But we must always remember that the unhappy are the vocal, and the satisfied do not have to ask counsel.

These records of a lack of satisfaction and its results furnished evidence for medical study of the emotional life, beginning with the anatomic-emotional inferences on which inquiry was based. In summary, these are the premises employed:

The hymen, vulva and vagina are believed by this gynecologist to document sex practice to a degree sufficient to give clues about both auto-erotism and coitus. The hymen admitting no more than one adult digit full length is that of anatomic virginity; the introitus of coitus admits the whole of two fingers of the usual male size; that of less than this dimension in marriage, or that of lessening dimensions in a series of observations, indicates a lessening frequency of coitus or a degree of male impotence or feebleness. Increasing as well as diminishing distensibility, other things being equal, is an index to coital behavior. The untorn hymen of the worn-down edge, easily outrolled, means vigor and quantity; the introitus of the nullipara taking four fingers to the whole hand may go beyond the possibilities of the phallus and suggest prolonged manualization. In all the foregoing, it is understood that douche, pessary and prolonged gynecologic treatment with a full-sized speculum will cause some of the same modifications as sex practice.

The vulva may record, in labial contour, in enlargements and in varicosities, the clitoris in range of excur-

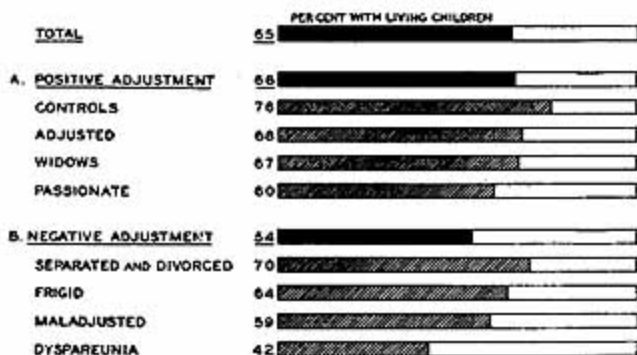


Chart 4.—Effective fertility and marital adjustment: The hatched sections of the bars represent the proportion of each class of adjustment, who had some living children, omitting brides.

sion, the muscles of the pelvic floor in reactions or relaxations, the mammary gland tissues in chronic thickening, the story of years of active self-excitation both as contemporary practice and as historical development. This applies particularly to premarital diagnosis.

The measurements and conformation of the vagina and the pelvic floor muscle groups furnish a correlation to the verbal narrative of coitus, giving some evidence about posture, frequency, method, coital response and capacity for retention of semen in the woman.

These anatomic indications and those modified expressions of them which show in pelvic organs exhibiting erotic signs at gynecologic examination serve to corroborate or cast doubt on the patient's verbal record.

SEXUAL VARIANTS WITHIN MARRIAGE

The division of these marriage groups into experimental, affirmative and negative stages of sexual adjustment excludes the first for the moment and divides the others into two parts quantitatively equal, on which the facts range themselves about as follows:

The essential element for happy and complete union shows in the repeated desire of 1,098 women for sexual expression. Any patient whose case is followed for a reasonable length of time exhibits some form of sex feeling, either actively, passively, as a wish or even as a hatred. To follow the behavior of personality historically and to trace the reasons for its evolution and reactions is to find some degree of capacity for passion in every instance in which time and pains have been given to the search.

Thirty women, who, by their statement and acts, were passionate beyond the average, give the most thought-provoking statement of adjustment to the conditions of married life. Described as of high general capacity,

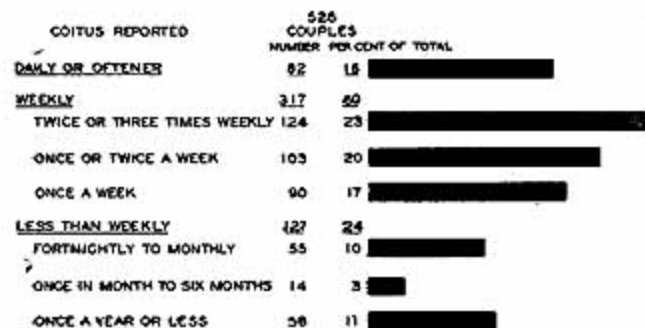


Chart 5.—Frequency of coitus reported by 526 couples: Bars show percentage reporting each frequency.

nearly all are mothers and, except as adultery is admitted, they conform to the social conventions. Ignoring the cases merely thwarted in passion because the husband did not match them, attention is drawn to those who may have a genuinely high sexual endowment. Their accounts of passion explain and amplify desire. They reveal the color, texture and stature of an experience which must be considered not merely as the expression of their uniqueness but broadly as a revelation of life. Clues about the feeling and behavior of the less articulate and of the antipassionate begin here.

The 365 wives who are adjusted without complaint to marriage include 100 of the sterile but even so show a little more than the median of fertility; 1.70 children per capita in the after-forty age group. Coitus proceeds in a semiweekly rhythm. Twelve per cent of 164 wives report entire lack of experience of orgasm. Two cases of adultery on the part of the wife appear. The history deals chiefly with objective factors. The patient does not come to the doctor about moral problems or personal affairs but for professional help. The doctor and patient relationship is confined largely to the factual.

The 375 wives who are on the negative side in marriage consist of 100 diagnosed as frigid, 175 who had dyspareunia and 100 who were maladjusted, usually with strongly worded grievance toward the husband or marriage. These are less fertile women. Only 26 per cent of them have two or more living children, while

in the first group 40 per cent have that number. Also they are the less expressive sexually. Coitus proceeds in a rhythm of once or twice a week, and 34 per cent of 244 patients report absence of orgasm with the husband. The histories, contrary to the others, are packed with the subjective and are the longest in the series. The patient frequently feels spiritually isolated and is trying to get from the doctor the wherewithal to strengthen the foundations of life.

The difference between the frigid, the maladjusted and the dyspareunic patient, after the cases of physical dyspareunia caused by local inflammation or anatomic difficulty have been excluded, is one of degree in assertion on the negative side. She does not want the pattern of intercourse with which she has become familiar because it is not interesting and does not end well; it leaves her feeling bad afterward. She may say this verbally or with the introitus; may act it; may, when she means this, act in some other way; may inhibit sensation and inner release, although going through external compliance. Her husband lacks perhaps in personal qualities, in vigor and staying power, but certainly lacks the technical skill necessary to change this response.

No organic basis and no functional basis except in the scattered cases of low vitality, fatigue, family care, great spiritual emergency or temporary pelvic indisposition can be established for this proportion of sexual coldness. It records a sex experience usually limited to the husband, and the total meaning of the woman's elaborate recoil seems to be that she thought she was going to be loved by a man of her own nature. Now, in this aspect of marriage and sometimes in others, it appears that she is not.

Separated and divorced wives should be added to this category. In 40 broken marriages, counting children and other partners, 165 persons are concerned. The records of the fertility of the separated are quite comparable with the norm and with other cases. Coitus was unsatisfactory. Peace and confidence never blotted out the memory of sexual shock received before marriage and perpetuated by repetition. The conspicuous difference between this and other groups is the relatively high incidence of venereal disease, sixteen cases, and of adultery, twenty-seven cases.

DETERRENTS TO SEXUAL ADJUSTMENT

Complaints about relatives, money, work, and management of the children and the home are here minimized in favor of the sexual story. They appear only very early before the bride is used to marriage or very late after she has rejected the husband on other counts.

At the root of that difficulty in woman which cannot break down resistance and freely enter into the life of another person there is much evidence of fear. Some impact on the sex side of life to the child or to the little girl lasts forever. Married women at all ages say that they cannot get over the effect of first menses; first ugly news about sex; accident to a friend, sister or mother; the first departure from cautions made on a religious or ethical basis; the husband's first approach; first coitus, male genitals, semen, and knowledge of male sexuality.

This psychic imprint reappears as apprehension, general or specific, not necessarily having anything obvious to do with sex; or it appears as sexual hesitation. Sex is rated as esthetically or morally lower than the rest of life; manual contact lower than phallic contact, and coitus in the light lower than in the darkness. The patient avoids sexual experience at whatever point she is unable to dissolve fear, perhaps even at the initiation.

The effect of extensive educational and religious background, or rather of these influences together with their concomitants, is toward the cultural tabus of fear, withdrawal and isolation. A selection of 114 patients, college graduates, Jewish and Roman Catholic wives and wives of Protestant ministers has 68 per cent of sexual maladjustment as compared to 34 per cent in the rest of the 1,098 patients (chart 6).

From my long practice of premarital instruction the more recent impressions, not yet tabulated, run as follows: Compared with previous decades, in the last eight or ten years there have been fewer inhibitions and shocks; during engagement, great frankness and frequent rousing and sex play short of entry; after marriage, bettered technic and fuller response; general knowledge of control of conception with its removal of fear of accidental pregnancy, yet with little diminution of desire for as many children as finances and health will permit; with provision for an interval between marriage and first pregnancy. All the foregoing are without change in the proportion of devoted love. Coital experimentation before marriage, or before formal engagement, has increased. There are more open liaisons, often enduring over long periods, but anything like promiscuity is very rarely found in the group which the study represents.

Before the organism is ready for union with another it has forms of sexual adventure on its own and, if ultimately disappointed in mating, it returns to the before-marriage state or devises compensations.

The simplest physical compensation for absent, delayed or incomplete coitus is auto-erotism, in the sense of concluding the whole sexual cycle alone, by masturbation, day dreaming or any successful means of excitation. The records are that two out of three patients had sometime had experience of this sexual substitute. In 400 histories there is no notation about auto-erotism, which may be read as "no anatomic signs, no statement." The remaining are divided as: 74 women who showed definite signs of former habit; 335 the signs of continuing habit, and 286 who had the signs and stated the practice either now or formerly.

Individual accounts of auto-erotism occur in the control group and in those who are supposedly adjusted to marriage and are not by any means confined to those who are negative in love. Their fluctuations may be traced from girlhood, through various phases of marital development to a maximum; sometimes in pregnancy, sometimes in widowhood, sometimes when the husband is unfaithful or for other reasons there is no intercourse. The characteristic reported experience has an accompanying play of the imagination and is followed by and associated with a sense of shame. Summarizing, the evidence is that auto-erotism is a typical experience but that its continuance in marriage is exceptional.

A long continued pronounced habit before marriage only occasionally curtails full response to coitus afterward, and this chiefly by keeping the orgasm vulvar rather than vulvovaginal.

Compensation for love impulses thwarted in marriage does not necessarily take the form of requiring physical satisfaction. To atone for spiritual loneliness, compensation magnifies the personality by extraordinary egotism and by material acquisition. Of these attempts, fear, girlish ways, gourmandism, the arts, religion, morals, culture, social and political "causes," the over-assumption of family responsibility, worry and financial extravagance are indications told in about 250 cases. Illness in many forms, especially nervous preoccupation

with the self, is an indication noted particularly 128 times.

Love for others and attraction for other men are noted less frequently; including the accounts of unconfessed attraction, between fifty and sixty incidents are reported.

CORROBORATION OF THE POSITIVE AND NEGATIVE BY THE NEUTRAL

All the foregoing story of the values of sexual desire, its variations and especially its extremes is corroborated by the evidence of those most near the neutral. Neutral, in this sense, means only those who gave no sexual history of their marriage or who may be excluded because they are at the beginning or end of marital experience; the brides, the widows and the control group.

The bride who seems typical is in a state of erotic confusion. In the redirection of romantic desire into the channels in which it may now be expressed, all the difficulties of pioneering and of reorganization are inherent.

The sexual technic of two average persons appears as a matter of time and growth which has to overcome fear and hesitation and to break down as much as may be of the barriers of individualism. In spite of what good

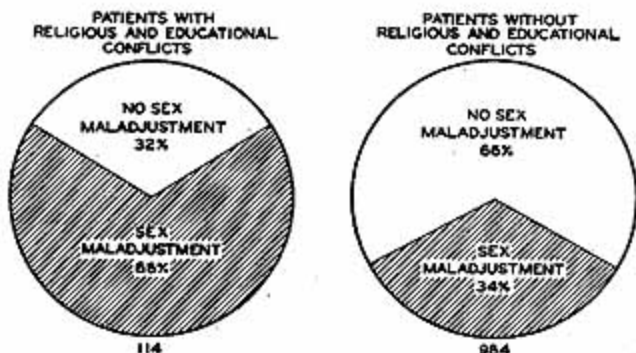


Chart 6.—Proportion of sexual maladjustment according to educational conflicts: First circle shows 114 patients made up of three groups presenting religious exceptions to whole series, in being either Jewish, Roman Catholic, or engaged in Protestant church work of some sort; and one group of women with more than average academic attainment. Second circle represents remainder of series, 984 wives not reporting educational or religious background of unusual sort.

intention can do, there is a period of vacillation and uncertainty. Frequently these women still keep their own secrets from the man and are responsive with the intelligence but not with the instincts. Seventeen of the fifty brides under discussion had not reached orgasm, and their love interests seemed to be freezing into a period of regression.

During the last decade, all these difficulties of the bride have been much less in evidence.

The forty widows, widows of some ten or twelve years, are on the side of happy adjustment in marriage. The sexual experience is commonly a delightful memory recalled as of greater than average frequency and intensity. Sexual desire persists perhaps to the point of taking a lover against better judgment, but idealization of the husband prevents remarriage.

The control group of 200 cases drawn from the medical history files by statistical methods was originally made for comparison with 200 cases of the sexually unhappy, the frigid and the maladjusted. These control histories lack question, comment or attempt to get the sexual story, but practically they seem quite like the other cases. They are rather less prosperous, their health is a little less satisfactory, their fertility a little higher, 1.89 per capita in the over forty group. One

in four stated some problem of sexual maladjustment, inclining toward coldness and alienation. The emotional tone of the narratives is less assertive than in the sex histories but conveys the same impression.

CONCLUSIONS

1. The sole method for planning intelligent prevention and treatment of maladjustment in marriage is systematic study of full case histories of success and failure. Though only 4 per cent came to the point of divorce or separation, nearly half showed some degree of difficulty: one sixth had considerable persistent distress in intercourse, eighteen wives were long-time married virgins, not from impotence but from ignorance.

To define disorders specifically is the first step toward a program of forestalling them: in this case, by sex education of parents and educators, of children and adolescents and engaged couples; and by careful premarital examination, and by the prompt recognition that is necessary for cure.⁶

2. The series, drawn from the socially normal, represents chiefly the educated urban couple, with the wife in good general health but needing the advice of an obstetrician or gynecologist.

3. Fertility has an important psychosexual correlation with coitus, since, in a type wherein the woman has a relatively high degree of independence, it tends to vary as the sexual harmony varies.

4. The woman has a capacity for sexual desire, lifelong, inconsistent and fluctuating, and found in every individual fully studied. The manifestations of this desire and her ability to turn them to happy issues are extraordinarily dependent on her early life.

5. Even when there are no children, complete unity in marriage stands on a basis of sexual unity. Bodily expressions of love, in their fineness and variety and power, are reflected in other phases of the life of the couple.

6. Sexual abstinence in marriage ordinarily is not practical. It has reactions in egotism. These take the direction of idiosyncrasy of opinion or act, derangement of health or disturbance of the emotional life. Abstinence is practiced from conviction by about 2 per cent of the series.

7. While intimate sex relations are most completely welcomed by women when they are adjusted to personality as a whole, there is a definite physical technic that can be developed and kept perfect only through experiment. The physical difficulty typical of the couples in our series is that their common knowledge and the husband's technic are not adequate, and anatomic considerations have received scant attention. There is also a definite psychologic technic of surmounting barriers and entering into the feelings of another. The mental balk is in making sex fit the rest of life, or in straight facing of need of training in adaptation and expertness.

8. The sexual difficulties revealed are not in the main organic in the woman and, save in exceptional cases, not functional. They are variants of mental and emotional behavior.

9. So far as emotion and clamor of complaint push to the front of the stage, this analysis is likely to take its place as one of the studies of unhappiness in marriage. But this is not actually or statistically the case and the figures deny it. Moreover, it must not be

forgotten that, of the maladjustments here shown, many are passing or relievable, and most are preventable.

10. Physicians face a medical obligation toward further intensive inquiry and toward the training of a personnel equipped to conduct the marriage advice center, and to teach in the physicians' office chair. We must do our part to prevent the preventable, and to foster successful and stable unions.

2 East One Hundred and Third Street.

ABSTRACT OF DISCUSSION

DR. ADOLF MEYER, Baltimore: Our association is to be congratulated that one of our members has offered truly observational data from a long and conscientious experience on a chapter in great need of the most scrupulously factual treatment. Today there is much individual thinking, much individual experimentation, and yet little control, little record, little of that which would help build up correct ideas of the facts as they are. In my efforts to bring to medical students a realization of what psychobiology, the knowledge of human functioning, means and gives to physicians, I have found that there is a strong tendency to solve problems that really are lifelong, with some relatively meager data and information and a great deal of reasoning and inferring which sometimes with mere fancy and exhortation goes far ahead of a real familiarity with the multiplicity of actual situations that have got to be met. It is necessary to furnish growing young people, and the mature as well, with a collection of real experiences, with which to instill in them the realization of the importance of correct records of facts and not merely of thinking. On the other hand, it is undoubtedly necessary that there should be a great deal more worthwhile thought and less of the mere copying of a few inferences from psychopathology, i. e., pathology of personality functions, or from complaints and their remedies, before one can form a conclusion as to the meaning of the whole situation and possible ultimate developments and plans for the future. We want to be able to offer the inquirer samples and patterns of real occurrences instead of mere exhortations and moralizing. The data that Dr. Dickinson gives come probably closer to what average experience with the rank and file of people may mean than a great deal of the information from self-chosen volunteers that has so far been collected by Hamilton, by Katharine Bement Davis and by other investigators. It will be important to collect far more data, especially also of the normal, by creating full confidence on the part of the public that it is not going to be detrimental to keep some record data, and that it will not be damaging to reputation to communicate the actual facts to the proper centers in which investigations are carried on in an objective and sensible fashion.

It is unfortunate that today the idea prevails that in the sexual life almost the only topic to be considered is that of psychopathology, and, in turn, that sex is that part of our life to which everything in psychopathology is to be referred. We should realize that we have to recognize a wide range of standards that are compatible with normality. On the other hand, we have to recognize that when we see miscarriages of attempts at normality we do not necessarily look on merely one or another item of technic or of planning as the one responsible factor. The study that Dr. Dickinson has made impresses me particularly with the necessity that physicians formulate for their work plans of examination of these facts, which will take a wide enough range of view over the whole life of the individual. If that is done, I think we shall then develop the possibility of studying and treating particular points in a broader setting, free from the imputation of the too exclusive terribleness of one or another difficulty, or, on the other hand, an intimation of the practical obligation of sex activity, under the idea that the sex problem might already be solved with so-called birth control, where much of the required work has still got to be done. Without a wise and broad setting, there will be as much pathology of birth control as there will be pathology of uncontrolled and totally unguided sex life. It is therefore essential that we as physicians state frankly that we do not know it all, that those who write about happiness in marriage and about happiness

6. Dickinson, R. L.: Premarital Examination as Routine Preventive Gynecology, *Am. J. Obst. & Gynec.* 16: 631 (Nov.) 1928.

in sex life do not always prove their case in their own lives, that there is particularly a need of knowing more about those who are successful and not only those who are whining or who are troubled innocently. Above all things we have to recognize that we are dealing here with a field of human life in which we cannot abandon responsibility, a responsibility of study, but also a responsibility of action and a responsibility of teaching. To assume that we have merely to dictate one or a few schemes of technic to the great variety of human beings would be absurd. We have to try to collect data such as Dr. Dickinson has collected in his practice, and more and more in a presentation of cross-sections of average communities and with less preponderance of mere pathology. I, for one, feel that we are approaching a time when there will be less of an obsession of short-sighted sexual experimentation, more confidence in some of the wisdom of tradition, and more interest in improvement of education and use of what we do know.

DR. MARIE PICHEL LEVINSON, New York: I could not resist the opportunity to represent the feminine side of the practice of medicine, because I feel that we are approached much more frequently than the male physicians with sex problems of our patients. After spending four years in Margaret Sanger's birth control clinic doing contraceptive work and in the gynecologic clinic at Mount Sinai Hospital and four years in private practice before I became interested in gynecology and sexology, I have found that the male physicians, a good many of them at least, do not give their patients an opportunity to discuss sex matters, which may be as important as if not more important than physical disabilities. A good many of the male physicians have begun the practice of referring to women physicians the wives of husbands who come to them with marital incompatibilities. While I think that the physician needs education along the lines of the paper given by Dr. Dickinson, and also along the lines of modern contraceptive technic and the part it plays in the happiness of marital relationships, I feel that a few practical pointers would be worth while bringing to attention. We hear much discussion of the question of marital clinics, and premarital clinics. I, for one, and a good many other women physicians and probably a lot of male physicians, have quietly been doing just that sort of work in private practice. I have many young couples come for physical examinations who want Wassermann blood tests. Especially the college graduates want to have advice on what is normal and what is abnormal so far as marital relations go. We have a frank discussion and I let them talk all they want to. They go away from the office feeling much better satisfied because of the information obtained. I think this is just as important a part of the practice and art of medicine as any other field.

DR. ROBERT L. DICKINSON, New York: I want to thank Dr. Meyer not only for his cordiality at this time, but also for his long service to the Committee on Marital Health. He spoke of the books on birth control and other germane subjects, so I do feel that there is a center both here and in Cambridge in England that is making serious study of these problems and can present data from which one can draw one's own conclusions.

Vertebrate Evolution.—The known record of fossilized remains shows that the ostracoderms, which were the immediate forerunners of the vertebrates, were already in existence in the Ordovician and Silurian periods, perhaps half a billion years distant from the present day. Even at that inconceivably remote epoch the most fundamental problem of vertebrate evolution had already been solved and with regard to the ground-plan of their anatomy the ostracoderms were actually far nearer to man than they were to the one-celled starting point of life. For these fishlike chordates were already bilaterally symmetrical, with head and tail and the ability to move in a forward direction. In their heads they had paired sense organs representing the senses of smell, vision and balance, while the main divisions of their brains, as shown by study of their fossilized brain casts, were of the primitive vertebrate type; the mouth, gill chamber and digestive tract were beneath the brain and spinal cord and the primary locomotor organs consisted of a closely packed series of zigzag muscle segments on either side of the long axis of the body.—Cowdry, E. V.: *Human Biology and Racial Welfare*, New York, Paul B. Hoeber, Inc., 1930.