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WOMEN. A SECOND REPORT ON A STUDY
OF FAMILY LIMITATION

By RAYMOND PEARL

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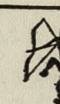
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CONTRACEPTION AND FERTILITY IN 4945
MARRIED WOMEN. A SECOND REPORT ON
A STUDY OF FAMILY LIMITATION¹

BY RAYMOND PEARL

INTRODUCTION

IN SEPTEMBER 1932 there was published a preliminary report² on the coöperative investigation of family limitation which we have been carrying on for several years. That first report dealt chiefly with a detailed account of the plans and methods of the study. It was possible at that time to present little in the way of results, and that little of no great significance, chiefly because of the fact that we had then been able to make only the merest beginning on the enormous job of tabulating the mass of intricate and complicated data. For a sample of 2000 women in total (of whom but 1824 were married) crude data were presented on the frequency of the practice of some kind of contraception, and on the associated differences in pregnancy and birth rates, together with somewhat more refined data upon a number of other points of less marked interest.

It is now possible to present a further progress report upon a sample of 6000 cases,³ these being the first 5000 cases in the order of their

¹From the Department of Biology of the School of Hygiene and Public Health of The Johns Hopkins University; and the Division of Research of the Milbank Memorial Fund. The substance of this paper was presented at the Annual Meeting of the Milbank Fund in New York on March 14, 1934.

²Pearl, R. Contraception and fertility in 2000 women. HUMAN BIOLOGY, Vol. 4, pp. 363-407, 1932. An abstract of this report by the same author appeared in the *Quarterly Bulletin of the Milbank Memorial Fund*, Vol. 11, pp. 37-60, January 1933, under the title "Preliminary notes on a coöperative investigation of family limitation."

³I am greatly indebted to the loyal aid of the following members of the staff of this department in the laborious computations preliminary to coding and punching the cards for mechanical tabulation, and for other help in connection with the project: Miss Marjorie E. Gooch, Dr. John R. Miner, Dr. T. I. Edwards, Miss



collection (and therefore including the 2000 previously discussed) and the 26th thousand collected. The 26th rather than the 6th thousand was added for the purpose of seeing whether the later cases were giving statistical ratios similar to the earlier ones. Of these 6000 cases 4945 pertained to married women living in wedlock, and these alone are considered here.

As has already been said, a complete and detailed account of the plan of the investigation, the manner in which the data were collected, the safeguards taken to ensure a maximum of accuracy in the original records, and the personnel involved in the enterprise has been given in the earlier report. Therefore it will not be repeated here. It will suffice here to say that the records pertain to the complete reproductive histories, up to the time of record, of women delivered of the products of their latest pregnancies in some urban hospital in the eastern United States, the original records being made by medically trained members of the staffs of the hospitals cooperating. In the nature of the case each woman involved in the investigation has been pregnant at least once.

The statistical methodology of this report is the same as that of the first report except in one respect. This is that further study of the whole matter has led to the revision of the method of calculating pregnancy rates. The new method⁴ which is used in this present report has been described as follows:

What we really want as a measure of pregnancy-rate is the answer, for each individual woman and constructively for the group, to the following question: What proportion of all the ovulations experienced during the period of observation resulted in the fertilization of an ovum or ova and pregnancy? On the basis of our present knowledge of the physiology of reproduction it is possible to construct a measure of the pregnancy-rate which will answer the question to a degree of approximation sufficiently close to the actuality for all practical statistical purposes.

In proceeding to set up this new rate let us first consider certain underlying physiological matters.

S. A. Gould, Miss Ruth DeWitt Pearl, and Mrs. Augusta K. Hibbitts. Except for Mrs. Hibbitts, who devoted her whole time to the project, the others have cheerfully given up a significant part of their time, at the sacrifice of their own research interests, to help the project along.

I also wish to acknowledge with deep gratitude the continued financial support the Milbank Memorial Fund has given to the work.

⁴Pearl, R. Factors in human fertility and their statistical evaluation. *Lancet*, Vol. II for 1933, pp. 607-611.

(a) It is well established that normally the human female ovulates once, and once only, in each menstrual cycle. While it may be the fact though it has not yet been conclusively demonstrated, that some women may occasionally menstruate but not ovulate, as has been shown to be the case in monkeys by Corner and Hartman, this must be so rare an occurrence if it occurs at all that it may be neglected in statistical practice. Any effect of so neglecting it would be to make the stated pregnancy-rate slightly lower than its true value.

(b) From (a) it follows that the number of ovulations in a year will normally be determined by the average length of the menstrual cycle. This is usually stated to be 28 days, and there is a great deal of accumulated evidence that, statistically speaking, this is extremely close to the average figure. For example, Kelly found 942 out of 1000 women reporting a 28-day interval. Heyn reported the same interval for 63.5 per cent of 1684 women. Sanes found 75 per cent menstruating regularly and 72 per cent of these at 28-day intervals. Recently Allen and King have emphasized the variability of the interval, but upon calculating the biometric constants for King's own data for 354 menstrual intervals, derived from two groups of women ranging from 17 to 35 years, we find the following results:

Mean interval = $28.41 \pm .17$ days

Median interval = $27.94 \pm .21$ days

Standard deviation = $4.83 \pm .12$ days

Coefficient of variation = $17.0 \pm .4$ per cent.

Plainly with a probable error of mean and median of the order of four to five hours on the basis of a sample of only 354 intervals no serious error will be made by taking 28 days as the average length of the menstrual cycle for statistical purposes. This gives 13.04 ovulations per woman per year. Considering the approximate nature of the calculation, in that all individual variation in respect of the menstrual interval is going to be neglected, no harm will be done by dropping the decimals and taking 13 as the normal average number of ovulations per year.

(c) A woman normally does not ovulate during the time she is pregnant, nor during the puerperium (the period between parturition and the complete involution of the uterus).

We may then set up the pregnancy-rate as follows:

Let M = the total period (in years) during which a woman engages in copulation, between puberty and the menopause (for practical purposes the duration of marriage within the same limits—that is, between puberty and the menopause); and

P_1 = duration of time (in years) she spends in the pregnant state, and regardless of the manner of its termination (by term birth, or abortion, etc.); and

T = number of times she becomes pregnant during the time-period M ; and

P_2 = duration of time (in years) she spends in the puerperal state (taken to a rough approximation as $.04T$ or $.04(T-1)$ when, as is the case in our records, the period of observation and record ends with the date of the termination of a pregnancy).

Then $M - P_1 - P_2$ = duration (in years) of exposure to risk of pregnancy, and

$$= R_p = \text{pregnancy-rate per 100 ovulations.} \\ \frac{100 T}{13 (M - P_1 - P_2) + T}$$

This pregnancy-rate may take any value between the limits zero and 100. For the completely sterile mating ($T=0$) it will be $R_p=0$. The more fertile the women the higher will be the rate.

In principle this pregnancy rate is the same as the original one used in our first report, except for the addition of the constant multiplying factor for ovulations, which as developed in the formula has the effect of confining the limits of variation of the pregnancy rate between 0 and 100 per cent, and making the physical interpretation of the rate more consistent and intelligible.

SOME GENERAL CHARACTERISTICS OF THE PRESENT SAMPLE

Race. Of the 4945 married women in the present sample 4177, or 84.5 per cent, are *whites*, and 767, or 15.5 per cent, are negroes, and for one there was no record of race.

There are, thus, only about one-half as many negroes proportionately in this larger sample as there were in the first sample of 2000. It was predicted in our first report, for reasons there set forth, that a larger sample would show a diminished proportion of negroes.

TABLE 1

Geographical Distribution of Cases in Present Sample

STATE	WHITES		NEGROES	
	Number	Per cent	Number	Per cent
Illinois	1056	25.2	66	8.6
Maryland	825	19.8	198	25.8
Pennsylvania	679	16.3	230	30.0
New York	572	13.7	120	15.6
Minnesota	328	7.9	4	.5
Missouri	173	4.1	58	7.6
Wisconsin	160	3.8	1	.1
Ohio	145	3.5	31	4.0
Tennessee	66	1.6	42	5.5
District of Columbia	49	1.2	..	..
Michigan	47	1.1	..	..
Indiana	46	1.1	2	.3
Kentucky	31	.7	15	2.0
Totals	4177	100.0	767	100.0

Geographical Distribution. Table 1 shows the distribution of the women in the present sample by the states in which they were delivered of the products of their last pregnancy at the time of record.

Table 1 tells its own story, and requires little comment beyond pointing out that the women in the present sample have a quite different geographical distribution than those of the smaller sample reported on earlier. Seventy-five per cent of the whites, and 80 per cent of the negroes in the present sample belong to the four states Illinois, Maryland, Pennsylvania, and New York. But the general scatter is sufficient so that it may fairly be said that the present data do not reflect solely the condition of any one small region of the country.

Economic Status. Table 2 shows the distribution of the women in the present sample relative to economic status. The classes are defined in detail in our first report (*loc. cit.*, p. 377).

TABLE 2

Economic Status of 4945 Families

CLASS	WHITES		NEGROES	
	Number	Per cent	Number	Per cent
Very poor	510	12.2	347	45.2
Poor	1951	46.7	381	49.7
Moderate circumstances	1358	32.5	39	5.1
Well-to-do and Rich	358	8.6	..	..
Totals	4177	100.0	767	100.0

The percentage distributions as to economic status are shown graphically in Fig. 1.

In comparison with the smaller sample of the first report (*loc. cit.* p. 387) the present sample shows generally a somewhat higher economic status in the case of the whites, and a slightly lower one in the case of the negroes. Thus in the case of the whites there are 12.2 per cent in the "Very Poor" class as against 12.5 per cent in the earlier sample; 46.7 per cent as against 50.6 per cent in the "Poor" class; 32.5 per cent as against 34.2 per cent in the "Moderate circumstances" class; and finally 8.6 per cent as against 2.6 per cent in the combined "Well-to-do" and "Rich" classes.

It was emphasized in our first report that the economic status distribution was probably distorted as a result of the fact that the data were collected during the lowest depths of the general economic depression. It was suggested (*loc. cit.* p. 387) that: "In many cases in the records skilled artisans, for example, who in good times would fall into the

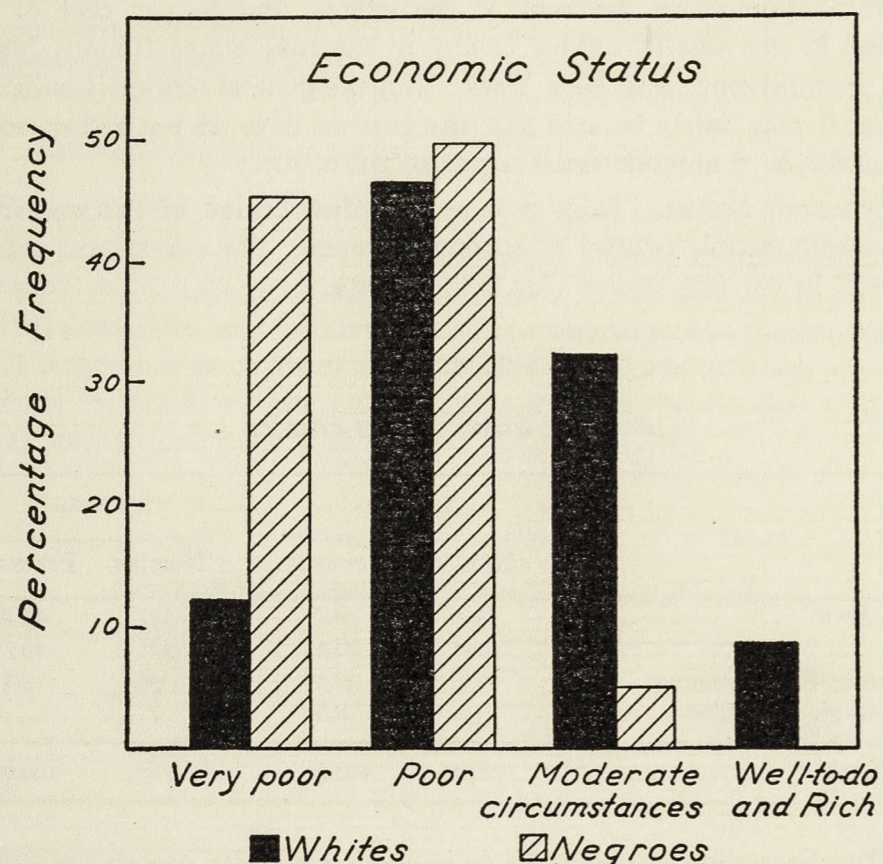


FIG. 1. DISTRIBUTIONS OF WOMEN IN SAMPLE AS TO THEIR ECONOMIC STATUS

'Moderate circumstances' group, had been long unemployed and were in actual fact 'poor,' and in some cases 'very poor' at the time the records were made."

It is now possible to bring support to this view from the more analytical tabulations that have been made from the present larger sample. Table 3 distributes the material into three broad occupational classes, in accordance with the classification of occupations recently

presented by the writer.⁵ These three broad occupational classes are defined as follows:

- I. Owners, managers, officials, and professional men.
- II. Skilled and semi-professional workers.
- III. Laborers—unskilled and semi-skilled.

The underlying idea is to contrast *primarily* two groups of persons, namely those (I) who, on the whole, are situated at or near the top of things in the existing social organization, and those (III) who, by and large, find themselves at or near the bottom in the same social organization. This leaves a third class (II); persons who are, on the whole, neither very near the top nor the bottom, and who, if they are sometimes thought and sometimes think themselves worse off than those in class I, are plainly and admittedly better off, on the whole, than those in class III.

The distinction between classes I and III is a real and fundamental one. By and large—that is to say in a statistical sense and with some admitted exceptions—the individuals falling in class I have much higher incomes and standards of living than those in class III; incomes in fact high enough—again with individual exceptions—so that they have quite definite marginal resources which not only give them a feeling of relative security as regards biological survival, but also make possible education for themselves and their children and indulgence in various luxuries and pleasures.

The occupational distributions are shown graphically on a percentage scale in Fig. 2.

The totals in Table 3 do not agree with those in Table 2 because in 48 cases among the whites and 8 among the negroes occupation was not intelligibly recorded.

TABLE 3

Occupational Distributions of Husbands of Women in Present Sample

OCCUPATIONAL CLASS	WHITES		NEGROES	
	Number	Per cent	Number	Per cent
I	656	15.9	16	2.1
II	2606	63.1	190	25.1
III	867	21.0	553	72.8
Totals	4129	100.0	759	100.0

⁵ Pearl, R. A classification and code of occupations. HUMAN BIOLOGY, Vol. 5, pp. 491-505, 1933.

By comparison of the percentages of Tables 2 and 3 it is seen that while 79 per cent of the white husbands fall into occupational classes I and II taken together, only 41.0 per cent of the white families have an economic status in the combined "Moderate Circumstances," "Well-to-do," and "Rich" classes. The difference between these two percentages may be not unfairly taken as a rough index of the extent to which the depression reduced income and resources in the social group which the English call "middle class."

The occupational distribution of the whites in Table 3 does not differ very widely from that of the total occupied male population of

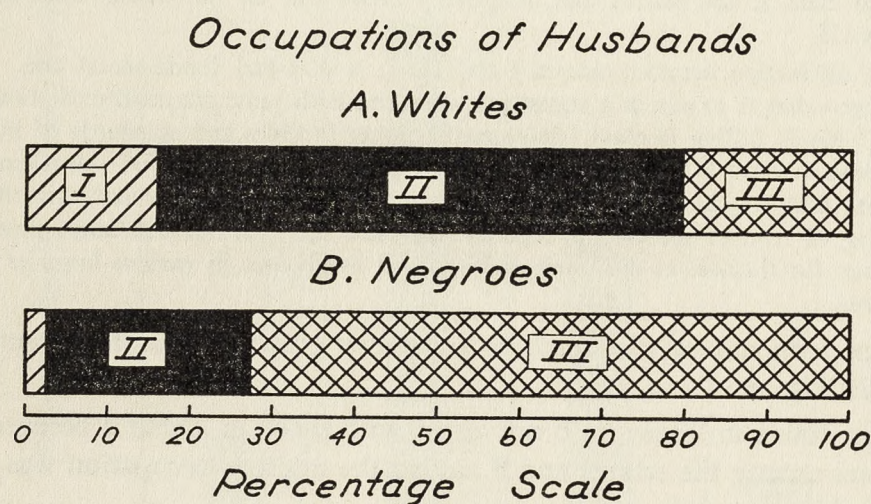


FIG. 2. OCCUPATIONAL DISTRIBUTIONS OF HUSBANDS.

Class I = Owners, managers, officials, and professional men. Class II = Skilled and semi-professional workers. Class III = Laborers — unskilled and semi-skilled.

New York City in 1930, which was (*loc. cit.*, p. 496): Class I, 18.7 per cent; Class II, 53.7 per cent; Class III, 27.6 per cent.

The difference between the white and negro occupational distributions of Table 3 is striking, but about what would be expected, I think. Nearly three-quarters of the negroes fall in Class III, and an insignificant proportion in Class I.

Religion. Keeping always in mind that the material of this study comes almost exclusively from large urban populations, the distribution of the women as to religion shown in Table 4 is of some interest.

That the populations from which this sample was drawn are urban is reflected in the fact that more than half the white women are either

Catholic or Jewish. The relatively high percentage of Catholics is in spite of the fact that no specifically Catholic hospital was included in collecting the data. Apparently Catholic women go to specifically Protestant or non-sectarian hospitals to be delivered of their babies much more frequently than the writer, at least, would have expected.

Amongst the negroes just over a half of the women were Baptists, and just over a quarter were Methodists. This, of course, is the sort of result that would have been expected.

It is to be understood that in Table 4 each denomination is inclusive of all its branches, sects, or churches. That is the Catholics include

TABLE 4

Religious Denominations of Women in Present Sample

RELIGION	WHITES		NEGROES	
	Number	Per cent	Number	Per cent
Catholic	1671	40.00	59	7.7
Jewish	642	15.37	..	..
All others not specified here....	544	13.02	82	10.7
Lutheran	434	10.39	3	.4
Methodist	372	8.91	200	26.1
Baptist	221	5.29	387	50.5
Episcopalian	136	3.26	21	2.7
Presbyterian	124	2.97	12	1.6
None	33	.79	3	.4
Totals	4177	100.00	767	100.

Greek and various other sorts of Catholics besides Roman. And the same thing is true for all the other specified denominations.

Education. Inasmuch as the frequency of the practice of contraception is presumably in some degree definitely correlated with the degree of general enlightenment of any population group, it will be well to present some data about the extent of the schooling experienced by the women in the present sample. This is done in Table 5, where education and religion appear in a double entry table, so that it may be possible to get at least some indication about the extent to which so-called religious prejudices against contraception are reinforced or weakened by ignorance or intellectual enlightenment.

The entries in Table 5 are arranged in descending order of percentage attending college or university in the case of the whites; and in descending order of percentage attending high school in the case of the negroes.

Figure 3 tells in graphic form the essential points of Table 5 so far as concerns white women. The solid black portion of each 100 per cent bar gives the percentage of the white women in this sample belonging to

TABLE 5

Extent of Formal Education of Women in Various Religious Denominations in the Present Sample

A. Whites

RELIGION	HIGHEST STAGE OF FORMAL EDUCATION RECEIVED									
	Illiterate		Elementary		High School		College or Univ.		Totals	
	No.	%	No.	%	No.	%	No.	%		
Presbyterian..	1	0.8	45	36.3	52	41.9	26	21.0	124	100.0
Episcopalian..	..	..	62	45.6	53	39.0	21	15.4	136	100.0
All others not specified here	5	0.9	227	41.7	245	45.1	67	12.3	544	100.0
None	2	6.1	17	51.5	10	30.3	4	12.1	33	100.0
Methodist ...	4	1.1	177	47.6	154	41.4	37	9.9	372	100.0
Baptist	1	0.5	129	58.4	71	32.1	20	9.0	221	100.0
Jewish	26	4.0	328	51.1	253	39.4	35	5.5	642	100.0
Lutheran	2	0.5	288	66.4	125	28.7	19	4.4	434	100.0
Catholic	49	2.9	1211	72.5	373	22.3	38	2.3	1671	100.0
Totals	90	2.2	2484	59.4	1336	32.0	267	6.4	4177	100.0

B. Negroes

Lutheran .....	..	..	..	..	3	100.0	..	..	3	100.0
Episcopalian..	..	..	9	42.9	10	47.6	2	9.5	21	100.0
Presbyterian..	..	..	7	58.3	5	41.7	..	..	12	100.0
Methodist ...	8	4.0	122	61.0	64	32.0	6	3.0	200	100.0
Catholic	4	6.8	38	64.4	16	27.1	1	1.7	59	100.0
All others not specified here	8	9.8	52	63.4	21	25.6	1	1.2	82	100.0
Baptist	13	3.4	272	70.2	89	23.0	13	3.4	387	100.0
None .....	..	..	3	100.0	..	..	..	..	3	100.0
Totals	33	4.3	503	65.6	208	27.1	23	3.0	767	100.0

the indicated religious denomination whose formal schooling extended only to elementary school or was less than that amount. The cross-hatched portion of each bar shows the percentage of the white women

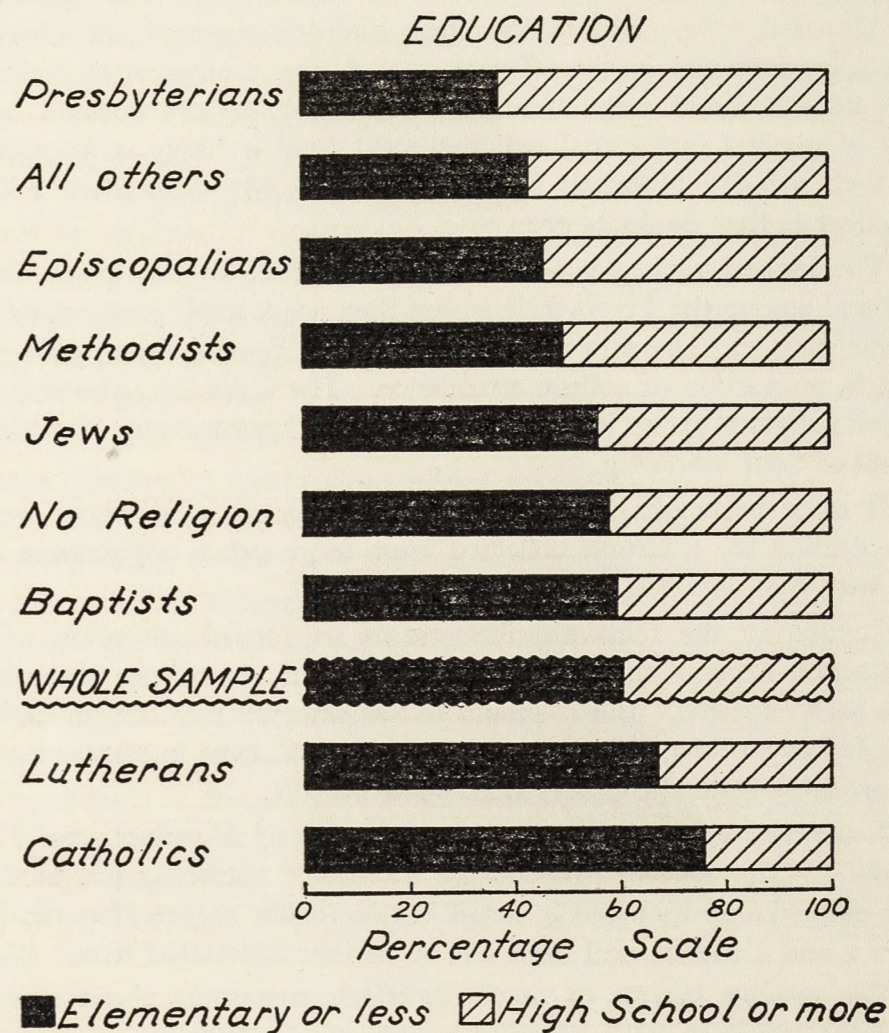


FIG. 3. AMOUNT OF FORMAL EDUCATION OF THE WHITE WOMEN IN THIS SAMPLE ADHERING TO THE INDICATED RELIGIOUS DENOMINATIONS. FOR FURTHER EXPLANATION SEE TEXT

who had attended high school or who had also gone on afterwards to college or university. In short, the length of the black bars represents the sum of the percentages in the Illiterate and Elementary columns of Table 5, and the cross-hatched bars the sum of the percentages of the High School and College or University columns of Table 5.

The most striking and important result from Table 5 and Figure 3 is that in this whole sample of white women 61.6 per cent had never got beyond elementary schools. The implications of this fact are far-reaching in relation to their practice of contraception subsequently to be discussed. Any real or thorough understanding of the biological principles involved in the efficient use of any contraceptive technique now known would seem to make a somewhat greater demand in the way of general intellectual enlightenment than is likely to be attained by such meager education as is afforded by our elementary schools, excellent as they no doubt are.

The highest percentage of college attendance in the white women is found among the Presbyterians, but they are a small group absolutely in this sample. The same also applies to the Episcopalians, who stand next in proportion of college attendance. The Catholics, who form the largest religious group in this sample, are the lowest group of all in the extent of their schooling.

It must be emphasized again that the women with whom we are here dealing are a sample collected from large *urban* populations only, and with the economic status already described.

Comparing the total distributions as to formal education of the whites and negroes there is less difference, on the whole, than might have been expected. But it should be remembered that the similarity is probably more formal than real. Negro schools, even in northern cities, are probably generally poorer than white schools.

Magnitude of Exposure to Risk; Duration of Marriage; and Times Married. The concept of exposure to risk of becoming pregnant has been defined and discussed in detail in two earlier papers (*loc. cit.* footnotes 2 and 4 *supra*) and need not be further elaborated here.

The present sample of material, which represents about one-fifth our total data that will eventually be reported, includes:

14,666.6 person-years of exposure to risk of becoming pregnant, among the *whites*, and

2,838.7 person-years exposure to risk of becoming pregnant, among the *negroes*, and

17,505.3 person-years of exposure to risk of becoming pregnant, for the *whole sample*.

These exposures indicate that the present sample is roughly equivalent to what one would get by observing the total normal reproductive

activity of the population of a city of about the size of Buffalo for a period of one year.

The exposures upon which the present report is based are plainly more respectable statistically than those of our first report. They lead to the following average exposures per woman:

Average number of years of exposure to risk of pregnancy per *white* woman = 3.51 years.

Average number of years of exposure to risk of pregnancy per *negro* woman = 3.70 years.

Average number of years of exposure to risk of pregnancy per woman for the whole sample = 3.54 years.

The similarity of average duration of exposure to risk of pregnancy in the whites and the negroes is striking.

The average duration of marriage up to the time of record among these women is as follows:

Mean duration of marriage in whites = 5.72 years

Mean duration of marriage in negroes = 6.44 years

Mean duration of marriage in all women in sample = 5.83 years.

From these data it appears that the white women in this sample have, on the average, spent about 2.2 years, or 38.6 per cent of their whole married lives in the business of being pregnant and bearing children, while the negro women have spent about 2.7 years, or 42.5 per cent of their married lives in the same way.

The number of times these women have been married is shown in Table 6.

The figures of Table 6 indicate plainly that so far in their married careers the women in this sample have mainly got along with one husband.

TABLE 6
Times Married

MARRIAGES	WHITES		NEGROES	
	Number	Per cent	Number	Per cent
One marriage only	4074	97.5	722	94.1
Two marriages only	100	2.4	44	5.7
Three marriages only	3	.1	1	.1
Totals	4177	100.0	767	99.9

THE FREQUENCY OF CONTRACEPTIVE EFFORTS

In our first report the objective of the investigation was stated to be to get some light on two questions (*loc. cit.*, p. 367) as follows:

1. To what extent statistically is any sort of contraceptive technique, device, or habit actually practised in a defined sample of the population of the United States at the present time?

2. What is the quantitative effectiveness exhibited by the various contraceptive techniques, considered both separately and all together, in reducing the relative frequency of pregnancy, as these techniques are actually used in a defined sample of the population of the United States at the present time?

Let us now see what the present sample of data contributes to the first of these questions.

In coding the extensive and manifold information on the original record cards a distinction has been made between contraceptive *genus* and *species*. By contraceptive genus is meant how, in general, contraception has been practiced; and by contraceptive species what particular device or method or combination of devices and methods was used. The distinction will be made clearer by the presentation of the entire contraceptive genus code, and the beginning and samples from the contraceptive species code.

CONTRACEPTIVE GENUS CODE

Code No. Way in which contraception was practised

B	No information
X	Practice of contraception intermittent without statement of reason for intermittence
0	No contraception practiced
1	Contraception regularly and steadily practiced without intermittence
2	Contraception practice intermittent through carelessness
3	Contraception practice intermittent through dislike
4	Contraception practice intermittent through planning for children
5	Contraception practice intermittent through carelessness and dislike
6	Contraception practice intermittent through carelessness and planning
7	Contraception practice intermittent through carelessness and dislike and planning
8	Contraception practice intermittent through dislike and planning
9	Contraception practice intermittent for other reasons

PART OF CONTRACEPTIVE SPECIES CODE

Code No. Contraceptive methods and/or devices used

BBB	No information
XXB	Observer regards information as unreliable

000	No contraception
001	Coitus interruptus only
002	Condom only
003	Pessary alone only
004	Pessary with medicated jelly only
005	Pessary with douche only
006	Medicated vaginal suppositories or jellies only
007	Douche alone—water only
008	Douche alone—medicated only
009	Intra-uterine mechanical device only
010	"Safe period" only
011	Any other method only
012	Coitus interruptus and/or condom together or alternatively

436 Pessary alone and/or pessary with medicated jelly and/or pessary with douche and/or medicated vaginal suppositories or jellies, together or alternatively in any combination as to time.

For purposes of presenting the data in this paper the classes of the contraceptive genus code have been combined into four broad groups as follows:

Cont. Genus Group A = Code No. 0 = No contraception

Cont. Genus Group B = Contraception regularly and steadily practiced without intentional intermittence. Code No. 1.

Cont. Genus Group C = Code Nos. 4 + 6 + 7 + 8 = Contraceptive practices intermittent for reasons wholly or partly connected with deliberate planning for children.

Cont. Genus Group D = Code Nos. X + 2 + 3 + 5 + 9 = Contraceptive practices intermittent for reasons wholly other than deliberate planning for children (except for Code No. X, of which there were negligibly few cases).

From a careful study of the original data it appears that of these four Contraceptive Genus Groups A is the most homogeneous, with D, C, and B following in the order named in comparative homogeneity relative to contraceptive practices and the motives and events lying behind the intermissions and failures of these practices. Contraceptive Genus Group B includes chiefly cases where contraceptive methods were regularly used without conscious or intended intermission for

planned children or any other reason, but failed regularly or occasionally to prevent conception in fact. It was set up with the intention to include *only* such cases. But unfortunately this category also probably includes some (relatively few) cases where contraceptive practice was intermittent because of planning (and possibly for other reasons) but without the fact having been specifically so reported. Study of the original records indicates that the proportion of such cases is not large, and probably diminished steadily and almost to the vanishing point as the observers became better trained and more experienced in the course of the work. There is nothing that can be done about the matter now; it is impossible now to go back and check up doubtful cases. The most that can be done is to recognize clearly the ambiguous character of Group B, and exercise corresponding caution in drawing inferences from its figures.

Contraceptive Genus Groups C and D have been set up as they are for the purposes of this preliminary report solely as a practical expedient. In a sample of the size of the present one a number of the subgroups in the Cont. Genus code have too small frequencies to be of any significance by themselves. In the final analysis of the whole material each one of the 12 rubrics of the Cont. Genus Code will be dealt with separately, but to attempt this on a sample of less than 5000, as the present sample is, would be futile.

Over two-thirds of the white women in Cont. Code C fall under the code number 4. Code numbers 7 and 8 included in the C group, have very small frequencies. Code number 6 has a higher frequency than 7 and 8, but falls much below that of number 4. The net result of lumping code numbers 6, 7 and 8 with 4 in this report is plainly to minimize the results as to the effect of intelligent and precisely performed contraception upon pregnancy and birth rates. The procedure adopted in setting up Cont. Genus Group C weights unfavorably the records of those women belonging to code number 4, who practice contraception carefully, intelligently, and persistently with intermissions only for planned and wanted pregnancies. The records of these code number 4 women are compelled by the present grouping to carry along the burden of the women who had the same intentions as they did, but were more careless in their performance. Since, however, the actual numerical burden imposed by the women of code numbers 6, 7, and 8 is not large the results from Cont. Genus Group C women will be treated in this progress report as though the group were homogeneous

and consisted only of women belonging strictly to code number 4. The errors made by so doing, insofar as concerns effects upon pregnancy and birth rates, will be in the direction of understatement rather than of exaggeration.

Contraceptive Genus Group D is formally and categorically more homogeneous than Group C, so far as concerns motivation of intermission of contraceptive practices. It includes a majority of the women who are ever careless practitioners.

It is hoped that with the above exposition of the defects consequent upon the system of contraceptive genus grouping adopted in this progress report the readers of this paper will not be too harshly critical

TABLE 7

Frequency of Practice of Contraception Among 4932 Married Women

RACE	CONTRACEPTION NOT PRACTICED (GROUP A)		CONTRACEPTION PRACTICED IN SOME FORM REGULARLY OR INTERMITTENTLY (GROUPS B+C+D)		TOTALS	
	No.	%	No.	%	No.	%
Whites	2280	54.7	1886	45.3	4166	100
Negroes	569	74.3	197	25.7	766	100
Totals	2849	57.8	2083	42.2	4932	100

of it, but will be willing to wait for the presentation of the whole material. Practical considerations made it desirable to find out at this time as much as possible about the trends of the results of the investigation. Consequently the grouping plan was adopted as a temporary expedient to arrive at an approximation.

The simplest and most general expression of the frequency of contraceptive practice among this sample of women is presented in Table 7.

The totals of Table 7 differ from those of most of the preceding tables because of the fact that in the cases of 11 whites and one negro the records as to contraceptive practices were incomplete.

It is at once apparent that in this larger sample the percentage of women practicing contraception is higher than that shown by the 2000

TABLE 8
The Practice of Contraception in Relation to Economic Status
A. Whites

CONTRACEPTIVE GENUS GROUP	VERY POOR		POOR		MODERATE CIRCUMSTANCES		WELL-TO-DO AND RICH		TOTALS	
	No.	%	No.	%	No.	%	No.	%	No.	%
A. No contraception	343	67.3	1191	61.2	669	49.4	77	21.7	2280	54.7
B. Regular and steady practice of contraception.....	59	11.6	323	16.6	276	20.4	78	22.0	736	17.7
C. Contraceptive practice intermittent mainly for planned children	68	13.4	262	13.4	325	24.0	169	47.6	824	19.8
D. Contraceptive practice intermittent for reasons other than planning	39	7.7	172	8.8	84	6.2	31	8.7	326	7.8
Sub-totals (B+C+D). Contraception practiced.....	166	32.7	757	38.8	685	50.6	278	78.3	1886	45.3
Totals (A+B+C+D). All cases	509	100.0	1948	100.0	1354	100.0	355	100.0	4166	100.0
<i>B. Negroes</i>										
A. No contraception	263	76.0	275	72.2	31	79.4	...	..	569	74.3
B. Regular and steady practice of contraception.....	30	8.7	45	11.8	4	10.3	...	..	79	10.3
C. Contraceptive practice intermittent mainly for planned children	8	2.3	20	5.2	3	7.7	...	..	31	4.0
D. Contraceptive practice intermittent for reasons other than planning	45	13.0	41	10.8	1	2.6	...	..	87	11.4
Sub-totals (B+C+D). Contraception practiced.....	83	24.0	106	27.8	8	20.6	...	..	197	25.7
Totals (A+B+C+D). All cases	346	100.0	381	100.0	39	100.0	...	..	766	100.0

cases of the first report (*loc. cit.*, p. 394). For the married white women the percentage has risen from 36.6 to 45.3; and for the married negroes from 18.5 to 25.7. The increase is plainly relatively greater for the negroes than for the whites. For the whole sample together 42.2 per cent practiced contraception in one form or another. It was anticipated when the first sample of 2000 was studied that a larger sample of the material would show higher contraceptive rates, chiefly because it would be sure to have a greater proportion of persons in the

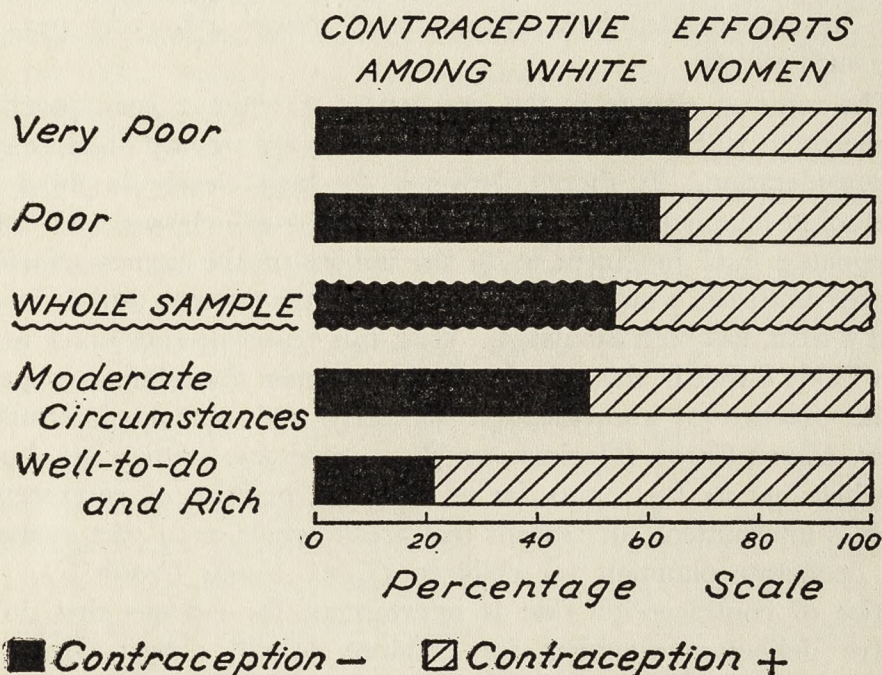


FIG. 4. SHOWING THE INCREASING PROPORTION OF WHITE WOMEN PRACTICING CONTRACEPTION (CROSS-HATCHED PORTION OF BARS) AS ECONOMIC STATUS IMPROVES

higher economic brackets. This expectation is borne out by the present results.

Table 8 subdivides the material more finely relative to contraceptive genus and economic status.

It is evident from Table 8 that the degree of prevalence of contraceptive practices in this sample of women is definitely associated with their economic status, at least so far as concerns the whites. As we go from the lowest to the highest of the four economic categories here exhibited the percentage of white women within each category who

practice contraception in one way or another steadily increases, from 32.7 per cent among the Very Poor to 78.3 per cent among the Well-to-do and Rich. The relations are shown graphically in Figure 4.

Figure 4 suggests that generalizations regarding the proportion of whole populations of women who practice contraception can have but little real significance. In the present case it is of no great import to say that among the 4166 white women of this whole sample 54.7 per cent did not practice contraception, when it is seen that in one differentiated group of these women 78.3 per cent made contraceptive efforts, while in another definitely differentiated group only 32.7 per cent made such efforts.

The rates of change in the proportion of white women practicing contraception with improving economic status are worthy of more careful consideration. It should, however, be kept clearly in mind that the absolute numbers are small in some of the sub-classes, and that in consequence final judgment as to the import of the figures should be reserved until the whole material, of which the present sample is only about a fifth, has been tabulated. With this reservation in mind we see from Table 8 that in this sample of white women the relative frequency of the practice of contraception regularly and without intermission (*Cont. Genus Group B*) rises steadily as economic status rises, but on the whole not as fast or as far as does the practice of contraception which is intermittent for reasons that are in whole or in part connected with deliberate planning for children (*Cont. Genus Group C*). The practice of contraception that is intermittent for reasons that do not involve deliberate planning for children (*Cont. Genus Group D*) does not sensibly change as economic status rises. The frequencies for this type of contraceptive behavior are substantially horizontal. It relates chiefly to people who are intermittent in their contraceptive efforts through carelessness. It suggests that under the thralldom of the sexual urge the economically better off folk contain among their numbers a residue of about the same proportion of people who, though well intentioned about contraception, are reckless upon occasion. It will be extremely interesting to see whether this suggestion is borne out by the whole material when it is tabulated.

Amongst the negroes of the present sample the relationship between contraceptive efforts and economic status appears to be somewhat less marked than among the whites, a result that accords with general expectation, I think. But a definite conclusion on the point is not

warranted yet. In view of the facts, first, that the proportion of negro women who have ever made any contraceptive efforts is much smaller than among the whites; and, second, that our total sample of negroes so far tabulated is small, it results that in the contraceptive genus groups for women practicing contraception the numbers are generally too small to yield reliable percentages.

In the present sample 1583, or 38.0 per cent of the white women had experienced pregnancy but once in their lives up to the time of record, while the remaining 2583, or 62.0 per cent, had experienced two or more pregnancies. Among the negroes the corresponding figures are 201, or 26.2 per cent, women who had experienced their first (and only) pregnancies, and 565, or 73.8 per cent, who experienced two or more pregnancies. It thus appears that this sample of women delivered in hospitals is not only heavily weighted with first pregnancies (and first births) but that the whites are more heavily weighted in this series than the negroes. It is important to see what effect this has upon contraceptive practices. The necessary data are given in Tables 9 and 10, which are constructed on the same plan as Table 8, for whites and negroes respectively.

It is evident that with the still finer subdivision of the present limited sample in Tables 9 and 10, the absolute numbers in the sub-classes of women practicing contraception become in some cases too small to have any reliability whatever. This is particularly true for the Very Poor white primigravidae, and for the negroes generally. Having due regard to these limitations the data of Tables 9 and 10 suggest that:

1. The percentage of women *not practicing* contraception is *higher* among the primigravidae than among those who have been pregnant two or more times. This is true for both whites and negroes, and within each economic group. The differences in both races are largest in the Very Poor class, tend to become progressively smaller in the higher economic classes, and are, in the whites, smallest in the Well-to-do and Rich class.

2. Conversely the percentage of women *practicing* contraception is *lower* among the primigravidae than among those who have been pregnant two or more times, in both whites and negroes and in all four economic classes.

The trends of these differences are shown graphically for the white women in Fig. 5.

TABLE 9

The Practice of Contraception in Relation to Economic Status Among White Women
I. Women who had experienced only one pregnancy

CONTRACEPTIVE GENUS GROUP	VERY POOR		POOR		MODERATE CIRCUMSTANCES		WELL-TO-DO AND RICH		TOTALS	
	No.	%	No.	%	No.	%	No.	%	No.	%
A. No contraception	115	81.0	504	72.0	338	56.7	35	24.0	992	62.7
B. Regular and steady practice of contraception.....	9	6.3	110	15.7	110	18.5	44	30.1	273	17.2
C. Contraceptive practice intermittent mainly for planned children	12	8.5	44	6.3	108	18.2	54	37.0	218	13.8
D. Contraceptive practice intermittent for reasons other than planning	6	4.2	42	6.0	39	6.6	13	8.9	100	6.3
Sub-totals (B+C+D). Contraception practiced.....	27	19.0	196	28.0	257	43.3	111	76.0	591	37.3
Totals (A+B+C+D). All cases	142	100.0	700	100.0	595	100.0	146	100.0	1583	100.0
<i>II. Women who had experienced two or more pregnancies</i>										
A. No contraception	228	62.1	687	55.0	331	43.6	42	20.1	1288	49.9
B. Regular and steady practice of contraception.....	50	13.6	213	17.1	166	21.9	34	16.3	463	17.9
C. Contraceptive practice intermittent mainly for planned children	56	15.3	218	17.5	217	28.6	115	55.0	606	23.5
D. Contraceptive practice intermittent for reasons other than planning	33	9.0	130	10.4	45	5.9	18	8.6	226	8.7
Sub-totals (B+C+D). Contraception practiced.....	139	37.9	561	45.0	428	56.4	167	79.9	1295	50.1
Totals (A+B+C+D). All cases	367	100.0	1248	100.0	759	100.0	209	100.0	2583	100.0

TABLE 10

The Practice of Contraception in Relation to Economic Status Among Negro Women
I. Women who had experienced only one pregnancy

CONTRACEPTIVE GENUS GROUP	VERY POOR		POOR		MODERATE CIRCUMSTANCES		WELL-TO-DO AND RICH		TOTALS	
	No.	%	No.	%	No.	%	No.	%	No.	%
A. No contraception	64	86.4	87	79.0	15	88.2	...	..	166	82.5
B. Regular and steady practice of contraception.....	5	6.8	11	10.0	2	11.8	...	..	18	9.0
C. Contraceptive practice intermittent mainly for planned children	1	1.4	6	5.5	...	..	...	..	7	3.5
D. Contraceptive practice intermittent for reasons other than planning	4	5.4	6	5.5	...	..	...	..	10	5.0
Sub-totals (B+C+D). Contraception practiced.....	10	13.6	23	20.0	2	11.8	...	..	35	17.5
Totals (A+B+C+D). All cases	74	100.0	110	100.0	17	100.0	...	..	201	100.0
<i>II. Women who had experienced two or more pregnancies</i>										
A. No contraception	199	73.1	188	69.4	16	72.8	...	..	403	71.4
B. Regular and steady practice of contraception.....	25	9.2	34	12.5	2	9.1	...	..	61	10.8
C. Contraceptive practice intermittent mainly for planned children	7	2.6	14	5.2	3	13.6	...	..	24	4.2
D. Contraceptive practice intermittent for reasons other than planning	41	15.1	35	12.9	1	4.5	...	..	77	13.6
Sub-totals (B+C+D). Contraception practiced.....	73	26.9	83	30.6	6	27.2	...	..	162	28.6
Totals (A+B+C+D). All cases	272	100.0	271	100.0	22	100.0	...	..	565	100.0

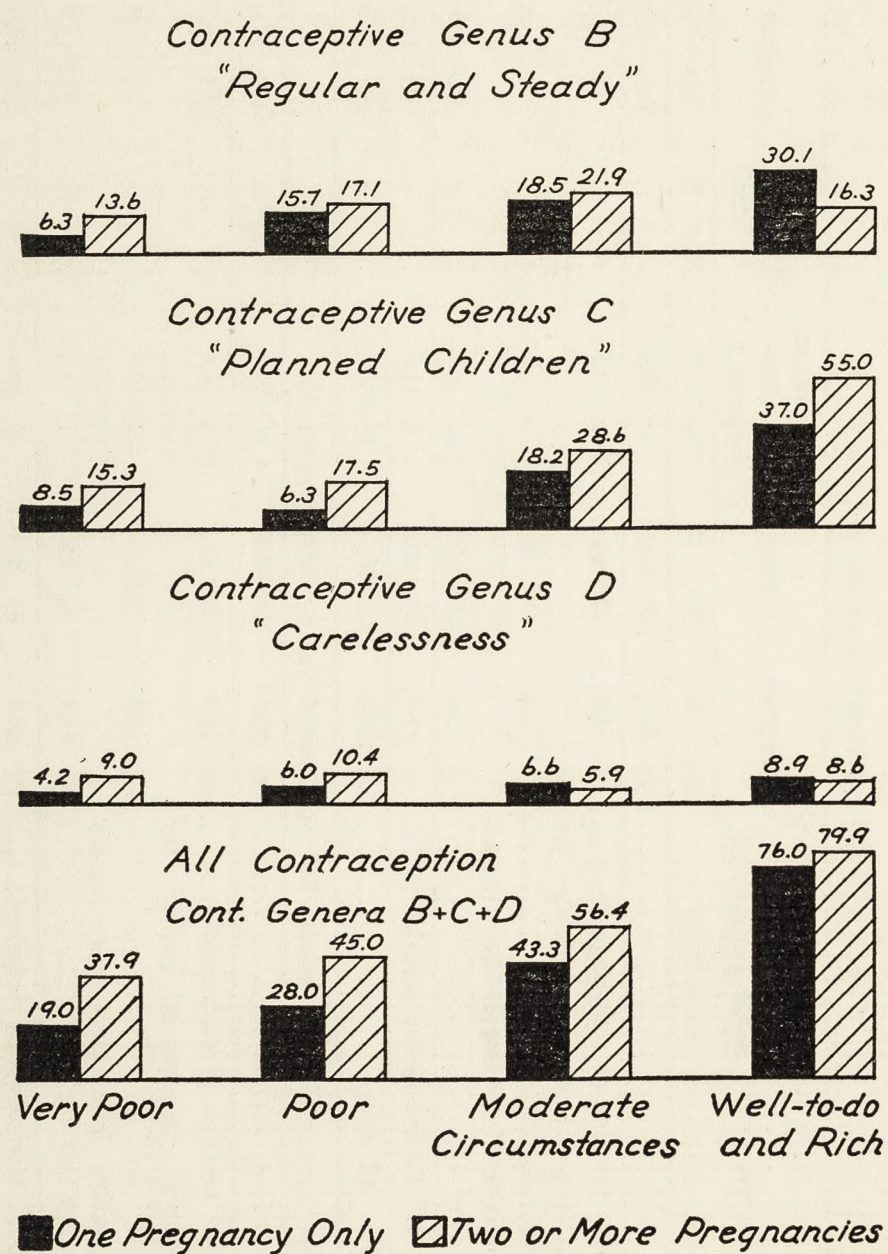


FIG. 5. PERCENTAGES OF WHITE WOMEN PRACTICING CONTRACEPTION IN RELATION TO (1) CONTRACEPTIVE GENUS, (2) ECONOMIC STATUS, AND (3) NUMBER OF PREGNANCIES EVER EXPERIENCED

The data of Table 9 will bear further analysis from another point of view. Broadly speaking, and with of course some individual exceptions, the conceptions among the women falling in Contraceptive Genus Group B occurred because of a combination of bad luck and bad management of contraceptive methods. Actually most of the "bad luck" was probably really bad management, due to general ignorance and lack of specific understanding of the biological principles involved in human reproduction. No great injustice will be done, I think, by classifying these women of Contraceptive Genus Group B as generally ignorant, who try to practice some kind of contraception regularly and faithfully but still keep on having babies. In contrast to these are the women in Contraceptive Genus Group C, who practice contraception intelligently, and by and large have babies only when they want them. Finally come the Contraceptive Genus Group D women, who as a class are the feckless ones; having the best of intentions about family limitation but failing from time to time to take the trouble, mainly through sheer carelessness, and consequently getting more babies than they want. These women are generally inclined to the opinion that contraceptive methods are no good, when the main fault is of course their own.

Now what of the proportions amongst all women making contraceptive efforts of these types of women in the several economic classes, and among primigravidae as compared with those who have experienced two or more pregnancies? The figures of Tables 9 and 10 do not answer these questions directly, because in those tables the percentages are based upon all the women in the sample, including those who do not practice contraception at all. Therefore, Tables 11 and 12 have been prepared. In appraising and discussing these tables it is again necessary to keep in mind the limitation imposed by the absolute smallness of some of the sub-classes.

Table 11 suggests a number of points of interest. In the first place the figures for the women in this sample who made contraceptive efforts of some sort suggest that general dumbness about contraception (and presumably other things) is no exclusive prerogative of any particular economic class. In fact it would seem to be rather evenly distributed amongst the women of this sample practicing contraception who had experienced but one pregnancy. Women who had experienced two or more pregnancies appear generally sharper-witted and more intelligent in their practice of contraception than those who had experienced but one, as might reasonably be expected *a priori*. This is especially true

of women in the Well-to-do and Rich class. The women in Contraceptive Genus Group C, who practice their contraception intelligently and for the most part effectively, are proportionately more numerous in the higher than in the lower economic classes, and except for the Very Poor class, are more numerous relatively among those in any given

TABLE II

The Percentages of White Women Practicing Contraception Relative to (1) Contraceptive Genus, (2) Economic Status, and (3) Times Pregnancy Has Been Experienced

I. Women who had experienced only one pregnancy

CONTRACEPTIVE GENUS GROUP	VERY POOR (Per cent)	POOR (Per cent)	MODERATE CIRCUMSTANCES (Per cent)	WELL-TO-DO AND RICH (Per cent)	TOTALS (Per cent)
B. Regular and steady practice of contraception	33.3	56.1	42.8	39.6	46.2
C. Contraceptive practice intermittent mainly for planned children.....	44.4	22.4	42.0	48.6	36.9
D. Contraceptive practice intermittent for reasons other than planning..	22.2	21.4	15.2	11.7	16.9
Totals	99.9	99.9	100.0	99.9	100.0

II. Women who have experienced two or more pregnancies

B. Regular and steady practice of contraception	36.0	38.0	38.8	20.4	35.8
C. Contraceptive practice intermittent mainly for planned children.....	40.3	38.9	50.7	68.9	46.8
D. Contraceptive practice intermittent for reasons other than planning...	23.7	23.2	10.5	10.8	17.4
Totals	100.0	100.1	100.0	100.1	100.0

economic class who have experienced two or more pregnancies than among the primigravidae. Again these are results which might reasonably have been expected *a priori*. Women who are careless about doing their contraception (Contraceptive Genus Group D) diminish in relative frequency as we go up in the economic scale, but are relatively about as numerous, on the whole, among those who have experienced two or

more pregnancies as among those who have had only one pregnancy. These results again seem about what might reasonably be expected *a priori*. Carelessness and indifference about so grave a matter as creating more human beings are probably matters of character, bred in the bone, and unlikely to be rapidly altered by experience.

Finally the last column of the table reveals a somewhat significant fact. It appears that if we take all the women together, regardless of both economic condition and experience in reproduction, somewhat less than half of the white women in this sample who practiced contraception did it intelligently, precisely, and effectively, using the word "effectively" in the sense of meaning the one-hundred-percent achievement of the objective which they (the women) set out to obtain by the practice of contraception. I make no comment on this result. It speaks for itself. In the Well-to-do and Rich class the case is different. There a much higher proportion of the women fell in our Contraceptive Genus Group C.

Table 12 corresponds to Table 11, but is for negro women.

From Table 12, considered in comparison with Table 11, it appears to be the case, always remembering that the numbers are small, that, of the women in each race practicing contraception, proportionately fewer among the negroes than among the whites did so with approximately complete intelligence and effectiveness (Cont. Genus Group C), but in the negroes of this sample just as in the whites, the proportion doing so increased with economic status. The percentages of negro women whose contraceptive practice fell short of perfection because of lack of intelligence in its application (Cont. Genus Group B) are, among those who had experienced two or more pregnancies, oddly similar to the corresponding percentages among the whites of Table 11. (The one-pregnancy negro women practicing contraception are too few in number to warrant any statement). The percentages of negro women in the sample whose contraceptive practices are defective primarily through carelessness are rather appallingly high, but seem to diminish with advancing economic status.

METHODS OF CONTRACEPTION USED

In this section we shall consider contraceptive species, that is the particular devices and methods used to prevent conception. As the data here are necessarily enormously complex and detailed it will be im-

TABLE 12

The Percentages of Negro Women Practicing Contraception, Relative to (1) Contraceptive Genus, (2) Economic Status, and (3) Times Pregnancy Has Been Experienced

I. Women who had experienced only one pregnancy

CONTRACEPTIVE GENUS GROUP	VERY POOR (Per cent)	POOR (Per cent)	MODERATE CIRCUMSTANCES (Per cent)	WELL-TO-DO AND RICH (Per cent)	TOTALS (Per cent)
B. Regular and steady practice of contraception	50.0	47.8	100	....	51.4
C. Contraceptive practice intermittent mainly for planned children.....	10.0	26.1	...	....	20.0
D. Contraceptive practice intermittent for reasons other than planning...	40.0	26.1	...	....	28.6
Totals	100.0	100.0	100.0	....	100.0

II. Women who have experienced two or more pregnancies

B. Regular and steady practice of contraception	34.3	41.0	33.3	....	37.7
C. Contraceptive practice intermittent mainly for planned children.....	9.6	16.9	50.0	....	14.8
D. Contraceptive practice intermittent for reasons other than planning..	56.2	42.2	16.7	....	47.5
Totals	100.1	100.1	100.0	....	100.0

possible to analyze them completely in this progress report. But I hope that the summary discussion of them will be of some use.

Table 13 shows, for the women in the sample who practiced contraception and had complete and intelligible records about it, the methods and devices used. The items in the table are arranged in descending order of frequency of usage among the whites. Some of the women (1136 whites and 145 negroes to be precise) had each used only one single method or device up to the time of record. The frequency of the devices as used by them stands in the first columns of figures in the two halves of Table 13. The remainder of the women "shopped around," as the phrase goes, in contraceptive practice; using now one method or device, now another, and sometimes two or more in combination. The

TABLE 13

Methods and Devices Used for Preventing Conception

CONTRACEPTIVE SPECIES	WHITES						NEGROES					
	Alone		In Combination with Other Methods		Total Usage		Alone		In Combination with Other Methods		Total Usage	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Condom	339	29.8	426	24.0	765	26.3	15	10.3	33	26.2	48	17.7
Douches alone—medicated	295	26.0	410	23.1	705	24.2	98	67.6	42	33.3	140	51.7
Coitus interruptus	217	19.1	370	20.8	587	20.1	4	2.8	21	16.7	25	9.2
Douches alone—water	197	17.3	263	14.8	460	15.8	18	12.4	10	7.9	28	10.3
Medicated vaginal suppositories or jellies	35	3.1	156	8.8	191	6.6	..	...	8	6.3	8	3.0
“Safe period”	20	1.8	70	3.9	90	3.1	3	2.1	9	7.1	12	4.4
Pessary with medicated jelly...	18	1.6	24	1.3	42	1.4	5	3.4	..	...	5	1.8
Other methods	9	.8	22	1.2	31	1.1	2	1.4	3	2.4	5	1.8
Pessary alone	2	.2	19	1.1	21	.7	..	...	..	...	..	...
Pessary with douche	3	.3	14	.8	17	.6	..	...	..	...	..	...
Intra-uterine mechanical device	1	.1	4	.2	5	.2	..	...	..	...	..	...
Totals	1136	100.1	1778	100.0	2914	100.1	145	100.0	126	99.9	271	99.9

frequency of their employment of each designated method or device is shown in the second column of figures. Finally the last column of figures gives the sums of the other two.

The order of the figures in Table 13 is essentially the same as in the corresponding table in our first report (*loc. cit.*, p. 397). In the present sample of white women the condom comes first (because of its high degree of safety as the detailed records show) with the medicated douche and coitus interruptus closely following in relative popularity. The fact that the vast majority of these women have never been in contact with a birth control clinic or received really scientific birth control information of any sort is reflected clearly in Table 13. What these women, taken as a group, know about contraception is mainly what has been passed on to them by mothers, husbands, friends, or drug-store attendants, who in turn derived it from precisely the same kinds of sources, back to the debarkation at Ararat.

Oddly enough the 1136 (60.2 per cent) white women who stuck to one method or device alone, and the 750 women who instead followed the first part of the Pauline injunction to "try all things," furnish in the end extremely similar percentage distribution as to methods used.

Just as was the case in our first report the negro women show a relative frequency of usage of contraceptive methods and appliances rather widely divergent from that of the whites. Among the negroes douches are the outstanding method of choice, forming 62 per cent of the total usage, as against 40 per cent among the whites.

The general picture is of obviously still less precise and intelligent practice of contraception by the negroes than by the whites, even among those of both races who practice it at all.

Table 14 gives, for the white women, the distributions (absolute and relative) of contraceptive species according to contraceptive genus groups, for the total usage (alone or combined) of each method or device. The items are arranged in descending order for Contraceptive Genus Group C (contraceptive practice intermittent mainly for planned children).

It is apparent from Table 14 that the particular methods and devices for contraception employed by this sample of white women varied considerably according to their general mode of using them (contraceptive genus). The women falling in Cont. Genus Group C, who by and large do their contraception intelligently and carefully, intermitting it mainly only for planned children, favor most the condom.

TABLE 14

*Methods and Devices Used for Preventing Conception by White Women,
According to Contraceptive Genus Groups*

CONTRACEPTIVE SPECIES	CONT. GENUS GROUP B		CONT. GENUS GROUP C		CONT. GENUS GROUP D	
	No.	%	No.	%	No.	%
Condom	227	19.6	408	32.5	130	25.9
Coitus interruptus	223	19.3	272	21.7	92	18.4
Douche alone—medicated	337	29.1	243	19.3	125	24.9
Douche alone—water	225	19.4	148	11.8	87	17.4
Medicated vaginal suppositories or jellies	64	5.5	103	8.2	24	4.8
"Safe period"	40	3.5	35	2.8	15	3.0
All other methods together.....	41	3.6	47	3.7	28	5.6
Totals	1157	100.0	1256	100.0	501	100.0

This is undoubtedly because it is the most reliable method known to these women, who for the most part have never had formal, scientific instruction in contraception. In this same Group C coitus interruptus comes next in frequency of usage, and this is followed in turn by medicated douches.

The women of Cont. Genus Group B (regular and steady practice, but failing mainly through ignorance and stupidity about contraception) rely most heavily upon medicated douches, with condom, coitus interruptus, and plain water douches following, each with about equal frequency.

The careless couples in Cont. Genus Group D depend about equally upon the condom and medicated douches, but less on the former and more on the latter than those in the Genus C group.

In Table 15 contraceptive species totals for white women are tabulated against economic status. The items are arranged in descending order of frequency in the "Well-to-do and Rich" column, that being the group in this sample which practices contraception most frequently, intelligently, and effectively.

Table 15 shows the manner in which economic position altered the details of contraceptive practice in this sample of women. The percentage using the condom rises steadily with advancing economic status. Coincidentally the percentage relying on medicated douches falls. As expensive as the condom is relatively, the Very Poor class in this sample

TABLE 15

*Methods and Devices Used for Preventing Conception by White Women,
According to Economic Status*

CONTRACEPTIVE SPECIES	VERY POOR		POOR		MODERATE CIRCUM- STANCES		WELL-TO-DO AND RICH	
	No.	%	No.	%	No.	%	No.	%
Condom	52	22.3	266	22.7	290	27.5	157	34.7
Coitus interruptus	56	24.0	248	21.1	193	18.3	90	19.9
Douche alone—medicated	62	26.6	327	27.9	241	22.8	75	16.6
Douche alone—water	29	12.4	176	15.0	186	17.6	69	15.3
Medicated vaginal suppositories or jellies	18	7.7	67	5.7	74	7.0	32	7.1
“Safe period”	7	3.0	46	3.9	32	3.0	5	1.1
All other methods together..	9	3.9	44	3.7	39	3.8	24	5.3
Totals	233	99.9	1174	100.0	1055	100.0	452	100.0

employed it to the extent of nearly a quarter of their total usage. Coitus interruptus tends to decrease somewhat in popularity with advancing economic status, but still remains one of the main resources in all groups.

PREGNANCY AND BIRTH RATES

In stating the main problem with which this investigation is concerned I said, in the first report, that one of them was to get light on the effectiveness of contraception *as practiced* in a defined sample of women. What I meant by this was that it seemed to me desirable to find out by how much the pregnancy rates and live birth rates were lower in groups of women practicing contraception in their own way—stupidly or intelligently, carelessly or precisely as the case might be—than they were in groups of women not practicing contraception at all. It is clear now that it was a mistake to use the words “effectiveness of contraception” in this connection. Quite apart from the fact that some persons whose emotions outrun their reason when contraception is under discussion chose to misunderstand or misconstrue what was meant, “effectiveness of contraception” were really question-begging words. I think that the problem I had in mind is nearly if not quite the most important still unresolved question connected with the problem of human population growth at this moment. It seems to me vastly more important than any such question as whether contraceptive device X is

effective *per se*. Without investigating the matter at all I know in advance that contraceptive device X, or Y, or Z may be 100 per cent effective when used by Mrs. Doe, and 100 per cent ineffective when used by Mrs. Roe. But what are the aggregate net consequences to the population of the contraceptive efforts of all the Mrs. Does and Mrs. Roes, taken together, as they actually operate in the sexual sphere?

Being now quite clear about the futility of ever attempting to talk about the “effectiveness of contraception” in so imperfect a world as this, I propose not to do so any more, but to confine the discussion to the following completely realistic question:

What are the pregnancy rates, and birth rates of defined groups of women endeavoring in various ways to practice contraception or not attempting to practice it at all, and how do these rates differ among themselves?

We shall now proceed to exhibit the data of the present sample arranged in such form as to show their bearing upon this question. The reader may then draw his own inferences in any direction he pleases as to what, if any, bearing the results may seem to have regarding the “effectiveness of contraception.”

In the following discussion *pregnancy rate* means “number of pregnancies per 100 computed ovulations” as defined and described above (pp. 356-358 *supra*). *Live birth rate* means “number of live births per 100 computed ovulations.”

Table 16 gives the mean pregnancy rates of the women in the present sample, together with their probable errors, tabulated by contraceptive genus groups and economic status. Thus in the upper left hand corner cell of Table 16 the figure 14.02 ± 0.62 means that the group of white married women in this sample who did not practice contraception and were very poor had an average pregnancy rate of just over 14 per cent.

Since Table 16 embodies the most interesting and significant results of the present report they are exhibited for the white women in graphic form in Figure 6. If the reader will study this diagram he may find it easier to grasp the general purport of the somewhat complicated figures of Table 16.

From Table 16 and Figure 6 the following significant results emerge:

1. The mean pregnancy rates of white women in this sample who had not practiced contraception at all (Cont. Genus Group A) are substantially similar in all economic status classes. The greatest difference

TABLE 16

Mean Pregnancy Rates per 100 Computed Ovulations in All Married Women in the Present Sample, by Contraceptive Genus Group and Economic Status

A. Whites

CONTRACEPTIVE GENUS GROUP	VERY POOR (Per cent)	POOR (Per cent)	MODERATE CIRCUM- STANCES (Per cent)	WELL-TO-DO AND RICH (Per cent)	TOTALS ALL WOMEN IN GROUP (Per cent)
A. No contraception	14.02±0.62	16.00±0.38	13.59±0.46	16.97±1.89	15.03±0.26
B. Regular and steady practice of contraception.....	8.77± .92	10.56± .50	8.63± .46	9.71± .88	9.60± .31
C. Contraceptive practice intermittent mainly for planned children	6.32± .40	7.27± .32	6.55± .27	5.16± .28	6.48± .16
D. Contraceptive practice intermittent for reasons other than planning	8.59±1.25	10.41± .65	9.67± .84	8.87± .89	9.85± .44

B. Negroes

A. No contraception	14.03±0.74	14.67±0.71	18.24±2.55	.....	14.57±0.51
B. Regular and steady practice of contraception.....	10.42± .84	10.83±1.40	21.35±5.35	.....	11.20± .92
C. Contraceptive practice intermittent mainly for planned children	5.63± .58	9.25± .64	9.17±1.84	.....	8.30± .51
D. Contraceptive practice intermittent for reasons other than planning	9.22± .88	9.33± .86	..... *	.....	9.45± .62

* Only one woman in this class, with a pregnancy rate falling in the class 20.0-29.9 per cent.

between any two classes in average pregnancy rates is that between the Moderate Circumstances and the Well-to-do and Rich classes, and amounts to 3.38 ± 1.95 , a statistically insignificant difference. The next greatest difference is that between the Moderate Circumstances class and the Poor. This amounts to $2.41 \pm .60$. This is probably a "statistically significant" difference, but seems absolutely too small in amount to have any particular biological significance. The Very Poor class has nearly the lowest mean pregnancy rate and the Well-to-do and Rich class the highest mean pregnancy rate among the white women not practicing contraception. While this result does not accord with popular preconceptions, and as had been noted the difference in any case is not statistically significant, its trend is in agreement in principle with the results of Edin⁶ for the Stockholm population.

2. The white women belonging to the Cont. Genus Group C (contraceptive practice intermittent mainly for planned children) in this sample display an average pregnancy rate for the whole sample that is only 43.1 per cent of that shown by women not practicing contraception at all, a reduction of about 57 per cent. In the women of the Well-to-do and Rich class the Cont. Genus Group C mean pregnancy rate is only 30.4 per cent of that of the women in the same economic class not practicing contraception at all. This reduction of approximately 70 per cent in the average pregnancy rate associated with the relatively intelligent and careful practice of contraception is a very substantial lowering indeed. The mean pregnancy rate is lowered least (about 52 per cent) in association with Cont. Genus Group C in the Moderate Circumstances class, but the reduction is of approximately the same order as this in both the Very Poor and Poor classes.

3. Taking the white women in this sample as a whole group the mean pregnancy rates in Cont. Genus Groups B and D are roughly about 65 per cent of those exhibited by the women not practicing contraception at all, showing in other words a reduction of only about 35 per cent as compared with the 57 per cent shown by the women of Cont. Genus Group C. Careless and unintelligent contraceptive efforts, in short, have associated with them in this sample of women a smaller

⁶Edin, K. A. Fertility in marriage and infantile mortality in the different social classes in Stockholm from 1919-1922. *Proc. World Population Conference*. London (Arnold) 1927. Pp. 205-207.

Id. The birth rate changes. Stockholm 'upper' classes more fertile than the 'lower.' *Eugenics Rev.*, Vol. 20, pp. 258-266, 1929.

reduction in the mean pregnancy rate than do careful and intelligent efforts.

4. The mean pregnancy rates of the white women in this experience are extraordinarily similar in each economic class, for the same contraceptive practices. To put it another way, if we were to connect the tops of each set of similarly hatched bars in Figure 6, we should have a series of nearly horizontal lines, only deviating from horizontality by amounts

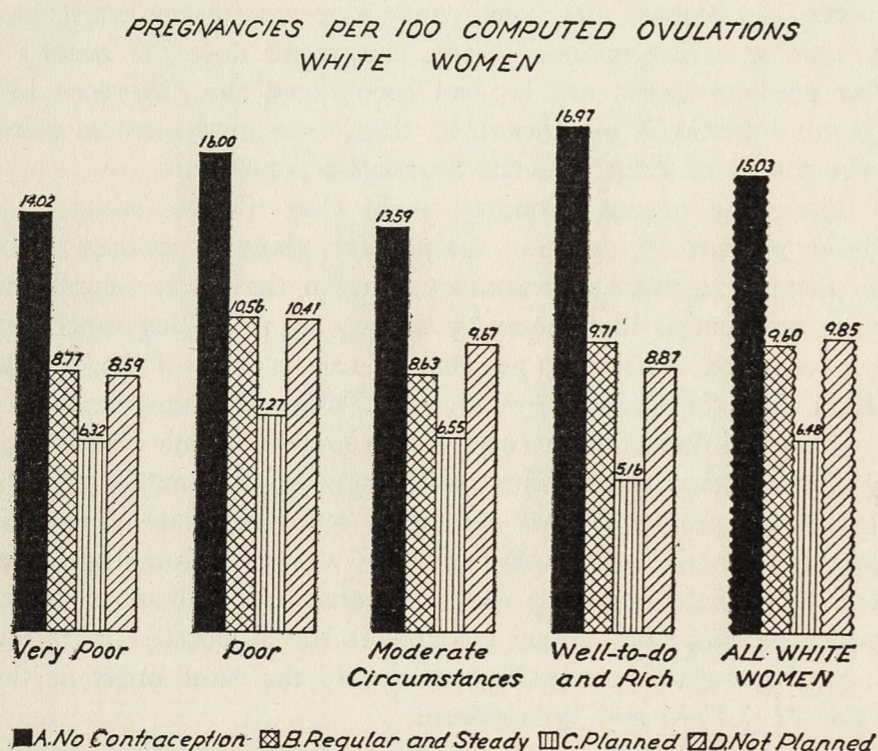


FIG. 6. SHOWING FOR THE DIFFERENT ECONOMIC STATUS CLASSES AND CONTRACEPTIVE GENUS GROUPS THE MEAN PREGNANCY RATES PER 100 COMPUTED OVULATIONS

generally well within the range of expected fluctuations of sampling. The horizontal lines would, however, be at different levels, associated with the modes of contraceptive practice which they designated. What this suggests biologically is that the innate natural fertility of these women is about the same in the different economic classes here distinguished, and that the differences in average *expressed* fertility observed in the different economic classes are due mainly to different degrees of artificial alteration of the innate natural fertility. On the

basis of the present material this conclusion seems clear and indubitable. I confess that it goes fundamentally contrary to the conclusions I had tentatively reached from earlier studies of the matter and from critically reading the literature. But I do not know that there has hitherto been available so considerable a body of reasonably accurate evidence, so pertinent to the elucidation of the point, or so cogently pointing in one direction and one direction only, as is that presented here. At the same time it will be well to reserve final judgment on the matter until the other four-fifths of our whole material has been tabulated.

5. The lower half of Table 16 dealing with the negro women shows in general, and within its limitations imposed by the smaller size of the sample, the same kind of relationships as those just discussed for the whites. The chief difference is that the lowering of the mean pregnancy rates among the women of Cont. Genus Groups B, C, and D, as compared with Group A, is generally not quite so large in amount as in the white women. But the outstanding and somewhat surprising result is the general likeness between the white and the negro tables. This is so marked that it seems unnecessary to display the negro figures graphically.

6. Comparing negro and white groups as wholes it appears that the negro women who did not practice contraception at all in this sample have a mean pregnancy rate almost identical with that of the white women in the same category. The mean rate for the negro women is actually slightly lower than that for the whites but no significance is to be attached to the slight difference. The average negro rates do, however, lend additional support to the view expressed above that these data suggest that innate natural fertility uninfluenced by artificial alterations appears to be about the same for all groups of women into which this material has been divided. If substantiated by further data this would mean that the reason for the frequently observed higher birth rates of negroes might be sought in the fact that as a racial group they practice contraception much less frequently than whites, and somewhat less intelligently and carefully when they do practice it.

7. The lowest average pregnancy rate among negro women not practicing contraception at all is in the Very Poor Class, and the highest in the Moderate Circumstances class. This agrees in principle with the findings in the whites, but the difference is not statistically significant having regard to its probable error.

TABLE 17

Mean Live Birth Rates per 100 Computed Ovulations in All Married Women in the Present Sample, by Contraceptive Genus Group and Economic Status

A. Whites

CONTRACEPTIVE GENUS GROUP	VERY POOR (Per cent)	POOR (Per cent)	MODERATE CIRCUM- STANCES (Per cent)	WELL-TO-DO AND RICH (Per cent)	TOTALS ALL WOMEN IN GROUP (Per cent)
A. No contraception	13.20±0.63	15.09±0.37	12.72±0.46	16.55±1.90	14.16±0.26
B. Regular and steady practice of contraception.....	8.09±.93	9.76±.49	7.42±.37	9.26±.89	8.70±.28
C. Contraceptive practice intermittent mainly for planned children	5.85±.37	6.32±.31	5.96±.26	4.54±.21	5.77±.15
D. Contraceptive practice intermittent for reasons other than planning	7.69±1.26	9.77±.64	8.84±.82	7.58±.88	9.07±.43

B. Negroes

A. No contraception	12.75±0.72	13.60±0.70	17.44±2.59	.....	13.42±0.50
B. Regular and steady practice of contraception.....	8.75±.71	8.44±1.03	20.00±5.62	.....	9.14±.73
C. Contraceptive practice intermittent mainly for planned children	4.38±.58	8.50±.61	9.17±1.84	.....	7.50±.51
D. Contraceptive practice intermittent for reasons other than planning	8.78±.79	8.72±.86	.....*	.....	8.94±.59

* Only one woman in this class, with a birth rate falling in the class 20.0-29.9 per cent.

TABLE 18

Mean Pregnancy Rates per 100 Computed Ovulations in White Married Women in the Present Sample, by Contraceptive Genus Group and Economic Status

I. Women who had experienced only one pregnancy

CONTRACEPTIVE GENUS GROUP	VERY POOR (Per cent)	POOR (Per cent)	MODERATE CIRCUM- STANCES (Per cent)	WELL-TO-DO AND RICH (Per cent)	TOTALS ALL WOMEN IN GROUP (Per cent)
A. No contraception	25.20±1.53	24.84±0.74	19.73±0.81	28.11±3.61	23.26±0.52
B. Regular and steady practice of contraception.....	19.44±4.78	16.61±1.24	12.28±1.00	12.28±1.42	14.33±.71
C. Contraceptive practice intermittent mainly for planned children	8.54±1.28	10.06±1.25	9.00±.68	5.97±.49	8.44±.45
D. Contraceptive practice intermittent for reasons other than planning	7.69±1.26	9.77±.64	8.84±.82	7.58±.88	9.07±.43

II. Women who had experienced two or more pregnancies

A. No contraception	8.38±0.30	9.52±0.25	7.32±0.26	7.68±0.98	8.69±0.16
B. Regular and steady practice of contraception.....	6.85±.46	7.50±.33	6.25±.33	5.96±.60	6.87±.21
C. Contraceptive practice intermittent mainly for planned children	5.85±.39	6.71±.21	5.33±.18	4.78±.34	5.77±.14
D. Contraceptive practice intermittent for reasons other than planning	6.29±.41	8.10±.57	7.89±.86	7.22±.86	7.72±.38

8. Taking the negro group as a whole, the average pregnancy rate is below that of the women not practicing contraception at all, by about 23 per cent in those belonging to Cont. Genus Group B; by about 43 per cent in those belonging to Cont. Genus Group C; and by about 35 per cent in those belonging to Cont. Genus Group D.

Table 17 gives the mean live birth rates, as defined above, for this material, tabled in precisely the same manner as the mean pregnancy rates of Table 16.

Table 17 brings out no point of principle differing in any essential way from those seen in Table 16. The lower values of the live birth rates below the pregnancy rates are, of course, due to what I have called reproductive wastage, that is to the losses reflected in abortions, miscarriages, and still births.

It has been shown in Table 9 *supra* that a high proportion of the women in this sample of material had at the time of record been pregnant only once, and that the percentage of those who had not practiced contraception was considerably higher among these primigravidae than among those who had been pregnant two or more times. It is therefore desirable to examine the mean pregnancy rates of these two groups of women.

Tables 18 and 19 present the data in the same form as in Table 16. Table 18 deals with white women and Table 19 with the negroes.

Table 18 shows definite similarities to, as well as marked differences from Table 16. It is in the first place clear that the relatively high average pregnancy rates of Table 16 are primarily the resultant of the fact that this sample of women delivered in hospitals contains a high proportion of primigravidae. As had been suspected even before this investigation was begun, one of the commonest immediate results of marriage is a pregnancy.

But it is equally apparent that when our material is divided as in Table 18 no one of the basic results derived from Table 16 is essentially altered. It still appears to be the result that, whether we deal with primigravidae or more sexually experienced women, innate natural fertility seems to be about the same in all of our four economic classes, and is only altered by artificial means addressed to the attainment of that result. Furthermore it appears that in both primigravidae and in women who have experienced two or more pregnancies those who do their contraception according to Cont. Genus Group C have lower mean pregnancy rates than any other class in this experience.

TABLE 19
Mean Pregnancy Rates per 100 Computed Ovulations in Married Negro Women in the Present Sample, by Contraceptive Genus Group and Economic Status

I. Women who had experienced only one pregnancy

CONTRACEPTIVE GENUS GROUP	VERY POOR (Per cent)	POOR (Per cent)	MODERATE CIRCUM- STANCES (Per cent)	WELL-TO-DO AND RICH (Per cent)	TOTALS ALL WOMEN IN GROUP (Per cent)
A. No contraception	27.21±2.35	24.43±1.79	22.33±3.36	.....	25.31±1.34
B. Regular and steady practice of contraception.....	10.00±2.52	16.82±4.43	..... *	.....	13.97±3.04
C. Contraceptive practice intermittent mainly for planned children .....	.....	10.83±1.03	.....	.....	10.83±1.03
D. Contraceptive practice intermittent for reasons other than planning	15.63±4.19	19.17±4.38	.....	.....	17.75±3.14

* Only one case, pregnancy rate in class 0-4.9.

II. Women who had experienced two or more pregnancies

A. No contraception	9.80±0.47	10.16±0.48	14.41±3.69	.....	10.15±0.36
B. Regular and steady practice of contraception.....	10.50± .87	8.90±1.07	27.50±5.21	.....	10.12± .85
C. Contraceptive practice intermittent mainly for planned children	5.63± .58	8.57± .78	9.17±1.84	.....	7.70± .56
D. Contraceptive practice intermittent for reasons other than planning	8.60± .84	7.64± .44	..... *	.....	8.38± .51

* Only one case, pregnancy rate in class 20.0-29.9.

Coming now to details it appears that among the primigravidae the highest mean pregnancy rate among those not practicing contraception at all is among the Well-to-do and Rich in this material. But among those who have been pregnant two or more times and have not practiced contraception it falls upon the Poor class. The probable errors, however, are so large especially for the primigravidae that these differences cannot be regarded as statistically significant.

Taking all the white women together, regardless of economic status, the primigravidae who fall in Cont. Genus Group C (intermittent mainly for planned children) have a mean pregnancy rate some 64 per cent lower than that of women who do not practice contraception at all. The corresponding figure for women who have been pregnant two or more times is about 34 per cent. This result suggests that possibly artificial interference with innate natural fertility tends to approach asymptotically a limit higher than zero. That is, apparently normal people do want *some* children, odd as that idea may seem to some persons. In the case of women belonging to the Well-to-do and Rich class the mean pregnancy rate for primigravidae belonging to Cont. Genus Group C is about 79 per cent lower than primigravidae in the same economic class not practicing contraception at all. The corresponding percentage lowering of the pregnancy rates for women who had experienced two or more pregnancies is 38 per cent.

Table 19 is the same as Table 18, but for negro women.

Table 19 shows the same general characteristics as Table 18, with only such differences as accord with what we have learned earlier about the negroes in this sample. It is again noteworthy, however, that the negro primigravidae not practicing contraception exhibit mean pregnancy rates generally not significantly different from the corresponding group of whites.

It seems unnecessary to publish the live birth rate tables corresponding to Tables 18 and 19. They show only such differences from Tables 18 and 19 as are consequent upon reproductive wastage. Considerations of space and expense compel their omission from this progress report.

SUMMARY AND DISCUSSION

This paper presents a report of progress on an extensive investigation of the prevalence of contraceptive efforts among a defined sample of American women, not selected with reference to their interest in birth control. The present report deals with about one-fifth of the total

material that will eventually be analyzed. The present sample consists of 4945 married women, of whom 84.5 per cent are whites. Seventy-five per cent of the whites and 80 per cent of the negroes belong to the four states Illinois, Maryland, Pennsylvania and New York. The remainder are scattered among nine other states. The economic status of these women is described, as is also the occupational status of the husbands. In religion 40 per cent of the whites are Catholic and 15 per cent Jewish. Nearly all are urban dwellers. Of the white women 61.6 per cent had never got beyond elementary schools. The same was true of 69.9 per cent of the negro women. Only a very small number of women (fewer than one per cent of the whites, and still fewer among the negroes) appear ever to have had any formal or scientific instruction in the principles or practice of contraception, or contact with a birth control clinic. The total experience includes 17,505.3 person-years exposure to risk of pregnancy. The mean duration of marriage in the whites was 5.72 years, and in the negroes 6.44 years. The white women in the sample had, on the average, spent 38.6 per cent of their whole married lives in the business of being pregnant and bearing children. The negro women had spent 42.5 per cent of their married lives in the same way.

The more important results regarding *prevalence of contraceptive efforts* are:

1. The prevalence of contraceptive practices among the white women in this sample is definitely and positively associated with economic status. The percentage of white women practicing contraception rises from 32.7 among the Very Poor; to 38.8 among the Poor; to 50.6 among those in Moderate Circumstances; and to 78.3 among the Well-to-do and Rich. The percentage of negro women practicing contraception is 24.0 among the Very Poor and 27.8 among the Poor.

2. The percentage of women not practicing contraception is higher among the primigravidae in this sample than among those who have been pregnant two or more times. This is true for both whites and negroes and in all four economic groups. The differences are largest in the Very Poor class, and, in the whites, smallest in the Well-to-do and Rich class.

3. Among white women in this sample who made some sort of contraceptive effort, somewhat fewer than one-half, regardless of both economic status or duration of marriage and consequent number of experienced pregnancies, did their contraception intelligently, precisely,

and "effectively," using effectively to mean complete achievement of the object which they set out to attain by the practice of contraception. Among these white women practicing contraception, taken as a whole group, 46.2 per cent of the primigravidae and 35.8 per cent of those who had experienced two or more pregnancies had more pregnancies than they desired primarily through lack of intelligence about the principles of successful contraception. Finally, of the whole group of white women making contraceptive efforts 16.9 per cent of the primigravidae and 17.4 per cent of those who had experienced two or more pregnancies had more pregnancies than they desired primarily through carelessness in the usage of contraceptive methods and appliances.

4. But in the Well-to-do and Rich classes among the white women making contraceptive efforts of any sort, 48.6 per cent of the primigravidae and 68.9 per cent of those who had experienced two or more pregnancies did their contraception with considerable precision, and mainly had only as many pregnancies as they wanted, and when they desired them.

5. Among the negro women in this sample making any contraceptive efforts the percentage who did so with considerable precision and mainly had only planned and wanted pregnancies is low, and the percentage of those whose contraception failed because of carelessness is high.

The more important results regarding *methods of contraception* used are:

6. Of the 1886 white women in this sample who had practiced some sort of contraception, 1136 or 60.2 per cent had used in their whole marital experience but one single method or device alone, whereas 750, or 39.8 per cent, had tried two or more methods or devices, successively or in combination. The corresponding percentages for negro women are 73.6 and 26.4.

7. Among the white women practicing contraception 86.4 per cent of it was accomplished by the use of the condom, or coitus interruptus, or medicated douches, or plain water douches, either alone or in some combination. The corresponding percentage for the negro women was 88.9. It is thus evident that among the women of the sample, mostly without sound scientific instruction in contraception, the more modern methods found relatively little usage.

8. Among those in the group practicing contraception intelligently and having only wanted children, the condom stood first in popularity because the most reliable method known to them. Among those whose

contraceptive attempts failed of complete effectiveness, through ignorance of its principles, medicated douches were highest in popularity. As expensive a means of contraception as the condom is relatively, the Very Poor and Poor classes in this sample employed it to the extent of nearly a quarter of their total usage. This again is chiefly because of its supposed greater reliability.

The more important results as to *changes in pregnancy and birth rates associated with contraceptive practices* are:

9. The mean pregnancy rate (pregnancies per 100 computed ovulations) of white women in this sample who had not practiced contraception at all are substantially similar in all four economic classes, ranging from 13.59 ± 0.46 for the Moderate Circumstances class to 16.97 ± 1.89 in the Well-to-do and Rich class.

10. The white women who practiced contraception most intelligently and precisely, intermitting it mainly only for planned and wanted pregnancies, exhibited a mean pregnancy rate only 43.1 per cent of that of the women not practicing contraception at all, a reduction of about 57 per cent. The corresponding reduction among women of the Well-to-do and Rich class is approximately 70 per cent.

11. Careless and unintelligent practice of contraception shows, as would be expected, lower associated reductions in the pregnancy rates in all economic classes.

12. The mean pregnancy rates of the white women in this experience are extraordinarily similar in each economic class, for the same contraceptive practices. This leads to the tentative conclusion (to be tested by further data) that the innate natural fertility of these women is about the same in the different economic classes here distinguished, and that the differences in *expressed* fertility in the different economic classes are due mainly to different degrees of artificial alteration of the expression of innate natural fertility.

13. The negro women in the sample show essentially the same kind of relationships between contraception and mean pregnancy rates as those described above for the whites. The chief difference is that their contraceptive practices did not have associated with them quite so large reductions in the pregnancy rates.

14. The mean pregnancy rates for negro women not practicing contraception at all are very closely similar to those for the corresponding group of whites, indicating a similar innate natural fertility.

15. Results 9 to 14 above are, in principle and with only the numerical differences due to reproductive wastage by miscarriages, abortions, and still-births, the same for live birth rates calculated on the same basis (live births per 100 computed ovulations).

The above 15 numbered paragraphs state only a part of the results set forth in the body of this report, but they sufficiently indicate the general trend. The general picture is of a state of affairs where a high proportion of the economically most fortunate classes are practicing contraception with a relatively high degree of precision and intelligence, producing mainly only as many babies as they want and when they want them. On the other hand the less and particularly the least fortunate economic classes, in this material certainly, are to a much smaller extent making any attempt to practice contraception at all, and of those who are making the attempt the proportion who are doing so intelligently and precisely is also smaller. Our detailed records indicate clearly that *this is due primarily to ignorance of contraceptive methods and technique*, rather than to a desire to have large families. Hundreds and hundreds of the women in this sample who do not practice contraception are pleading for information and instruction so that they may. A more perfect illustration than that afforded by the figures of this report would be hard to find of the element of truth embodied in that plaintive ballad whose refrain states that:

It's the *rich* what 'as the pleasure;
It's the *poor* what gets the blime!

It seems to me plain, though I admit that others whom I greatly respect hold, or at least have held, different views, that all the eugenic propaganda and pleading ever heard of or conceivable is not going substantially to increase the birth rates among the more fortunate economic classes, who also are, by and large, the more intelligent classes. They are at least intelligent enough to have a concept which they regard as enlightened self interest, and to act according to it. It seems silly to suppose that any sort of propaganda is going to result in a significant increase in the birth rate among these classes.

On the other hand the economically unfortunate classes also have a concept which they too regard as enlightened self interest. The degree of enlightenment involved in it seems to me to be on the whole definitely smaller than in the other group of which we have just been speaking. But about this there is this to be said: that in any case the level of intelligence or enlightenment of the economically less fortunate classes,

wherever it may be placed, is at least sufficiently high, on the testimony of the data of this report, to make many of them wish to practice contraception effectively who are not now doing so.

The logic of our results would seem to point clearly and unequivocally to the probability that prompt removal of all legal restriction to the free dissemination of contraceptive information, and of barriers to the unrestricted distribution of contraceptive devices, would tend to have the effect of bringing the differential fertility of social classes more nearly into balance again. Whether this would be a "good" or "desirable" thing to do is a matter of opinion, to which our results *per se* make no contribution. Therefore that question will not be discussed. But it seems clear that if restrictions upon the dissemination of contraceptive information and advice were removed, it might somewhat lighten the burden of poverty and unemployment with which our children and grandchildren bid fair to be faced. After all it should not be forgotten that even though the "universe" may conceivably be expanding as some astronomers tell us it is, certainly this earthly globe on which we live is doing nothing of the sort. And yet each year there are more human beings on it than there were the year before. All of these human beings desire not only to live but to enjoy life. The more of them there are the more difficult it is likely to be to satisfy either of these desires, unless and until man's control of nature and of himself keeps better in step with his biological reproductivity than has been the case in the past.



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