

# SOCIAL AND PSYCHOLOGICAL FACTORS AFFECTING FERTILITY

## XXXII. THE NUMBER OF CHILDREN DESIRED AT THE TIME OF MARRIAGE<sup>1</sup>

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IN a recent article in this series Pratt and Whelpton presented some data on the relation of interest in and liking for children to (a) actual fertility of the couple, (b) number of children claimed to have been wanted by the wife and husband at the time of marriage, and (c) number of children that the wife and husband stated that they would like to have if they could begin married life over and if the number were determined only by liking for children. These authors found "a positive relation between the index of interest [in children] and the number of children wanted at marriage and also the number wanted if married life could be relived. . . . This is true for all wives and husbands and for those with children. The number of children wanted at marriage is substantially smaller than the number wanted if married life could be relived for wives and husbands at all levels of interest. Among all couples the number wanted at either period is consistently larger than the number actually born, regardless of level of interest."<sup>2</sup>

In the paper by Pratt and Whelpton, however, the data regarding number of children wanted at marriage were simply handled as one of the possible criteria of interest in children for the purpose of investigating the relation of *interest in children* to actual fertility. The data were presented on the basis

<sup>1</sup> This is the thirty-second of a series of reports on a study conducted by the Committee on Social and Psychological Factors Affecting Fertility, sponsored by the Milbank Memorial Fund with grants from the Carnegie Corporation of New York. The Committee consists of Lowell J. Reed, Chairman; Daniel Katz; E. Lowell Kelly; Clyde V. Kiser; Frank Lorimer; Frank W. Notestein; Frederick Osborn; S. A. Switzer; Warren S. Thompson; and P. K. Whelpton.

<sup>2</sup> Pratt, Lois and Whelpton, P. K.: Social and Psychological Factors Affecting Fertility. XXIX. Interest in and Liking for Children in Relation to Fertility Planning and Size of Planned Family. The Milbank Memorial Fund *Quarterly*, XXXIII, No. 4, October, 1955, pp. 454-455. (Reprint, pp. 1235-1236.)

of wife's and husband's statements considered separately but not jointly. In the present paper some further attention is given to the Indianapolis Study data regarding number of children that the wife and husband (jointly considered) stated that they had wanted at the time of marriage. These data are presented by fertility-planning status and by number of children the couple actually had.

Since increasing use is being made of data regarding "intentions" with respect to size of family in order to estimate future fertility trends, it seems well, also, to consider some of the characteristics of the data and possible biases and pitfalls that may be inherent in the various types of data on the subject.

*Netherlands Study.* In a paper presented in 1954 at the World Population Conference in Rome, and recently published in the *Eugenics Quarterly*, Groenman described a study of desired size of family carried out in 1950-1951 in Amsterdam by the Institute for Social Research. "A mail questionnaire was sent to women residing in municipalities in the Netherlands with more than 100,000 inhabitants who were planning to marry (for the first time) and who were under 50 years of age. In the Netherlands a couple that wants to get married must give notice of its planned marriage some weeks before. The municipalities where the brides are residing publish names, dates of marriage, etc. Each week the addresses of the prospective brides were sent to the Institute for Social Research, and the mail questionnaires were then distributed immediately.

"The questionnaire opens with a short explanation of the purpose of the inquiry. Then eight questions . . . are asked concerning the ages of the woman and her prospective husband, occupation, church affiliation, and number of children of the woman's parents. The two most important questions, however, are these:

1. If it rested with you, how many children would you consider ideal for your future family?

2. Do you hope to have children in the shortest possible time?"<sup>3</sup>

The author stated that the "average of total returns was 20.6 per cent and of usable returns, 18.5 per cent." (p. 225.) He acknowledged that since the questionnaires were restricted to the eleven large municipalities of the size indicated and since the same number of questionnaires (1,000) was distributed in each of these, the sample is in no sense representative. Nevertheless, the author described the results as "very satisfactory in that they clarified the motivations behind registered birth rate trends." He expressed the belief that the "mail-questionnaire method proved workable." (p. 227.) The value of the Netherlands project would be enhanced if there were an eventual followup to ascertain the extent to which the women did have families of the size that they considered ideal at the time of marriage.

*Growth of American Families Study.* In the United States, field work recently was completed for a study of the expected completed fertility of a national sample of 3,000 white women 18-39 years of age. This study is being conducted by P. K. Whelpton and Ronald Freedman under the auspices of the Scripps Foundation for Research in Population Problems and the Survey Research Center of the University of Michigan. Although no plans for followup of the *same* women are included, Whelpton has expressed the hope "that a study like the one we are undertaking can be repeated in 1960 so that it will be possible to see how the expectations of women in the different socio-economic classes as reported in February, 1955, compare with performance during 1955-1959."<sup>4</sup> Since the women in the original sample are scattered throughout the United States, problems of relocating the same women five years hence doubt-

<sup>3</sup> Groenman, Sjoerd: Women's Opinion About Size of Family in the Netherlands: Attempts to Measure Desired Family Size. *Eugenics Quarterly*, ii, No. 4, December, 1955, p. 224.

<sup>4</sup> Whelpton, P. K.: A Study of the "Expected" Completed Fertility of A National Sample of White Women. A paper in Milbank Memorial Fund: CURRENT RESEARCH IN HUMAN FERTILITY, New York, 1955, pp. 106-112.

less would be large under the best of circumstances. Actually, names of the respondents were not recorded; in fact, names were not asked by the interviewer.

*Study of Future Fertility of Two-Child Families.* Another large study which is in the offing in the United States is one which is being planned by a Steering Committee working under the auspices of the Milbank Memorial Fund with grants from the Population Council. Under the plans that have been developed a sample of about 1,200 native-white couples (with wife under 35 and husband under 45) who had second births 4-7 months prior to the interview will be visited and then followed up at least once after a period of about two years. Among the questions at the initial interview will be those concerning the total number of children that the wife hopes to have and the number she really expects to have. Questions are also asked as to how soon she expects to have these children so it will be possible at least to some extent to compare desires and expectations with accomplishment.<sup>5</sup>

As will be noted later, the advantage of longitudinal over retrospective data concerning the relation of children wanted at the time of marriage to eventual performance with respect to fertility is that data of the former type are free from problems of "rationalization." Hence, the direction of cause-effect relationships is more definite. It is realized that definite difficulties confront those who plan a longitudinal study. First of all, there is the possible effect of repeated interviewing on the behavior which is being observed. There are also selections and biases that infiltrate because of "lost" cases and "dropouts" over the period of study.<sup>6</sup>

<sup>5</sup> Kiser, Clyde V.; Mishler, Elliot G.; Westoff, Charles F.; and Potter, Robert G., Jr.: Development of Plans for a Social Psychological Study of the Future Fertility of Two-Child Families. *Population Studies*, ix, July, 1956.

Westoff, Charles F.; Mishler, Elliot G.; Potter, Robert G., Jr. and Kiser, Clyde V.: A New Study of American Fertility: Social and Psychological Factors. *Eugenics Quarterly*, ii, No. 4, December, 1955, pp. 229-233.

<sup>6</sup> Downes, Jean: Longitudinal Studies of Families as a Method of Research. *The Milbank Memorial Fund Quarterly*, xxx, No. 2, April, 1952, pp. 101-118.

See also Cochran, William G.: Research Techniques in The Study of Human

*Kelly's Study of Engaged Couples.* Perhaps because of the difficulties and cost of longitudinal studies, few have been made. One study that is germane to the present discussion is E. Lowell Kelly's study of engaged couples which he initiated some twenty years ago. The couples in Kelly's sample were recruited in part from announcements of engagements in eastern newspapers. Oriented largely to factors related to marital happiness and stability, the questions that were asked of prospective brides and grooms included one on number of children desired. The basic design of the study involved periodic contact with the couples after marriage to learn how they were "getting along." The coming of World War II necessitated virtual abandonment of the study but recently Professor Kelly has managed to secure contact with a large majority of the original group. Kelly, Mishler, and Westoff have analyzed fertility desires and fertility expectations before marriage in relation to actual fertility of the couples. The report has not been published, but two pertinent figures have been kindly supplied by the authors. The coefficients of correlation between the preferences regarding family size that were expressed before marriage and the eventual fertility behavior were .27 for wives and .26 for husbands.<sup>7</sup> These are a little lower than the corresponding coefficients .32 and .30 that were secured from *ex post facto* data for *all couples* in the Indianapolis Study. They are considerably lower than corresponding coefficients .38 and .40 for wives and husbands, respectively, in the "*number and spacing-planned*" group of the Indianapolis Study considered separately. The higher correlation in the Indianapolis Study data may reflect the two-way relation of actual number of children

Beings. The Milbank Memorial Fund *Quarterly*, xxxiii, No. 2, April, 1955, pp. 121-136.

Douglas, J. W. B. and Blomfield, J. M.: The Reliability of Longitudinal Surveys. The Milbank Memorial Fund *Quarterly*, xxxiv, No. 3, July, 1956, pp. 227-252.

<sup>7</sup> Westoff, C. F., Mishler, E. G., and Kelly, E. L.: The Interrelationships Among Initial Fertility Preference, Observed Fertility, and Recalled Preference: A Report of a Twenty-Year Study. (In process.)

*Note:* Since Kelly's sample was recruited largely from published announcements of the engagements, it seems likely that the socio-economic and fertility-planning status of the couples in that sample fall somewhere between the averages for all couples and for number and spacing-planned couples in the Indianapolis Study.

borne and number that the wives and husbands (after 12–15 years of marriage) stated that they had wanted at the time of marriage. Whatever may be the explanation there is no doubt about the need for caution in the interpretation of coefficients of correlation in *ex post facto* data.

*Gutman's Study of College Men.* Another completed investigation in this area is Gutman's study of college men. This study purports to compare "number of children desired by a group of college undergraduates in 1925" with their actual fertility performance by 1950.<sup>8</sup> Actually, there was no "followup" of the same persons although some of the same persons probably were included in the followup. During the academic year 1925–1926, 90 of the students enrolled in introductory sociology at an Eastern college "were asked to reply anonymously to the question: 'In your day dreams of marriage, do you visualize children; if so how many?'" the data were analyzed by Rice and Willey in 1926.<sup>9</sup>

Some twenty-five years later, Gutman undertook a study of the extent to which the "day dreams" had been translated into achievement. Because of the anonymous nature of the questionnaire, it was impossible to follow up precisely the same group of men. However, it was known that the original sample had been from registrants in introductory sociology during 1925–1926. The registrar furnished the appropriate class rolls consisting of 445 names. A sample of 89 was drawn at random for followup.

In comparison with an average of 2.6 children "wanted" by the students in 1925, the average number of actual children in 1950 was 1.9 for all married respondents and 1.6 for all respondents including six reported as single. Gutman mentioned three general classes of factors that might have been responsible for the deficiency of the actual fertility performance. These are (a) impaired fecundity, (b) practice of contraception, and (c) economic insecurity. These may perhaps be

<sup>8</sup> Gutman, Robert: College Men and The Birth Rate—25 Years After. *Journal of Heredity*, XIII, No. 6, November–December, 1951, pp. 285–287.

<sup>9</sup> Rice, Stuart and Willey, Malcolm: *Journal of Heredity*, XVII, 1926, pp. 11–12.

regarded as equivalent, respectively, to (a) physiological capacity, (b) means of fertility control, and (c) a cultural or environmental factor.

A factor not mentioned by Gutman (although it is of cultural or environmental type) is the potential effect of the wishes of the other spouse on the wishes of the respondent and the actual fertility of the couple. It can easily be shown, for instance, that in the case of random mating, the average family size will be one child less than the average number of children wanted at marriage by both parents (a) if the wishes are spread evenly over the whole range of no-child to six-child possibilities and (b) if all couples actually have the lower of the two-family sizes desired. Under these conditions, the average number desired at marriage would be 3 and the average number of actual births would be 2.

Actually, Gutman's data show a narrower range of fertility desires than that presumed in the theoretical example just given. Neither is there any reason to suppose that the spouse desiring the lower number would always be the one to have the wishes fulfilled. Therefore, one would not be justified in attributing more than part of the difference between the desired and the actual fertility to the factor just described.

*Indianapolis Study Data.* As already implied, the question regarding number of children wanted at marriage was included in the Indianapolis Study because of its supposed relevance to the hypothesis regarding "interest in and liking for children." The question appeared in the Forms B and C which were the "self-administered multiple choice" questionnaires on which wives and husbands respectively recorded replies to a number of questions relating mainly to attitudes, beliefs, etc.

The question was: "When you were married, how many children did you want? (Draw a circle around the right number.)

0 1 2 3 4 5 6 7 8 or more."

It will be recalled that these forms were filled out independently by the wife and husband in the presence of the inter-

viewer and usually at a pre-arranged evening appointment in the home of the client. An important reason for the presence of the interviewer was that of maintaining the "independent" character of the replies of each spouse. The couples were instructed that there was to be no discussion of the questions and answers and that neither would see the answers given by the other.

The possibility of rationalization of replies in *ex post facto* data regarding number of children wanted at marriage has already been mentioned. This might easily be done quite unintentionally. Many people probably had no clearcut desires before marriage regarding number of children they had wanted. Others may have formed the opinion, which is reflected in their reply, only after an exchange of views on this subject with their spouse during engagement or just after marriage. For still others, the original "ideal number" image may have been forgotten because of changed conditions since marriage. The number of children desired probably changes in time with the coming of children and with other changes of circumstances. Thus, some respondents, consciously or unconsciously, may have related their replies to their present social setting. Their replies may reflect the number of children they think they would have wanted, if, at the time of their marriage, they could have predicted their eventual socio-economic status, their marital adjustment, the sex of their children, and other factors. Regarding the sex of the children it may perhaps be assumed that most people who have any clear opinion about the number of children they intend to have also have some preferences regarding sex of the children. In fact, it is probably the sex distribution of the existing children that provides much of the reason for rationalization of replies concerning number of children wanted at marriage.

Despite the inadequacies that arise from their *ex post facto* nature, the Indianapolis Study data on number of children wanted at the time of marriage exhibit some interesting features, and attention will now be turned to them.



*Results from the Indianapolis Study.* A summary cross-tabulation of replies of wife and husband regarding number of children wanted at marriage, is given for all 1,444 couples in Table 1. In the first place it will be noted that the "unknowns" number only 46 (about 3 per cent) for husbands and only half that number for the wives.

Almost half of the husbands and wives stated that they wanted two children at the time of their marriage. This may reflect the popularity of the small-family ideal among urban native-white Protestants in this country during the decade preceding 1940.

Husbands reported desires for fewer than two children somewhat more frequently than did wives (17 per cent as against 13 per cent). Among both husbands and wives who wanted fewer than two children, half wanted one child and half wanted no child. No such similarity existed regarding husbands and wives who wanted more than two children. Whereas progressively fewer husbands reported desires at marriage for three, four, and five or more children, more wives wanted four children than three children. Also, more wives wanted six than five children. (Table 1.) This preference of women for the even rather than for the odd numbers might suggest a stronger

Table 1. Couples by number of children wanted at time of marriage by husband and wife.

NUMBER OF CHILDREN WANTED BY WIFE	NUMBER OF CHILDREN WANTED BY HUSBAND											
	Total	0	1	2	3	4	5	6	7	8	9+	Not Stated
Total	1,444	119	120	760	233	144	11	7	1	2	1	46
0	91	25	17	44	1	1						3
1	92	6	29	46	5	4						2
2	774	50	64	471	104	51	4	1				29
3	207	17	7	96	59	20	2	1		2		3
4	225	17	3	81	52	57	2	4			1	8
5	10			4		5	1					
6	19	1		8	5	3	1	1				
7												
8												
9+	3					2			1			
Not Stated	23	3		10	7	1	1					1

concern of women than of men with the sex of their children (even numbers admitting equal number of children of each sex). However, this interpretation is not borne out by earlier findings<sup>10</sup> of the Indianapolis Study. It has been found, in fact, that fathers are more frequently concerned than mothers about the sex of their children. Again, however, this information is based, as indicated by the earlier authors, on what may be nothing but *ex post facto* rationalizations regarding wishes relative to the sex of children. The findings may simply indicate that mothers are more reluctant to admit (to themselves or to the interviewer) any actual dissatisfaction with the sex of their children. Almost twice as many husbands as wives stated that if they could have only one child they would prefer one of the sex opposite that of their first child. Thus, although it is possible that the preference of women for pair numbers of children is connected with wishes regarding the sex of their future children, there is no evidence for this in the available data. The average number of children wanted at the time of marriage is slightly higher for the women (2.359) than for the men (2.176).

Table 2. Number of couples with identical wishes regarding number of children, observed, and expected under the assumption of random mating.

NUMBER OF CHILDREN WANTED	OBSERVED	EXPECTED <sup>1</sup>
No Child	25	7.4
1 Child	29	7.8
2 Children	471	406.1
3 Children	59	33.5
4 Children	57	22.6
5 Children	1	0.1
6 Children	1	0.1
TOTAL	643	477.6

<sup>1</sup> The expected numbers of couples with identical wishes of the two married partners were secured by applying the product of the individual expectancies to the total number of couples in which both wife and husband reported on desired number of children. For example  $(.541 \times .545 \times 1376 = .291 \times 1376 = 406.1$  couples with identical wishes for two children.)

<sup>10</sup> Clare, Jeanne E. and Kiser, Clyde V.: Social and Psychological Factors Affecting Fertility. XIV. Preference for Children of Given Sex in Relation to Fertility. *Milbank Memorial Fund Quarterly*. XXIX. No. 4, October, 1951, pp. 440-492. (Reprint pp. 621-674.)

As 54.1 per cent of the wives and 54.5 per cent of the husbands stated that at the time of marriage they wanted two children, one would expect from chance or random mating that for 29.5 per cent of the couples ( $54.1 \times 54.5$ ) both the husband and the wife would have wanted two children. The observed proportion was approximately one third (34.2 per cent). Thus had the original data actually been collected at the time of marriage one could say that some tendency existed for persons wanting two children to select partners wanting the same number.

It must again be emphasized, however, that the number of children wanted at marriage is ascertained here by a retrospective investigation, and it is quite possible that any correlation observed is the effect of mutual conditioning since marriage, rather than mate selection. Furthermore, even if such mate selection exists, the correlation between the number of children wanted at marriage by the bride and groom need not be interpreted as *conscious selection* of spouses who want the same number of children; it could arise from assortive mating by such factors as age, educational level, and social status. These factors could affect number of children wanted at marriage just as they affect actual fertility. Recent studies of some of the correlates of "ideal size of family" have been made by Freedman, Goldberg and Sharp<sup>11</sup> and analyses of socio-economic determinants of "expected" family size presumably will be made by Freedman and Whelpton.

In Table 2, the frequency of couples in which both spouses stated the same number of children wanted at marriage is compared with the corresponding frequency expected with random mating. It is seen that in all cases, the former exceeds the latter. With respect to couples with the spouses differing by one or more in the stated number of children wanted at marriage, the

<sup>11</sup> Freedman, Ronald; Goldberg, David; and Sharp, Harry.: "Ideals" About Family Size in the Detroit Metropolitan Area: 1954. *The Milbank Memorial Fund Quarterly*, xxxiii, No. 2, April, 1955, pp. 187-197.

Freedman, Ronald and Sharp, Harry: Correlates of Values About Ideal Family Size in the Detroit Metropolitan Area. *Population Studies*, viii, No. 1, July, 1954, pp. 35-87.

DIFFERENCE BETWEEN NUMBER OF CHILDREN WANTED BY HUSBAND AND WIFE	NUMBER OF COUPLES	
	Observed	Expected
0	643	477.6
1	413	422.4
2	248	345.4
3	39	75.2
4	27	43.6
5+	6	11.8
ALL COUPLES	1,376	1,376.0

Table 3. Observed and expected (under random mating) number of couples, by difference between number of children wanted.

observed numbers consistently fall short of those expected by random mating. (See Table 3.)

In order to express the information included in Table 3 in one figure—some kind of correlation index<sup>12</sup>—the mean of the differences, regardless of sign between the number of children wanted by the spouses can be computed both from the observed data and from those “expected” under the assumption of random mating. The former average proves to be 0.847 and the latter 1.150; thus, as a consequence of mate selection, the average difference between the number of children wanted at marriage by the spouses is reduced by .303 or 26.3 per cent of the “expected” difference. This is the proposed measure of correlation. It is obvious that in case of perfect selection, i.e. if each person marries only a partner who desires the same number of children as he himself, the observed mean difference between wife and husband would be *nil* and our index would

<sup>12</sup> It is believed that the relation between number of children reported as wanted at marriage by wife and number reported as wanted by the husband cannot be satisfactorily measured by the product-moment correlation, ( $r$ ). We are not interested here in a linear relationship between these two variables. We are interested, rather, in ascertaining the frequency of desires for the same number of children, and the comparative frequency of couples with large differences and those with small differences. (It is acknowledged that under *certain restricting circumstances* the coefficient of product moment correlation measures something similar.)

A somewhat similar index was proposed several years ago for a different purpose. See Bachi, Roberto: *La Mobilità della Popolazione all'Interno delle grandi Città Europee*. Roma, Federazione della proprietà edilizia, 1933, 502 pp.

assume the value of 100. Hence, if the data were not retrospective, the measure of 26.3 might be interpreted as a moderate but not very strong tendency to select spouses with similar wishes regarding family size. Since the data are *retrospective* one must add other possible reasons for the husband-wife agreements on "number of children wanted at marriage" over and above those arising from chance and pre-marital selections of the type indicated. One such additional reason is that each spouse might rationalize to some extent on the basis of the children that the couple has. By the same token, however, it should also be noted that, in these data at least, rationalization of replies on the basis of actual fertility apparently was not an important factor. Other reasons, centering around the tendency of mutual conditioning of the spouses, have been mentioned before.

*Number of Children Wanted at Time of Marriage and Planning Status.* If it is assumed that the number of children desired at the time of marriage represents an attitude held by respondents before they actually were involved in planning their family (except, perhaps as far as the begetting of the first child is concerned), any correlation between the number of children wanted at marriage and the planning status would point toward a causative effect of the number of children wanted at marriage on planning behavior with due regard being given to the reservations of conclusions drawn on the basis of *post hoc ergo propter hoc*.

It should be remembered that efficiently-planned families tend to be smaller than families that are not efficiently-planned. This may, perhaps, be interpreted in either of two ways: (a) couples who want small families plan more efficiently or (b) couples who plan efficiently succeed in keeping their families small. However, no such ambiguity exists if one of the events definitely precedes the other in time.

The average number of children wanted at the time of marriage by both the husband and the wife is lowest among "number and spacing planned" families (*see* Table 4). This would

PLANNING STATUS	HUSBAND	WIFE	MEAN DIFFERENCE
All Couples	2.177	2.359	0.182
Number and Spacing Planned	2.018	2.051	0.033
Number Planned	2.277	2.773	0.496
Quasi-Planned	2.276	2.443	0.167
Excess Fertility	2.173	2.360	0.187

Table 4. Average number of children wanted at marriage by husband and wife, by planning status of couple.

mean that the desire for smaller families is an incentive to efficient family planning. In view of the *ex post facto* nature of the data, it could also mean that there was some tendency for respondents to let their actual fertility influence their statements regarding the number of children wanted at the time of marriage.

In the "completely-planned" families the number of children wanted by both the husband and the wife is smaller on the average than that for couples of any other planning status (Table 4). Also, the mean difference is smallest and the correlation, as measured by the method defined above, between the number of children wanted at marriage by the spouses is one of the highest. The coefficient of correlation ( $r$ ) is highest in the number and spacing planned group. (Table 5.)

It appears therefore that not only the low number of children wanted by both partners induces the couple to plan their

Table 5. The "suggested measure" of relation of wife's report and husband's report on number of children wanted at marriage, and the product-moment coefficient of correlation ( $r$ ) of these variables, by fertility-planning status.

FERTILITY-PLANNING STATUS	"SUGGESTED MEASURE" <sup>1</sup>	COEFFICIENT OF CORRELATION ( $r$ )
ALL COUPLES	26.3	.35
Number and Spacing Planned	37.0	.51
Number Planned	16.0	.28
Quasi-Planned	37.0	.41
Excess Fertility	8.4	.13

<sup>1</sup> As indicated in the text, the "suggested measure" is derived from the formula:  

$$\frac{\text{"Expected" average difference} - \text{observed average difference}}{\text{"Expected" average difference}} \times 100$$

family efficiently, but at the same time the agreement regarding this number, be it small or large, plays a considerable role. On the other hand, it seems as if planning status is not strikingly related to the direction of the difference between the reports of the husband and those of the wife regarding number of children wanted at marriage. (Table 6.)

It is true that only among completely-planned families do the couples in which the wife wanted fewer children than the husband outnumber the cases in which the wife wanted more children than the husband. The difference, though small, is statistically significant. But it seems that the relatively high proportion of wives who wanted fewer children than their husbands wanted represents only another aspect of the small difference between the average number of children wanted at marriage by the spouses who finally became the most successful planners.

The relationship between the reported desires of the two spouses with respect to number of children wanted at marriage was itself systematically related to fertility-planning status: one of the highest correlations is observed for couples with the highest planning status and the lowest for couples with excess fertility.

As the formation of the opinion regarding number of children wanted and the choice of the mate both occur before the couple assumes a definite behavior regarding family planning,

Table 6. Families, classified by planning status and whether husband or wife wanted more children.

	TOTAL	NUMBER AND SPACING PLANNED	NUMBER PLANNED	QUASI-PLANNED	EXCESS FERTILITY
ALL FAMILIES	1,376	379	200	428	369
Wife Wanted More Children than Husband	423	95	92	121	115
Both Wanted Same Number	643	181	73	219	170
Husband Wanted More Children than Wife	310	103	35	88	84

the former two may be assumed to be the causes of the last, if they prove to be correlated. This confirms the earlier findings<sup>13</sup> regarding the success in family planning of couples who are well equilibrated with respect to various other attitudes and opinions. It is obviously also possible that both the agreement on the number of children that were wanted by the two marriage partners and the efficiency in family planning are consequences of a common psychological characteristic. It may well be that couples who are successful in having no pregnancies except those that are deliberately planned by stopping contraception in order to conceive tend to be a select group with respect to presence of definite agreement of the wife and husband on number of children wanted before marriage. This agreement may, here again, be the direct consequence of deliberate mate selection or indirectly due to assortive mating by various social and economic characteristics. It may even reflect mainly a particularly strong effect of mutual conditioning with respect to the opinion itself or to the reply eventually given at the interview.

*Number of Children Wanted and Actual Number of Children.* The average number of children that the couples in the Indianapolis Study actually had was, on the average, lower than the number wanted at the time of marriage by the husband and wife. (Table 7.) It is true that a few of the families may not have been completed at the time of the interview. Probably more important, however, are the combined factors mentioned in previous sections, such as the experiencing of sterility and low fecundity and the impact of environmental factors conducive to family limitation. The actual family size was lower on the average than the number that the wife stated that she wanted at the time of marriage in all fertility-planning status groups except "excess fertility." This also held true for husbands except those in the "number planned" group

<sup>13</sup> Reed, Robert B.: Social and Psychological Factors Affecting Fertility. VII. The Interrelationship of Marital Adjustment, Fertility Control and Size of Family. *Milbank Memorial Fund Quarterly*. Vol. XXV, No. 4, October, 1947, pp. 383-425. (Reprint pp. 259-301.)



PLANNING STATUS	NUMBER OF CHILDREN WANTED BY		ACTUAL FAMILY SIZE
	Husband	Wife	
ALL COUPLES	2.177	2.359	2.030
Number and Spacing Planned	2.018	2.051	1.065
Number Planned	2.277	2.773	2.283
Quasi-Planned	2.276	2.443	1.993
Excess Fertility	2.173	2.360	2.958

Table 7. Average number of children wanted at marriage and actual family size, by planning status.

in which the average number of children reported as wanted by the husband at marriage was essentially the average of the number actually borne.

Since the average number of children desired by husbands at marriage is somewhat smaller than that desired by wives, it may seem that the actual average family size would have been more nearly predicted by the replies of men than of women. It is emphasized again that the data are retrospective. Men may, in fact, not only more frequently have given no reply to the question regarding the number of children wanted at marriage, but also among those who gave some reply, many may actually have had no definite opinion on this matter and their replies, may have been mainly *ex post facto* rationalizations. However, it is also of interest to note that in the total group of planned and quasi-planned families (Table 8A) the actual number of children equals exactly the number of children wanted by the wife (366 cases), almost as often as that wanted by the husband (371 cases). In the "number and spacing planned" (Table 8B) and "excess fertility" (Table 8E) groups, somewhat more women than men are found in the "same number" categories.

Another surprising feature revealed by the study of the relationship between the number of children wanted at marriage and the actual family size, is the relative rareness of families with as many children as were wanted by one spouse and fewer than were wanted by the other. One might expect this combi-

nation to be relatively frequent because the average size of the planned and quasi-planned families is smaller than the number of children reported as wanted by either spouse at marriage. But whereas among all planned and quasi-planned families

Table 8. Couples by actual family size as compared with number of children wanted at marriage by the husband and wife.

WIFE WANTED	TOTAL	HUSBAND WANTED		
		Fewer Children	Same Number	More Children
<b>A. (=B+C+D)</b>				
<b>ALL PLANNED AND QUASI-PLANNED FAMILIES</b>				
TOTAL	1,007	166	371	470
Fewer Children	131	66	40	91
Same Number	366	70	205	25
More Children	510	30	126	354
<b>B. NUMBER AND SPACING PLANNED FAMILIES</b>				
TOTAL	379	21	106	252
Fewer Children	30	9	11	10
Same Number	113	8	55	50
More Children	236	4	40	192
<b>C. NUMBER PLANNED</b>				
TOTAL	200	52	95	53
Fewer Children	35	21	10	4
Same Number	74	22	40	12
More Children	91	9	45	37
<b>D. QUASI-PLANNED</b>				
TOTAL	428	93	170	165
Fewer Children	66	36	19	11
Same Number	179	40	110	29
More Children	183	17	41	125
<b>E. EXCESS FERTILITY</b>				
TOTAL	369	201	102	66
Fewer Children	165	138	14	13
Same Number	133	40	67	26
More Children	71	23	21	27

about 36 per cent have the same number of children as either spouse considered separately had wanted at the time of marriage, among 510 families in which the wife wanted more children than the couple had, only 25 per cent had the same number of children that the husband wanted. Also, among 470 families in which the husband wanted more children than the couple had, only 19 per cent had the same number of children that the wife wanted. The same is true with respect to completely-planned families: among these, 28 and 30 per cent of the families were of the size wanted at the time of marriage by the husband and wife, respectively. In contrast among 252 completely-planned families in which the husband wanted more children than the couple had, only 20 per cent had the same number of children that the wife wanted at the time of marriage. Likewise, among 236 completely-planned families in which the wife wanted more, only 17 per cent had the number wanted by the husband at the time of marriage.

This suggests a very particular way of reaching agreement regarding the number of children. This will appear somewhat clearer when one considers that for many couples, number of children wanted at marriage was the same for both spouses. Among these couples it is obviously impossible to have a compromise of the type: same number as wanted at the time of marriage by one spouse, fewer than the number wanted by the other spouse at marriage.

It is likewise obvious that among couples in which the spouses differed with respect to the number of children wanted at marriage, the final family sizes of the formula: "same as wanted by both" is impossible. Finally, the real compromise: "fewer than wanted by one spouse and more than wanted by the other," is impossible for couples who differed by only one child with respect to the number of children wanted at the time of marriage.

It therefore seems desirable to group the couples into three classes, according to the possibilities of compromise or agreement, regarding the size of their family.

Table 9. Distribution of planned and quasi-planned families according to number of children wanted at marriage in relation to actual fertility and fertility-planning status.

NUMBER OF CHILDREN WANTED IN RELATION TO ACTUAL FERTILITY	ALL PLANNED AND QUASI-PLANNED FAMILIES	NUMBER AND SPACING PLANNED	NUMBER PLANNED	QUASI-PLANNED
<b>A. COUPLES WITH BOTH SPOUSES WANTING THE SAME NUMBER OF CHILDREN</b>				
ALL COUPLES	473	181	73	219
Both Wanted Fewer Children Than They Had	49	7	14	28
Both Wanted Same Number That They Had	205	55	40	110
Both Wanted More Children Than They Had	219	119	19	81
<b>B. COUPLES WITH THE HUSBAND WANTING ONE CHILD LESS THAN THE WIFE</b>				
ALL COUPLES	171	58	46	67
Both Wanted Fewer Children Than They Had	3	1	2	—
Husband Wanted Fewer, Wife Same Number	42	3	17	22
Husband Wanted Same Number, Wife More	64	21	17	26
Both Wanted More Children Than They Had	62	33	10	19
<b>C. COUPLES WITH THE HUSBAND WANTING ONE CHILD MORE THAN THE WIFE</b>				
ALL COUPLES	141	73	18	50
Both Wanted Fewer Children Than They Had	9	—	4	5
Husband Wanted Same Number, Wife Wanted Fewer	26	7	8	11
Husband Wanted More, Wife Same Number	59	37	1	21
Both Wanted More Children Than They Had	47	29	5	13
<b>D. COUPLES WITH THE HUSBAND WANTING AT LEAST TWO FEWER CHILDREN THAN THE WIFE</b>				
ALL COUPLES	137	37	46	54
Both Wanted Fewer Children Than They Had	2	1	1	—
Husband Wanted Fewer, Wife Same Number	28	5	5	18
Husband Wanted Fewer, Wife More	30	4	9	17
Husband Wanted Same Number, Wife More	62	19	28	15
Both Wanted More Children Than They Had	15	8	3	4

Table 9. (Continued)

NUMBER OF CHILDREN WANTED IN RELATION TO ACTUAL FERTILITY	ALL PLANNED AND QUASI-PLANNED FAMILIES	NUMBER AND SPACING PLANNED	NUMBER PLANNED	QUASI-PLANNED
<b>E. COUPLES WITH THE HUSBAND WANTING AT LEAST TWO MORE CHILDREN THAN THE WIFE</b>				
ALL COUPLES	85	30	17	38
Both Wanted Fewer Children Than They Had	3	—	—	3
Husband Wanted Same Number, Wife Fewer	14	4	2	8
Husband Wanted More, Wife Fewer	25	10	4	11
Husband Wanted More, Wife Same Number	32	13	11	8
Both Wanted More Children Than They Had	11	3	—	8

(a) Couples with wife and husband giving identical reports on number of children wanted at marriage.

(b) Couples with wife and husband differing by only one child in their reported wishes.

(c) Couples with wife and husband differing by more than one child in their reported wishes.

Group (b) is obviously one in which no real compromise between the spouses regarding the size of the family is possible. Within this group, the actual number of children borne more frequently agrees with the number wanted by the spouse who had wanted the lower number of children than with the number wanted by the other spouse, regardless of which spouse wanted fewer children.

Among couples of group (c), however, where a real compromise in family size is possible, such a compromise is reached in about 25 per cent of the cases. In about 54 per cent of the cases the actual number of children is the same as or even lower than that desired by the spouse who wanted the lower number. In about 21 per cent of the cases the actual number is the same as or even higher than that desired by the spouse wanting the larger number. Among couples with husbands

wanting at least two *fewer* children than the wife, 45 per cent had the exact number of children reported as wanted by the husband at marriage and 20 per cent had the number wanted by the wife. Among couples with husbands wanting at least two *more* children than the wife, 16 per cent had the exact number wanted by the husband and 38 per cent had the number wanted by the wife. (See Table 9.)

Exactly as the low absolute number of real compromises was *relatively* high as compared with the number of couples who had the choice of such a compromise, it can also be explained why so few (20 per cent) of the total number of planned and quasi-planned families of the sample had the exact number of children that was wanted by both spouses. Of the total couples who by chance or by actual agreement wanted the same number of children, group (a), almost one half (43 per cent) had, in fact, as many children as both spouses had wanted at the time of their marriage; most of the others obviously had fewer children. This is particularly borne out by the "number-planned" and "quasi-planned" families. In the "completely-planned" families the actual average family size is so small that most couples had actually fewer children than either spouse wanted at the time of marriage.

In the other groups, (b) and (c), frequencies are too small to permit an analysis of the effect of the planning status on the type of agreement reached.

In view of the intricacies encountered in trying to recognize

Table 10. Average difference between family size and number of children wanted at marriage by husband, according to fertility-planning status.<sup>1</sup>

FERTILITY-PLANNING STATUS	NUMBER OF CHILDREN WANTED BY HUSBAND						
	0	1	2	3	4	5	6 <sup>a</sup>
Number and Spacing Planned	+0.5	-0.3	-1.0	-1.6	-2.2	(-2.0)	(-2.0)
Number Planned	+1.9	+0.9	+0.2	-0.6	-1.3	(-2.0)	—
Quasi-Planned	+1.7	+0.3	-0.1	-1.1	-1.1	(-1.7)	(-2.0)
Excess Fertility	+2.2	+1.0	+0.9	+0.1	-0.6	(+1.8)	(+2.0)

<sup>1</sup> Including couples with number of children wanted by wife "unknown." Parentheses indicate that less than 10 cases are involved.

<sup>a</sup> Does not include those wanting more than 6.

the mode of reaching an agreement regarding family size on the basis of observed data on the number of children wanted and actual family size only, it seems necessary to emphasize that over half (53 per cent) of the planned and quasi-planned families (Table 8A) had as many children as at least one of the spouses desired at the time of marriage. Among families of "excess fertility," in contrast, somewhat fewer than half of the couples (46 per cent) had the number of children that at least one of the spouses wanted. This difference is not very striking, unless one considers that most of the couples of "excess fertility" had made at least some effort at family limitation since marriage. Furthermore, in families with "excess fertility," as well as among the planned and quasi-planned the difference between the average number of children wanted at marriage and the average family size is less than one child. Nevertheless, this difference is somewhat larger among the "excess fertility" couples than among the others. In general, the problem of ascertaining the circumstances under which the wish of the husband or that of the wife predominates, and the circumstances under which a compromise lying between opposing wishes is reached cannot be settled on the basis of the Indianapolis Study materials. It seems that the size of the difference between the wishes and perhaps also the direction of the difference have some effect on the agreement finally reached. But other factors are probably also of considerable importance. It should finally be remembered that only the actual family

Table 11. Average difference between family size and number of children wanted at marriage by wife, according to fertility-planning status.<sup>1</sup>

PLANNING STATUS	NUMBER OF CHILDREN WANTED BY WIFE						
	0	1	2	3	4	5	6*
Completely Planned	+0.5	0	-1.0	-1.5	-2.3	(-3.0)	(-5.0)
Number Planned	(+2.4)	(+1.7)	+0.1	-0.8	-1.5	(-2.0)	(-4.0)
Quasi-Planned	+1.6	+0.2	-0.2	-0.8	-1.5	(-1.0)	(-3.3)
Excess Fertility	+2.3	+0.6	+1.0	-0.1	-0.5	(+4.0)	(-2.2)

<sup>1</sup> Including couples with number of children wanted by husband "unknown". Parentheses indicate that less than 10 cases are involved.

\* Does not include those wanting more than 6.

size and not the agreed desired family size could, here, be compared with the number of children desired at marriage.

Tables 10 and 11 give average differences between premarital wishes and actual accomplishments with respect to size of family. Fundamentally, the previously stated arguments against using the product-moment correlation coefficient as a measure of the relation of number of children wanted at marriage by the two spouses also apply to efforts at summarizing the relation of number of children wanted at marriage by either spouse to the total actual fertility of the couple. However, zero-order coefficients of correlation ( $r$ ) between actual fertility (A) and number of children reported at marriage by the father (F) and mother (M) are shown below for all couples and for those in the number and spacing planned group. The multiple correlation coefficients  $R_{A(FM)}$  are also shown.

Among all couples, regardless of fertility-planning status, the predictive value of the number of children wanted at the time of marriage by both the father and the mother is very low:

$$r_{AF} = .30, r_{AM} = .32 \text{ and } R_{A(FM)} = .38$$

It may be noted that the number of children wanted at marriage by the mother is slightly more correlated with actual family size than number of children wanted at marriage by the father, but the difference is small. Furthermore, it is seen that there is a certain advantage in using both the number of children wanted at marriage by the mother and the corresponding figure for the father in predicting fertility: the coefficient of total correlation being larger than either of the simple zero-order coefficients.

Among completely-planned families the results are very similar:

$$r_{AF} = .38, r_{AM} = .40 \text{ and } R_{A(FM)} = .45$$

All correlations are slightly stronger, but the predictive value is still low.

This should not be interpreted as a denial that the number of children wanted at marriage is a useful datum for population



forecasts. The correlation coefficients computed here show only how much the knowledge of the number of children wanted at the time of marriage by the spouses helps to improve an estimate of the final size of a family, as compared with taking the average size for the cohort as an estimate for each and every family. The low coefficients of correlation mean, therefore, only that if the average family size of a cohort is known, the knowledge of number of children wanted at marriage by the spouses does not add much useful information. But in the problem of forecasting, with which we are concerned here, this average family size is not known and must be forecast on the basis of the data on number of children wanted at marriage.

The problem with which the population forecaster would therefore really be confronted, is the following: Does the number of children wanted at marriage reflect the behavior which is in fashion at the time it is ascertained, i.e., does the number stated by brides and grooms at the time of a marriage reflect the "normal" fertility behavior at the time of this marriage, or do these figures presage the future behavior of the couple concerned?

The data of the Indianapolis Study provide no valid basis for final judgment on this question. They do show that there is a considerable correspondence between the number of children reported as wanted at the time of marriage, both by the husband and by the wife and the size of their completed family. At the same time these data show that much more information on the relationship between the number of children wanted at the time of marriage and actual family size is needed before some information on the former can be used efficiently for forecasting the latter.

#### SUMMARY

In this paper an attempt is made to discuss some of the properties of data regarding number of children wanted at the time of marriage by wives and husbands. The strengths and weaknesses of concrete data from several specific studies are considered. A weakness of the data from the Indianapolis Study

is that they are *ex post facto*. The Indianapolis Study was restricted to couples married 12–15 years. Hence, to an indeterminant extent, the replies to the question regarding number of children wanted at marriage may be influenced by the number of children actually born. The correlation of fertility desires with fertility performance doubtless is unduly high because of the *ex post facto* nature of the data on fertility desires.

Despite the limitations, the Indianapolis Study data on fertility desires of the spouses (separately and jointly considered) in relation to fertility-planning status and actual fertility point up some interesting internal differences and relationships.

The data point up the popularity of the two-child family. Over half of the wives (54 per cent) and husbands (55 per cent) stated that at the time of marriage they had wanted two children. Among about one-third of the couples *both* wife and husband stated that they wanted two children.

With the increasing prevalence of family planning, size of family probably is coming more and more under control. At the same time probably few students expect the stated fertility desires at the time of marriage to remain unaltered and effective. It seems more likely that attitudes regarding family size may often undergo changes as a result of desires of the spouse, and changing economic and social factors, and experience with children themselves. On these things very little is known at present. From several recent, current and prospective studies we hope to learn more about the factors affecting fertility desires.