

SOCIAL AND PSYCHOLOGICAL FACTORS AFFECTING FERTILITY

XXIV. THE RELATIONSHIP OF FAMILY SIZE IN TWO SUCCESSIVE GENERATIONS¹

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IN A previous issue of the Milbank Memorial Fund *Quarterly* there appeared an article dealing with the results of an investigation into "the relationship between family sizes of two successive generations." This study concludes, as do several other studies of this relationship, that "the size of the family from which the parents come holds an important place among the biological and social factors influencing the number of children born to them."² A test of this general conclusion can be made using data collected in connection with the Indianapolis Study of Fertility. Positive findings in the case of the present inquiry would lend confirmation to the conclusion quoted above, but it does not follow that negative findings here would upset the findings of earlier studies since in general the Indianapolis Study deals with a more restricted universe.³ The restrictions placed upon the Indianapolis sample appear to be one reason why negative or inconclusive verdicts have resulted from many of the analyses of quite plausible hypotheses which have employed data from this sample. On the other hand, the Indianapolis data afford an opportunity for greater refinement in the testing of the relationship between family size in two successive generations. This is especially

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² Berent, Jerzy: The Relationship Between Family Sizes of Two Successive Generations. The Milbank Memorial Fund *Quarterly*, xxxi, No. 1, January, 1953.

³ For a full discussion of the Indianapolis sample, see Whelpton, P. K. and Kiser, Clyde V.: Social and Psychological Factors Affecting Fertility. IV. Developing the Schedules and Choosing the Type of Couples and the Area to be Studied. The Milbank Memorial Fund *Quarterly*, xxiii, No. 4, October, 1945, pp. 386-409. (Reprint pp. 139-162.)

so with respect to the handling of controls for contraceptive effectiveness, socio-economic status, age of wife at marriage, and duration of marriage.

In general, there are three ways in which the parental generation might influence the filial generation with respect to family size. One channel of influence—and one that may have been an important factor in earlier studies—has to do with *impulse control*. This term is meant to refer to a complex set of habit patterns resulting from early conditioning that predispose an individual to immediate impetuous action in response to insistent but deferable stimuli. Such action is not polar to rational action since alternatives may indeed be weighed. The distinction is rather that such action always discounts heavily the alternatives opposed to immediate gratification.⁴

A second channel of influence between two generations relates to the knowledge component of action. In simple terms, and with regard to reproductive behavior, similarity of family size between generations may be a function of similarity of knowledge and technique between them. This, like the first line of influence discussed, is a complex variable, for the influence of the parental generation may be effected through the types of information it transmits, through attitudes it instills toward the problem of fertility planning, and so on.

When we deal with planned families, as can be done with some success with the Indianapolis data, both of the above lines of parental influence are largely removed from consideration. The older generation then affects the family size of the younger generation, if it does so at all, by forming its notions about family size directly or by instilling preferences regarding the spacing of children, sex composition of the family, or other dimensions of the style of life that have a bearing on fertility.⁵

⁴ We are speaking here of a general quality of action which obviously need not be associated solely with the matter of reproduction.

⁵ There is no evidence among Indianapolis couples that the parental generation resorted greatly to direct pressure with regard to the size of their offsprings' families nor that those who did were successful. The lower deck of the following table suggests that most parents kept "hands off," this being somewhat more true of the

In the present study, consideration will be given to all three of these lines of influence with primary interest, however, in an attempt to evaluate the significance of the transmission of the elements of a style of life that have an effect on family size. This will be done by examining the relationship within a group of "efficient planners" that has demonstrated its contraceptive effectiveness by having planned family size.⁶ For compar-

father than of the mother. The table also suggests that the mother-daughter relationship is the most communicative and that husbands receive more encouragement or less discouragement than wives. However, the fact is that variation in encouragement reported by the children is not associated with large or systematic differences in fertility among the couples studied. Most interesting of all perhaps is the evidence that when the parent's attitude toward having a family is unknown to the son, his fertility is low. This was also examined among couples planning both the number and spacing of their children where it was found that if the mother's attitude was unknown to the son (25 couples) or if the father's attitude was unknown to the son (49 couples), the birth rates were 76 and 92 (births per 100 couples) compared with 106 for all couples in this planning category. Without trying to explain these facts fully, it does appear that the character of the communication between the generation rather than the overt opinions expressed by parents may be the crucial factor. For the data shown here, it appears that the dichotomy between known and unknown attitudes is the only meaningful classification that can be made of these data insofar as they affect fertility.

Births per 100 couples by extent of encouragement received from parents to "have a family of your own."

EXTENT OF ENCOURAGEMENT	PERSON ENCOURAGED AND BY WHOM			
	Husband by Mother	Husband by Father	Wife by Mother	Wife by Father
	BIRTHS PER 100 COUPLES			
Encouraged Very Much	223	227	194	213
Rather Encouraged	193	190	202	196
Neither Discouraged nor Encouraged	206	206	204	204
Rather Discouraged or Discouraged Very Much	210	249	203	207
Unknown	156	175	200	200
	NUMBER OF COUPLES			
Encouraged Very Much	116	74	89	62
Rather Encouraged	285	248	281	160
Neither Discouraged nor Encouraged	904	960	844	1,004
Rather Discouraged or Discouraged Very Much	87	37	202	72
Unknown	52	125	28	146

⁶ The couples considered here are those who had no pregnancies that were not (Continued on page 297)

son, a group of "inefficient planners,"⁷ as well as the total sample will be dealt with. Actually there are very few couples (around 2 per cent) in the Indianapolis sample who have not resorted to contraception of some type. There are, however, wide differences in contraceptive effectiveness which are reflected in variations in family size. Thus among the inefficient planners, low impulse control or inefficient technique may be important variables.⁸

PROPOSITION TO BE TESTED

The three principal conclusions to be reported on in this paper are the following:

1. There is a positive relationship between the size of one's family of origin and one's own family size (to be stated hence-

deliberately planned by stopping contraception in order to conceive and those whose last pregnancy was deliberately planned by stopping contraception in order to conceive but who had one or more pregnancies under other circumstances. In previous reports in the Indianapolis series, these groups have been referred to as "Number and Spacing Planned" and "Number Planned," respectively. Together they will be referred to here as "effective planners." The uninflated sample was employed in order to avoid complicating the interpretation of sampling error. (See Whelpton, P. K. and Kiser, Clyde V.: *Social and Psychological Factors Affecting Fertility. V. The Sampling Plan, Selection and the Representativeness of Couples in the Inflated Sample. The Milbank Memorial Fund Quarterly*, xxiv, No. 1, January 1946, pp. 49-93. Reprint: Vol. 2, pp. 163-207.)

⁷ This group is composed of couples classified as least successful in planning family size because one or more pregnancies occurred after the last that was wanted. In some cases, the unwanted pregnancy was wanted at the time it occurred. In previous reports this group has been classified as "Excess Fertility." Another group of couples, "Quasi-Planned" in earlier reports, who did not deliberately plan the last pregnancy, but who either wanted the last pregnancy or wanted another pregnancy, were omitted because of the large part that attitude and rationalization play in the definition. The "inefficient planners" like the "efficient planners" were drawn from the uninflated sample.

⁸ Among the inefficient planners no relationship was discovered between the size of the family of origin and the number of excess pregnancies even when the size of the family of origin of husband and wife was identical. One possible interpretation of this is to question at the start the necessity of studying the relationship of the family size of the two generations within this group since in an earlier report a positive relationship between the number of excess pregnancies and family size (of couple) was demonstrated. (Whelpton, P. K. and Kiser, Clyde V.: vi. *The Planning of Fertility, The Milbank Memorial Fund Quarterly*, xxv, No. 1, January 1947, pp. 63-111. Reprint Vol. II, pp. 209-257.) The explanation of this is obscure but may be related in part to the fact that nearly all couples in this group practice contraception with a low degree of efficiency which tends to put success in controlling family size on something approaching a chance basis. To the extent that success is random, the relationship between size of parental family and the families of the younger generation approaches randomness.

forth as the relationship between size of family of origin and *couple fertility*.

2. This relationship is found in connection with the size of both the husband's and wife's family of origin and is closer with respect to the wife's family.

3. The relationship is maintained within socio-economic status levels.

The first conclusion is, of course, the basic hypothesis under study. The second and third conclusions are included because they have been reported on positively in other studies.⁹ There are no obvious or compelling reasons for the second statement. It is being examined here purely as an empirical hypothesis. The third conclusion represents a refined testing of the primary hypothesis, as well as a finding reported by other investigations.

Collectively, the testing of the three propositions might be regarded as a testing of one facet of the Indianapolis Study hypothesis (number 12), which reads: "Family and childhood situations and attitudes affect the proportion of couples practicing contraception effectively and the size of the planned families."

SIZE OF FAMILY OF ORIGIN AND COUPLE FERTILITY

When the relationship between the size of the family of origin and couple fertility is examined among all couples (the total sample) it receives moderate support (see Table 1). The relationship is somewhat more apparent when the family of origin is defined in terms of sociological siblings (the children in the family, regardless of blood relationship, with whom the respondent grew up) rather than in terms of biological siblings (all children born to the biological parents of the respondent). This latter finding is consistent with the general theory underlying the present hypothesis but the low reliability of the differences between the two series does not permit great elaboration on this point.

A suggestion that the relationship might be curvilinear also

⁹ See especially Berent, *op. cit.*

appears in the data in Table 1. In no case do couples from the largest families themselves have the largest families. This question of the curvilinearity of the relationship, very weakly evident in the total sample, will be pursued more intensively in connection with the subsample of efficient planners.

The data in Table 1 are consistent with the contention that the relationship is closer with respect to the size of the *wife's* family of origin. A formal test of the significance of the difference between the two correlation coefficients—one with size of

Table 1. Births per 100 couples by number of biological and sociological siblings of husband and wife.

NUMBER OF SIBLINGS	BIOLOGICAL		SOCIOLOGICAL	
	Husband	Wife	Husband	Wife
	BIRTHS PER 100 COUPLES			
0	184	182	183	172
1	192	170	185	180
2	193	207	207	211
3	219	213	227	218
4	198	211	216	210
5	232	202	186	234
6	233	212	185	208
7	204	261	231	209
8	204	206	218 ^a	225 ^a
9	204	237		
10 or More	205	215		
ALL COUPLES	203	203		
	NUMBER OF COUPLES			
0	164	148	196	156
1	260	254	293	337
2	261	253	324	326
3	176	209	208	240
4	166	166	207	155
5	104	115	88	93
6	116	78	62	64
7	68	66	29	33
8	46	36	22 ^a	28 ^a
9	26	57		
10 or More	57	62		
ALL COUPLES	1,444	1,444		

^a 8, 9, and 10 or more siblings.

NUMBER OF SOCIOLOGICAL SIBLINGS	BIRTHS PER 100 COUPLES	NUMBER OF COUPLES
0	179	156
1	183	337
2	213	326
3	221	240
4	211	155
5	240	93
6	211	64
7	209	33
8 or More	225	28

Table 2. Births per 100 couples adjusted for pregnancies at time of interview by wife's number of sociological siblings.

the wife's family as the independent variable, one with the size of the husband's family as the independent variable—indicates, however, that the difference could easily be due to chance.¹⁰

Since we are not dealing with completed families, it is desirable to adjust the figures in Table 1 to make allowance for women who were pregnant at the time of the interview.¹¹ The results obtained if these pregnancies are counted as births are shown in Table 2 classified by the wife's number of siblings. Differences in fertility between the extremes are reduced slightly by a small increase in the average size of families in which the wife is an only child or has relatively few siblings. Fundamentally, however, the data resemble those in Table 1. With most wives in their mid-thirties, it seems likely that only minor changes in average family size will occur throughout the remainder of the reproductive life of these women. Any change in average family size that does occur will reduce even more the size of the fertility differential attributable to differences in size of family of origin if the distribution of pregnancies at the time of interview is taken as indicative of this trend.

Since the Indianapolis sample includes only women married

¹⁰ In making this test, advantage was taken of the fact that the two coefficients are computed from the same sample. The coefficients themselves reveal that less than one per cent of the variation in fertility is explained by variations in the size of the family of origin.

¹¹ There were forty-five women pregnant at the time of the interview.

NUMBER OF SIBLINGS	FERTILITY PLANNING STATUS				
	All Couples	Number and Spacing Planned	Number Planned	Quasi-Planned	Excess Fertility
	(1)	(2)	(3)	(4)	(5)
0	21.2	21.8	19.5	21.4	18.8
1	20.5	21.1	19.4	20.6	19.9
2	20.2	21.1	21.4	19.8	19.3
3	20.3	21.0	18.0	20.5	19.6
4	20.5	21.8	18.8	21.0	19.7
5	20.3	22.8	22.3	19.3	19.9
6	19.8	20.6	17.8	21.5	19.7
7	19.2	20.3	18.4	19.8	19.5
8 or More	19.7	22.8	18.5	20.4	19.4

Table 3. Median age of wife at marriage by wife's number of sociological siblings and by fertility planning status.

within a three-year period centering on 1928, duration of marriage is controlled for this sample. An additional restriction was imposed with respect to the age of the wife at marriage. Thus, the need for additional control over these sources of variation in fertility is virtually removed. This is shown further by the data in Table 3 in which the median age of the wife at marriage is shown classified jointly by the wife's number of siblings and by her fertility planning effectiveness.¹² Slight differences in the median age of the wife at marriage are observable for the total sample. Wives with the smallest families of origin were older when married than wives from larger families. Whether these differences will have a bearing on fertility subsequent to the time of interview is perhaps doubtful. As for completed fertility, these differences in age at marriage, with duration of marriage controlled, are probably less important in themselves than as an indication of socio-economic status differentials among various family of origin size groups. Within the various planning effectiveness groups, variation in the age of wife at marriage appears thus to be a negligible problem.

¹² Columns 2 and 3 are *efficient planners*; column 5, *inefficient planners* in this study.

Turning to the subsample composed of *efficient planners*, we find that here again the relationship between the size of the family of origin and couple fertility is a modest one and, in connection with the size of the husband's family of origin, negative. The linear correlation between couple fertility and size of wife's family of origin was .09 (correlation ratio = .11). The corresponding relationship with respect to the husband's family of origin is expressed by a correlation coefficient of $-.05$ (correlation ratio = .08). For both sets of coefficients the following null hypotheses were accepted:

$$\begin{aligned} p &= 0 \\ \eta^2 &= 0 \\ \eta^2 - p^2 &= 0 \end{aligned}$$

With none of the relationships showing a significant departure from 0, it becomes meaningless to make comparisons of the relative degree of influence of the wife's and husband's family of origin.

The curvilinearity of relationship observed among the couples of the total sample can be shown for the subsample by computing separate correlation coefficients for different ranges of the family of origin size continuum. Up to a point, couple fertility increases as the size of the family of origin increases although the degree of association is quite low. As larger families of origin are encountered the relationship becomes slightly negative, indicating that very large families of origin do not inspire the largest families in the second generation. These correlations between number of children ever born to couples

NUMBER OF SOCIOLOGICAL SIBLINGS	CORRELATION (r)	NUMBER OF CASES (n)
Wife:		
0-3	.15	251
4 or More	-.07	80
Husband:		
0-3	.06	249
4 or more	-.14	87

effectively planning family size and the number of sociological siblings of husband and wife are shown in the accompanying table. This reversal of relationship is not statistically significant¹³ but the finding has sufficient theoretical interest to warrant further investigation of it under other conditions, especially with a sample that provides more couples with large families of origin.

One reason for the low correlation encountered thus far appears to be the low correlation between the size of the family of origin of husband and wife ($r = .11$ for the total sample and $.09$ for the efficient planner subsample). A clearer relationship is evident among couples coming from families of the same size (*see* the rates in Table 4 that appear on the diagonal from upper left to lower right) with the suggestion of curvilinearity

Table 4. Births per 100 couples by number of sociological siblings of husband and wife (all planning groups).

WIFE'S NUMBER OF SOCIOLOGICAL SIBLINGS	HUSBAND'S NUMBER OF SIBLINGS				
	0	1 and 2	3 and 4	5-9	Total
	BIRTHS PER 100 COUPLES				
0	164	177	181	*	174
1 and 2	174	188	204	212	194
3 and 4	194	206	259	159	213
5-9	217	215	229	223	221
TOTAL	183	195	221	195	201
	NUMBER OF COUPLES				
0	28	77	36	15	156
1 and 2	94	282	198	82	656
3 and 4	46	172	115	59	392
5-9	24	81	65	44	214
TOTAL	192	612	414	200	1,418*

* Rates not computed when $n < 20$.

* There were 26 cases where either the husband or wife was reared in an institution or where the number of sociological siblings was unknown.

¹³ Analysis of variance tests indicate that there is better than a .05 chance that the departure from linear regression could result from sampling error. A cutting point between three and four siblings was employed in order to have an adequate number of couples in the large family subsample. The character of the results does not change if the cut is made between four and five or at higher orders.

again present.¹⁴ Measuring the relationship among these homogamous couples yields a correlation ratio of .21 which is positive and significantly different from zero. Similarly among sixty couples in the efficient planner subsample in which the size of husband's and wife's family of origin coincide, $r = .29$ with the probability that this is a chance correlation being less than .05.¹⁵ At best, then, we have succeeded in explaining less than 10 per cent of the variation in couple fertility by considering the size of their families of origin and this was achieved for only a small part of the original sample.

Among the subsample of inefficient planners the degree of relationship between couple fertility and size of family of origin is negligible. Considering only the forty couples in which husband and wife come from families of identical size, the correlation was raised to .16. As might be expected, no evidence of curvilinearity was found since this would imply the ability to limit family size on the part of those inefficient planners with large family backgrounds.

THE ROLE OF SOCIO-ECONOMIC STATUS IN THE RELATIONSHIP BETWEEN SIZE OF FAMILY OF ORIGIN AND COUPLE FERTILITY

It is possible that the very modest relationships encountered thus far might be further reduced through the application of a control for differences in socio-economic status among couples originating in families of varying size. On the other hand, the effect of variation in socio-economic status in the uncontrolled situation might be to obscure the relationship. The objective of this section of the report is thus to discover the role of socio-economic status in connection with the present hypothesis.¹⁶

¹⁴ The relationship is positive and *linear* so long as either member of the couple has fewer than three or four siblings.

¹⁵ Although the null hypothesis is rejected at the .05 level, the extreme instability of the relationship when couples are included in which the size of husband's and wife's family of origin differs by only one ($r = -.04$) strongly suggests that we should have accepted the null hypothesis in this case.

¹⁶ For the total sample the relationship between couple fertility and socio-economic status is inverse. Couples having large families have a low socio-economic position which in turn is associated with large families of origin. Thus, the effect of

NUMBER OF BIOLOGICAL SIBLINGS	INDEX OF SOCIO-ECONOMIC STATUS					
	(High)	0-19	20-29	30-39	40-49	50+ (Low)
	BIRTHS PER 100 COUPLES					
0	179	166	176	169	} 251 ^a	
1	157	125	191	178		
2	168	163	178	214	} 316	
3	185	150	181	198	} 341	
4	200	188	164	208	} 350	
5	164 ^a	156	193	219	} 230	
6-7		169 ^b	168	212	} 362	
8 or More			212	178	} 306	
	NUMBER OF COUPLES					
0	33	29	41	26	} 37 ^a	
1	68	52	57	59		
2	47	38	60	64	} 44	
3	33	38	31	66	} 41	
4	21	33	42	48	} 22	
5	22 ^a	27	27	31	} 23	
6-7		26 ^b	31	58	} 37	
8 or More			34	51	} 47	
TOTAL	224	243	323	403	} 251	

Table 5. Births per 100 couples by wife's number of biological siblings and index of socio-economic status.

^a 5 or more siblings.
^b 6 or more siblings.
^c 0 and 1.

The measure of socio-economic status is based upon the husband's occupation, his annual earnings since marriage, rental, net worth, purchase price of car, education of husband and wife, and the Chapin Social Status Scale.¹⁷

the control for socio-economic should be to reduce the relationship observed between couple fertility and size of family of origin in the total sample. Among the subsample of efficient planners the relationship between couple fertility and socio-economic status is complex. For the first four socio-economic status groups constructed for this study, the relationship is positive but couples in the lowest status group have the largest families. The effect produced by controlling socio-economic status in this case is difficult to foresee although an explanation of the curvilinearity of relationship might be forthcoming. Among the inefficient subsample, couple fertility and socio-economic status are inversely related and thus it is unlikely that the role of socio-economic status has been to suppress the relationship.

¹⁷ For a full description of this index, see Whelpton, P. K. and Kiser, C. V.: Fertility Planning and Fertility Rates by Socio-Economic Status, The Milbank Memorial Fund *Quarterly*, xxvii, No. 2, April 1949, pp. 188-244 (Reprint, Vol. II, pp. 359-415).

NUMBER OF BIOLOGICAL SIBLINGS	INDEX OF SOCIO-ECONOMIC STATUS					(Low)
	(High)	0-19	20-29	30-39	40-49	
	BIRTHS PER 100 COUPLES					
0		149	200	177	166	} 302 ^b
1		177	132	200	190	
2		186	169	168	182	
3		204	129	173	243	
4		139	186	161	221	
5		174 ^a	146 ^a	197 ^a	192	419
6-7					215	311
8 or More					176	308
	NUMBER OF COUPLES					
0		47	28	35	38	} 52 ^b
1		52	56	57	59	
2		44	59	56	67	
3		24	28	44	46	
4		23	22	41	42	
5		34 ^a	50 ^a	90 ^a	49	21
6-7					61	46
8 or More					41	25
TOTAL		224	243	323	403	251

Table 6. Births per 100 couples by husband's number of biological siblings and index of socio-economic status.

^a 5 or more siblings.

^b 0 and 1.

As far as the total sample is concerned (Tables 5 and 6), the evidence is extremely weak that the relationship between couple fertility and size of family of origin is independent of socio-economic status. Comparing the end groups in each of the socio-economic groups in Tables 5 and 6 reveals that eight out of ten comparisons are consistent with the hypothesis of a positive relationship. However, the differences are generally small, cell frequencies are often low, and marked irregularities are to be noted. Even the over-all differences between end groups cannot be accepted as statistically reliable.¹⁸

¹⁸ This conclusion is based upon the Sign Test and is looked upon as a minimum test of relationship. The probability tables consulted are given in Dixon, W. J. and Mood, A. M.: The Statistical Sign Test. *Journal of the American Statistical Association*, 41, No. 236, December 1946.

CONTROLS	THREE OR FEWER BIOLOGICAL SIBLINGS		FOUR OR MORE BIOLOGICAL SIBLINGS	
	Correlation Coefficients with Regard to Siblings of:		Correlation Coefficients with Regard to Siblings of:	
	Wife	Husband	Wife	Husband
No Control	.15	.06	-.07	-.14
Socio-Economic Status	.15	.08	-.07	-.14
Feelings of Economic Security	.16	.06	-.07	-.14
Socio-Economic Status and Feelings of Economic Security	.14	.04	-.06	-.14

Table 7. Partial correlation analysis¹ of the relationship between number of children ever born to couples effectively planning family size and the number of biological siblings of husband and wife.

¹ Square root transformation employed.

In analyzing the role of socio-economic status on the relationship among the efficient planner subsample, we have again treated the upper end of the family of origin size continuum separately. The reason for proceeding in this fashion is not only to check upon the influence of the socio-economic status variable¹⁹ but to determine whether the reversal (from positive to negative) previously noted in the direction of relationship might be a function of socio-economic status and thus fail to appear when this control is applied. The results of this analysis are shown in Table 7. It appears from this that neither the modest relationships already noted between the size of families in successive generations nor the reversal of direction taken by the relationship among couples from large families are due

¹⁹ Since, among the efficient subsample, feelings of economic security show a closer relationship to couple fertility than does socio-economic status, the former variable is also employed as a control. Feelings of economic security are indicated by answers to a series of questions dealing with one's confidence in the fiscal future, employment and so on. For a full description of this measure, see Kiser, Clyde V. and Whelpton, P. K.: xi. The Interrelation of Fertility, Fertility Planning, and Feeling of Economic Security, The Milbank Memorial Fund *Quarterly*, xxix, No. 1, January 1951 (Reprint, Vol. III, pp. 467-548).

CONTROLS	CORRELATION COEFFICIENTS WITH REGARD TO BIOLOGICAL SIBLINGS OF:	
	Wife	Husband
No Control	.08	.09
Socio-Economic Status	-.02	.05
Feelings of Economic Security of Husband and Wife	.07	.09

Table 8. Partial correlation analysis¹ of the relationship between number of children ever born to couples inefficiently planning family size and the number of biological siblings of husband and wife.

¹ Square root transformation employed

to selection in terms of socio-economic status or feelings of economic security. By far the most important fact continues to be the very low and unreliable relationship, with or without controls.

A similar type of analysis among the inefficient planners suggests that the slight relationship (couple fertility to size of family of origin) previously observed within this group is partially dependent upon socio-economic status. The results are shown in Table 8.

SUMMARY OF THE RELATIONSHIP BETWEEN SIZE OF FAMILY OF ORIGIN AND COUPLE FERTILITY

Among the Indianapolis couples the relationship between the fertility of the older and younger generation is negligible except perhaps in the case of couples originating from families of identical size. Even in the latter instance, however, less than 10 per cent of the variation in the fertility of the younger generation is attributable to the size of the family of origin. Except among the efficient planners, what relationship there is appears to be partially dependent upon differences in socio-economic status. Thus we have in the case of the present relationship, a hypothesis of low predictive value so far as the Indianapolis data are concerned.

The data in some respects are consistent with the hypothesis that the wife's family of origin exerts a stronger influence on a

couple's fertility than the husband's family of origin, but the influence in both cases is so minor as to make the comparison fairly meaningless.

Interesting evidence that the relationship may be curvilinear was encountered although the reliability of the data in this connection could not be established. This nonlinearity, which is most pronounced when the relationship is examined among the efficient planners, could not be explained as a function of socio-economic status.

The low relationship that was found between the size of family in the older and younger generations, especially in connection with the inefficient planner subsample, may have a variety of explanations, none of which can be definitively isolated here. It could be, for example, that the range of the *preferred* family size was rather wide in the parental generation in which case exposure to a large family of origin and inefficient planning would not necessarily occur together. This would tend to attenuate the relationship. Or again, since we have no knowledge of the extent to which variations in family size in the parental generation were the result of fairly random factors such as sterility and chance success in avoiding pregnancies, it is conceivable that among moderately large to large parental families one might encounter, speaking figuratively, a rectangular distribution of the factors making for inefficient planning. If this were true, a low relationship among the inefficient subsample would not be surprising since around one-half of these couples come from families with four or more children. It is possible also that the unsystematic contraceptive efforts on the part of the inefficient planners of the younger generation inject a certain degree of randomness into the relationship between contraceptive discipline and family size. All of which is to say that our information about the degree of impulse control and contraceptive technique in both generations is inferential and based on family size. To the extent that family size is a poor index of these variables—and except among the efficient planners we have assumed it to be a good one—the

expected relationships based on the transmission of inefficient contraceptive habits will not materialize.

THE INFLUENCE OF OTHER FACTORS ON THE RELATIONSHIP

It has previously been shown that when both the husband and wife come from families of identical size, the expected relationship is more clearly evident. An effort was made to discover and neutralize other variables that might be suppressing the relationship. This required a certain methodological innovation for, as we now know, the low correlation coefficients encountered were due in part to the relatively large contributions to the standard error of estimate made by couples from the largest families. Thus to employ as a control any variable which selects against large families of origin would automatically increase the correlation, due to this fact alone. To overcome this defect, the regression of *difference* in family size between the two generations on size of parental family was computed. From the estimating equation the expected *difference* in family size between the two generations could be estimated for any family of origin size. For any subgroup, then, an expected *difference* of this type could be obtained (from the given average size of the families of origin) and compared with the observed differences for that subgroup. Observed differences must be less than the expected differences in order to corroborate a particular hypothesis.

A number of variables were tested in this way, but the *observed* and *expected* differences between family size in the older and younger generations varied very little from each other. The variables considered included residence background, regional origin, marital status of parents, survivorship of parents, age differences between parents and children, relative economic conditions of the two generations, childhood happiness, and frequency of contact with relatives. In each case, there were constructed certain subgroups of couples who either were believed to resemble the parental generation more closely in terms of their present characteristics than the entire sample

or else were believed to have been exposed to conditions favorable to the intergenerational transmission of attitudes and habits. Thus, the conclusion remains unchanged that, for the present sample at least, the relationship between the size of families in two related generations is very modest.

CONCLUSION

There is little more that can be said with respect to the findings of this study except to comment briefly on the more positive results reported in other studies. It would certainly be unwarranted to conclude that the relationship in question is negligible under all conditions. Where a greater range in the fertility of both the older and younger generations is found, the influence of the parental generation on the succeeding one might be more evident. Related to this is the likelihood that if couples even less efficient at contraception than those in our inefficient planner subsample were included, a greater continuity of family size pattern would be apparent. Finally, the couples taken into the Indianapolis Study were chosen in such a way as to maximize differences between the two generations: for example, many were of rural background but no strictly rural couples were sampled; many had parents with less than eight years of education, yet no couples with so little education were admitted to the sample, and so on. It is also true that the greater part of the reproductive lives of the Indianapolis couples coincided with an economic period (1927–1940) when cues received from the older generation could not be acted upon.

But, while there are definite reasons for expecting the hypothesis to have more limited significance among Indianapolis couples than it has had elsewhere, this does not diminish the importance of the conclusion that for a group such as the one studied here, the parental generation exercises very slight influence on the size of their children's families.