

AN EMPIRICAL STUDY OF THE RELATIONSHIPS OF CATHOLIC PRACTICE AND OCCUPATIONAL MOBILITY TO FERTILITY*

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I. REVIEW OF THE LITERATURE

EMPIRICAL research in differential fertility as in other areas operates with two general types of independent variables: hypotheses variables and control variables. Interest is focused on the relationship of the hypothesis variable and the dependent variable, but a careful testing of the hypothesis demands that the influence of other relevant factors, the control variables, be eliminated or held constant. These variables have their origin in deductive theory and/or in empirical fact. Deductive theory usually contributes more heavily to hypotheses variables; empirical generalizations to control variables. Accordingly, this section presents a brief review of some of the literature on differential fertility as a source of control variables. Four topics are considered: the Catholic-non-Catholic fertility differential within the United States, the declining importance of this differential, fertility differentials within the Catholic population, and finally, fertility differentials within the general American population.

The Catholic-non-Catholic Differential. In an early correlational analysis of the relationship of religion and fertility, Hornell Hart concluded from a study in Iowa that the "tendency for married Catholics to have more children than married non-Catholics is offset by the fact that Catholics in Iowa

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tend to marry later than non-Catholics.” (Hart, pp. 37–39). Mulvaney, using national census materials of 1930, showed that Catholicity, as measured by the percentage of an area Catholic, yielded insignificant correlations with the birth rate when disturbing factors were partialled out (Mulvaney, 1941 and 1933).

During the same pre-depression period others were studying the religious differential using college students as respondents. Holmes showed that within his limited sample Catholic families averaged 4.44 children, Protestant families 3.48 and mixed marriages 3.10. Part of this difference seemed accounted for by a greater proportion of foreign-born whites among the Catholic group (Holmes). Thompson also found that Catholic families with children in college had a higher fertility rate than Protestants, but at least part of this difference may have been due to the lower socio-economic status of the Catholics in the sample (Thompson, 1925).

During the middle 1930's, Notestein summarized the results of studies of fertility of selected samples of the native white population of eight cities which showed that “class for class, the Catholics are more fertile than the Protestants.” Both groups exhibit an “inverse association between fertility and occupational status, although the association is stronger among Protestants than among Catholics” (Notestein, 1936, p. 33).

The Changing Importance of the Catholic-non-Catholic Differential. Many early studies throughout the north central states have stressed the religious differential. Stouffer, analyzing the confinement rates of 40,766 urban wives in Wisconsin between the years 1919 and 1933, found that the Catholic fertility rate generally surpassed that of the non-Catholic couples. Then, after finding that the Catholic fertility rates declined more rapidly during the period of the study than the non-Catholic rates, Stouffer showed that the birth rate had declined faster in cities with large proportions of Catholics. Thus he concluded that “the Catholic fertility has been dropping faster, both relatively and absolutely, than the non-Catholic fertility

in Northern and Western cities of the United States" (Stouffer, 1936, p. 166).

Robinson, studying selected census tracts in Chicago, lent support to Stouffer's conclusion when he found that the rapid decline in the birth rate among those of Polish and Italian descent held for both the native whites and the foreign-born whites, and that this decline among the native whites was more rapid from 1920 to 1930 than was the decline for the native white population of the United States as a whole. He concluded that "When the major portion of immigrant women pass beyond the child-bearing age, one factor in the Catholic birth rate decline will cease to operate" (Robinson, p. 757).

Another study of the relationship of national and religious differentials in fertility trends during the period 1875 to 1940 among farm families in five areas of Minnesota, indicated that the fertility of German Catholics was high, but declining more rapidly than that of Anglo-American Protestants (Marshall, also see Glick, Slocum, Rockwell Smith). A Maine study of college students showed a high Catholic birth rate, but also revealed that from the parent to the student generation, Hebrew fertility declined 45 per cent, Catholic fertility 32 per cent, and Protestant fertility 23 per cent (Lamson).

Studies in the latter part of the 1930's noted that evidence concerning the religious differential "is limited to a few sample studies" (Whelpton). Jaffe in a study of net reproduction rates concluded that "the influence of the Catholic religion upon birth rate is rather negligible in comparison to other factors such as age, urban-rural districts, economic status" (Jaffe). Another study of 107 families in rural Wisconsin revealed that the average number of children for Catholic families was 7.7 and for the Lutheran families 5.3, and that economic status, nationality, and religion were factors in the fertility of these Wisconsin farmers; however, the latter two factors apparently were of less importance than formerly (Hill). But more recently Kirk concluded from an analysis of Census and Catholic Directory figures that "the Catholic birth rate since the second

World War has reached a high and sustained level, with quite as large a differential in crude birth rate now as was recorded in the early 1920's" (Kirk, pp. 96-97). Mulvaney, in an analysis of studies pertaining to the Catholic-non-Catholic differential, observed that the longer the couples are married the greater is the difference between the fertility rates for the two groups (Mulvaney, 1946).

In the 1941 Indianapolis Household Survey of 41,498 native-white couples it was found that "Catholic couples are 18 per cent more fertile on the average than Protestant unions. Mixed Protestant-Catholic marriages on the other hand are 10 per cent less fertile than Protestant unions." The survey also found that "the rate standardized for age at marriage as well as age is 30 per cent higher for the Catholic than for the Protestant unions" (Whelpton and Kiser, pp. 50, 15).

Fertility Differentials within the Catholic Population. The Indianapolis Household Survey also suggests that "the traditional inverse relation of fertility to socio-economic status is found for both Protestant and Catholic marriages. This is true in the analysis of fertility by rental value of the dwelling unit, rent paid by the couple, and educational attainment of the husband and wife." However, "actual reversals of the fertility-rental relationship at high rental-value levels are found among Catholic renters, albeit the instances are based upon small samples" (Whelpton and Kiser, pp. 51, 26).

Coogan's study of Catholic differential fertility in Florida during 1944 was restricted to 4,891 native-white married couples. The analysis stressed the comparison of the fertility of Catholic marriages and mixed marriages. The study found that when the fertility rates were standardized for wife's age, the both-Catholic couples were 16 per cent more fertile than the mixed couples. When the rates were standardized for both age and age at marriage, the rate for Catholic couples was 20 per cent higher than for the mixed couples. The Florida study also found a direct relationship between fertility and rent at the higher rental-value levels; this was more pronounced for

the Catholic marriages than for the mixed marriages. Home owners were found to be 25 per cent more fertile than renters for the Catholic group but only two per cent more fertile for the mixed-marriage group. For the Catholic group fertility and educational attainment of the husband and wife are related in the form of a "U" shaped curve, the fertility upswing beginning after the 4th year of high school; for the mixed couples however, there was a simple inverse relationship. Thus the high fertility in the upper rental brackets of Catholic couples seems related to the high proportion of college couples found at those levels (Coogan, pp. 5-80). The study comes to this general conclusion:

It seems that Catholic fertility is being influenced by the social and economic circumstances of modern family life. Catholic families follow the general downward trends in child-bearing. It does seem, though, that at present they are more fertile than those of mixed marriages. The fertility variations associated with rental value, place of birth and residence, are wider for Catholic than for mixed marriages (Coogan, p. 83).

Fertility Differentials within the General American Population. Both the Florida study and the Indianapolis Household Survey appear to indicate that the fertility differentials of importance in the non-Catholic population are also of some, though perhaps not of the same, importance in the Catholic population. These differentials would seem to be marital status, duration of marriage and age at marriage; race, nativity and national descent; size of community of residence and farm-non-farm residence; socio-economic status; formal education; and region of residence (Landis and Hatt, pp. 225-261; T. Lynn Smith, pp. 208-221; United Nations, pp. 85-90; Thompson, 1942, pp. 165-186; Whelpton and Kiser). After discussing the research design, the manner in which these controls were exercised in the present study will be explained.

II. THE RESEARCH DESIGN

This paper describes a fertility study of a sample of Catholic

couples. The two main hypotheses of the study are that fertility is directly related to Catholic practice and that fertility is related to occupational mobility. The population of the study, the sample design, the amount and types of non-response to the questionnaires and the interviews, the various subpopulations excluded from the study, and finally some indications of the accuracy of the replies are discussed in this section.

The Population of the Study. The population of this study comprises native-white couples, both Catholic, with one or more children in the first grade in Catholic private or parochial schools located in the Northeastern section of the United States, i.e., Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey (excluding the dioceses¹ of Newark and Trenton), Pennsylvania (excluding the diocese of Philadelphia²), Delaware, Washington, D. C., and that part of Maryland included in the diocese of Washington, and the easternmost Ohio dioceses of Cleveland and Youngstown.³ The population of the study is further limited through selection from returned questionnaires, to couples married only once and married during the years 1937–1948 inclusive, who were living together during the period of the study and who had never been apart for a period of five years or more, and to couples in which the husband had a non-farm occupation during 1940–1955.

The limitation to couples with one or more children in the first grade in a Catholic school was determined by the sample

¹ A diocese is an administrative unit of the Catholic Church, an area which comes under the jurisdiction of a bishop. Dioceses are usually subdivisions of states. There were 126 dioceses in the United States as of January 1, 1955.

² The dioceses of Newark, Trenton, and Philadelphia were excluded because permission to administer the study in these dioceses was not granted. These dioceses comprise the following counties: Newark: Hudson, Bergen, Essex, and Union in New Jersey; Trenton: Burlington, Hunterdon, Mercer, Middlesex, Monmouth, Ocean, Somerset, and Warren in New Jersey; Philadelphia: Philadelphia, Berks, Bucks, Carbon, Chester, Delaware, Lehigh, Montgomery, Northampton, and Schuylkill in Pennsylvania.

³ The dioceses named comprise the following political units: Washington: The District of Columbia and Montgomery, Prince Georges, St. Mary's, Calvert, and Charles counties in Maryland; Cleveland: Ashland, Cuyahoga, Geauga, Lake, Lorain, Medina, Summit, and Wayne counties in Ohio; Youngstown: Ashtabula, Columbiana, Mahoning, Portage, Stark, and Trumbull counties in Ohio.

design. All other limitations, e.g., to native whites, were determined by the same general reasoning as that followed in the Indianapolis Study:

Many studies had shown that native-white, foreign-born white, and Negro women differ with respect to fertility. Since this initial study could not . . . secure an adequate sample of each group, it seemed desirable to concentrate on the largest group, the native white (Whelpton and Kiser, p. 153).

It should be noted that childless couples are completely excluded from the present study; and furthermore, that families with children have a probability of being included in the study roughly proportional to their size, since the more children a couple has the greater is the probability of having a child in the first grade. These are peculiarities of the study population (not only of the sample), and although they make the data less comparable with data from other populations lacking these peculiarities, they in no way affect the validity of the study. This is true because all that is claimed for the study is that the sample adequately represents the population, that statements which are true of the sample are probably true also of the population.

The Sample Design. Data were collected by means of questionnaires⁴ and interview follow-ups of a sample of non-respondents. The questionnaires were distributed by first grade teachers in Catholic elementary schools for the first grader to take home. The mother was requested in the letter on the front of the questionnaire to complete the questionnaire, put it back into the envelope provided, seal it and give it to her little boy or girl to return to school. The teachers then mailed the questionnaires back to the authors together with the names and addresses of those not returning the questionnaires.

The sample for the study was secured by sampling the parishes with Catholic elementary schools in the area of the study, i.e., the sample was a cluster sample—the clusters being the parishes in which the schools were located.

⁴ See Appendix.

The problem presented by the cluster sample was to determine how many schools to use and how many pupils to take from each school. It was decided to include all the first graders in each school. An alternative to taking every first grader would be to have taken every Nth one. The teacher could have been requested to give a questionnaire to every other student on her roster, or to every third one, but it was feared that in some cases the temptation to give the questionnaires to the children of the more cooperative parents or to higher class parents would be too strong to be resisted.

As for the number of schools, it was decided to include enough schools to yield a total of 5,000 respondents when the foreign-born, the non-whites, those married more than once or not at all, the separated, the widowed and the divorced were eliminated and when allowance was made for non-response.⁵ In order to determine how many schools to include from each diocese to total 5,000 respondents, it was necessary to know just which dioceses were to be included in the study. As a means of helping to decide the area of the study, letters had been sent to sixty diocesan superintendents of schools in the New England, Middle Atlantic, and North Central States requesting permission to administer a questionnaire study in their dioceses in the manner just described. On the basis of preliminary returns from the superintendents of schools and because of economic considerations, it was decided to limit the area of study to the New England and Middle Atlantic States, Delaware, Maryland, and the District of Columbia. At the time of the drawing of the sample, permission for the study was still in doubt in several dioceses despite long-distance

⁵ Initially it was not planned to limit the study to both Catholic couples married since 1937. Calculation of needed sample size is a simple task when the problem is simple (*cf.* Hagood and Price, pp. 279-284), but in this case the investigators were unable to set up a formula to ascertain the required size. The number 5,000 was determined partly by economic considerations, i.e., the investigators' cost estimates indicated that about 5,000 responses could probably be served and processed with the funds which had been made available; and partly by the assumption that 5,000 respondents would be a sufficiently large sample to establish with a high degree of probability whether or not the relationships that were being investigated existed in the population from which the sample was drawn.

telephone conversations with the superintendents of schools concerned; therefore, some allowance was made in the calculations for the possible drop out of these doubtful dioceses.

The number of students in Catholic schools in the New England and Middle Atlantic States, Delaware, Maryland and the District of Columbia, according to THE OFFICIAL CATHOLIC DIRECTORY (Kenedy, insert following p. 1108), was 1,345,432. According to figures published by the National Catholic Welfare Conference, Department of Education (National Catholic Welfare Conference, p. 33), approximately 14.3 per cent of these students were first graders, making an estimated total of 192,397 first graders in the area of study. Further calculation showed that a sample of 3.7 per cent would yield a total of approximately 5,000 respondents when allowance was made for the drop out of some doubtful dioceses, for exclusions, and non-response.

The dioceses in doubt contained 344,826 elementary school children or approximately 49,310 first graders; one-third of this figure or 16,437 was allowed to cover possible dropouts of dioceses, leaving a total of 175,960 first graders in the probable area of study ($192,397 - 16,437 = 175,960$). Taking 3.7 per cent of 175,960 makes an estimated 6,511 persons to receive questionnaires. It was further estimated that 73 per cent of these 6,511 would return usable questionnaires; 10 per cent was allowed for refusals by parents,⁶ 5 per cent for refusals by pastors, and 15 per cent for couples to be excluded. Allowance for overlap makes a total of 27 per cent non-response and exclusion. Seventy-three per cent of 6,511 is 4,753. It was planned that a 25 per cent sample of the non-returning parents and of the parents in the non-cooperating parishes would be taken for interviewing. Estimating non-response at 15 per cent makes a total of 977 non-respondents; 25 per cent of 977 gives a total of 244 parents for interviewing. Finally, adding 244 to

⁶ This figure was based in part on returns from the pretesting described in the following section, *infra*. pp. 232-233.

4,753 brings the total to 4,997 estimated usable questionnaires and interview schedules.

When it became clear that loss due to drop out of dioceses would be greater than one-third of the students in the doubtful dioceses, the two easternmost dioceses of Ohio were added to the area of study, and a 3.7 per cent sample of the schools from these dioceses was drawn in the manner described in the following paragraphs.

There were a total of 2,915 Catholic parochial elementary schools in the area of study, i.e., in the New England and Middle Atlantic States, Delaware, Maryland, and the District of Columbia, and 217 private elementary schools (Kenedy). A total of 108 parochial schools and eight private schools were therefore needed for the sample, 3.7 per cent of the total number of parochial and private schools.

The sample was stratified in three ways. First by diocese: from each diocese a number of schools was drawn proportional to the diocese's contribution to the total number of schools in the area of study. For example, there were 201 Catholic elementary schools in the diocese of Boston (Archdiocese of Boston Catholic School Directory, 1954-55, p. 6. For 16 of the dioceses, lists of Catholic elementary schools supplied by the diocesan superintendents of schools were used; for the other 18 the lists in Kenedy) or 6.9 per cent of the total elementary schools in the study area. Therefore, 6.9 per cent of the 116 schools was drawn from the Boston archdiocese, i.e., eight schools. Secondly, the sample was stratified by type of school, private and parochial, e.g., 92 per cent of the Catholic elementary schools in the archdiocese of Boston were parochial schools; therefore, seven of the eight schools drawn from the Boston archdiocese were parochial schools.

Thirdly, within each diocese, two strata were distinguished—the largest city of the diocese was one stratum, and the remaining area of the diocese the other. In the archdiocese of Boston 51 of the parochial schools were within the city of Boston and 151 in the surrounding area; therefore, the schools

within the City were numbered from one to 51 and the names of two schools were drawn using a table of random numbers (Dixon, pp. 290-294). In like manner the names of five parochial schools were drawn from the rest of the Boston archdiocese. The one private school was selected by numbering all the private schools both within and outside the city of Boston, and choosing one on a random basis.

These three controls for stratification were selected mainly because they were easy to apply: THE OFFICIAL CATHOLIC DIRECTORY and the diocesan school directories list separately parochial and private schools; they also list separately schools within the seat of the diocese and those outside. In only two cases was the seat of the diocese not also the largest city in the diocese.

The Pretest. The first preliminary questionnaires were distributed to students and married couples for criticisms and suggestions especially with regard to the wording of the questions. Copies of the final revisions of the two preliminary questionnaires were sent to five Catholic schools, where they were distributed to 347 first graders to take home for their mothers to fill out. Two hundred and ninety-three completed questionnaires were received—a return of 84.1 per cent.

The five parochial and private Catholic schools used for pretesting were in Wisconsin, Maryland, and the District of Columbia. An attempt was made to pick schools that were located in different ecological areas. The school in Wisconsin was in a town of 15,000 population, the two schools in Maryland had suburban locations, and those in the District of Columbia were in the center of an urbanized area. Both of the schools in the District of Columbia were located in blighted areas, but one was a private school and the other a parochial school. Thus it was felt that the pretest subjects would be somewhat representative of the various types of respondents to be contacted in the actual study.

Several minor changes were introduced as a result of the pretesting, both in the wording of questionnaire items and in the

instructions to the first grade teachers; however, the main function of the pretests in the five schools was to afford some assurance that questionnaires could be distributed and collected in the manner proposed, and that questions on Catholic practice would be answered frankly and consistently.

Returns from the Questionnaires and Interviews. Four dioceses which were designated for inclusion in the study were not included because permission to administer the study in these dioceses—Philadelphia, Newark, Trenton, and Baltimore—was refused. Dropping the 28 schools which had been selected from these four dioceses brought the total of schools included in the sample to 96; however, since 3 of these 28 schools were private schools, one additional private school was selected from the dioceses of the study in order to retain the proper proportion between private and parochial schools, bringing the final total of schools included in the study to 97.

It should be noted that no sampling was involved in the selection of the area of the study and that these four dioceses do not in any sense constitute non-response; the only consequence of the dropout of these dioceses was to change the area of the study which was originally proposed.

Non-Response. The schools in which permission to administer the study was refused do, however, constitute non-response since the random selection of these schools constituted the sample design for this study. There were a total of six schools out of the 97 schools in the sample in which either the pastor or the principal refused permission to make the study either by the questionnaire or by the interview approach. It was not possible to make any estimate concerning this 6.2 per cent non-response since both the questionnaire and the interview approach were refused, but perhaps it is not too bold to assume that the non-cooperating pastors and principals were distributed randomly.

One non-cooperating school was located in each of the following communities: New Bedford, Massachusetts; Cleveland, Ohio; Jackson Heights, Cheektowago, and Rochester, New

York; one other non-cooperating school was located in a small town in upstate New York. One of these non-cooperating schools was in a national parish, the other five were in territorial parishes. One parish was judged lower class, one upper class, and the other four middle class by the investigators on the basis of a brief personal inspection of the areas. The reasons given by the pastors or principals for refusing to allow the study were as follows: "I really am not interested in distributing your questionnaires. We have too much going on in the school as it is"; "Our Reverend Pastor does not approve of our sending the questionnaires to the homes of our children"; "Our pastor does *not* wish to participate." Replies to the request letters were not received from the other three parishes.

The following reasons were given for refusing the interview approach: One pastor was taking a parish census at the time and felt that our interviews would interfere with his work; another thought his parishioners would object; since so many people came to him selling everything from awnings to layettes, and asked for lists of names of parishioners, he had made it a standing rule to refuse all such requests; another refused to talk to the investigators when they telephoned for an appointment; another was angry because the questionnaires had been sent to the principal on the assumption that his failure to answer letters requesting his permission indicated his willingness to participate in the study; finally, one principal agreed both by letter and in an interview to distribute the questionnaires but simply had not yet done it when school closed for the summer.

One additional school in Connecticut refused permission for the questionnaire study, but permitted the data to be collected by interview. There were 79 first graders in this school; a 25 per cent sample of 19 names was selected for interviewing. One of these interviews was refused.

According to reports received from the first grade teachers, there was a total of 6,320 first graders in the cooperating schools. However, 49 of these first graders had a brother or

sister in the same grade; thus, the 6,320 first graders represented only 6,271 eligible families.

Due to a mixup in a school with several sections of first

Table 1. Non-response of schools and families selected for inclusion in the sample.

TYPES OF NON-RESPONSE	NUMBER OF NON-RESPONDENTS
Schools	6
Families, Total	904
Undistributed	66
Absentees	265
Blanks	210
Non>Returns, No Names	161
Incomplete	202

graders, one class of 66 pupils did not receive questionnaires. Also a total of 265 students were absent during the time that the questionnaires were distributed in the various schools and their mothers, therefore, did not receive the questionnaires. There was then

a total of 5,940 questionnaires distributed.

Of the total 5,940 questionnaires distributed 210 or 3.5 per cent were returned blank. An additional 528 questionnaires were not returned; however, the first grade teachers supplied the names and addresses of 367 of these non-respondents and a one sixth systematic sample of the 367 was taken for interviewing. This left 161 non-responding parents from whom no data could be obtained and in addition to these, 202 questionnaires were returned too incomplete to use.

Table 1 summarizes the above types of non-response. A total of 904 or 14.4 per cent of the 6,271 eligible families in the cooperating schools failed to submit sufficient data either by questionnaire or by interview sample. A total of 5,000 couples returned completed questionnaires and information regarding 367 additional couples was obtained from the sample interviews.

There is one further type of non-response to consider, the non-response of wives selected for interviewing. A total of only sixty names was drawn for interviewing from the 367 non-respondents whose names and addresses had been supplied by the teachers, rather than the expected sixty-one names, because part of the sampling was done in the field from separate

lists. Ten of these sixty interviews, or 16.7 per cent, were refused or too incomplete for use. As noted above, one of the 19 interviews in the Connecticut school was not completed.

Exclusions. It was the original intention of the investigators to limit the study to native-white couples who were married only once, living together at the time of filling out the questionnaire and who had never been apart for a period of five years or more. At the time of undertaking the correlation analysis it was decided to restrict the study further to both Catholic couples, to couples married since 1937, and to couples in which the husband had a non-farm occupation during the years for which occupation was recorded on the questionnaire.⁷

It would seem that the findings of the Florida study provide sufficient reason for not combining both Catholic and mixed couples in the analysis of Catholic fertility—not only because both Catholic and mixed couples differ with regard to fertility, but more so because the fertility differentials within each group seem to operate differently. Catholic wives in both Catholic marriages who had received Communion at least once in the previous four weeks had a fertility rate 10 per cent higher than non-communicants; but Catholic wives in the mixed marriages showed no differences between the two rates of Communicants and non-Communicants. Additional evidence concerning the operation of other fertility differentials within the Catholic and mixed groups is provided by the data on home ownership and rental value of home. “In the Catholic marriages, owners are 25 per cent more fertile than renters. In the mixed marriage group . . . owners are only 2 per cent more fertile than renters” (Coogan, p. 24). The Indianapolis study also indicated very little difference between the fertility rates for owners and renters among the mixed marriage group, whereas for the both Catholic couples the difference is quite noticeable (Whelpton and Kiser, p. 17). Rental value of owners homes among the Catholic couples of Florida had a “U” shaped relation with fertility whereas among the mixed marriage “the in-

⁷ See Appendix p. 4, q. 9.

verse ratio seems to carry through the highest rental level for owners." The "U" shaped relationship also exists for education and fertility for the both Catholic group, but it is an inverse relationship for the mixed marriage group (Coogan, pp. 28, 43 and 54).

The present analysis of Catholic fertility is further restricted to couples who have been married since 1937. Because of the apparently changing relationship of socio-economic status and fertility from an inverse to a direct relationship (see Kiser and Whelpton, pp. 393-414; Hagood, pp. 372-373; *Infra.* pp. 247-251), it seems advisable to restrict the study to fertility occurring within a relatively brief period of time.

Table 2 gives the number of questionnaires and interviews excluded for various reasons. The total of 1,934 questionnaires excluded is 38.7 per cent of the 5,000 completed questionnaires. The total of 32 interviews on non-responding parents is 64 per cent of the 50 completed interviews with parents. Such

Table 2. The number of questionnaires and interviews excluded for indicated reasons.

REASON	NUMBER OF QUESTIONNAIRES	INTERVIEWS OF PARENTS	INTERVIEWS IN CONNECTICUT SCHOOL
Foreign Born	578	8	3
Non-White	85	1	0
Separated	69	4	0
Child Living with Stepmother or Other Relative	9	0	0
Widowed	60	1	0
Divorced	35	0	0
Remarried	141	2	1
Unmarried	2	0	0
Apart Five Years or More	10	0	0
Not Having Children of Their Own	44	1	0
Both Non-Catholic	8	0	0
Mixed Marriage	512	7	5
Married Before 1937	321	5	2
Farm Occupation	60	3	0
TOTAL	1,934	32	11

a high rate of exclusions of interviews with parents suggests the possibility that a high proportion of the non-respondents would have been excluded had they responded.

Subtracting the excluded questionnaires from the total of completed questionnaires leaves 3,066 (5,000 - 1,934) returns for the study. Of 68 completed interviews 43 were excluded, making a total of 25 used in the study. The total of questionnaires and interview schedules used in the study then is 3,091.

However, when the data were punched on IBM cards, duplicates were made of the cards which contained information from interviews for this reason: the questionnaires each represented 27 couples in the study population since the sample was a 3.7 per cent sample; the interview schedules of parents who did not respond to the questionnaire each represented 162 couples in the study population, because only one-sixth of the parents who did not respond to the questionnaire were interviewed; in order to effect a proper weighting of the interview schedules in relation to the questionnaires, six IBM cards were punched for each schedule. Thus each of the duplicate cards represents 27 couples in the study population. In like manner four cards were punched for each of the seven completed schedules from the Connecticut school.

Table 3. Catholic practices according to this and other studies reporting on various types of religious behavior.

RELIGIOUS BEHAVIOR	THIS STUDY	FLORIDA STUDY ¹	URBAN PARISH ²
Invalid Marriage	7.1	22.6	—
Failure to Make Easter Duty			
Male	19.1	30.2	30.4
Female	12.2	21.8	20.6
Irregular Mass Attendance			
Male	25.1	22.4	31.7
Female	25.1	23.2	21.4

¹ The percentages presented here are based on the married couples in the age categories 20 to 59 and are adapted from Kelly, Tables 8 and 9, pp. 58 and 61.

² The percentages presented here are based on males and females (not just married couples) aged 20 to 59 and are adapted from Fichter, Table 10, p. 91.

There were then a total of 136 cards representing interviews. This makes a grand total of 3,202 cards used for the study or 3,202 couples in the "inflated sample."

The Validity of the Returns. Some indirect indications of the validity of the questionnaire returns can be obtained by examining the percentages of "unfavorable" replies to questions relating to Catholic practice, assuming that seemingly frank answers to these questions indicate equally valid answers to other less personal questions. Table 3 gives the percentages of respondents who were invalidly married⁸ and the percentages of husbands and of wives who had not made their Easter duty and who had been irregular in attendance at Sunday Mass in the Florida study, in Fichter's Urban Parish study, and in this study. The percentages of men and of women in this study who failed to make their Easter duty is about 10 per cent lower than the percentages found in the Florida and Urban Parish studies. However this is to be expected since all the couples in our study had at least one child in a Catholic school and since a positive correlation apparently exists between sending one's children to Catholic schools and making one's Easter duty and attending Sunday Mass regularly (Fichter, p. 171).

The percentages of respondents who were irregular in Sunday Mass attendance are about the same for the three studies, except that a somewhat higher percentage of males in Fichter's study were reportedly irregular in fulfilling this obligation. Other studies have also reported similar percentages of persons irregular in Mass attendance. Bullena found that 20 per cent of the Catholics in Madison, Wisconsin, did not attend church every Sunday (Bullena). Schnepf found that 80 per cent and McCaffrey found that 71 per cent of the Catholics in their study population attended Mass four times a month and had made their Easter duty (Schnepf, p. 28; McCaffrey, p. 120). The *Catholic Digest* survey found that 38 per cent of the Catholics surveyed did not attend Sunday Mass regularly; the

⁸ Invalid marriages are considered to be those entered into by two baptized Catholics or by a baptized Catholic and a non-Catholic without a Catholic priest as official witness. See the Code of Canon Law, Canons 1094, 1098 and 1099.

authors suggest, however, that this high figure may be due in part to the practice of offering Mass only once or twice a month in some rural areas (Anonymous). Finally, a recent intensive study of a Catholic parish in the Bronx found that 80 per cent of the non-dormant parishioners had made their Easter duty and were regular in Sunday Mass attendance (Schuyler, figure used with permission).

Table 3 indicates a substantial difference in the percentages of invalid marriages found in the Florida study and in the present one. About 23 per cent of the marriages in the Florida study originated as invalid marriages whereas only 7 per cent of the marriages in the present study so originated. The following considerations help to account for this difference: First, there were more mixed marriages in the Florida study—37 per cent as compared with only 12 per cent in the present study. This is important in that the Florida study also indicated that more than one-third of the mixed marriages were originally invalid (Kelly, p. 54). Second, several studies have indicated that many invalid marriages end in divorce or separation, and these marriages are excluded from our study population. Third, it would be expected that the sample for the present study would include fewer invalid marriages because a positive correlation probably exists between validity of marriage and sending children to Catholic schools (Thomas, pp. 159–169). Thomas presents data on mixed and invalid marriages for twelve suburban parishes—four better residential, three lower-middle and five “poor apartment”; the percentage of both-Catholic invalid marriages ranged from 4 to 16 per cent (Thomas, calculated from Table 11, p. 166). Donovan’s study of a suburban parish in a midwestern border state also reported on validity of marriage; 6.7 per cent of the marriages involving at least one Catholic were invalid (Donovan). This percentage, however, is for invalid marriages at the time of the study. The present study found about 3.6 per cent of the couples still invalidly married at the time of the distribution of the questionnaires.

One additional check on the accuracy of the returns is provided by the data on pre-marital pregnancy as judged by data on date of marriage and date of birth of first child. There were a total of 311 births occurring less than seven calendar months after marriage; this figure represents 7.1 per cent of all first births in the sample. An additional 159, or 3.6 per cent, of the respondents did not give the date of marriage and/or the date of birth of the first child. In his study of premarital pregnancy in Utah County, Utah, Christensen found that 10.9 per cent of the couples had their first child less than seven lunar months after the date of marriage. Another study by the same author in Tippecanoe County, Indiana revealed about 14.8 per cent of the couples studied had their first child within seven calendar months of the date of marriage (Christensen, estimated from Table 1; 11.6 per cent of the first order births occurred within seven lunar months). Studies made in Czechoslovakia and the Scandinavian countries found percentages of first births occurring within seven lunar months from the date of marriage ranging from 12.0 to 38.8 (Christensen, p. 54).

It is difficult to compare any of these previously mentioned studies with the present study since these studies are not restricted to Catholics. However, two studies which dealt with Catholic data reported results similar to those found in this sample. An analysis by Thomas of 130 Catholic wives confined to the obstetrical departments of two hospitals revealed that in approximately 10 per cent of the cases, the first born had been premaritally conceived (Thomas, p. 280). Pearl reported 728 premaritally conceived first-borns to Catholic wives out of 9,570 cases of marital and premarital pregnancies—7.6 per cent of the cases considered (Pearl, pp. 180–181).

From the foregoing discussion it may be concluded that since the responses to these rather delicate and highly personal questions in this study do not differ greatly from the response to similar questions asked of Catholics in other studies, when consideration is given to the different types of samples involved in each of the studies, there is an indirect indication that the

truthfulness of responses to the other less personal items is probably sufficiently high for use in the differential fertility analysis which will be considered in the following pages.

III.
FERTILITY
CONTROL
VARIABLES

Total number of children ever born per married couple is the definition of fertility used in this paper.⁹ All children born alive to the couple were counted; twins were

counted as two children, adopted children were not counted. Table 4 gives the distribution of couples by number of children ever born. It will be noted that approximately 60 per cent of the respondents had either two or three children.

Control over race, nativity, marital status, and religion is approximated in this study by limiting it to native-white Catholic couples married once, living together at time of study and never apart for a period of five years or more.¹⁰ Duration of marriage, coded as year of marriage, is roughly controlled in single years of duration.¹¹ Table 5 gives the number of respondents and the mean number of children ever born by each year of marriage. Additional control of duration is achieved by the nature of the sample, in that all the couples were married at least seven years at the time of answering the questionnaire and none was married more than 18 years. The correlation coefficient of duration of marriage and number of children ever born is +.287; the correlation ratio is .297.

Table 4. Distribution of couples by number of children ever born.[‡]

NUMBER OF CHILDREN EVER BORN	NUMBER OF RESPONDENTS	PERCENTAGE OF TOTAL
1	303	9.5
2	984	30.7
3	929	29.0
4	563	17.6
5	238	7.4
6	114	3.6
7	37	1.2
8	19	0.6
9	8	0.2
10	4	0.1
11	3	0.1
TOTAL	3,202	100.0

⁹ See questions 14, 15 and 20 of the questionnaire, Appendix p. 2.

¹⁰ See Appendix pp. 2-3, qq. 2, 4, 5, 20 and 23, and p. 4, qq. 2, 4, 5.

¹¹ See Appendix p. 3, q. 20.

Wife's age at marriage was coded by subtracting date of birth from date of marriage to the nearest year.¹² But the age at marriage categories used for correlation analysis were as

Table 5. Number of couples and mean number of children ever born by year of marriage.

YEAR OF MARRIAGE	NUMBER OF RESPONDENTS	MEAN NUMBER OF CHILDREN EVER BORN
1948	166	2.70
1947	744	2.54
1946	580	2.80
1945	292	3.12
1944	201	3.04
1943	248	3.20
1942	264	3.27
1941	241	3.49
1940	168	3.55
1939	110	3.97
1938	93	3.90
1937	95	3.80
TOTAL	3,202	3.04

follows: 12-17, 18-19, 20-21, 22-23, 24-25, 26-27, 28-29, 30-33, and 34 and over; in some cases the last two categories were combined into one—"30 and over" category. Table 6 gives the number of respondents and mean number of children by wife's age at marriage. One weakness of the control on age at marriage in this study comes from the large number of respondents (558) not giving wife's date of birth, and hence not included in the calculation of the correlation of age at marriage and fertility. This lack of information was probably due in large part to the extremely poor placement of the date of birth question on the questionnaire. Except for the two extreme

Table 6. Number of respondents and mean number of children ever born by age of wife at marriage.

WIFE'S AGE AT MARRIAGE	NUMBER OF RESPONDENTS	MEAN NUMBER OF CHILDREN EVER BORN
15-17	74	3.36
18-19	388	3.09
20-21	657	3.01
22-23	628	3.09
24-25	395	2.98
26-27	236	3.14
28-29	129	3.07
30 and Over	137	2.52
Not Given	558	3.08
TOTAL	3,202	3.04

age at marriage categories, "15-17" and "30 and over," Table 6 shows little relationship between age at marriage and

¹² See Appendix pp. 2 and 3, qq. 3 and 20.

number of children ever born. The correlation coefficient of wife's age at marriage and number of children ever born is $-.053$, the correlation ratio is $.100$.¹³

Size of community of residence and farm-non-farm residence¹⁴ is controlled by the eleven categories listed in Table 7. The population of the community in which the couples lived at the time of responding to the questionnaire was used (United States Bureau of the Census). It was thought that place of residence of the husband or the

Table 7. Number of respondents and mean number of children ever born by size of couple's place of residence in 1955.

COMMUNITY SIZE	NUMBER OF RESPONDENTS	MEAN NUMBER OF CHILDREN EVER BORN
Rural Farm	31	4.45
Under 1,000	178	3.43
1,000-2,499	84	2.68
2,500-9,999	287	3.02
10,000-24,999	427	3.23
25,000-49,999	220	3.28
50,000-99,999	400	3.20
100,000-249,999	267	3.09
250,000-499,999	114	2.89
500,000-999,999	493	3.16
1,000,000 and Over	701	2.58
TOTAL	3,202	3.04

wife during adolescence might be a better control and the correlation of number of children and size of wife's place of residence in 1935 as well as the correlation of number of children and size of the urbanized area¹⁵ in which the wife lived in 1935 were calculated with this thought in mind. However the correlations are lower, $-.109$ and $-.048$ respectively, than the correlation of number of children and couple's place of residence in 1955 which is $-.137$. Therefore the latter control was used. The correlation ratio for this relationship is $.213$. Table 7 gives the number of respondents and mean number of children by size of couple's place of residence in 1955. The data

¹³ Studies which have included childless couples have observed a strong increase in childlessness with increase in age at marriage; cf. Whelpton and Kiser, p. 71, fig. 1.

¹⁴ See Appendix p. 3, q. 24.

¹⁵ An urbanized area is an area consisting of "one or more cities of 50,000 or more and all the nearby closely settled suburban territory, or urban fringe" (United States Bureau of the Census, p. vii). Of course, size of the urbanized area was coded only for those wives who lived in an urbanized area (about 74 per cent of the cases), for the others size of the community was coded.

NATIONAL DESCENT OF HUSBAND	NUMBER OF RESPONDENTS	MEAN NUMBER OF CHILDREN EVER BORN
English	59	3.25
Irish	817	3.35
German	236	3.19
Mixed	838	3.20
French	109	3.00
Polish	327	2.80
Italian	622	2.42
French Canadian	167	3.30
Puerto Rican	27	2.48
TOTAL	3,202	3.04

Table 8. Number of respondents and mean number of children ever born by husband's national descent.

show, in general, an indirect relationship with the exception of community sizes 1,000 to 9,999 and 500,000 to 999,999. These exceptions probably account for much of the discrepancy between the correlation coefficient and the correlation ratio.

For husband's national descent¹⁶ as an index of social status, nationalities were ranked in the following order: English, Irish, German, French, Polish, Italian, French Canadian, and Puerto Rican. Those husbands for whom more than one nationality was listed were ranked between the German and the French above the middle position, since it was felt that the relative lack of national identification implied would indicate higher social status.¹⁷ Also included in the mixed categories are those for whom only one nationality was indicated but a nationality not separately ranked, e.g., Swiss. Table 8 gives the number of respondents and mean number of children ever born by husband's national descent. The data indicate a somewhat direct

¹⁶ See Appendix p. 4, q. 1.

¹⁷ Some of the literature on preference ranking of ethnic groups is reviewed in Hartley and Hartley, pp. 690-694 and Freedman, et.al., pp. 542-544; but this ranking which took into account the section of the country and the all-Catholic character of the population, was largely subjective. The authors realize that correlation is not ordinarily used with nationality. However, there does seem to be a quantitative aspect of nationality, namely, social status, for which correlation is probably justified; analogously occupations are qualitatively different, but there are quantitative aspects such as status and income that are often correlated with other variables (*cf.* Hagood and Price, pp. 68-69).

Table 9. Number of respondents and mean number of children ever born by husband's 1955 occupation.

STATUS SCORE	OCCUPATIONAL CATEGORIES ¹	NUMBER OF RESPONDENTS	MEAN NUMBER OF CHILDREN
8	High Government Positions such as U.S. Senators, Diplomats, Cabinet Officers, State Governors; Doctors, Dentists, and Lawyers in Private Practice and Other Free Professionals	62	3.68
7	Salaried Professionals (Except Social Workers and School Teachers); Large Business Owners (100 Employees or More), General Managers (100 Employees or More), Bankers; Officers in the Armed Forces, Airplane Pilots, Sea Captains; Median High Governmental Positions such as State Senators, U.S. Representatives, Heads of Departments in State Governments, and County Judges	241	3.21
6	Semi-Professionals; Social Workers and Teachers; Medium Business Owners (6-99 Employees); National Officials of Unions and Other Organizations, Department Heads in Business and State Government, Buyers and Purchasing Agents, Credit Men, and General Foremen	325	3.25
5	Small Business Owners (under 6 Employees), Minor Officials such as Railroad Conductors, Local Union Officials, Floor Managers, Foremen (Unspecified), Minor or Assistant Supervisors, Manager (Unspecified); Major Clerical such as Bookkeepers, Stenographers, Secretaries, Mail Carriers, Bank Tellers, Telegraph Operators, Ticket, Station and Express Agents, Attendants of Physicians and Dentists, Staff Sergeants; Major Sales such as Insurance Agents, Traveling Salesmen, Advertising Agents, Real Estate Agents and Brokers, Stock and Bond Salesmen, Automobile Salesmen, Routemen, Merchants, Furniture Salesmen; Minor Government Positions	797	3.03
4	Skilled Labor, Skilled Inspectors, Protective Service (Except Night Watchmen), Armed Forces Personnel Below Grade of Staff Sergeant	1,062	2.99
3	Minor Clerical such as File Clerk, Typist, Baggage-men, Cashiers, Bill Collectors; and Minor Sales such as Sales Clerks, Auctioneers, Demonstrators, Hucksters and Peddlers	69	2.70
2	Major Personal Service such as Barbers, Beauticians, Boarding and Lodging Housekeepers, Cooks, Hospital Attendants, Restaurant Operators; Semi-Skilled Labor	445	2.92
1	Minor Personal Service such as Bartenders, Counter and Fountain Workers, Waiters and Waitresses, Ushers, Recreation and Amusement Attendants, Chauffeurs; Building Service and Porters; Night Watchmen; Unskilled Labor; and Domestic Service	201	3.03

¹ For sources of this code see *Infra.*, p. 247.

relationship between ethnic status and number of children except for the French Canadians. The correlation coefficient of husband's ethnic status and number of children ever born is $+ .190$, the correlation ratio is $.244$.

Socio-economic status is controlled in this study by a Guttman scale (Stouffer, 1950, pp. 60-90; Guttman; Jahoda, Deutsch and Cook, Vol. II, pp. 681-711; Riley, Riley and Toby, pp. 269-417) which combines data on husband's 1955 occupational status, value of the couple's automobile, rental value of the couple's home, and husband's and wife's education.¹⁸ Table 9 gives the categories used for coding husband's occupational status, the number of respondents and mean number of children for each category. The correlation coefficient of occupational status and number of children is $+ .072$. These occupational status categories are based primarily on the following three classification systems: the status scores assigned to various occupations by the North-Hatt study (Bendix and Lipset, pp. 411-427), the occupational categories devised from those status scores by Freedman, *et. al.* (Freedman, *et. al.*, p. 207), and the occupational classification of the DICTIONARY OF OCCUPATIONAL TITLES (United States Employment Service). According to the last, one can assign a status score to occupations classified as professional, semi-professional, skilled, semi-skilled, unskilled, or protective, domestic, or building service. For occupations that the DICTIONARY classifies managerial, official, clerical, sales, or personal service the coder must judge whether these occupations were major or minor, (e.g., whether an occupation classified by the DICTIONARY as clerical was major clerical or minor clerical) by comparison with examples of each provided by the code.

Value of the couple's automobile was determined by reference to the N.A.D.A. Official Used Car Guide, April, 1955, issue for District A, comprising the New England states, part of New Jersey and New York states (including New York City)

¹⁸ See Appendix p. 4, qq. 7, 8, 9, 11 and 12, p. 3, qq. 26, 27 and 28 and p. 2, qq. 9 and 10.

AUTOMOBILE VALUE	NUMBER OF RESPONDENTS	MEAN NUMBER OF CHILDREN	HOME VALUE OR RENT		NUMBER OF RESPONDENTS	MEAN NUMBER OF CHILDREN
			Value Owned Homes	Rental Rented Homes		
No Car or Not Given	570	3.02	Not Given	Not Given	80	2.89
Under \$300	525	3.22	Under \$1,200	Under \$10	8	2.62
\$300-\$499	438	3.02	\$1,200-\$2,300	\$10-\$19	46	3.39
\$500-\$699	347	3.00	\$2,400-\$3,500	\$20-\$29	210	2.96
\$700-\$899	294	2.91	\$3,600-\$4,700	\$30-\$39	303	3.00
\$900-\$1,099	196	2.99	\$4,800-\$7,100	\$40-\$59	575	2.88
\$1,100-\$1,299	237	3.14	\$7,200-\$9,500	\$60-\$79	693	2.88
\$1,300-\$1,499	99	2.90	\$9,600-\$11,900	\$80-\$99	392	3.11
\$1,500-\$1,699	184	3.01	\$12,000-\$17,900	\$100-\$149	689	3.15
\$1,700-\$1,999	81	2.94	\$18,000-\$35,000	\$150-\$200	185	3.61
\$2,000-\$2,999	211	2.95	Over \$35,000	Over \$200	21	4.10
\$3,000 and Over	20	4.05				
TOTAL	3,202	3.04	TOTAL		3,202	3.04

EDUCATION	NUMBER OF WIVES RESPONDING	MEAN NUMBER OF CHILDREN	NUMBER OF HUSBANDS RESPONDING	MEAN NUMBER OF CHILDREN
Not Given	7	3.29	10	2.60
No School	0	—	1	2.00
Grades 1-4	7	2.71	16	2.50
Grades 5-7	80	2.96	137	3.36
Completed Grade School	297	3.02	396	2.88
High School 1-3	792	2.77	902	2.89
Completed High School	1,106	3.03	586	2.98
Non-College Past High School	576	3.17	459	3.02
College, 1 Year	103	3.31	128	3.17
College, 2 or 3 Years	93	3.29	185	3.25
Completed College	95	3.99	158	3.22
Past College	46	3.51	224	3.65
TOTAL	3,202	3.04	3,202	3.04

Table 10. Number of respondents and mean number of children ever born by automobile value, home value or rent, wife's education and husband's education.

(N.A.D.A.). Table 10 gives the categories used for coding automobile value, home value, and husband's and wife's edu-

NUMBER OF RESPONDENTS	CUTTING POINTS				
	Husband Skilled Worker	Wife Completed High School	Home Value \$9,600 or Rent \$80	Husband, Non-College, Past High School	Automobile Value \$1,300
156	—	X	—	—	—
14	—	X	—	—	X
2	—	X	—	X	X
20	—	X	—	X	—
14	—	X	X	—	X
51	—	X	X	—	—
1	—	X	X	X	X
11	—	X	X	X	—
23	—	—	—	—	X
289	—	—	—	—	—
3	—	—	—	X	X
16	—	—	—	X	—
9	—	—	X	—	X
35	—	—	X	—	—
2	—	—	X	X	—
63	X	—	—	—	X
428	X	—	—	—	—
12	X	—	—	X	X
89	X	—	—	X	—
23	X	—	X	—	X
126	X	—	X	—	—
18	X	—	X	X	X
47	X	—	X	X	—
74	X	X	—	—	X
398	X	X	—	—	—
59	X	X	—	X	X
269	X	X	—	X	—
88	X	X	X	—	X
257	X	X	X	—	—
413	X	X	X	—	—
192	X	X	X	X	X
3,202					

Table 11. Socio-economic status: original response patterns.

cation and the number of respondents and mean number of children for each category. The correlation coefficients of these status indices and number of children are as follows: automobile value, $-.017$, home value, $+.090$, husband's education, $+.115$, and wife's education, $+.134$.

The five cutting points used in the socio-economic status

CUTTING POINTS ¹	SCALE POSITION	NUMBER OF RESPONDENTS	MEAN NUMBER OF CHILDREN EVER BORN
Husband Skilled Worker	1	289	2.88
Wife Completed High School	2	626	2.88
Home Value \$9,600 or Rent \$80	3	905	2.95
Husband Non-College, Past High School	4	689	3.04
Automobile Value \$1,300	5	501	3.40
	6	192	3.56
TOTAL		3,202	3.04

¹ These five cutting points determine six scale positions, just as five knife strokes cut a sausage into six pieces.

Table 12. Number of respondents and mean number of children ever born by socio-economic status.

scale are husband skilled worker (status score),¹⁹ wife completed high school, home value \$9,600 or rent \$80, husband non-college past high school and automobile value \$1,300. Table 11 presents the original response patterns for these five cutting points.

The original response patterns were subjected to Image analysis which resulted in a perfect scale—all Image response patterns were perfect scale types.²⁰ Table 12, which gives the mean number of children ever born by socio-economic status, shows a generally direct relationship between the variables. The correlation coefficient of socio-economic status and number of children is +.122; the correlation ratio is .134.

Region of residence of wife in 1935 was coded²¹ but because 82 per cent of the wives in this study lived in the New England and Middle Atlantic states, regions thought to be generally

¹⁹ See Table 9 for the definition of this status score.

²⁰ Image analysis is a general method for determining ideal types for qualitative data. An image response expresses what the item has in common with all the other items in the scale. "The image of each item is determined separately by prediction from all the remaining items" (Riley, Riley and Toby, p. 412).

²¹ See Appendix p. 3, q. 24.

similar in regard to fertility, no control by region of residence was exercised.

The next two variables to be considered are occupational mobility and Catholic practice; these are included in this chapter as control variables because each is used as a control variable when the other is being considered as an hypothesis variable, i.e., occupational mobility is one of the variables partialled out in calculating the partial correlation of Catholic practice and fertility and vice versa.

Occupational mobility is measured from 1940²² to 1955 for those married between the years 1937 and 1942, and from 1947 to 1955 for those married between the years 1943 and 1948. In other words mobility is measured from a year shortly following or preceding marriage to the time of answering the questionnaire. The status scores of Table 9 are used for determining the amount of mobility, e.g., a man who was married in 1947 and had a skilled occupation at that time who had become a small business owner in 1955 would be coded as having moved up one status position. Table 19 gives the number of respondents and mean number of children ever born by husband's occupational mobility. The table shows a direct relationship between occupational mobility and number of children. The correlation coefficient of occupational mobility and number of children ever born is +.049; the correlation ratio is .052. It seems likely that the positive correlation of mobility and fertility is related to the positive correlation found in the present study between socio-economic status and fertility (*Infra.*, p. 253). Occupational mobility will be discussed at greater length when it is considered as an hypothesis variable.

Catholic practice is measured by a Guttman scale that combines data on husband's and wife's Easter duty fulfillment,²³

²² The 1942 occupation was used in place of the 1940 occupation in 86 cases in which the 1940 occupation was not given. See Appendix p. 4, qq. 7, 8 and 9.

²³ Church law, Canon 859, requires all Catholics who have attained the use of reason to receive Communion during the Easter time (in the United States from the First Sunday in Lent to Trinity Sunday). The questionnaire, however, merely asks: "Have you received Communion at least once in the past year?" It is as-

their Mass attendance and their Communion reception in the four weeks preceding their responding to the questionnaire.²⁴ This scale is explained in the later section in which Catholic practice is considered as an hypothesis variable. Table 17 gives the number of respondents and mean number of children ever born by the couple's Catholic practice. Scale positions three through six, which contain approximately 80 per cent of the respondents, exhibit an almost linear relationship between the couple's Catholic practice and number of children; scale position two is considerably out of line with the general direct relationship between the two variables. The correlation coefficient of the couple's Catholic practice and number of children ever born is +.151; the correlation ratio is .187.

Table 13. Raw correlation coefficients and correlation ratios of the control variables and fertility.

VARIABLE	r	n
Duration of Marriage	+.287	.297
Age at Marriage	-.053	.100
Community Size	-.137	.213
National Descent	+.190	.244
Socio-Economic Status	+.122	.134
Occupational Mobility	+.049	.052
Couple's Catholic Practice	+.151	.187

approximately 80 per cent of the respondents, exhibit an almost linear relationship between the couple's Catholic practice and number of children; scale position two is considerably out of line with the general direct relationship between the two variables. The correlation coefficient of the couple's Catholic practice and number of children ever born is +.151; the correlation ratio is .187.

Table 13 gives the raw correlations of the several control variables with number of children; both correlation coefficients and correlation ratios are presented. Examination of this table reveals some lack of linearity in the relationships of the control variables and fertility. The departure from linearity was judged insufficient, however, to invalidate the use of partial correlation to hold these factors constant in investigating the existence of the hypothesis' relationships; the use of correlations as high as those of the correlation ratios, of the control variable and fertility, probably would not substantially change the partial correlations of occupational mobility and fertility, and couple's Catholic practice and fertility.

All of the correlations in Table 13 are quite low. To some extent low correlations must be expected when working with a

summed that the person who received Communion only once did so during the Easter time.

²⁴ See Appendix p. 3, qq. 17, 18 and 19 and p. 4, qq. 14, 15 and 16.

population as homogeneous as the present one; with a more heterogeneous population some correlations would have been higher, e.g., if both married and unmarried couples were included in the study population the correlation of marital status and fertility probably would have been a high one. In this regard it should be noted that part of the explainable variation in fertility may have been lost to this study by the non-inclusion of childless couples. However, these low correlations seem generally in line with previous research findings. The Indianapolis study, for example, was unable to account for more than 12 per cent of the fertility variance of completely planned families by multiple combinations of various factors (Whelpton and Kiser, p. 966). Previous studies have also shown weaker correlations of fertility differentials among Catholics than among non-Catholics (Notestein, 1936, p. 33; Whelpton and Kiser, p. 51). These weaker correlations may result from the greater part played by chance as opposed to effective planning in Catholic than in non-Catholic fertility. It is interesting to note the relatively high correlation of fertility with nationality, a variable generally thought to be of declining importance.

Table 14 presents the complete matrix of the raw inter-correlations of the control variables. Multiple R is .384, i.e., the multiple correlation of all the variables explains approximately 15 per cent of the variation in number of children. A multiple R as low as this means either that one or more impor-

Table 14. Matrix of the raw correlations of the control variables and number of children ever born.

VARIABLE	DURATION OF MARRIAGE	AGE AT MARRIAGE	COMMUNITY SIZE	NATIONAL DESCENT	SOCIO-ECONOMIC STATUS	OCCUPATIONAL MOBILITY	CATHOLIC PRACTICE
Number of Children	.287 ^a	-.053	-.137	.190	.122	.049	.151
Duration of Marriage		.029	.012	.017	-.003	.073	.124
Age at Marriage			.084	.085	.101	-.022	.177
Community Size				-.063	-.105	-.067	-.106
National Descent					.238	.019	.197
Socio-Economic Status						.165	.288
Occupational Mobility							.066

^a All correlations are positive except those marked negative. Correlations of .036 are significant at the .05 level, correlations of .047 at the .01 level, correlations of .058 at the .001 level, and correlations of .071 at the .0001 level.

tant determinants of fertility have not been included in the study, or that fertility is largely indeterminate at the social science level of explanation.

The partial correlation of couple's Catholic practice and fertility and occupational mobility and fertility are considered in the following sections.

IV. CATHOLIC PRACTICE AND FERTILITY

The main theoretical rationale for the hypothesis that fertility is directly related to Catholicity or degree of faithfulness in religious observances of Catholics is that of greater identification with a group that defines direct induced abortion, artificial contraception, and use of rhythm without sufficient reason as evil (Pope Pius XII, pp. 5-16), and faith in Divine Providence as good (cf. Whelpton and Kiser, pp. 418-422). Catholics who are more faithful in the practice of their faith are assumed to be relatively less given to the use of induced abortion, contraception, and/or rhythm (for an explanation of Catholic teaching on responsible parenthood see Gibbons and also Lorimer, pp. 193-198). That the latter factors influence fertility greatly is shown by a number of studies which have indicated that "class differences in fertility can be accounted for almost entirely by class differences in prevalence and effectiveness of contraceptive practice" (Kiser, 1953-54, p. 497).

Although Catholic-non-Catholic fertility differentials were declining at an earlier period (Stouffer, 1935 and Jaffe), it seems that they are increasing at the present time (Kirk, pp. 96-97). Differentials between Catholics and non-Catholics have been found to be greater at the higher socio-economic levels (Notestein, 1936, p. 33; Whelpton and Kiser, pp. 23-43; Mulvaney, 1946) and greater in urban than in rural areas (Smith and Hitt, pp. 153-157). More effective use of contraception has also been found to be positively associated with socio-economic status (Whelpton and Kiser, pp. 885-951) and probably is positively associated with urban residence as well. In other words, Catholic-non-Catholic fertility differentials are

probably greatest among those groups in which contraceptive practice is most effective.

Data from the Florida study suggest an hypothesis to account for the greater Catholic-non-Catholic differentials at the upper than at the lower socio-economic levels. The Florida study found a direct relationship between faithfulness in religious observances and socio-economic status (Kelly, p. 19). If we assume that a direct relationship also exists between Catholicity and fertility we may have an explanation of the greater Catholic-non-Catholic differentials at the upper socio-economic levels. In other words with improved status it seems that Protestants are more likely than Catholics to practice contraception, and this differential may be related to the differences in Catholic and Protestant teachings on the point, and to a direct relation between Catholic practice and fertility.

Empirical Data Concerning the Relationship of Catholic Practice and Fertility. Data concerning the relationship of Catholic practice and fertility from the Florida study are rather inconclusive. "Total fertility rates of those [wives] who made their Easter duty are only 3 per cent higher than of those who did not." Wives who are "regular Mass attendants are only 3 per cent higher in fertility than those who attend irregularly and those who never attend. . . . In the total sample, [wives who are] communicants have a fertility rate 8 per cent higher than non-communicants. In the Catholic marriages the rate is 10 per cent higher. But in the mixed marriages there is no difference between the two rates. . . . When standardized for age of wives, the fertility rate is 185 for valid marriages and only 152 for invalid marriages. . . . For Catholic couples the fertility of the valid marriages was 22 per cent higher than for the invalid marriages. In mixed marriages the difference between the two was 15 per cent" (Coogan, pp. 19-22). Since 4,891 cases are involved, the valid-invalid marriage differential is no doubt significant; probably the 10 per cent difference by Communion reception is significant and conceivably the 3 per

cent differentials by Easter duty and Mass attendance are also significant, but because statistical tests of significance are not presented, it is rather difficult to evaluate these findings.

The second source of evidence suggesting a positive relationship between Catholic practice and fertility lies in the studies of vocation families. It has been found that faithfulness in religious observances is positively associated with the appearance of religious vocations in the family. These studies of the vocation family also have shown that the average number of children in the vocation family is much higher than in the non-vocation family and in the general population, even when allowance is made for the fact that no vocations originate in childless families and that the chance of a vocation occurring in a family with children is proportional to the number of children in the family. Most of these studies show the vocation family to be composed of an average of from five to eight children. A study directed and edited by Thomas J. Harte, C.Ss.R., during the summer of 1951 showed that the mean number of children for the vocation family having a member attending the Catholic University of America was 6.2. The non-vocation family mean number of children was 4.0 (Harte). Foley, in his interview study of vocation and non-vocation families in a parish in Baltimore, concludes that the Catholic family has been following national trends of declining size of family up to very recent times although the vocation family is declining more slowly than the non-vocation family (Foley, p. 24).²⁵

The Measurement of Catholic Practice. Degree of Catholic practice is defined and measured in this study by husband's and wife's external religious observances: Easter duty, Sunday Mass attendance, daily Mass attendance and Communion reception more often than required by the Easter duty regulation.²⁶ The responses to the questions concerning husband's

²⁵ Apparently there is little relationship between fertility and degree of religious interest among Protestants, cf. Whelpton and Kiser, pp. 447-455. However, Lenski, analyzing the same data, found more couples with children than childless couples reported "much" interest in religion (Lenski).

²⁶ Appendix p. 3, qq. 17, 18 and 19 and p. 4, qq. 14, 15 and 16.

and wife's religious observances were combined into a seven position Guttman scale.

Criticism is frequently leveled at the use of external religious observances as a measure of Catholicity. The criticism does not usually pertain to the obligatory practices of Easter duty and Sunday Mass attendance since their deliberate omission constitutes mortal sin, rather it is maintained that the devotional practices, in particular monthly and weekly Communion

Table 15. Couple Catholic practice scale: original response patterns.

NUMBER OF RESPONDENTS	CUTTING POINTS					
	Husband Mass Twice Wife Easter Duty	Husband and Wife Mass Three Times	Husband Easter Duty, Wife Mass Four Times	Husband and Wife Communion Once	Wife Mass Five Times, Communion Twice	Husband Mass Five Times, Communion Twice
255	—	—	—	—	—	—
3	—	—	X	—	—	—
1	—	—	—	—	—	X
516	X	—	—	—	—	—
23	X	—	—	X	—	—
7	X	—	—	—	—	X
6	X	—	—	—	X	—
3	X	—	—	X	—	X
324	X	X	—	—	—	—
10	X	X	—	—	X	—
4	—	X	—	—	—	—
3	X	X	—	—	—	X
832	X	X	X	—	—	—
66	X	—	X	—	—	—
61	X	X	X	—	X	—
29	X	X	X	—	—	X
11	X	—	X	—	X	—
2	—	X	X	—	—	—
573	X	X	X	X	—	—
102	X	X	X	X	—	X
32	X	X	—	X	—	—
13	X	—	X	X	—	—
2	X	X	—	X	—	X
148	X	X	X	X	X	—
3	X	—	X	X	X	—
173	X	X	X	X	X	X
3,202						

Table 16. Couple Catholic practice scale: image responses.

SCALE POSITION	NUMBER OF RESPONDENTS	CUTTING POINTS					
		Husband Mass Twice Wife Easter Duty	Husband and Wife Mass Three Times	Husband Easter Duty, Wife Mass Four Times	Husband and Wife Communion Once	Wife Mass Five Times, Communion Twice	Husband Mass Five Times, Communion Twice
1	255	-	-	-	-	-	-
2	533	+	-	-	-	-	-
3	429	+	+	-	-	-	-
4	896	+	+	+	-	-	-
4	3	+	-	+	-	-	-
5	663	+	+	+	+	-	-
6	250	+	+	+	+	+	-
7	173	+	+	+	+	+	+
	3,202						

reception, provide poor indications of internal Catholicity. This objection seems to be based either on a confusion of sacrament and sacramental involving a denial of the efficacy of divine grace (Aquinas, III, q. 62, a. 1), or on a confusion of objective and subjective morality, since it is seldom argued that weekly communicants' actions are subjectively in error. The scalability of the Catholic practice items, of course, is no demonstration of their adequacy in measuring internal Catholicity, but it is assurance that the external items are ordered in rank (Stouffer, p. 78), and it is after all Catholic *practice* with which we are concerned.

The following contrived items were used as cutting points for the couple Catholic practice scale:

1. Husband attended Mass twice in the preceding four weeks or wife fulfilled her Easter duty.
2. Husband and wife both attended Mass three times in the preceding four weeks.
3. Husband fulfilled his Easter duty and wife attended Mass four times in the preceding four weeks.
4. Husband and wife both received Communion once in the preceding four weeks.
5. Wife attended Mass five times in the preceding four weeks and received Communion twice.
6. Husband attended Mass five times in the preceding four weeks and received Communion twice.

Table 15 gives the original response patterns²⁷ and Table 16 gives the Image response patterns (Riley, Riley and Toby, pp. 412-417); the Image responses constitute a virtually perfect scale.

A Typology of Catholic Couples. Since all but three of the couples fall into one of the ideal-type response patterns, the Catholic practice scale constitutes in effect a typology of Catholic couples. This scale apparently represents the first typology of Catholic couples in the literature, although typologies of in-

²⁷ In determining the original response patterns a positive response to one part of the contrived items and a non-response to the other part was counted as a positive response, a negative response and a non-response as a negative response.

dividual Catholics have been previously presented. Professor Le Bras classifies Catholics as *conformisme*, *saisonnier*, *observants*, and *dévots* on the basis of three varieties of religious acts — those relating to initiation into the Church (such as Baptism and Confirmation), observance of compulsory practices (such as Sunday Mass attendance and fulfillment of Easter duty), and spontaneous devotions (such as daily Mass attendance and Communion reception more often than required by the Easter duty regulation) (Le Bras, pp. 44-55).

Father Fichter types parishioners as nuclear, modal, marginal, and dormant. A nuclear Catholic is one who makes his Easter duty, attends Sunday Mass regularly, receives Communion every Sunday and belongs to a parish organization. Modal parishioners make their Easter duty, attend Sunday Mass regularly and send their children to Catholic schools; marginal Catholics fail to fulfill one or more of the requirements of a modal Catholic. A dormant Catholic is "a person who was validly baptized, does not practice the Catholic religion, has not joined a non-Catholic denomination, and belongs to a household in which the other members are either non-Catholics or dormant Catholics" (Fichter, pp. 24-70).

The Raw Correlation of Catholic Practice and Fertility. Table 17 gives, besides the number of respondents, the mean number of children ever born by Catholic practice scale scores. With certain exceptions, Table 17 shows a generally direct relationship between the two variables. The coefficient of correlation of Catholic practice and fertility is +.151; the correlation

Table 17. Number of respondents and mean number of children ever born by couple's Catholic practice.

COUPLE CATHOLIC PRACTICE SCALE POSITION	NUMBER OF RESPONDENTS	MEAN NUMBER OF CHILDREN EVER BORN
1	255	2.70
2	533	3.01
3	429	2.67
4	899	2.96
5	663	3.24
6	250	3.57
7	173	3.49
TOTAL	3,202	3.04

ratio is .187. There are 3,091 couples in the uninflated sample. (One hundred and eleven cards represent a sample inflation resulting from duplication of interview schedules).²⁸ If it is assumed that each of the 3,091 couples included in the sample is an independent observation and that the Catholic practice scale is an equal interval scale, then the correlation coefficient of +.151 is significant at about the 5×10^{-17} level.²⁹

The Partial Correlation of Catholic Practice and Fertility. In calculating the partial correlation of Catholic practice and fertility, six factors were controlled: duration of marriage, wife's age at marriage, couple's socio-economic status, size of couple's community of residence, husband's ethnic status, and husband's occupational mobility. The definitions of these variables, the manner in which they were measured, the matrix of the raw correlations, and the rationale for the use of these six is explained above.³⁰ When these six factors are simultaneously controlled,³¹ the resulting partial correlation is +.071. The level of significance of a partial correlation may be calculated by the formula

$$t = \frac{r}{\sqrt{1-r^2}} \sqrt{n-m-2}$$

According to this formula the partial correlation of Catholic practice and number of children is significant at a level greater than .001.³²

Summary. Although it is very probable that in the population of this study fertility and Catholic practice (as here defined) are positively related, the found relationship is not an important one; for the couples included in the population of the study, Catholic practice probably explains only about one-half of one per cent of that fertility variation left unexplained by

²⁸ *Supra.*, pp. 238-239.

²⁹ $\frac{Z}{\sigma_n} = Z\sqrt{N} - 1 = .152 \times 55.6 = 8.45.$

³⁰ *Supra.*, pp. 242-254; multiple R is .384.

³¹ By matrix inversion on the Burroughs E101 electronic computer.

³² $t = \frac{.071}{.9951} \times 55.5 = 3.92.$

the control variables: duration of marriage, wife's age at marriage, couple's socio-economic status, size of couple's community of residence, husband's ethnic status, and husband's occupational mobility.

Three considerations help to bring this finding into proper perspective. First, childless couples are not included in the study population, but Catholic practice may be a more important factor in distinguishing couples with children from those without than in distinguishing among couples with various number of children. Apparently this would be true of the Protestant couples included in the Indianapolis study. Lenski found that "half again as many of the couples with children reported 'much' interest in religion as compared with the childless couples" (Lenski, p. 536).

Another fact to be viewed with our result that Catholic practice in the study sample is significantly but unimportantly related to fertility is that, with a few exceptions, such as Mulvaney's correlational analysis of the Catholic composition of a population and its birth rate (which obtained a multiple R as high as .90 with United States data), studies of differential fertility have been remarkably unsuccessful in explaining why some married couples have more children than others, save only that they have shown fertility to be closely related to effective fertility planning (Whelpton and Kiser, pp. 1087-1137).

Of course, a third observation is that our method, at some point, may be inadequate in its use to reflect a Catholic practice fertility differential.

V. OCCUPATIONAL MOBILITY AND FERTILITY

Differential fertility has long been considered as a factor affecting the social mobility pattern by contributing to an excess of upward over downward circulation in American society (Sibley, p. 322). It is generally held that the open-class system is to some extent supported by differential fertility which contributes to the amount of vertical mobility in our society (Sorokin, p. 359). Studies of the relationship between socio-eco-

conomic status and fertility tend to show that it is an indirect relationship (Notestein, 1933 and 1936), i.e., the upper classes are failing to reproduce themselves, thus leaving room for individuals from lower levels of origin to move upward to fill the "gaps" left by the fertility differential.

After World War II the fertility pattern of those individuals who had actually moved or were in the process of moving from one socio-economic level to another began to be a point of interest to some European and American demographers. They have proposed a number of ideas concerning the relationship of fertility and social mobility. It would seem that the desire for a higher standard of living has acted to limit family size. Individuals weigh the value of the child against other values such as a higher standard of living and symbols of status. Couples falling in social status may attempt to limit their families in an effort to hold on to what status and position they have left. Conversely, a family with many children may have to spend a greater proportion of its resources on the necessities of life, thus lowering the level of living in other respects. Also, recognition of the need for income security may operate to hold back parents of large families from facing the risks involved in changing jobs and thus raising their status. Other possibilities are that the bread winner may be motivated to greater achievement in order to maintain his standard of living as the expenses involved in child rearing become greater. Domestic demands on his income and time may also make it more difficult for the large family man to increase his educational level or to devote time and energy to additional training and other activities necessary for improving his social position (Whelpton and Kiser, pp. 1032-1033).

Thus far mobility research has taken two basic forms: the intergenerational and the career mobility analysis.³³ The intergenerational approach consists in comparing the occupational

³³ The subjective aspects of social mobility are discussed by Westoff who points out that other methods are also needed since the effects of subjective factors on fertility cannot be deduced entirely from measurement of actual mobility (Westoff, pp. 32-33).

or educational level of one generation with another, e.g., son's occupational level with father's occupational level. Career mobility analysis measures changes taking place within the lifetime of the individuals being studied, e.g., from the first stable job or the first job held after marriage to an occupation held at some later period in life.

One of the first studies of the intergenerational type was undertaken in France where data on a national sample of 3,000 males were analyzed relating fertility to occupational and educational changes from the grandfather's generation to the father's and then to the son's. The analysis indicated lower fertility among the upwardly mobile, higher fertility among the downwardly mobile, and generally an intermediate fertility rate among the stable families (Bresard). A study of 2,000 marriages taken from the cases collected by the 1949 Social Survey in England and Wales also revealed that upward mobility was associated with low fertility and downward mobility with high fertility. The upwardly mobile had smaller families compared with their class of origin but larger families compared with their class of entry (Berent). Another study based on data for 770 residents of Philadelphia listed in the 1940 WHO'S WHO IN AMERICA, found that those who had *achieved* their position had smaller families than those holding an *ascribed* position. Baltzell states that there was "a consistent inverse relationship between upward mobility and family size" (Baltzell, p. 419).

An intergenerational mobility analysis of the Indianapolis data found that regardless of the direction of mobility, the mobile couples had lower fertility than their "origin" control group when occupation was used as an index of mobility (Whelpton and Kiser, pp. 969-1003). A further analysis of these data for career mobility showed that the findings were consistent with the idea that fertility restriction is associated with upward mobility and that downward mobility is related to intermediate planning success and moderate fertility. Riemer concludes that "deliberate childlessness, rather than

small families, accounts for much of the low planned fertility of mobile couples" (Whelpton and Kiser, p. 1049).

Rierner has pointed out that in a population with the fertility rate inversely related to socio-economic status, the socially mobile persons are subject to influences from both their level of origin and their new status position. Under these circumstances the psychological orientation toward the higher status values would minimize the influence of the lower status background, and therefore, the fertility pattern for this group would likely resemble the pattern exhibited by the non-mobile couples at the destination level. The downwardly mobile, however, would still be psychologically oriented toward the values of the origin level and therefore, the influence of their lower status position would be minimized (Whelpton and Kiser, p. 1033).

In the present study, however, fertility is slightly related in a direct manner to socio-economic status (see Table 12, *Supra.*). Using similar reasoning to that presented above, one would expect the upwardly mobile in this population to have fertility as high as (or higher than if they "over-conform" to the norms of this group) the non-mobile at the destination level as well as at the level of origin. The downwardly mobile would be expected to have a fertility rate lower than that of their level of origin but higher than the non-mobile couples at their level of destination.

Measurement of Occupational Mobility. Occupational mobility is defined as movement of the husband from one occupational status category to another over a period of time. The occupational categories and their status scores are presented in Table 9.³⁴ Since a complete work history was not requested on the questionnaire, it is not possible to measure the mobility from the first occupation at the time of marriage for many of the respondents. For these respondents mobility is measured from a year shortly preceding or following marriage. It is

³⁴ An explanation of how these occupations were ranked and status scores assigned appears above (*Supra.*, pp. 246-247).

measured from 1940 to 1955 for those married between the years 1937 and 1942, and from 1947 to 1955 for those married between the years 1943 and 1948. This means that the respondents married during the earlier period have had a longer time in which to be mobile than have those married during the later period. However, differences in the amount of mobility for these two duration periods are not great. Fifty-five per cent of those having 15 years in which to move were still stationary in 1955, whereas 66.5 per cent of those having only 8 years in which to move had not done so by 1955. Approximately 9.2 per cent of the 15 year respondents and 9.7 per cent of the 8 year respondents were downwardly mobile; the percentages for the upwardly mobile are 35.5 and 23.8 respectively.

Table 18. Mean number of children ever born by occupational status scores at time of marriage and at present.

OCCUPATIONAL STATUS SCORES AT MARRIAGE	PRESENT OCCUPATIONAL STATUS SCORES (1955) ¹							
	(High) 8	7	6	5	4	3	2	(Low) 1
	MEAN NUMBER OF CHILDREN							
8 (High)	3.51	*	*	*	*	*	*	*
7	*	3.12	*	*	*	*	*	*
6	*	*	3.16	*	*	*	*	*
5	*	3.16	3.22	3.04	3.12	*	3.20	*
4	*	3.22	3.37	2.93	2.92	*	2.92	2.71
3	*	*	*	2.89	3.40	2.70	*	*
2	*	*	*	2.99	3.24	*	2.89	*
1 (Low)	*	*	*	3.54	2.84	*	3.05	3.30
NUMBER OF COUPLES								
8 (High)	39	1	0	0	0	0	0	0
7	9	155	16	6	5	0	1	0
6	3	14	149	15	2	0	0	6
5	6	25	78	455	75	3	25	7
4	3	32	63	156	744	15	65	34
3	2	12	6	71	20	43	9	6
2	0	1	7	68	164	4	305	17
1 (Low)	0	1	6	26	52	4	40	131

* Rate not shown if based on fewer than twenty cases.

¹ See Table 9 for descriptions of these status positions.

Table 18 shows the entire distribution of couples according to their family size and occupational mobility. The italicized means on the diagonal represent the family size for the stationary couples, those above the diagonal represent the downwardly mobile and those below are the upwardly mobile. Table 19 presents the number of respondents and the mean number of children ever born for each of the five mobility categories derived from the data presented in Table 18. A direct relationship exists between occupational mobility and mean number of children ever born, with the fertility of the upwardly mobile deviating to a greater degree than that of the downwardly mobile from the pattern characteristic of the stationary group.

Correlation Analysis of Occupational Mobility and Fertility. The coefficient of correlation of occupational mobility and fertility is +.049; the correlation ratio is .052. The coefficient of correlation is significant at about the .005 level when the analysis is based on the uninflated sample of 3,091 couples.³⁵ The difference between the means of the upwardly mobile is not significant. The partial correlation analysis of the relationship of occupational mobility and fertility provides for the control of six factors judged to be important in fertility analyses. These variables are: duration of marriage, wife's age at marriage, socio-economic status, community size, Catholic practice of the couple, and the husband's ethnic status. The definitions of these variables and the manner in which they were measured have been discussed above (*Supra.*, pp. 242-252). After partialling out the effects of these six variables, the partial correlation of occupational mobility and fertility is +.002, a coefficient not significant at the .05 level.

Summary. Correlation analysis, using data derived from this population and the described research methods, does not show any important relationship between occupational mobility and fertility. The low, but significant, correlation between the two

³⁵ $\frac{Z}{\sigma_2} = Z\sqrt{N-1} = .049 \times 55.6 = 2.72.$

OCCUPATIONAL MOBILITY	NUMBER OF RESPONDENTS	MEAN NUMBER OF CHILDREN EVER BORN
Down Two or More Status Positions	160	2.92
Down One Status Position	148	3.01
Stationary	2,021	3.00
Up One Status Position	321	3.12
Up Two or More Status Positions	552	3.18
TOTAL	3,202	3.04

Table 19. Number of respondents and mean number of children ever born by husband's occupational mobility.

variables disappears when the other variables are brought under control by partial analysis. Tables 18 and 19 do show, however, a slight direct relationship between the two. The direction of this relationship is quite different from that found in other mobility analyses. Most of these analyses found either indication of an indirect relationship or one characterized by low fertility for all mobile couples. However, these studies were concerned with populations with indications of an inverse relation between socio-economic status and fertility.

In the present study, the high fertility rates for the upwardly mobile are evident from the data presented in Table 18. Not only are they high compared with their level of origin, but generally they are high in comparison with their level of destination. Such a relation is not so obvious for the downwardly mobile who, when grouped together, have slightly lower fertility rates than the stationary group (Table 19).

This does not mean that the observed pattern of fertility for this particular population is not consistent with the mobility hypothesis. On the contrary, as pointed out above (*Supra.*, p. 251), if the direction of the relationship between socio-economic status and fertility is given proper emphasis, one would expect to find for this population, with a direct relationship between socio-economic status and fertility, a pattern similar to that actually observed. The upwardly mobile (with but two exceptions out of the 12 cases containing more than 20 couples) have higher fertility than the stationary couples at their level

of origin and in the majority of cases (8 out of 12) the rate is higher than for those at their level of destination (see Table 18). There are only four instances for judging the fertility pattern of the downwardly mobile from the means presented in Table 18 (all other categories have less than 20 cases). Two of these instances indicate a higher fertility rate for the downwardly mobile couples than for the stationary couples at either level. As has been shown, when all the downwardly mobile are grouped together the average size of family is as low as the stationary for those moving down one status position and lower than this stationary group for those moving down two or more positions. Thus the data are only partially consistent with the mobility hypothesis as formulated above.

In the interpretation of these findings others factors must be briefly considered. First of all, due to the sample design childless couples were not included in the study population. In the analysis by Riemer of the Indianapolis data, evidence was found to suggest that a higher rate of deliberate childlessness was associated with upward mobility (Whelpton and Kiser, p. 1038). If such a tendency were also characteristic of the upwardly mobile in this Catholic population, one would expect that the upwardly mobile are not properly represented in the sample, i.e., the upwardly mobile without children did not have a chance to be included in the study. Thus the average size of family for this group would be too large to be truly representative of upwardly mobile Catholic couples in general.

However, this assumption regarding the relationship of mobility and childlessness may not be true of Catholics. Occupational position is only one facet of social status. It seems reasonable to assume, as Lundberg suggests, that religious good standing may be an important criterion of status for the Catholic in the community (Lundberg, p. 106). If this is so, then one would not expect to find Catholics attempting to raise their social position by limiting the size of their family or by a long delay before the birth of the first child.

Besides the possibility of children being included in the

lives of the upwardly mobile because religious good standing in the community is considered important, there are other factors that may distinguish the upwardly mobile from the stationary and downwardly mobile. Those moving upward may conform more to the Church's teachings regarding the use of artificial means of birth control and the conditions necessary for the legitimate use of the rhythm method over a long period of time. These individuals, being psychologically oriented toward higher class positions would be more likely to follow the practices prevalent in their group of orientation.³⁶ Studies of Catholics have indicated that faithfulness in religious observances is directly related to socio-economic status. In the present study the highest raw correlation was for these two variables (+.288). The correlation coefficient for occupational mobility and religious practice was not high (+.066), but it is felt that all the correlations with occupational mobility were low because of the large proportion of the respondents who had not moved during the mobility period.

The low fertility of the stationary and downwardly mobile may be due to restricting fertility in an effort to maintain or improve their level of living. Kantner's intergenerational analysis of the Indianapolis data revealed low fertility for the downwardly mobile. He suggests that these findings may possibly be due to chance (Whelpton and Kiser, pp. 76-77). However, the present study also indicates low fertility for the downwardly mobile.

It has already been suggested that the low correlation of occupational mobility with fertility and the other variables may be due to the large number of couples who had remained stationary over the period during which mobility was measured. Then too, the research design itself was responsible for leaving out a rather important segment of the population that

³⁶ Judging by the Indianapolis Household Survey the upwardly mobile would "conform to the practices prevalent in their group of orientation," by having relatively small families since that study found an indirect relationship between fertility and status. The judgment is reversed in the present instance since a direct relationship was observed.

should be considered in attempting to show the relationship between social mobility and fertility. Finally, although the means of measuring occupational mobility may not have been sufficiently refined for reflecting the fertility differential by correlation analysis, there are some indications that occupational mobility may be a more important variable than the analysis would seem to imply.

VI. CONCLUSION

This study is concerned with Catholic couples with a child in the first grade in Catholic schools in the Northeastern section of the United States, and the results of this study apply strictly only to this population.

Data for the study were collected mainly by means of questionnaires distributed to a sample of the population; about 85 per cent of the questionnaires distributed were returned satisfactorily completed. In addition, information was obtained concerning some of the non-respondents by personal interview. A total of 3,202 couples are included in the study.

The authors were interested mainly in the relationships of fertility and Catholic practice and fertility and personal occupational mobility. However five other factors were included in the study as control variables for the partial correlation analysis. These variables are duration of marriage, wife's age at marriage, size of the community in which the couple resided, couple's socio-economic status, and husband's national descent as a measure of social status. Catholic practice, as measured by a Guttman scale combining data on husband's and wife's fulfillment of Easter duty, attendance at Sunday and daily Mass and reception of Communion, explains about one-half of one per cent of the variation in number of children unexplained by the control variables and occupational mobility. The occupational categories used to measure occupational mobility were derived from the North-Hatt study. The partial correlation of mobility and fertility is insignificant.

Some of the secondary findings of the study may also be of

interest when compared with the results of other studies, but it seems advisable to compare these results only with other studies which have similar populations. For example, the mean number of children per couple found in the present study is 3.04, but if this figure is to be compared with the means from other studies it must be remembered especially that all the couples in this study had at least one child and that larger families had a greater chance of being included in the study. An adjustment can be made for the latter factor for comparative purposes if it is assumed that a couple's chance of being included in the study was just proportional to the number of children they had; the adjusted mean is 2.42. The 1950 Census figure for white married women aged 25-39 (86 per cent of the women in this study sample fall into this category), residing in the Northeast section of the United States who have at least one child would seem to be the best available mean for comparison; this mean is 2.32 (computed from United States Bureau of the Census, 1955, Table 32, p. 106). However one additional adjustment should be made for the larger percentage of urban women in this sample (91 per cent) compared to the Census population (80 per cent). Since the Census mean for comparable urban women is 2.08, the adjusted

Table 20. Urban white women married once, husband present, aged 25-39; number of own children under five years of age per 1,000 women by wife's education, the United States, 1950¹; and mean number of children ever born by wife's education, the present study.

EDUCATION OF WIFE	OWN CHILDREN UNDER FIVE PER 1,000 WOMEN, THE UNITED STATES	MEAN NUMBER OF CHILDREN EVER BORN, THE PRESENT STUDY
Elementary 0-7	651	2.94
8	572	3.02
High School 1-3	630	2.77
4	718	3.08
College 1-3	750	3.30
4 or More	798	3.84
TOTAL	684	3.04

¹ Computed from United States Bureau of the Census, 1955, Table 48, p. 176.

mean is 2.19. Apparently the difference between these two adjusted means, 2.42 and 2.19, is due mainly to the different religious composition of the two populations. If we figure that Catholics comprise about one-third of this census population, the Catholic-non-Catholic difference would be about 12 per cent. This percentage difference is somewhat lower than the 18 per cent difference found in the quite recent Indianapolis Household Survey (Whelpton and Kiser, p. 50) and lower also than the 21 to 25 per cent differential for the United States, 1953, estimated by Kirk from Census and CATHOLIC DIRECTORY figures (computed from Kirk, pp. 101-104).

The direct relationship of socio-economic status and fertility found in this study may seem to be out of line with other research findings, but one must take into account the peculiar nature of the population in this study. Approximately one-third of the children involved in this study are first graders, born for the most part in 1948 and 1949, the others are siblings of first graders; in other words, the fertility with which this study is concerned is largely recent fertility, most of it occurring since 1945. The most comparable material on fertility by socio-economic status is probably 1950 Census data on children born between April, 1945, and April, 1950, to urban white women aged 25-39, married once, husband present, by education of the wife. Table 20 gives number of own children under five years of age per 1,000 women by wife's education for the United States, 1950, and mean number of children ever born by wife's education for the sample of this study. The patterns presented are not strikingly dissimilar.

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APPENDIX
The Catholic University of America
Washington 17, D. C.

Dear Parent:

This questionnaire which your little boy or girl has brought home from school is part of a survey being conducted at the Catholic University of America to determine the size and the social background of the family of the Catholic school child. The results obtained from studies such as this can be of considerable value in planning for the education of the children of tomorrow.

The school which your child attends has been selected as one of the schools in this region of the country to participate in the survey. The success of the survey depends upon the cooperation of each of the mothers. Your cooperation by filling out the questionnaire will be greatly appreciated.

Please do not give your name. When you have completed the questionnaire, just put it back into the envelope, seal it and give it to your little girl or boy to return to school. Sister will put your sealed envelope along with those from the other parents in a large envelope and return it to us.

Sincerely yours,

Hugh E. Brooks

Hugh E. Brooks

Franklin J. Henry

Franklin J. Henry

NO NAMES PLEASE

Please indicate your relationship to the child who brought the questionnaire home: Mother... Stepmother... Father... Fostermother... Aunt... Other.....(Specify). If another person takes the place of the mother will he or she please answer these questions about the mother of the child and the mother's husband.

1. What is your national descent: Irish... German... Italian... Polish... Puerto Rican... French... French Canadian... English... Other.....(Specify)
Please do not list American.

2. Race: White... Negro... Other..... (Specify) 3. Date of birth:..... (Month-day-year)

4. Were you born in a city... in a village (under 2500)... or on a farm...? Please name it: --- (City, village or post office) --- (State or country)

5. Religion: Catholic... Protestant... Jew... None... Other.....(Specify)

6. If a Catholic, are you a convert?.... Date of conversion:..... (Month-year)

7. Are you a housewife? Yes... No... If you have another occupation, please name it: Please be very specific, e.g., write elementary teacher not just teacher; file clerk not just clerk.

8. How many hours per week do you work away from home? None... 1-9 hrs... 10-19 hrs... 20-29 hrs... 30-39 hrs... 40 hrs... 41-48 hrs... 49 hrs. or more...

9. Check the last grade that you completed in school:

- | | | |
|-------------------------------------|---|--|
| <input type="checkbox"/> No school | <input type="checkbox"/> Completed grade school | <input type="checkbox"/> College, 1 year |
| <input type="checkbox"/> Grades 1-4 | <input type="checkbox"/> High school 1-3 | <input type="checkbox"/> College, 2 or 3 years |
| <input type="checkbox"/> Grades 5-7 | <input type="checkbox"/> Completed high school | <input type="checkbox"/> Completed college |

10. Please check any other education you have had: Vocational school... Trade school... Business school... Normal school... Professional school... Graduate school... Other.....(Specify)

11. Encircle EACH year in which you attended CATHOLIC schools, for example, 1 2 3 4 5 6 7 8

None	Elementary school	High school	College	Graduate
0	1 2 3 4 5 6 7 8	1 2 3 4	1 2 3 4	1 2 3 4

12. What was the last year of school that your father completed?.....

13. How many brothers and sisters do you have? Brothers... Sisters... (please include any who may have died since birth)

14. Give the birthdays of all your sons and daughters. (Please do not include still births)

	Birthday				Birthday		
	Month	Day	Year		Month	Day	Year
1st child	-----	-----	-----	7th child	-----	-----	-----
2nd child	-----	-----	-----	8th child	-----	-----	-----
3rd child	-----	-----	-----	9th child	-----	-----	-----
4th child	-----	-----	-----	10th child	-----	-----	-----
5th child	-----	-----	-----	11th child	-----	-----	-----
6th child	-----	-----	-----	12th child	-----	-----	-----

15. Give the birthdays of all you adopted children and stepchildren.

	Adopted Children				Stepchildren		
	Month	Day	Year		Month	Day	Year
1st child	-----	-----	-----	1st child	-----	-----	-----
2nd child	-----	-----	-----	2nd child	-----	-----	-----
3rd child	-----	-----	-----	3rd child	-----	-----	-----

16. Are you expecting now? Yes... No... Don't know...

If you are a Catholic will you please answer the next three questions. A sincere answer is very important to the study and will be greatly appreciated. Please remember that no names are asked for in this study.

17. How many times have you attended Mass in the last four weeks? None... Once... Twice... Three times... Four times... More than four...
18. How many times have you received Communion in the last four weeks? None... Once... Twice... Three times... Four times... More than four...
19. Have you received Communion at least once in the past year? yes... No...

20. List the date(s) of your marriage(s) and the number of children ever born to each marriage.

	Date			Number of Children
	Month	Day	Year	
1st marriage	-----	-----	-----	-----
2nd marriage	-----	-----	-----	-----
3rd marriage	-----	-----	-----	-----

21. Were you married before a Catholic priest? Yes... No...
If "No" was the marriage ever validated by a priest? Yes... No...
22. Are you living with your husband now... or are you widowed... separated... divorced... or is your husband temporarily absent?
23. Have you ever been separated from your husband for any length of time, for example, when he was in the armed forces? Yes... No... If "Yes" how long were you separated?
One month... 1-6 months... 6-12 months... 1-2 yrs... 2-5 yrs... over 5 yrs. ...

24. Give the place where you were living in the following years.

Year	Place of Residence City, village or post office	State or Country	Check here if you lived on a farm
1935	-----	-----	-----
1940	-----	-----	-----
1947	-----	-----	-----
1949	-----	-----	-----
1950	-----	-----	-----
1955	-----	-----	-----

25. How many rooms do you have in your home or apartment? ... Do not include bathrooms.

26. Do you own your own home or apartment? Yes... No...
If "Yes" what is its present value approximately?

- | | | |
|--|--|--|
| <input type="checkbox"/> Under \$1200 | <input type="checkbox"/> \$3600 - \$4700 | <input type="checkbox"/> \$ 9,600 - \$11,900 |
| <input type="checkbox"/> \$1200 - \$2300 | <input type="checkbox"/> \$4800 - \$7100 | <input type="checkbox"/> \$12,000 - \$17,900 |
| <input type="checkbox"/> \$2400 - \$3500 | <input type="checkbox"/> \$7200 - \$9500 | <input type="checkbox"/> \$18,000 - \$35,000 |
| | | <input type="checkbox"/> Over \$35,000 |

27. If, you rent, what is the monthly rent of your home or apartment? If you rented in 1947, what was the monthly rent of your home or apartment at that time?

Rent now (1955)		Rent in 1947	
<input type="checkbox"/> Under \$10	<input type="checkbox"/> \$ 60 - \$ 79	<input type="checkbox"/> Under \$10	<input type="checkbox"/> \$ 60 - \$ 79
<input type="checkbox"/> \$10 - \$19	<input type="checkbox"/> \$ 80 - \$ 99	<input type="checkbox"/> \$10 - \$19	<input type="checkbox"/> \$ 80 - \$ 99
<input type="checkbox"/> \$20 - \$29	<input type="checkbox"/> \$100 - \$149	<input type="checkbox"/> \$20 - 29	<input type="checkbox"/> \$100 - \$149
<input type="checkbox"/> \$30 - \$39	<input type="checkbox"/> \$150 - \$200	<input type="checkbox"/> \$30 - \$39	<input type="checkbox"/> \$150 - \$200
<input type="checkbox"/> \$40 - \$49	<input type="checkbox"/> Over \$200	<input type="checkbox"/> \$40 - \$49	<input type="checkbox"/> Over \$200

28. Do you have a family car? ... If "Yes" give the make and year.-----
Make Year

29. Do you have a son? Yes... No... If "Yes" check the last year of school that you expect your oldest son to complete.

- | | | |
|---|--|---|
| <input type="checkbox"/> Complete grade school | <input type="checkbox"/> College, 1 year | <input type="checkbox"/> Past college, 1 or 2 years |
| <input type="checkbox"/> High school, 1 - 3 years | <input type="checkbox"/> College, 2 or 3 years | <input type="checkbox"/> Past college, 3 or 4 years |
| <input type="checkbox"/> Complete high school | <input type="checkbox"/> Complete college | |

30. How would you classify the occupation that you expect your oldest son to hold most of his life? Unskilled... Semiskilled... Personal service... Skilled... Sales... Office worker... Small owner or manager... Semiprofessional... Professional... Large owner or manager... Other... (Specify)

31. Do you have a daughter? Yes... No... If "Yes" what is the last year of school that you expect your oldest daughter to complete?...

If you do not know the answers to some of these questions about your husband, please ask him for the answers if he is available.

1. Husband's national descent: Irish... German... Italian... Polish... Puerto Rican... French... French Canadian... English... Other... (Specify). Please do not list American.

2. Race: White... Negro... Other... (Specify) 3. Date of birth: ... (Month-day-year)

4. Was your husband born in a city... in a village (under 2500)... or on a farm...? Please name it. (City, village or post office) (State or country)

5. Husband's religion: Catholic... Protestant... Jew... None... Other... (Specify)

6. If husband is a Catholic, is he a convert? Yes... No... Date of conversion: ... (Month-year)

7. Does your husband own his own business? Yes... No...

8. Does your husband have any people working for him? Yes... No... If "Yes" how many? 1... 2-5... 6-10... 11-20... 21-50... 51-100... 101-500... Over 500...

9. Give your husband's occupation in the following years. Please be very specific, for example, write bond salesman or routeman not just salesman; write punch press operator or riveter not just factory worker; write Seaman 1st Class not just Navy.

Year	Occupation	Year	Occupation
1928	-----	1942	-----
1937	-----	1947	-----
1940	-----	1950	-----
		1955	-----

10. What is (or was) the occupation of your husband's father for most of his life... of your husband's paternal grandfather... of your own father...? Please be very specific, for example, write farm hand or farmer; write typist or auditor not just Government employee.

11. Check the last year that your husband completed in school.
 No school
 Completed grade school
 College, 1 year
 Grades 1-4
 High school 1-3
 College, 2 or 3 years
 Grades 5-7
 Completed high school
 Completed college

12. Please check any other education your husband has had: Vocational school... Trade school... Business school... Normal school... Professional school... Graduate school... Other... (Specify)

13. Encircle EACH year in which your husband attended CATHOLIC schools:
None Elementary school High school College Graduate
0 1 2 3 4 5 6 7 8 1 2 3 4 1 2 3 4 1 2 3 4

14. What was the last year of school that your husband's father completed?

If your husband is a Catholic will you please complete the next three questions.

14. How many times has your husband attended Mass in the last four weeks? None... Once... Twice... Three times... Four times... More than four...

15. How many times has he received Communion in the last four weeks? None... Once... Twice... Three times... Four times... More than four...

16. Has he received Communion at least once in the past year? Yes... No...

18. Does your husband expect a raise in pay, a promotion or a change of job within the next year or two?
Raise Promotion Change of job
Within the next year -----
Within the next two years -----

19. Suppose your husband were offered an opportunity to make a substantial advance in a job or occupation, check each of the following items to indicate which he would be willing to do in order to make the advancement: Take on more responsibility... Give up leisure time... Learn a new routine... Work harder than he does now... Move around the country a lot... Endanger his health... Leave his friends... Leave his family for some time...