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Chapter Author: Gwendolyn Z. Johnson

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Differential Fertility in European Countries

GWENDOLYN Z. JOHNSON

UNITED NATIONS

EVIDENCE that traditional differentials in fertility are tending to diminish in a number of European countries has been disclosed by several recent studies and at least one earlier study. These investigations have also raised questions as to whether the differentials may not vanish entirely or perhaps in the long run be replaced by differentials of an opposite nature, that is, by a positive association of fertility with socio-economic status. It is the purpose of this paper to draw together findings of as many as possible of these studies and to supplement them with newly available data extracted from censuses and other sources. In what follows, attention is confined largely to the pattern of differentials in fertility between socio-economic groups and between urban and rural inhabitants in the industrialized countries of Europe.[1]

Before discussing differentials within the various countries, a brief review of the differences in fertility between countries at present and in the recent past may be desirable. Maps 1 and 2 depict the level of the gross reproduction rate in countries of Europe around 1930 and around 1955.[2] A comparison of the maps discloses two significant features: the decrease (1) in the number of countries with gross rates of 1.75 and above, and (2) in the number with rates below 1.00. Whereas the latter group contained seven countries around 1930, all countries had rates above unity around 1955. Around 1930 six countries had GRR's in excess of 1.75; in 1955 only Albania was in this class.

[1] Published data of the kind and quality required for an investigation of fertility differentials are not available for most nonindustrialized countries, nor for some of the important industrialized countries. Wherever possible the nonindustrialized countries are included, especially if the data for such countries show divergent patterns.

[2] The statistics are from the following sources: Dudley Kirk, *Europe's Population in the Interwar Years*, Princeton, Princeton University Press, 1946, p. 56; United Nations, *Recent Trends in Fertility in Industrialized Countries*, New York, United Nations Publications, 1958, pp. 142–143; and *Population Index*, Vol. 24, no. 2, April, 1958, pp. 190–196. The Foreign Manpower Research Office of the U.S. Bureau of the Census kindly supplied estimates for the U.S.S.R., Albania, and Bulgaria as of 1950–1955. The gross reproduction rates for the countries of Europe, excluding the U.S.S.R., around 1950–1955 have been published in the Bureau of the Census monograph. "The Population of Hungary," *International Population Statistics Reports*, Series P-90, no. 9. Rates in Map 2 for Greece, Iceland, Rumania, and Spain were estimated by a method similar to that used in indirect standardization.

The continued decline or unimportant increases in high fertility countries during this period and the substantial gains experienced in low fertility countries—mainly the industrialized countries—combined to effect a contraction of prewar differences, particularly between the less developed and the industrialized countries.[3] The region of lowest fertility in 1930, Northwest-Central Europe, maintained its prewar position in 1955, as did the other regions.

Differential Fertility Prior to 1900

Urban and rural inhabitants in European countries have had different levels of fertility for nearly a century. Indeed, crude birth rates for rural inhabitants exceeded those of the urban population in Sweden as early as the middle of the eighteenth century, and in England and Wales as far back as 1850.[4] The early differentiation of urban and rural inhabitants in Norway is illustrated in Chart 1. Here fertility is expressed as the average number of live births per woman after twenty years of marriage, for women married in 1880 to 1930 at age 24 or 25. Among couples married in 1880 there was little difference by residence in the completed family size. It varied from 5.98 per woman in Oslo, the capital, to 6.60 in rural areas. The subsequent widening of the differential was due to the more rapid declines in Oslo and the towns and to the relatively slow pace of the decline in completed family size among couples in rural areas. It will be noted later that the pattern which developed in the Netherlands (Chart 2) was almost identical with that observed for Norway.

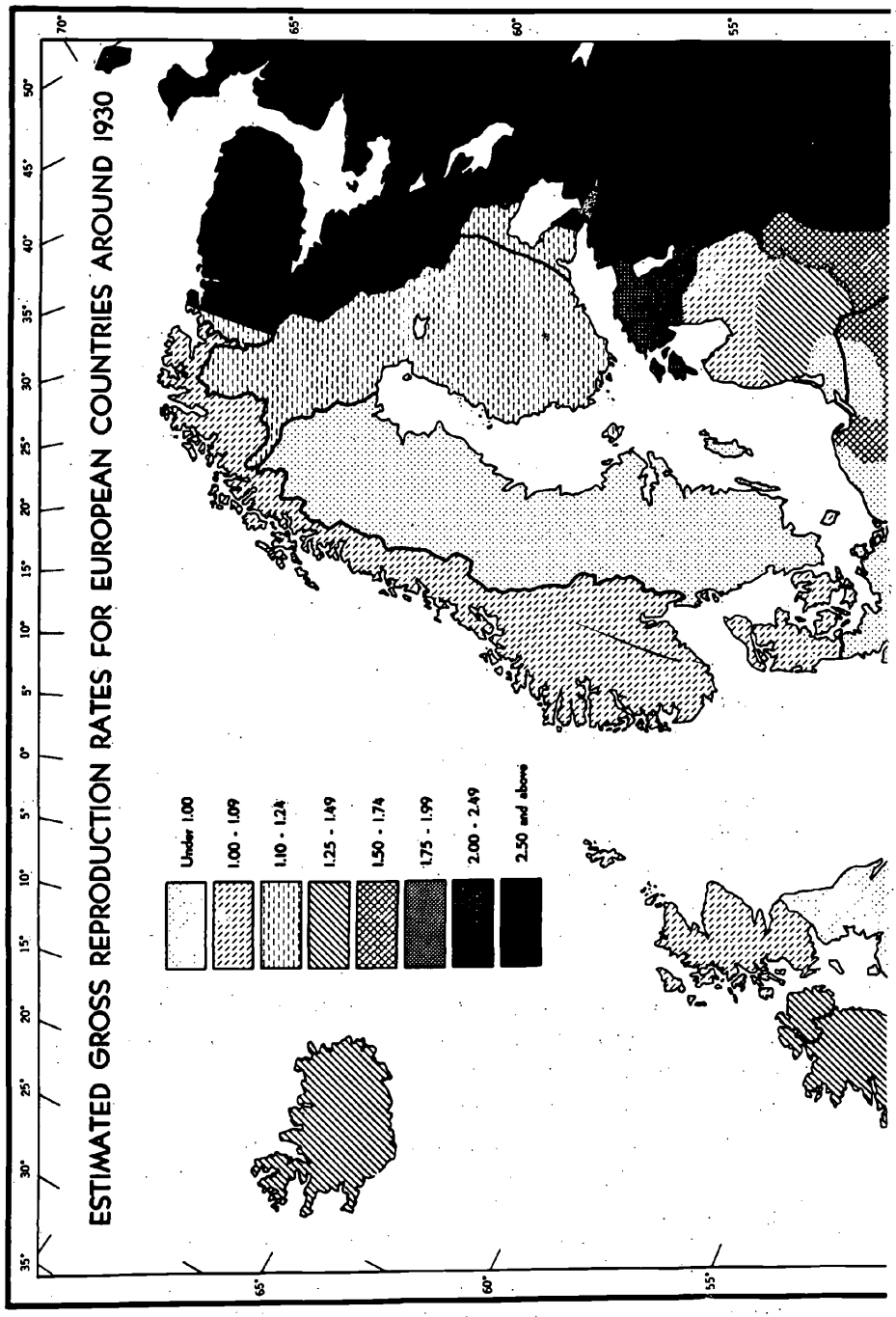
Studies of the fertility characteristics of social and economic classes within European countries other than Sweden usually found fertility to be inversely associated with status, no matter what the definition of status or the measure used to describe the level of fertility. Although data that would give a comprehensive picture are lacking, there is some evidence that a fertility distinction between classes was rather widespread prior to 1900 in the now industrialized countries of Europe.[5]

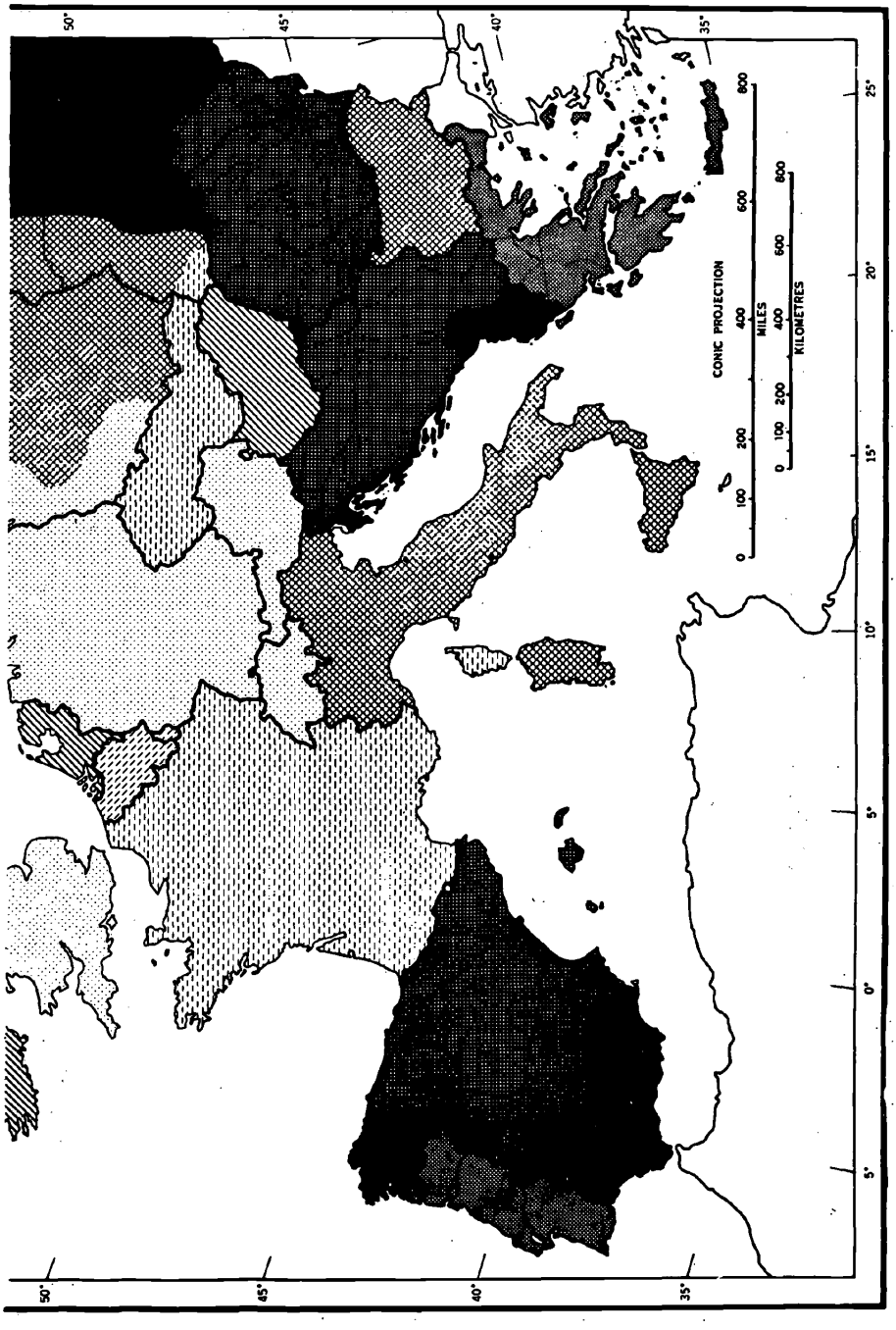
In England and Wales, differences in fertility between classes developed among cohorts of marriages that began during the latter half of the nineteenth century. Stevenson shows that, in marriages contracted prior

[3] Demographic factors in the recovery of the birth rate in industrialized European countries are discussed in the paper by Halvor Gille in this volume. See also United Nations, *Recent Trends in Fertility in Industrialized Countries*, United Nations Publications, 1958, pp. xi, 182.

[4] A. J. Jaffe, "Urbanization and Fertility," *The American Journal of Sociology*, Vol. XLVIII, no. 1, July 1942, pp. 48–60.

[5] For a more detailed discussion see United Nations, *Determinants and Consequences of Population Trends*, United Nations Publications, 1953, pp. 86–89.


ESTIMATED GROSS REPRODUCTION RATES FOR EUROPEAN COUNTRIES AROUND 1930
Under 1.00
1.00 - 1.09
1.10 - 1.24
1.25 - 1.49
1.50 - 1.74
1.75 - 1.99
2.00 - 2.49
2.50 and above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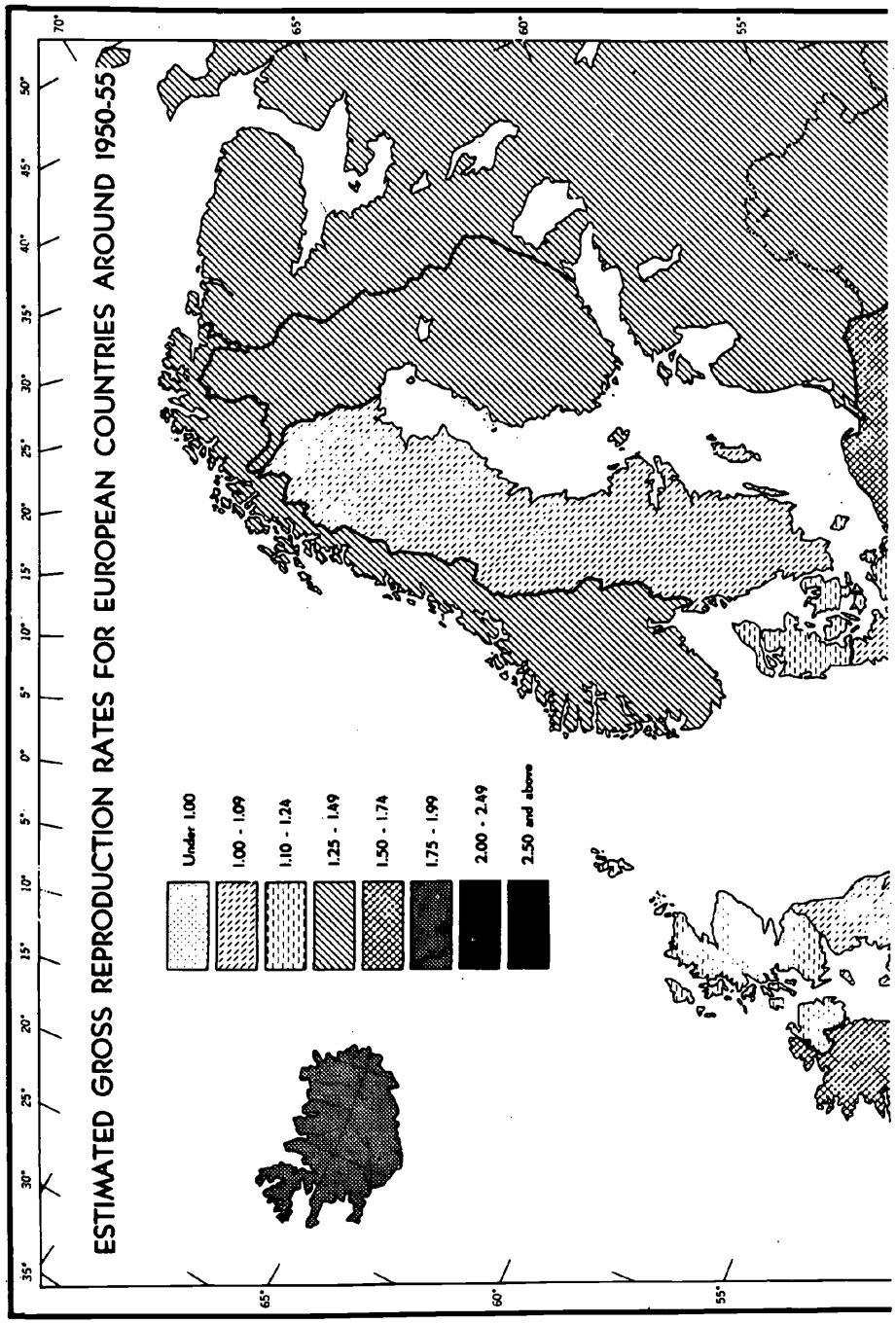
ESTIMATED GROSS REPRODUCTION RATES FOR EUROPEAN COUNTRIES AROUND 1950-55
Under 1.00
1.00 - 1.09
1.10 - 1.24
1.25 - 1.49
1.50 - 1.74
1.75 - 1.99
2.00 - 2.49
2.50 and above

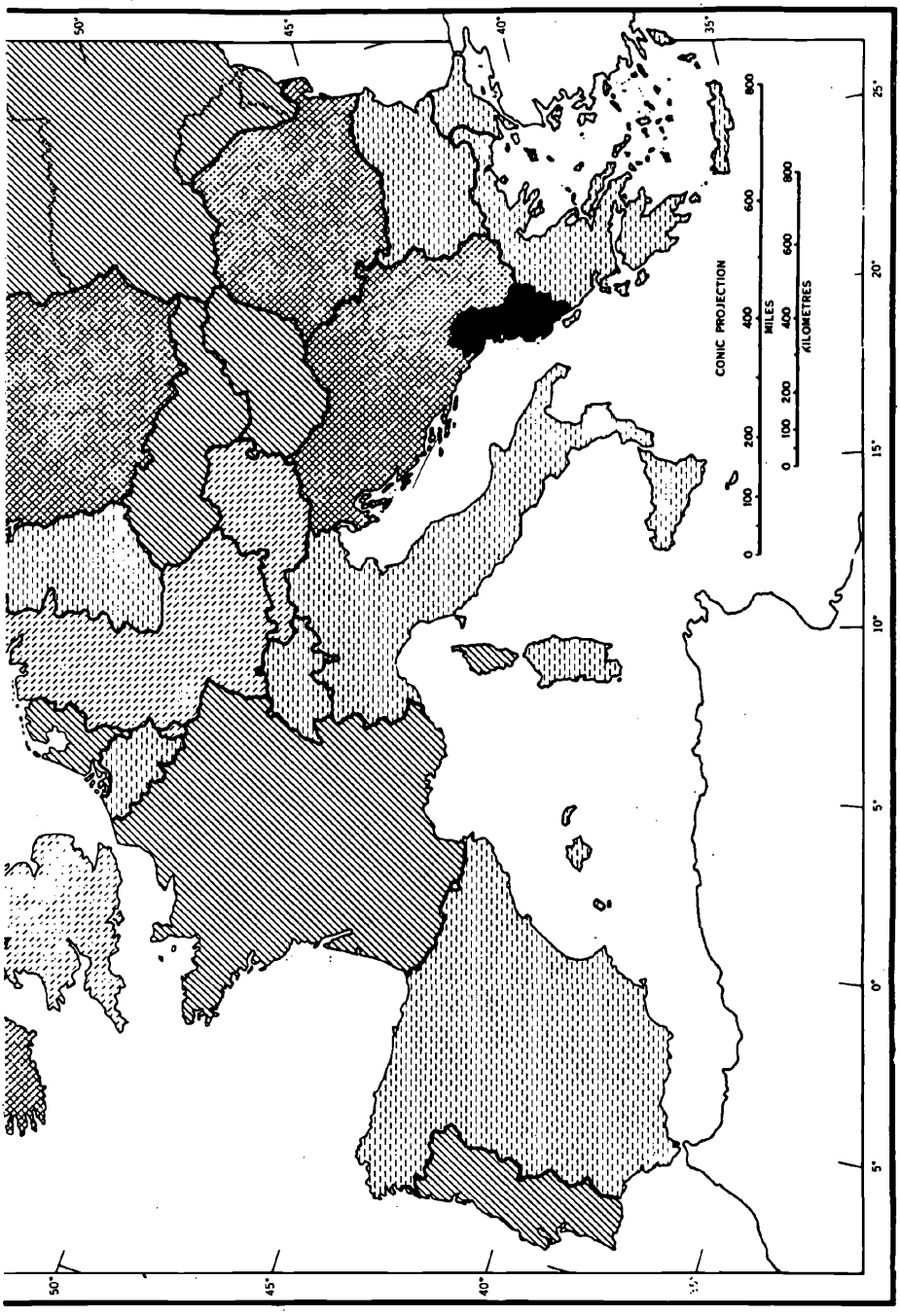
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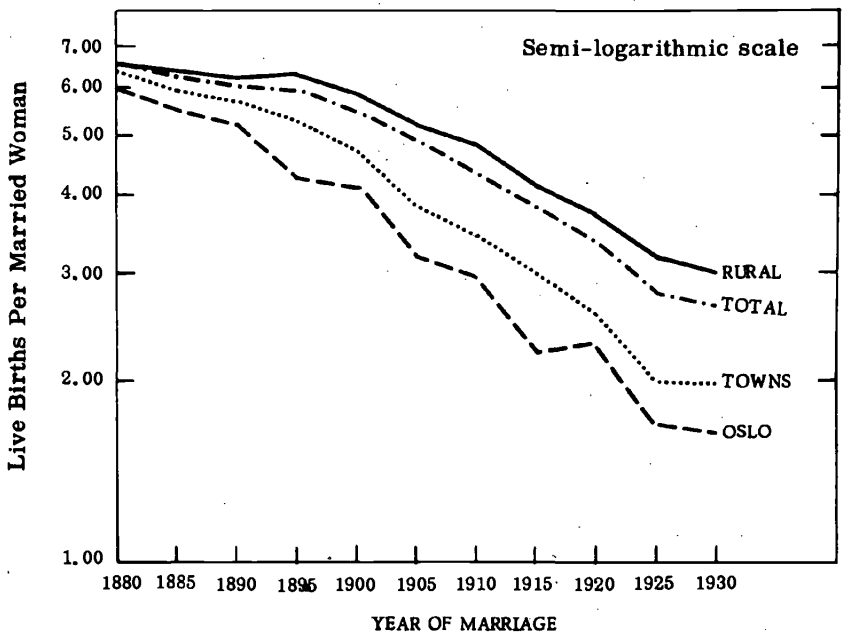
CHART 1

Average Family Size after Twenty Years of Marriage, Women Married 1880 to 1930, by Urban and Rural Residence, Norway
(age of wife at marriage, 24 and 25 years)



Source: L. Henry: "La fécondité des mariages en Norvège d'après les recensements", Population (Paris), 13e, No. 1, January-March 1958, pp. 136-143.

to 1871, average family size did not vary consistently with occupational status of husband, although the general tendency was towards an inverse relationship.[6] Notestein has already analyzed the nature of the development of the inverse relationship between fertility and socio-economic status in England and Wales (Chart 3).[7]

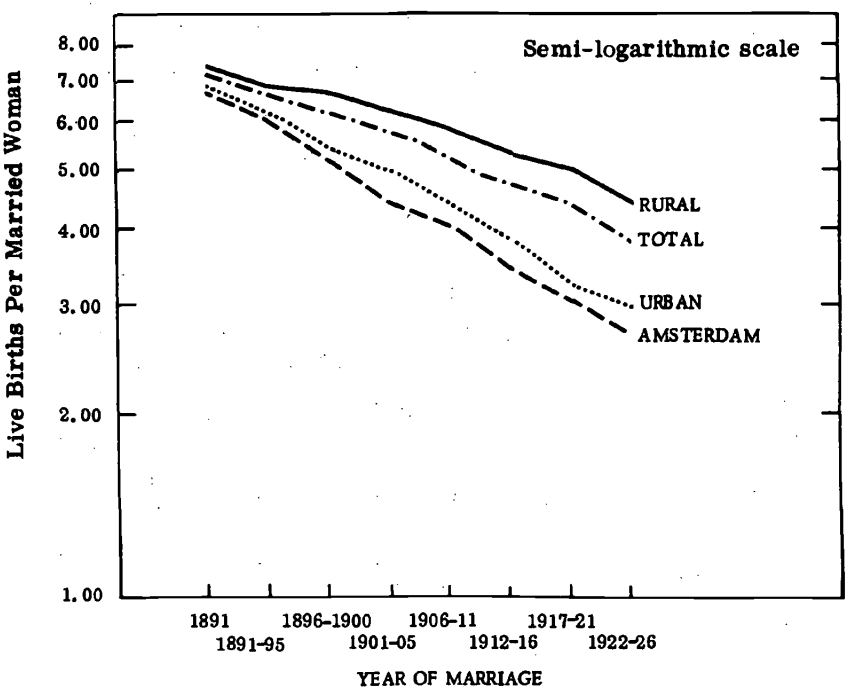
The differentiation of broad occupational classes was also well developed in the Netherlands at the turn of the century, as may be observed from information on completed family size for marriages contracted from 1891 and earlier to 1922–1926. From the standpoint of cohort fertility, the

[6] T. H. C. Stevenson, "The Fertility of Social Classes in England and Wales from the Middle of the Nineteenth Century to 1911," *Journal of the Royal Statistical Society*, London, Vol. LXXXIII, Part III, May 1920, pp. 401–432.

[7] Frank W. Notestein, "Class Differences in Fertility," *Annals of the American Academy of Political and Social Science*, Vol. 188, November 1936, pp. 26–36.

CHART 2

Average Family Size after Twenty and More Years of Marriage, Women Married 1891 to 1926, by Urban and Rural Residence, the Netherlands (age of wife at marriage, 25 and under)



Source: Adapted from a chart by T. Van Den Brink: op. cit., p. 751.

development of the inverse relationship was not complete until the termination of the reproductive span of couples married during 1896–1900. Chart 4 illustrates the number of live births per marriage in existence more than 20 years at the census of 1947 and in which the wife was under 25 years of age at marriage.[8]

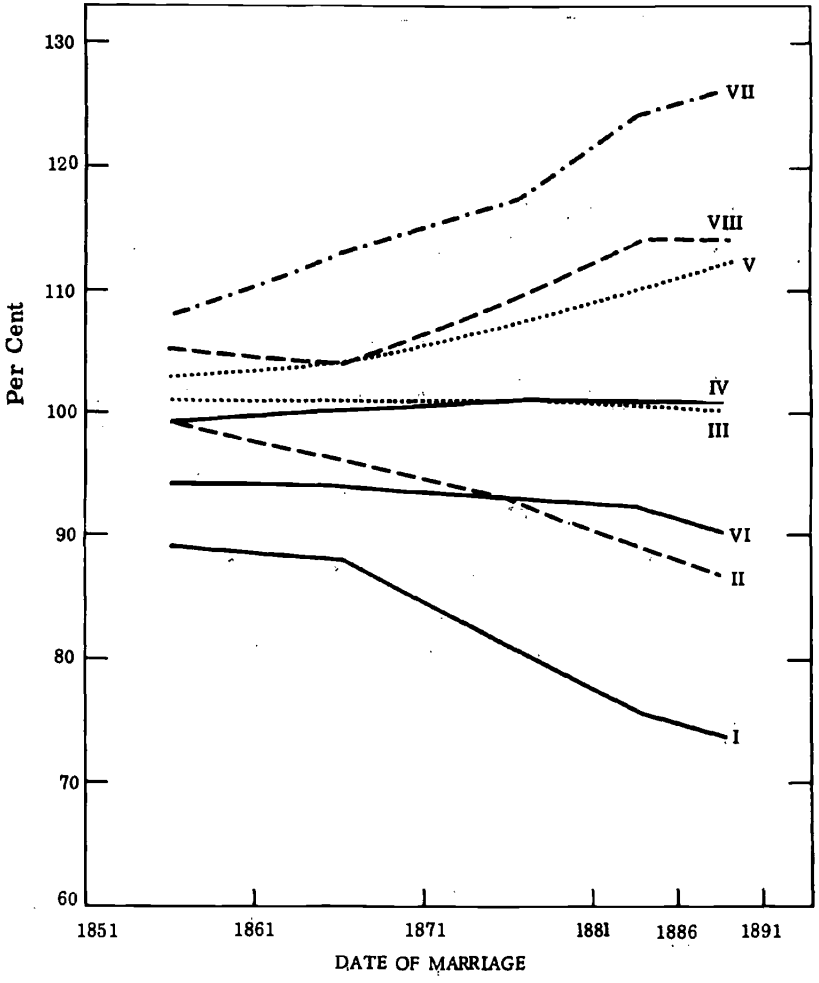
Data are not available to show the early development of this relationship in other European countries. However, the results of a survey carried out in Poland in 1948 (Chart 11, below) provide evidence of a *positive* association of fertility with economic status among peasant Polish

[8] T. Van Den Brink, "Levelling of Differential Fertility Trends in the Netherlands," World Population Conference, 1954, *Papers*, Vol. 1, United Nations Publications, 1955, pp. 743–752.

CHART 3

Development of Inverse Relation between Fertility and Socio-economic Status in England and Wales, during the Last Half of the Nineteenth Century

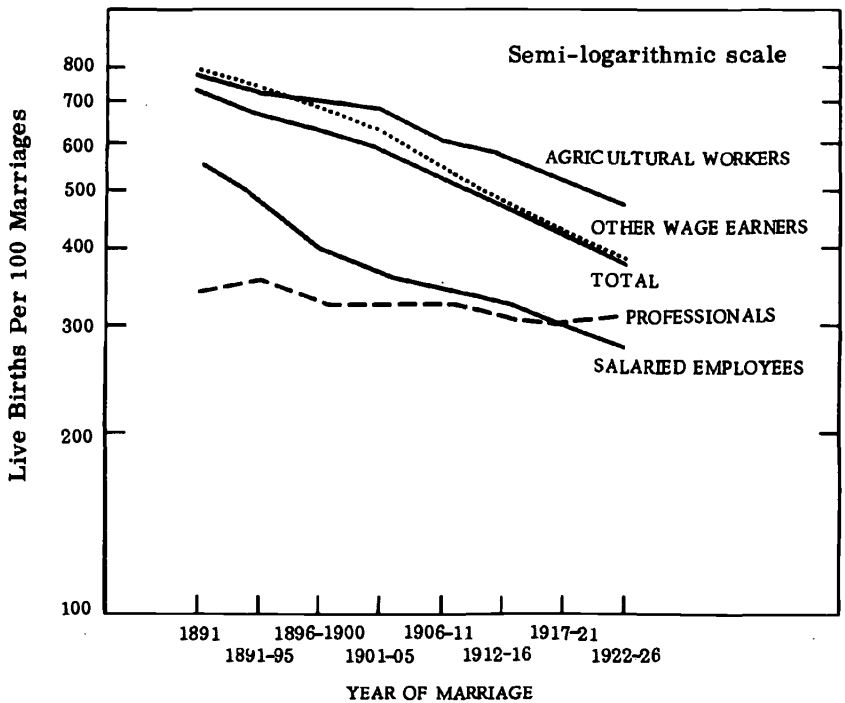
I. Upper and middle class
II. Intermediate between I & III
III. Skilled workers
IV. Intermediate between III & V
V. Unskilled laborers
VI. Textile workers
VII. Miners
VIII. Agricultural workers



Source: Reproduced from a chart by Frank W. Notestein: "Class Differences In Fertility", Annals of the American Academy of Political and Social Science, Vol. 187, September, 1936, p. 27.

CHART 4

Number of Live Births per Hundred First Marriages, in Marriages of Twenty and More Years Duration, by Occupation of Husband and Year of Marriage, Netherlands, Census of 1947
(age of wife at marriage, under 25 years)



Source: Adapted from a chart by T. Van Den Brink: op. cit., p. 751.

women prior to 1900.[9] The finding of immediate interest was that, among farm women born during the years 1855–1880 the average number of children increased consistently with increased size of the farm.[10]

[9] W. Stys, "The Influence of Economic Conditions on the Fertility of Peasant Women," *Population Studies*, London, Vol. XI, no. 2, November 1957, pp. 136–148. This study was based upon a survey carried out in twenty villages in Southern Poland in 1948. The data are shown in Chart 11, below.

[10] The author states that the number of women born between 1855 and 1880 and surviving at the time of the survey was small and was combined in a single age-group, in order to obtain numbers sufficiently large to permit subdivisions by size of family. He claims that the use of such a broad age group does not distort the relation of family size to size of farm, because older women did not practice birth control, and adds that, "The difference in fertility between the richest and poorest women caused by age differences amounted only to 2.74%" (*ibid.*, p. 138).

Patterns and Trends since 1900

URBAN-RURAL DIFFERENTIALS

The differentiation of urban and rural inhabitants by the level of their completed fertility was generally more pronounced after the turn of the century than previously (Charts 1 and 2). Throughout the period, the average completed family size of couples living in small towns more nearly approximated that of city residents than rural inhabitants. Current fertility is perhaps more aptly reflected by ratios of children under 5 to women of childbearing age. The trouble is that fertility ratios are affected by birth spacing and, as used here to describe differential fertility, by the difference between urban and rural areas in rates of child mortality. In addition, trends which they describe do not necessarily indicate the trends in completed family size. However, for what it is worth, Chart 5 shows the sharper decline in children under five per 1,000 women aged 20–24 in urban areas up to the mid-1930's in Denmark and Sweden and the constancy of the differential in England and Wales from 1890 to 1931.

In Denmark and Sweden, the downward trend is characterized by differing rates of decline resulting in a broadening of the differential, while the period of increasing fertility is marked by differing rates of increase resulting in a contraction of the differential. In both countries, the sharper decline and the more pronounced increase occurred in urban areas. This holds for England and Wales only with regard to the period of increasing fertility.

Trends in the urban-rural differential in Switzerland more nearly approximate the situation in Denmark and Sweden, except that the postwar increases in fertility were minor in cities and barely evident in the rest of Switzerland. However, the downward trend is marked by differing rates of rural and urban decline and, consequently, an expansion of the differential (Chart 6).

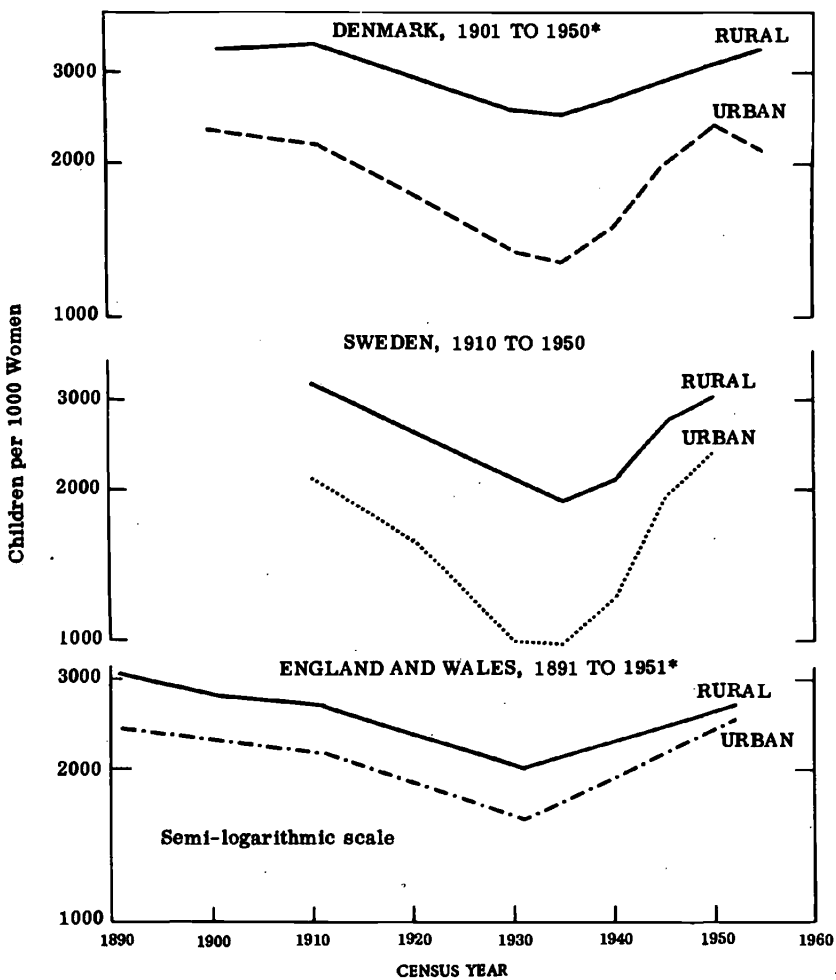
RELIGION

It is unfortunate that the recent censuses do not provide data adequate for a discussion of trends in fertility differences among language, nativity, and religious groups in the countries where important divisions exist, particularly Belgium, Germany, and Switzerland.[11]

[11] Most of the available data on recent patterns and trends in these countries are in the following sources: Switzerland: Kurt B. Mayer, *The Population of Switzerland*, Columbia University Press, 1952, 366 pp., and Mayer, "Cultural Pluralism and Linguistic Equilibrium in Switzerland," *American Sociological Review*, Vol. 16, no. 2, April 1951, pp. 157–163. Germany: Statistik der Bundsrepublik Deutschland, *Die Bevolkerung der Bunds-*

CHART 5

Number of Children under Five per Thousand Women Twenty to Twenty-Four Years Old, by Urban and Rural Residence, Denmark, Sweden, and England and Wales at Given Census Dates, 1890–1955



* Adjusted for changes in administrative definitions of urban and rural areas.

Sources: Official publications of the census and statistical offices of the countries concerned.

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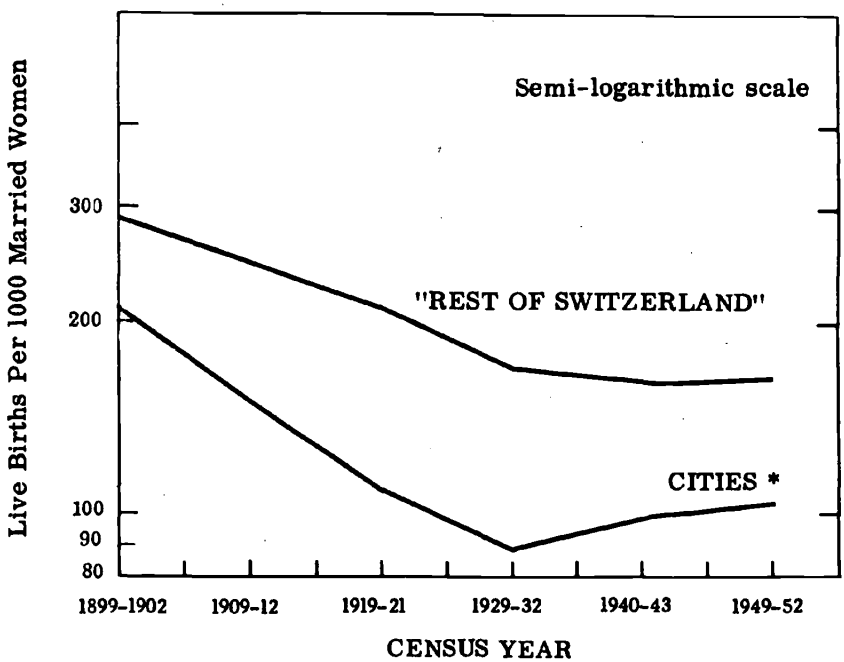
republik Deutschland Nach der Zahlung vom 13 Septembre 1950, Heft 9, Textheft, Stuttgart-Köln, 1956, 117 pp. Belgium: Institut National de Statistique, *Recensement général de la population, de l'industrie et du commerce au 31 décembre 1947*, Vol. 7, Recensement des familles, Brussels, 1951, 131 pp.

CHART 6

Number of Live Births per Thousand Married Women Aged Fifteen to Forty-Four Years by Urban and Rural Residence in Switzerland, at Census Periods, 1899–1902 to 1949–1952



*Cities of 30,000 and more inhabitants in 1951.

Source: Switzerland. Bureau Fédéral de Statistique, Annuaire Statistique de la Suisse 1955, Bern, 1956, p. 99.

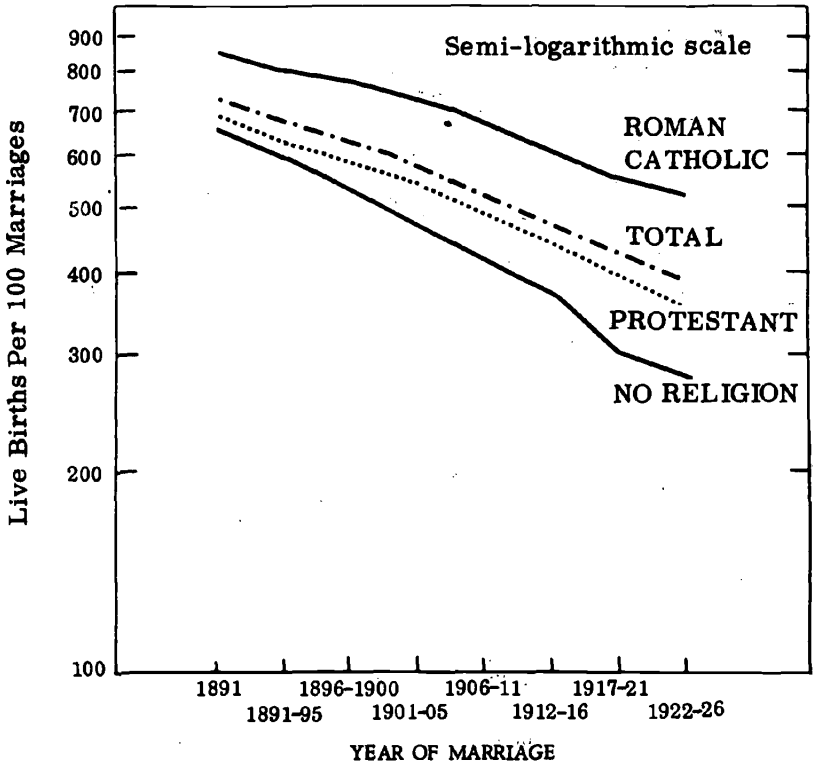
Two studies based on returns from the 1947 census of the Netherlands disclose interesting aspects of the religious differential in that country.[12] Chart 7 shows for the major religious divisions the completed family size of marriages contracted from 1891 and earlier to 1922–1926. Two noteworthy features are apparent. First, in marriages of 1891 and earlier there is a clear differentiation among religious groups by the level of their completed fertility, especially between Catholics and women professing no religion. In addition, the differences in completed family size are more pronounced in each successive cohort; the net decline over the

[12] T. Van Den Brink, *op. cit.*, pp. 743–752 and P. de Wolfe and J. Meerdink, "La fécondité des mariages à Amsterdam selon l'appartenance social et réligieuse," *Population*, 12e année, no. 2, Paris, April–June 1957, pp. 289–318.

CHART 7

Number of Live Births per Hundred First Marriages of Twenty and More Years Duration, by Religion of Wife and Year of Marriage, Netherlands, Census of 1947

(age of wife at marriage, under 25 years)



Source: Adapted from a chart by T. Van Den Brink: op. cit., p. 751.

period for Catholics, Protestants, and those "without religion" amounted to 39, 48, and 59 per cent, respectively.

For information on more recent trends, it is necessary to examine marriages of incomplete fertility, in this case, marriages of 9 to 18 years duration (Table 1). These data suggest that the differentials are decreasing. However, they may be somewhat misleading as to trends, for patterns of family building vary among religious groups.

De Wolfe and Meerdink show that during the period 1948–1955 Catholics tended to have their first children within a shorter period after marriage (excluding pre-marital conceptions) and subsequent births

occurred at closer intervals than was the case with non-Catholics.[13] On the other hand, the interval between marriage and births of first and second order increased among Catholics after 1948. The behavior of Calvinists was similar, but their fertility appears to be falling more slowly than that of Catholics.

TABLE 1

Indexes of Live Births per 100 First Marriages in Cohorts of Incomplete Fertility by Religion and Year of Marriage in the Netherlands and the City of Amsterdam, 1947
(Catholic rate = 100)

Year of Marriage	*The Netherlands*			*Amsterdam*		
	Calvinist	Reformed	No Religion	Calvinist	Reformed	No Religion
1924–28	86	62	51	88	63	62
1929–33	88	64	52	99	68	64
1934–38	91	69	58	97	73	67

Fertility rates for Jewish marriages were not included in the source of information.
Source: de Wolfe and Meerdink, *op. cit.*, p. 299.

EDUCATIONAL STATUS

The level of fertility among the better educated classes is above that of the general population in England and Wales, and in Sweden. This is not to say that among all married women or men in these countries reproduction is directly related to the extent of their education; data that would yield information on the family size of each educational class are not available. However, two recent studies make possible a comparison of the fertility of university graduates with that of the general population in these countries.

Table 2 compares the average family size in 1952 of a sample of women graduates of ten colleges and universities with that of the general population of Great Britain at the census of 1951.[14] It clearly indicates the tendency of better-educated women to have larger families. For example, where age at marriage was 25–29 years, the average family size among graduates after 5–6 years of marriage was equal to that of all British women in marriages of 15–24 years duration. This particular example

[13] *Op. cit.*, pp. 301–315.

[14] Judith Hubback, "The Fertility of Graduate Women," *The Eugenics Review*, Vol. 27, no. 2, July, 1955, pp. 107–113. This study of 1,165 graduates of 10 colleges and universities in Oxford, Cambridge, London, Durham, and Birmingham was carried out in 1952. It was not originally intended as a demographic study, but considerable demographic information was obtained. Questionnaires were used to render the original data suitable for fertility analysis. Three-fourths of these were sent to Oxford, Cambridge, and Durham.

may merely point up the proportionately greater contribution of the graduates to the recent increase in the birth rate, particularly those in marriages of less than ten years duration in 1952.[15] But it will be noted that their fertility is higher in marriages of all durations and for all ages at marriage. In her discussion of the material, Hubback pointed out

TABLE 2

Average Family Size of Graduate Women and of All British Women, by Age at Marriage and Duration of Marriage, Great Britain

Groups	*Duration of Marriage in Years*			
	5–6	7–9	10–14	15–24
Age at marriage under 24				
Graduates	1.9	2.0	2.6	2.8
All British women	1.5	1.7	2.1	2.6
Age at marriage 25–29				
Graduates	1.7	2.4	2.3	2.6
All British women	1.3	1.5	1.7	1.7
Age at marriage 30–34				
Graduates	1.3	1.6	1.8	—
All British women	1.2	1.3	1.3	—

Data for the graduates related to the year 1952. Material for all British women was taken from the 1951 One Per Cent Sample Census of Great Britain.

Source: Judith Hubback, *op. cit.*, p. 110.

that in marriages of less than five years duration graduate fertility is below that of other marriages of comparable duration. Thereafter, as a result of the making up of births postponed during early years of marriage, the average family size of the better-educated women uniformly exceeds that of the general population.

A recent Swedish study provides information on the average family size of married males who reached at least matriculation standard and on certain occupational groups, subdivided according to level of education.[16] Among employers and officials living in towns in 1935–1936 and

[15] Of course, the relative contribution that each population subgroup makes to the level of a country's fertility depends not only upon "group-specific" fertility, but also upon proportions married among women of childbearing age in each group. However, this aspect of the problem is not discussed here in detail, as the aim of the study is to determine group differences in fertility levels and trends, rather than the factors responsible for levels and trends in the fertility of the different countries.

[16] Sven Moberg, "Marital Status and Family Size Among Matriculated Persons in Sweden," *Population Studies*, Vol. IV, no. 1, June 1950, pp. 115–127. The basic data on marital status, number of children, and income of males who matriculated as students in 1910 and 1920 were taken from official population and tax registers and questionnaires.

who had been married 0–20 years, average family size is lowest for those who had no more than elementary school education (1.16) and rises with increases in level of education, 1.26 for high school graduates and 1.35 children for those who reached at least matriculation standard.

Moberg found that the average family size of Swedish men who matriculated in 1920 was above that of the general married male population of comparable age and that, while the data for men who matriculated from 1910 to 1930 indicate an increase in fertility, a decline occurred among non-matriculated males of similar ages.[17]

A particularly interesting feature of the material from the last Netherlands' census (Table 3) is that, among all first marriages existing in 1947,

TABLE 3

Live Births per 100 First Marriages by Education of Husband and Year of Marriage in the Netherlands, 1947. Age of Wife at Marriage 25 to 29 Years

Year of Marriage	*All First Marriages*	*Male University Graduates*	*Graduates as Percentage of Total*
A. Complete Fertility			
Before 1914	434	297	68
1914–18	371	285	77
1919–23	338	277	82
1924–28	324	280	86
B. Incomplete Fertility			
1929–33	309	288	93
1934–38	266	263	99
1939–43	185	188	102

Source: The Netherlands: Central Bureau voor de Statistiek, *12e Volkstelling, annex woningtelling 31 Mei 1947*, Deel 4. Statistiek der bestaande huwelijken en van de vruchtbaarheid dezer huwelijken (Statistics of Existing Marriage and Marital Fertility), Utrecht, 1951, pp. 114, 138.

Background data for those who matriculated in 1930 were obtained from the census of 1935–1936. The range in the per cent distribution of all males matriculating as students from 1910 to 1943 according to social status of father was as follows: Upper class, 32–36 per cent; Middle class, 41–48 per cent; Lower class, 17–22 per cent; Unknown, 1–2 per cent. At the time of the investigation the percentage married among the former students was higher than among all urban males and, 16 years after matriculation, at an average age of 36, there was a higher percentage married among the students of 1920 and 1930 than among all Swedish males of comparable age.

According to Moberg, ". . . the matriculation examination is generally taken at the age of 18–20 after 12 or 13 years of regular school attendance." It is required for entrance into the universities. During the period 1941–1945, approximately 5.1 per cent of all males and 2.8 per cent of all females aged 20 years passed the examination annually.

[17] *ibid.*, p. 123. The findings from this study are, on the whole, in keeping with the patterns and trends outlined in an early work by Karl A. Edin and Edward P. Hutchinson. See their *Studies of Differential Fertility in Sweden*, P. S. King & Son, Ltd., London, 1935.

the ratio of the fertility of male university graduates to that of all Dutch marriages increases in each successive marriage cohort, beginning with marriages of 1914 and earlier. Finally, in the youngest cohort, the graduates achieved an average family size slightly *above* the average for the Netherlands; the figures are 1.88 and 1.85, respectively. In view of the general trend suggested by the comparative behavior of the two series of cohorts, it is not unreasonable to assume that the slight reversal of relationship observed in the 1939–1943 cohort is indicative of what may be a lasting change in the relationship between fertility and higher education, and that it is not merely a matter of differential spacing or making up of postponed births during the recent recovery of the Netherlands' birth rate.

In Sweden, England and Wales, and the Netherlands, fertility rates of the better-educated class are clearly above the average rates for these countries. The question remains, to what extent are the differentials between those with higher education and the remainder of the population due to differences in group composition as regards socio-economic status, religion, and so forth, and to fertility differences between these substrata? There are virtually no data on this subject. Moberg has given the most recent information for Sweden for the census period 1931–1935. Although it does not meet the specifications outlined above, it at least shows the combined effects of income and education for an urban occupational group upon the level of fertility.

Table 4 gives the average number of live births per marriage for employers and officials living in towns by their educational status and level of family income, Sweden 1935–1936. The rates are standardized

TABLE 4

Average Number of Live Births by Level of Education and Income for an Urban Occupational Group in Sweden 1935–1936
(duration of marriage between 1 and 20 years)

Income Class (family income) *Thousands of Kroner per Year*	*Employers and Officials in Town Educational Group:* A	B	C
0–3	1.44	1.24	1.18
3–5	1.30	1.26	1.22
5–10	0.91	1.19	1.38
10 and over	0.97	1.36	1.61
Standardized[a]	1.16	1.26	1.35

[a] Differences in distribution due to income and marriage duration eliminated.
Source: Moberg, *op. cit.*, p. 124.

for differences in distribution by income and marriage duration. Among the group with primary education or less (Group A), family size is inversely related to income. In the group of average education, that is, above elementary but below matriculation (Group B), there is no apparent relationship. However, among men who had reached at least matriculation standard (Group C), there is a clear-cut positive correlation of income with family size.[18]

Data for the latter group may be compared with information for men (of all occupations) who matriculated as students in 1910, 1920, and 1930 (Table 5). The patterns are identical, although at all income levels

TABLE 5

Average Number of Live Births and Indexes of the Average Number of Live Births by Income–Male Students Matriculated in Sweden in 1910, 1920, and 1930

Income Class (husband's income) *Thousands of Kroner Per Year*	*Average Number of Live Births* Year of Matriculation[a]		*Indexes of the Average Number of Live Births* (all classes = 100) Year of Matriculation		
	1910	1920	1910	1920	1930
0–9	1.61	1.91	83	90	90
10–14	2.06	2.07	99	94	102
15–19	2.11	2.23			
20–29	2.20	2.47	102	105	117
30–39	2.63	2.83	114	121	
40 and over	2.39	2.86	109	119	
All classes	2.12	2.28	100	100	100

[a] Rates for men who matriculated as students in 1930 were not given in the source.
Source: Moberg, *op. cit.*, p. 125.

fertility is higher among the former students. Upon further observation of Table 4, another striking feature may be observed; for the two lower income groups fertility is *inversely* associated with level of education. In the two upper income groups, the relationship is strongly in the opposite direction. Thus, for the poorer classes gains in education depress fertility,

[18] Findings from the Edin and Hutchinson material were contradictory: This study of family size among 6,629 Stockholm families in 1917–1922 showed a modest positive association of fertility with income in the lower educational group (A), a sharper one for the group of average education (B), and a somewhat erratic one for the group of higher education (C plus D). However, in Moberg's study employers and officials in towns were a select occupation group, and the Stockholm families were not. When Edin and Hutchinson controlled age of wife at marriage and used broad income classes, higher income was associated with larger families in all education groups (*ibid.*, pp. 78–80).

whereas, in middle-income and wealthier classes, educational advances have a positive effect. As these data relate to family income, differences between income classes in the employment of the wife must be taken into consideration.[19]

OCCUPATION STATUS

The changes in the magnitude of differences in fertility between occupation groups in England and Wales, France, the Netherlands, and Norway since 1900 have been rather dissimilar, although in each of these countries an *inverse* association of fertility with status has until recently been fairly clear. In the Netherlands, the general fertility decline was accompanied by a gradual reduction of differences in completed cohort fertility. There was a similar tendency in Great Britain, particularly England and Wales, although here the evidence is less conclusive. In France, on the other hand, occupational differences in paternity rates for males aged 45–54 in 1946 were slightly more pronounced than those for males aged 50–59 in 1911. A similar trend was observed in Norway, where status groups have become, on the whole, more strongly differentiated in terms of their completed marital fertility. (The details are in Tables 6, 7, and 8, and Charts 4 and 8.)

It is plain that limited comparability both as to measures of fertility and as to classifications of occupations considerably complicates the manipulation and the interpretation of the data; it may, in fact, conceal similarities as well as differences in actual trends. The material is perhaps best examined separately for each country.

Information provided by the British family census of 1946 (Chart 8) shows that, in post-1900 marriage cohorts of completed fertility in England and Wales the smallest proportionate declines occurred among professionals and laborers, occupational groups which among marriages of 1900–1909 exhibited the extremes of behavior with respect to ultimate family size.[20]

The more noteworthy features are the reversals in the relative positions of professionals and salaried employees and of workers on own account and nonmanual wage earners in the 1920–1924 cohort. When the nine status categories were grouped into nonmanual and manual workers it

[19] The earlier study of Swedish fertility by Edin and Hutchinson gave evidence that employment status of wife was not related to the direction of the relationship between family size and income of husband within education groups A, B, C, and D (*ibid.*).

[20] The Royal Population Commission, *Papers*, Vol. VI, The Trend and Pattern of Fertility in Great Britain: A Report on the Family Census of 1946, by D. V. Glass and E. Grebenik, Part I, Report, HMSO, London, 1954, chs. I–VII.

TABLE 6

Indexes of the Number of Live Births per Woman First Married in 1900–1909 and 1920–1924 by Occupational Status of Husband, Great Britain, 1946

Occupational Status of Husband			*All Categories—100*		
			1900–1909 Cohort	1920–1924 Cohort	*1920–1924 as Per Cent of 1900–1909*
Non-manual	I	Professional	66	72	75
	II	Employers	75	76	70
	III	Own account	84	81	66
	IV	Salaried employees	67	68	70
	V	Non-manual wage earner	82	81	68
	VI	Farmers and farm managers	99	95	66
Manual	VII	Manual wage earners	112	112	68
	VIII	Agricultural workers	110	112	70
	IX	Laborers	126	138	75
Non-manual			80	79	68
Manual			116	112	69
All categories			100	100	69

Source: The Royal Population Commission: *Papers*, Vol. VI, The Trend and Pattern of Fertility in Great Britain: A Report on the Family Census of 1946, by D. V. Glass and E. Grebenik, Part I, Report, London, HMSO, 1954, p. 5.

TABLE 7

Indexes of the Average Number of Births per Married Male by Occupational Group and Age at Census, France, 1911 and 1946

Occupational Group	*All Classes—100*		
	Males Aged 50–59 in 1911	Males Aged 45–54 in 1946	*1946 as Per Cent of 1911*
I Miners, transport workers, and agricultural laborers	118	136	95
II Farmers	108	126	95
III Independent artisans, minor employers	98	91	76
IV Subordinate employees in industry and transport	97	95	80
V Subordinate among soldiers, police, etc.	92	97	86
VI Managers and owners of small businesses, professionals, public officials	92	85	76
VII Shopkeepers	82	83	83
VIII Civil servants	79	81	84
IX Employees in business and commerce (white collar)	70	70	82
All Classes	100	100	82

Source: M. Febvay: "Y-a-t'il un nivellement graduel des écarts observé jusqu'ici dans la fécondité des groupes distincts de population," World Population Conference 1954, *Papers*, Vol. I, New York, United Nations Publications, 1955, p. 610.

TABLE 8

Indexes of the Number of Children in Marriages of 18 and More Years Duration by Occupation of Husband. Age of Wife at Marriage 24 and 25 years. Norway Censuses of 1920, 1930, and 1950.

Occupation of Husband	*All Classes—100*			*1950 as Per Cent of 1920*
	1920	1930	1950	
A. Agriculture				
I. Workers in agriculture	107	114	116	64
II. Farmers	105	111	125	70
B. Industry				
III. Factory workers	101	94	82	48
IV. Owners of small businesses, retail dealers	90	84	83	54
V. Business and commercial clerks	82	75	69	49
VI. Factory owners, wholesale merchants, etc.	80	79	79	58
C. Professions and Government				
VII. Workers	94	86	70	44
VIII. Working on own account, officials in superior service, etc.	63	63	79	73
All Classes	100	100	100	59

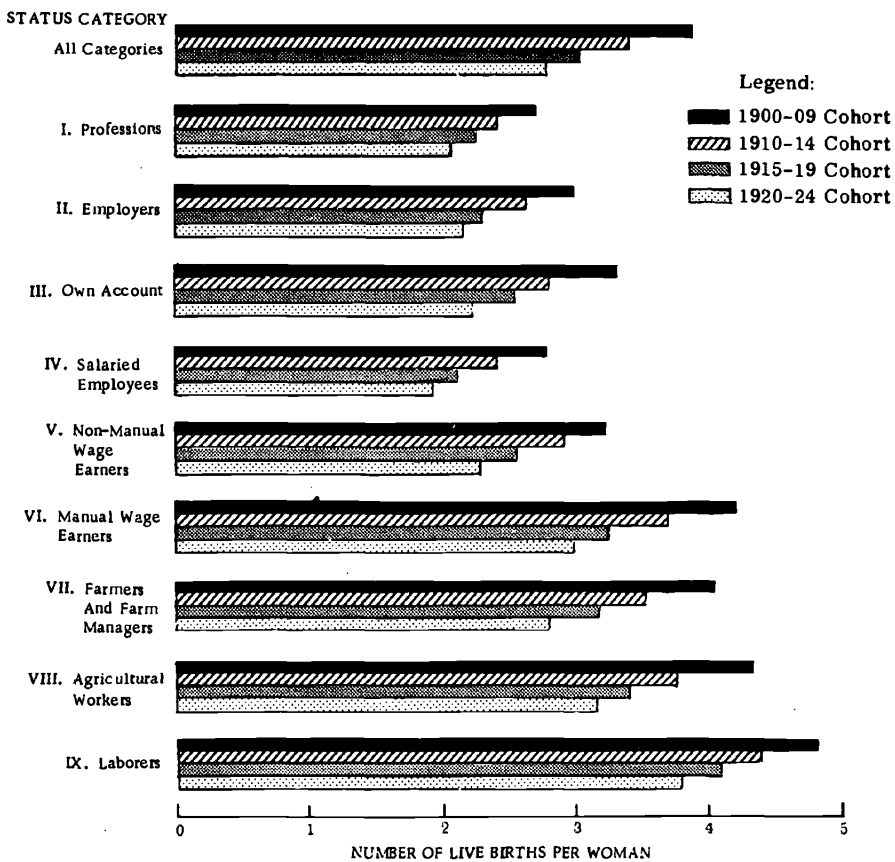
Source: Norway, Statistiske Sentralbyrå, *Folketellingen 1 December 1950*, Femte hefte, Barnetallet i norske ekteskap, Vol. v, Fertility of Norwegian Marriages, Oslo, 1957, pp. 36–37.

was seen that the fertility differential between broad classes had been very stable; the completed fertility of the manual group ranged from 41 to 43 per cent above that of nonmanual workers in all marriages contracted from 1900–1909 to 1920–1924.

Evidence of a widening of differences in paternity rates between occupation groups in France in 1946 as compared with 1911 may be observed in Table 8. Actually, this is primarily a matter of the further separation of the high fertility groups I and II from the remainder. The percent decline in their rates was very small, while that of some other groups, including independents, small owners, artisans, professionals, public officials, and the like, amounted to as much as one quarter. The association of fertility with status is not clear-cut, at least not uniformly inverse, either in 1911 or in 1946, but this may arise at least in part from some of the rather refined distinctions between types of occupations. In view of this and of the small size of the average completed family in France in 1946 (2.00 live births per married male aged 45–54), it is remarkable that the differentiation is as pronounced as it is.

CHART 8

Number of Live Births per Woman, by Social Status of Husband and Year of First Marriage, Great Britain, Census of 1946 (age of wife at marriage, 20 to 24 years)



Groups I - V, VII: Non-Manual
Groups VI, VIII, IX: Manual

Source: Royal Commission on Population: Papers, Vol. VI, The Trend and Pattern of Fertility in Great Britain, A Report on the Family Census of 1946 by D.V. Glass and E. Grebenik, Part I: Report, London, HMSO, 1954, p. 115.

As for patterns and trends in completed family size in the Netherlands (Chart 4) since 1900, two facts are worth noting: (1) the increasing rate of decline among agricultural workers and other wage earners and the constancy of average completed family size among the professionals, of which the combined result is a contraction of the differentials, and (2) the reversals of the positions of professionals and salaried employees in the two youngest cohorts.

The increased differentiation since 1920 of occupation groups in Norway with respect to their completed family size was pointed out earlier. The principal features of this trend are the relatively slow rates of decline among groups in agriculture and the rapid decreases that took place among white collar workers, that is, business and commercial clerks and workers in the professions and government. The figures are given in Table 8. As in Great Britain, the range of variation in completed family size within the intermediate groups (III–VII) narrowed somewhat in 1950. Further, the completed fertility of higher professionals and government officials increased in proportion to the national average. However, groups at either extreme are more widely separated than previously. More important, perhaps, is the number of reversals in the positions of groups with respect to their completed fertility at the census of 1950. The number of changes is such that the previous negative association of family size with occupational status has been significantly modified.

It has been seen that in England and Wales, France, and Norway the range of variation in family size within the higher-status category has narrowed. From this standpoint, a contraction of the differentials has taken place. However, the rate of decline in fertility among agricultural groups, (and, in France and England and Wales, also among non-agricultural groups of low status) has been at so slow a pace that there is now a more pronounced differential between these groups and the remainder of the occupational classes.

In recent cohorts, the completed fertility of professionals has increased in relation to the average in each country, except France, and in all four countries this occupational group no longer has the fewest children per couple. The smallest families are now found among civil servants and other white collar workers. In fact, the available data suggest that the inverse association of completed fertility with occupational status in advanced European countries may no longer be regarded as the customary pattern.

As has often been noted, the decline in family size began among the

well-to-do, the urban and the educated; these groups were the first to adopt the rational attitudes towards fertility needed to utilize means of fertility control and to offset the effects of the decline in mortality. The poorer, the less-urbanized, and less-educated elements of the population followed this lead, but apparently after a considerable time lag. It is possible, therefore, that the negative association of fertility with socio-economic status may be characteristic only of periods of demographic transition, from high to low fertility, from uncontrolled to controlled family size. It may be that when urban and upper class attitudes and practices have completely permeated all areas and all strata of society, differentials in fertility will either vanish or shift so that the relation of fertility to status will become a positive one.

Patterns and Trends During the Recovery of the Birth Rate

The recent recovery of the birth rate in the industrialized countries of Europe has given rise to much speculation as to its implications for fertility differences between socio-economic classes and between urban and rural inhabitants. Unfortunately, good data on the patterns and trends in the fertility differentials during this period are scant. The available material permits only a limited discussion of the situation in a few countries.

Differences in the trends in urban and rural fertility ratios during the recovery of the birth rate may be observed for four countries in Charts 5 and 6. The ratios suggest that the rise in fertility began in urban areas and that it was generally more pronounced among urban inhabitants.

The long-standing inverse association of fertility with size of community continues to prevail in France, Denmark, and Sweden. However, in Great Britain at the census of 1951 the relationship was rather weak, especially for younger marriages. In France, in the census year 1946 there was a pronounced inverse relation; gross reproduction rates were 1.23, 1.43, 1.56, and 1.66, respectively, for four classes of communities in descending order of size.[21] Bjerke found a similar pattern for Denmark and Sweden at the censuses of 1940, 1945, and 1950.[22] He observed differences in fertility between inhabitants of the capital cities and towns, and between the inhabitants of towns and rural areas. His data also showed that in Sweden the largest and second largest per cent increases in standardized birth rates per 1,000 married women of

[21] "Notes et Documents" in *Population*, 6e année, no. 2, Paris, Avril–Juin 1951, p. 352.

[22] Kjeld Bjerke, "The Birth Rate of the Rural and Urban Populations in Denmark, Finland, Norway and Sweden During the 1940's," World Population Conference 1954, *Papers*, Vol. 1, United Nations Publications, 1955, pp. 563–584.

childbearing age during the baby boom (1940 compared with 1945) took place in the capital and the towns, respectively. In Denmark, the relative increase in standardized births per 1,000 women was greater in the towns than in Copenhagen. In Sweden and Denmark, the relative increase in rural fertility during this period was smaller than that for the urban localities. In both countries the rates for all areas were lower in 1950 than in 1945, with the most pronounced per cent decreases occurring in the urban localities. On the whole, rates for the different communities were somewhat more nearly equal in 1950 than previously.

Information on occupational differentials is available for the city of Copenhagen, Denmark, for England and Wales, and for Norway, and data on fertility by level of income or property value were located for Sweden, Copenhagen, England and Wales, the Netherlands, Ireland, and Poland. The Danish Statistical Office published data on the distribution at 31 December 1948 of couples married in Copenhagen in 1939 only, by number of live-born children, occupational status of husband, and employment status of wife. Duration of marriage was at least nine but less than ten years. The data are illustrated in Chart 9, from which the following may be observed:

1. The strongest and most consistent factor is employment status of wife. For each age-group at marriage and each occupational group, childlessness is far more pronounced among the fully employed wives than among those not fully employed.

2. The effect of the age of the woman at the time of her marriage is also a consistent factor, but this point is of minor interest in the present context.

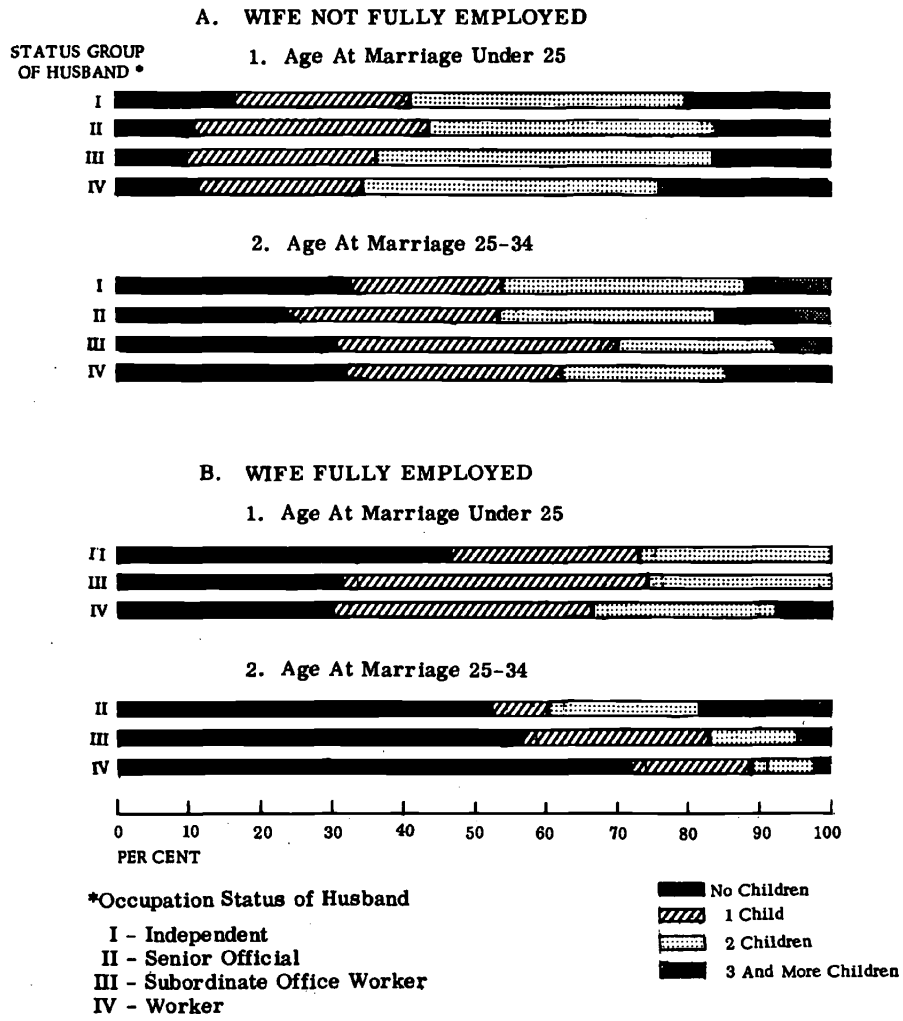
3. The differences by socio-economic status of husband are not consistent. For women married at older ages there is a slight suggestion of an inverse relation of childlessness to husband's occupational status, but among fully employed women who married under age 25 the relationship tends to be in the opposite direction. The data also suggest a limited positive association of size of family with occupational status of husband in cases where the wife was married at a relatively early age.

In England and Wales there was a modest amount of leveling of fertility differences between Social Class I (non-manual workers) and Social Class II (manual workers) in more recent cohorts, particularly couples married in 1930–1934 and 1935–1939. This contraction of group differences was due largely to fertility declines in the lower status group although slight increases were observed for Social Class I.[23] However,

[23] For details see Glass and Grebenik, *op. cit.*, p. 212.

CHART 9

Distribution of Couples Married in Copenhagen in 1939 by Number of Children, Occupation Status of Husband, Employment Status of Wife, and Age of Wife at Marriage, December 31, 1948



*Occupation Status of Husband

I - Independent
II - Senior Official
III - Subordinate Office Worker
IV - Worker

* The number of cases in Status Group I in which the wife was fully employed was too small to permit a distribution by age at marriage and number of children.

Source: Denmark, Statistiske Departement, "Frugtbarheden i og Holdbarheden at Københavnske Aegteskaber Indgaet i 1939 i Relation til Aegtefaellernes Indkomst of Erhverv", Statistisk Manedsskrift, 1955, No. 2, p. 32.

reproduction among couples married during the later period was still largely incomplete at the Family Census of 1946.

During the last twenty years the pattern of the occupational differential in Norway has been considerably modified (Chart 10). The primary concern here is with family size after 10 years of marriage, and particularly at the censuses of 1946 and 1950. This does not pose too serious a problem for the interpretation of the data, inasmuch as the major portion of childbearing takes place within the first ten years of marriage.

The occupational groups have been classified by industry, primarily because the data suggested it, and by locality of residence. One of the interesting features disclosed in this chart is that, among several groups in Oslo in 1946 and 1950, particularly those in manufacturing and commerce (the bulk of the labor force), family size is larger for couples married 10 years than for those in marriages of 17 years duration. This suggests that the recovery of the birth rate was more pronounced in Oslo than elsewhere in Norway, and it is in keeping with findings based upon the fertility ratios for Denmark, England and Wales, Sweden, and Switzerland. To return to the occupational differential in Norway, it may be observed that, on the whole, within the various industries there is no longer an inverse association of family size with status, as was the general pattern outside of commerce, at the census of 1930. In the rural districts the relation of family size to class within agriculture and within commerce has been positive for some time. Within manufacturing and within the professional occupations and public administration the behavior of the groups since 1930 has been such that, within the latter "industry" the change has been from an inverse association to a situation in which fertility has no relation to status, and within manufacturing a differentiation of groups is now hardly noticeable.

Wives of men working in manufacturing and commerce, and living in Oslo and in other towns, showed a tendency in 1950 toward a larger completed family size, and this trend is most noticeable among groups of lower occupational status and of comparatively low fertility.[24]

At the census of 1930, family size did not vary consistently with occupational status within the professional occupations and public administration in Oslo and in towns, but at the 1946 and 1950 census the number of live births per marriage of 10 and more years duration was positively associated with social class within this broad group. It is significant that

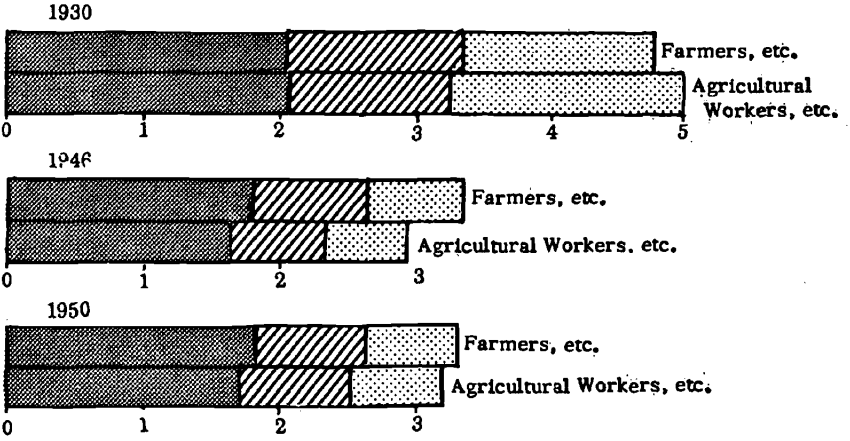
[24] The social status of occupational groups often changes over a period of time, and it seems that this is the case with artisans and factory workers. According to a Norwegian informant, artisans now enjoy a higher status than most factory workers, some clerks, and, occasionally, small business men.

CHART 10

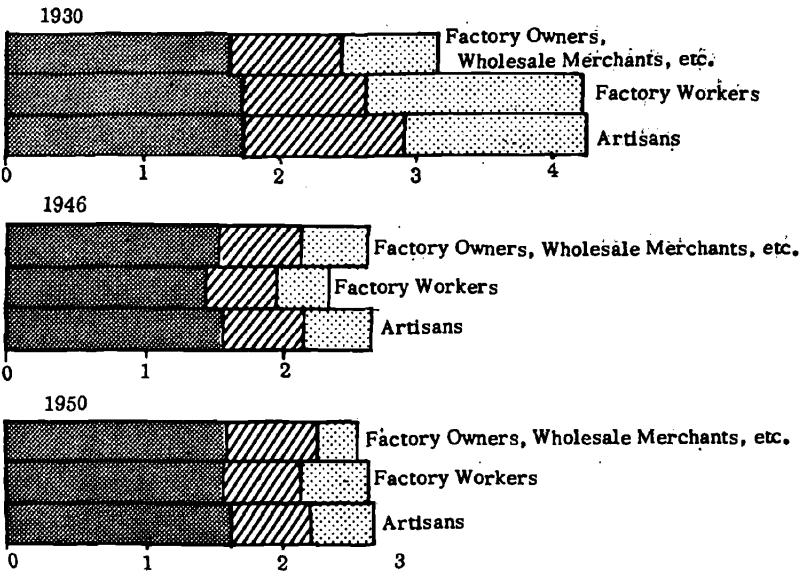
Average Number of Live Births per Marriage, by Occupation of Husband, Type of Locality, and Duration of Marriage, Norway, Censuses of 1930, 1946, and 1950
(age of wife at marriage, 20 to 29 years)

I. RURAL DISTRICTS

A. AGRICULTURE



B. MANUFACTURING

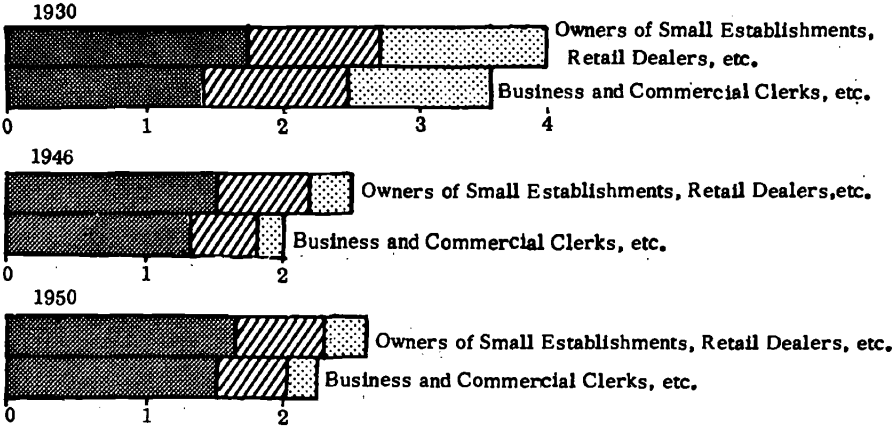


NUMBER OF LIVE BIRTHS PER MARRIAGE

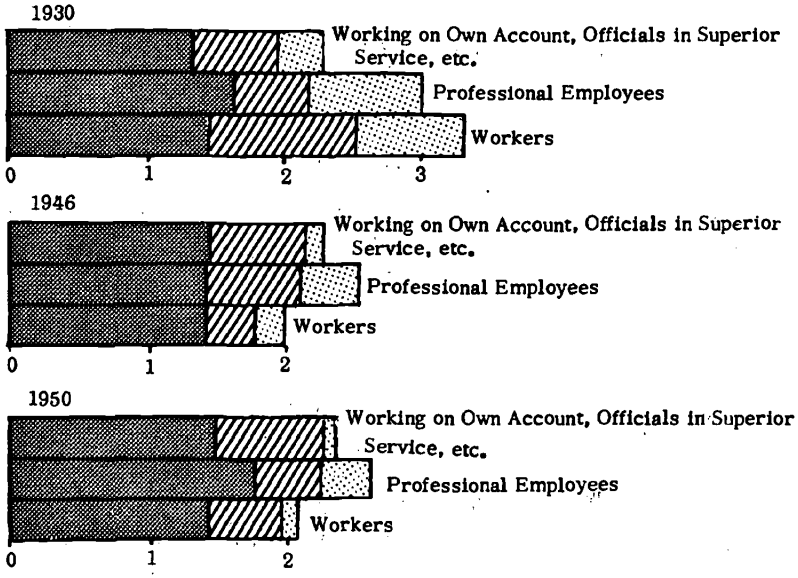
CHART 10 continued

I. RURAL DISTRICTS

C. COMMERCIAL SERVICES



D. PROFESSIONAL OCCUPATIONS AND PUBLIC ADMINISTRATION



NUMBER OF LIVE BIRTHS PER MARRIAGE

CHART 10 continued

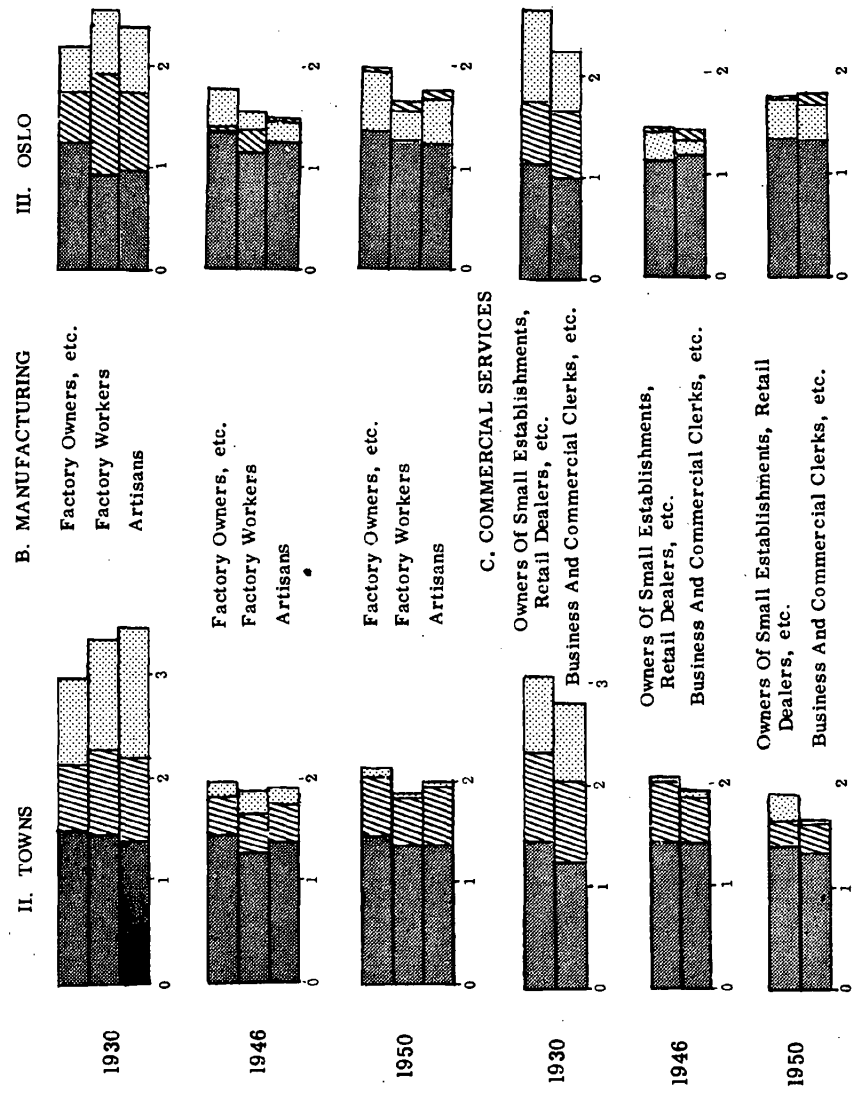
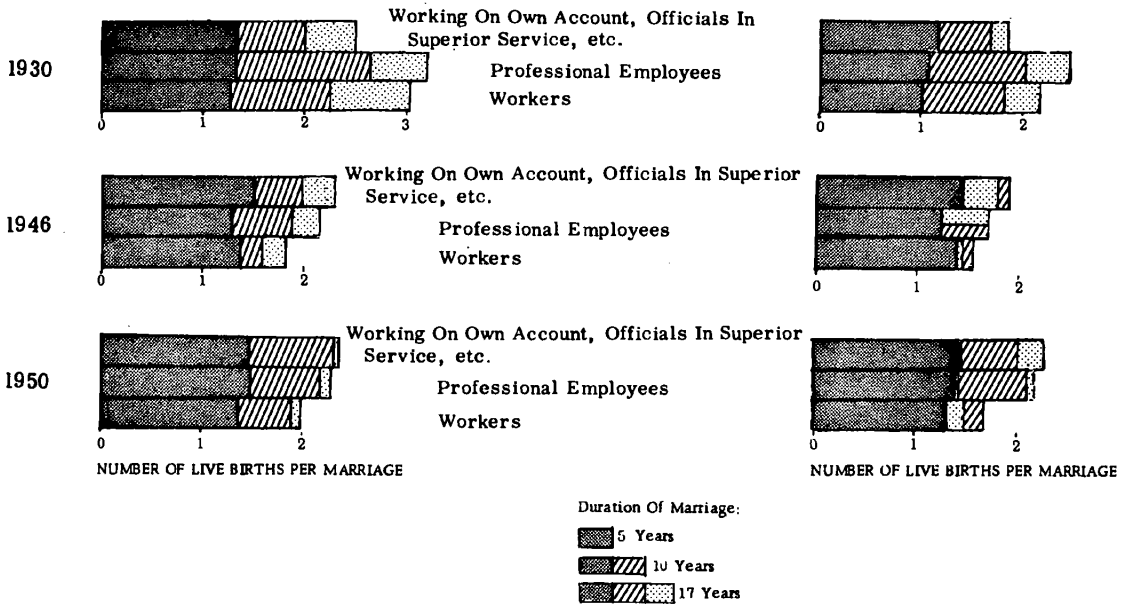


CHART 10 concluded

II. TOWNS

III. OSLO

D. PROFESSIONALS OCCUPATIONS AND PUBLIC ADMINISTRATION



Source: Norway, Statistisk Sentralbyra, Folktellingen 1, Desember 1950, Femte Hefte, Barnetallet i norske ekteskap (Fifth Volume, Fertility of Norwegian Marriages), Oslo, 1957, pp. 46-47.

the pattern of differential fertility within the professional occupations and public administration that existed in Oslo and the towns in 1930 is virtually identical with that in the rural areas in 1946 and 1950, and that the pattern in rural areas in 1930 is similar to the association of completed family size with status in towns in 1920.[25]

In four of the five industrialized countries for which data on fertility by income class or property value are available for fairly recent years, the evidence indicates that large families are more closely associated with wealth than with low income or property of low value. Unfortunately, the evidence for some of these countries is based upon fertility rates for which age of wife at marriage and/or duration of marriage are not controlled.

In urban Sweden in 1945, the average number of children per couple married during 1931–1935 was smallest for the lowest income class and

TABLE 9

Average Number of Live Births in 1945 per Marriage Contracted During 1931–1935 in Towns of Sweden by Annual Income of Husband (duration of marriage 10–14 years[a])

Annual Income ('000 Kroner)	*Live Births per Marriage*	*Per Cent Childless*
0–2	1.44	30
2–4	1.53	24
4–6	1.54	20
6–10	1.34	25
10–15	1.53	26
15 and over	1.97	26

[a] Differences in distribution of income groups by age of wife at marriage eliminated by standardization.

Source: Carl-Erik Quensel, "Familjestorleken i Skelda befolkningsgrupper," *Försäkringstidningen*, no. 7, 1954, p. 3.

increased with status up to the middle-income group, where it dropped. However, family size then increased at each succeeding income level (Table 9). Childlessness was most prevalent in the lowest income group, although it was also widespread among couples with the largest incomes.

The same positive relationship between fertility and income appears in the sample of graduate women in England and Wales mentioned earlier.

[25] The average number of children in marriages of 18 and more years in towns in 1920 where age of wife at marriage was 24 and 25 years was as follows:

Working on own account and officials in superior service	3.65
Professional employees	5.17
Workers	5.41

Norway: Statistiske Sentralbyrå, *op. cit.*, p. *36.

Among them, higher income is clearly associated with larger families (Table 10). However, the value of the material is limited somewhat by the use of family income as the index of economic status; there are likely to be differences between the income classes with respect to the employment status of the wives. The relation of the latter factor to the level of fertility was noted earlier. It is not surprising that family size is positively

TABLE 10

Average Family Size Among a Sample of Graduate Women by Gross Family Income, Age at Marriage, and Duration of Marriage, England and Wales, 1952

Age at Marriage and Annual Income (in pounds)	*Duration of Marriage in Years*			
	5–6	7–9	10–14	15–24
Age at marriage under 24				
Under £1,000	1.4	2.1	2.4	2.6
£1,000 and more	2.5	1.9	2.7	2.8
Age at marriage 25–29				
Under £1,000	1.4	2.5	1.9	2.0
£1,000 and more	1.9	2.3	2.3	2.9

Source: Judith Hubback: "Fertility of Graduate Women," *The Eugenics Review*, Vol. 47, no. 2, July 1955, p. 113.

related to income within the professional class for, as Hubback points out, couples in the professions in England, as in most countries, generally plan their families.[26] If the number of children desired is related to the couples' financial ability to rear them, then the achievement of the desired family size would be expected to effect a positive relation between completed family size and economic status.

Recent studies of patterns of differential fertility in the Netherlands, Ireland, and Poland have found family size to be directly related to wealth. These studies do not relate specifically to differential reproduction during the baby boom; they are included here mainly because their findings are among the most recent. A sample survey of income tax returns in the Netherlands in 1949 yielded data on the number of births in relation to net income of the head of the house.[27] It was found that

[26] Judith Hubback, *op. cit.*, p. 113.

[27] The Netherlands: Centraal Bureau Voor de Statistiek, *Statistische en econometrische Onderzoeringer*. 4e Kw., 1956, pp. 157–177. The average number of children per couple by net income of family head in 1949 was as follows:

Net income ('000 guilders)	Under 1	1–2	2–3	3–4	4–5	5–6
Children per couple	3.1	3.1	3.6	4.0	4.4	4.6
Net income ('000 guilders)		6–7	7–8	8–10	10–20	20 plus
Children per couple		4.8	4.9	4.5	4.2	4.0

the average number of children per couple was lowest where income was lowest and that it increased uniformly, although modestly, with income up to a certain point, thereafter declining as income increased. The trouble is that the rates were not standardized for duration of marriage and age of wife at marriage. These factors are obviously correlated with income and are at the same time known to have considerable bearing upon fertility.

The Irish material also discloses a positive relationship between fertility and wealth, but its validity is limited in the same manner as the data just described for the Netherlands. The information relates to farmers and agricultural workers in Ireland at the census of 1951 and shows that except where farms were of lowest value, family size increased with size of farm.[28] These data are subject to the further limitation that they were taken from household schedules and relate to children living at home rather than to children ever born. Other research has shown that children of poor families migrate from the farm more frequently than do those of more prosperous parents.

An investigation of children ever born per married woman by her year of birth in twenty villages in Southern Poland in 1948 also revealed a positive association of family size with size of family farm.[29] The pattern and trends are illustrated in Chart 11. The author determined that the positive correlation of fertility with size of farm was due to the earlier marriage of the wealthier girls, who bear children sooner, more frequently, and over a longer period. The noticeable leveling of the differential in the younger generation was considered to have resulted from the parceling of land to offspring and to the consequent convergence of differences in economic status between families, rather than to class differences in the practice of birth control. Some of the leveling is probably due also to the fact that reproduction among the younger women was not complete at the time of the survey.

Summary

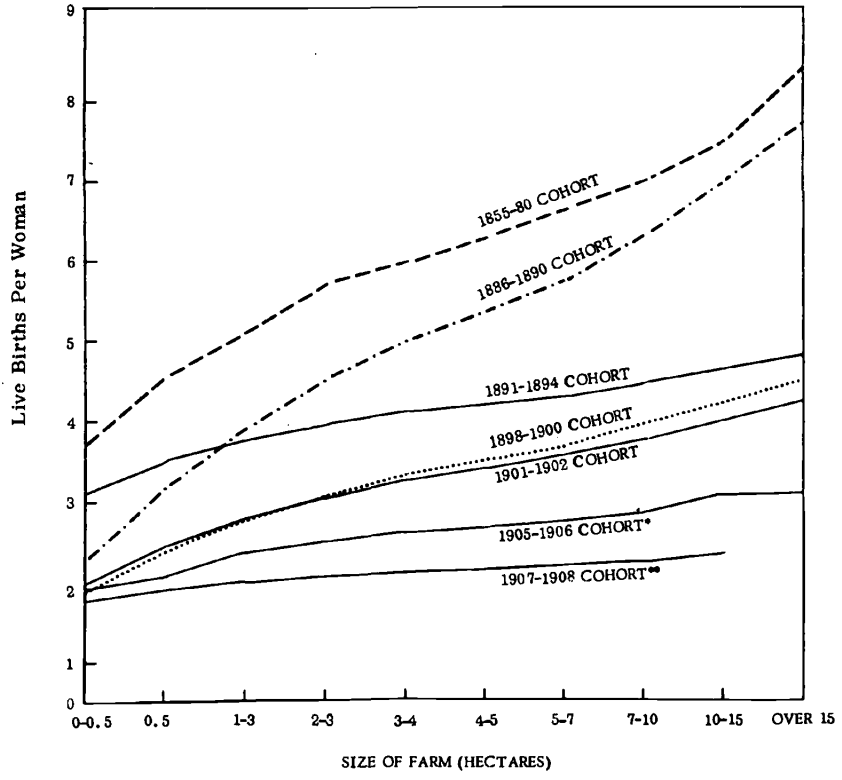
Fertility differences between the various population strata of the now industrialized countries of Europe have existed for at least a century and a half. The historical decline in the birth rate was characterized by a

[28] R. C. Geary, "The Family in Irish Census of Population," *Journal of the Statistical and Social Inquiry Society of Ireland*, Vol. XIX (1954–1955), pp. 1–27. Forty folios were selected at random from the 4,151 which contained the household schedules. The sampling unit was the folio rather than the schedule.

[29] W. Stys, *op. cit.*, pp. 136–148.

CHART 11

Average Number of Children per Married Woman, in Selected Birth Cohorts, by Size of Family Farm in Poland



*Women aged about 42-43 in 1948.

**Women aged about 40-41 in 1948.

Source: W. Stys, "The Influence of Economic Conditions on the Fertility of Peasant Women", Population Studies (London), Vol. XI, No. 2, November 1957, p. 141.

gradual development of an inverse association of fertility with socio-economic status and by a broadening of fertility differentials. Average family size became increasingly smaller in urban communities than in rural areas, and the differentiation of occupational groups became more marked.

During the long-term decline in the birth rate, the increased differentiation of groups by residence and occupational status resulted largely from differences between them in the rate of fertility decline; the contraction of group differentials that took place during the recent recovery

of the birth rate primarily reflected the higher rates of increase in fertility among groups of previously low fertility.

The often-observed inverse association of fertility with socio-economic status is still present in some, and possibly in the majority of the industrialized countries of Europe. But where it does exist, it has, with few exceptions, been significantly modified. In general, the higher professionals and the wealthier classes no longer have the smallest families; this position is now occupied by intermediate occupational groups and by married couples of average means.

Little is known directly of the relation of family size to the level of educational attainment in these countries, but according to such information as is now available, the fertility of individuals with higher education exceeds that of the general population. This pattern has existed for some years in England and Wales and in Sweden, and has recently become evident in the Netherlands.

More information of good quality is needed on the patterns and trends in residence and class differences in fertility during and since the recovery of the birth rate. It is hoped that the forthcoming censuses will provide such data so that future research and analysis may add to our knowledge of the complex relationships between socio-economic characteristics and fertility.

COMMENT

RONALD FREEDMAN, University of Michigan

In many respects fertility similarities may be more important than fertility differentials. The evidence in Miss Johnson's paper—as well as in the papers by Kiser, Goldberg, Becker, the Ruggles, and others—indicates that the long-heralded contraction of fertility differences is hard upon us. Analyses of fertility differentials sometimes underestimate the contraction of fertility differentials because they concentrate on percentage differences between classes, although it is clear that there is a greater contraction in the size of the absolute differences in family size. For many purposes such absolute contractions are the more important.

The range within which fertility variation is contained in Western Europe is a very small one, whether we take as our frame of reference the maximum physiological potential or the actual performance in Western Europe as recently as 75 years ago. In most of the Western European countries a large majority of families are now having 1, 2, or 3 children —with 1 or 2 as a modal size. For the most part, differentials between the kinds of groups Miss Johnson has considered involve different

concentrations within this narrow range. The outstanding exceptions to this generalization are Ireland and the Netherlands, both of which present demographic paradoxes in which religion plays an important role. The over-all situation in Western Europe in the concentration of family-size distributions in a very narrow range is similar to that in the United States, except that in the United States the range is one child higher, with the concentration on 2, 3, or 4 children.

Whether we deal with Miss Johnson's data for Western Europe or Kiser's for the United States, it is clear that there must have developed a rather homogeneous and standardized set of values guiding behavior in the area of fertility-values that have very wide reference in the society, reaching into all of the major social- and economic-status groups.

The standardization of values would be even clearer if the data on actual behavior were supplemented by data on desires, intentions, and ideals. Many of the families without children want them but cannot have them because of fecundity impairments. At the other extreme, a good many families with large numbers of children have their large families involuntarily. This is undoubtedly linked to economic and social status in Western Europe, as it can be demonstrated to be in the United States. There are some data on attitudes toward ideal family size, desired family size, and expected family size for many of the countries of Western Europe and these generally indicate a very small range of values. Stoetzel presented a summary of surveys of ideal family size at the last World Population Conference. Other surveys have asked such questions since then. For example, a recent survey on expected, desired, and ideal family size in West Germany shows a strong concentration in a very small range of values from 1 to 3. We have every reason to expect that with the further spread of effective methods of contraception these attitudes will be more effectively realized in action, so that the actual fertility will also become more homogeneous, within a narrow range of variation.

Even if attitudes are not always effective in guiding fertility behavior, they may have an independent effect on economic decisions, because the couples may not know that their plans and expectations will not be fulfilled.

I think that a principal task of fertility analysis is to explain the reasons for the existence of the particular boundaries that now contain the range of fertility values. The classical sociological explanation for the secular decline in fertility is the transfer of functions from the family to other institutions. If this transfer of functions were assumed to continue indefinitely, the proportion of families with no children should become

very large. Despite the existence of low fertility groups, this hasn't been the case in any country in Western Europe except under very limited and exceptional circumstances. Even when only specific groups that are highly urbanized and secular are considered, we rarely find a majority childless. The data from the Growth of American Families Study indicates that childlessness at present is largely involuntary in the United States in all social groups. But why is there such a strong repugnance to childlessness through Western society? To put the problem in another way, why do married couples have any children? The question we need to answer is this: what functions do children continue to play in the lives of adults in Western societies?

Even in the Western European countries where many families have only one child, there is a strong preference for two as the minimum number, as indicated by answers to questions about a desirable or ideal family size. The lower boundary may be two rather than one. Certainly this is true in the United States where there is a strong feeling that an only child is undesirable.

At the upper end of the range, it is clear that very few Western Europeans irrespective of social characteristics want more than four children, and most do not want more than three. This is clear not only in the actual family-size distributions, but in answers to questions about ideal family size, which typically give rather inflated values. In a recent survey in West Germany only six per cent of all respondents indicated a desire for more than four children, even when asked for the number they would want if economic and social conditions were very favorable. The lack of enthusiasm for larger families in almost all social strata probably can be explained in terms of the transfer of functions away from the family and the competition of non-familial activities with those located in the family context.

The fact that such a large part of all of the traditional social and economic strata agree in behavior and attitude on a moderate-size family is indicative, I believe, that the function of children has become very similar in the lives of these various groups. Without venturing into a complete statement, I suggest that with all its loss of functions, the family in a highly mobile, specialized society continues to have a unique set of core functions. It is, in the first place, the only continuing primary group that a man takes with him in his travels in space and in society. It is the unit which specializes in nonspecialized relationships in a highly specialized society. It is, therefore, the only social unit which can provide dependably the emotional support and stable orientation man needs in

a kaleidoscopic, mobile, specialized world. A considerable literature has documented the fact that men develop primary groups to orient their behavior wherever they associate in large groups for any period of time —on the job, in schools, in the army, in formal organizations. But all of these relationships are transitory in a highly mobile society. The fundamental need their appearance represents is met most dependably for most people in the family. Since mobility tears people away from their parental families rather early, the early formation of their own families becomes important.

The family performs a correlated and equally important function in serving as the center which organizes the impersonal specialized services of the economy and the society for consumption on a personal basis by its members. This important function increases the family's strength as a source of nonspecialized orientation and emotional support.

The organizing function I have described and its emotional correlates have both production and consumption aspects. Insofar as they involve consumption aspects, they may lead to a positive correlation between economic status and fertility. This possibility is discussed in some detail in Becker's paper. There is some evidence to support his thesis in Miss Johnson's paper. However, I would expect such a positive correlation to be much smaller than the former negative correlation, for two reasons: (1) it will not be supported by differences in contraceptive practice. In fact, effectiveness in contraceptive practice will probably continue to have a positive correlation to economic and social status for a long time, and (2) insofar as the organizing function of the family has a production as well as a consumption function, the positive correlation need not follow. While the basic orienting and supportive function is probably equally important in all strata, it may be that, in a future situation where contraceptive effectiveness is not an important variable, those who are better off may be able to afford this important value more easily. I am more inclined to believe that this is a value which everyone wants so much that it will not be highly correlated to income.

I am proposing to interpret the trend to disappearance of the traditional fertility differentials as an indication that differences in family function as between social strata are also disappearing and that the remaining important central organizing and orienting functions of the family are equally relevant in all the strata defined on such traditional bases as occupation, income, education, and rural-urban background. We might cite as an example of a disappearing difference in family functions the former reliance of low-status groups on their children and other relatives

as a source of social security. Social security measures and higher wage levels have greatly diminished this dependence and have thereby reduced the value for lower-status families of a large clan of relatives.

Some types of differentials are likely to be of continuing importance in the future as the differentials more traditionally studied narrow or disappear. One of the largest differences cited by Miss Johnson is in the set of data about the labor-force status of women in Copenhagen. While data were not available for other West European countries, it is most likely that this differential is large in other countries, too. It is one of the largest differentials found in the American data. It seems likely that this differential will become more important in the future. It has rather clear-cut relations to economic phenomena both as a cause and as an effect.

Another area of persistent differences is religion. Unfortunately, Miss Johnson only had data for the Netherlands. In this case, there is evidence of some convergence, but it is not very marked and it is much less than the convergence in other social characteristics. Unpublished data on expectations and desires for family growth in West Germany indicate a persistent difference between Catholics and Protestants that is larger than differences for any of the other standard social and economic characteristics. In the case of religion, children have the function of meeting, directly or indirectly, needs created by distinctive religious values. If American data are generally pertinent, the old notion that Catholic-Protestant differences were a temporary result of differences in status, urbanization, and contraceptive information is fallacious. Certainly in the Netherlands there is significant evidence that urbanization and education need not mean elimination of Catholic-Protestant fertility differentials.

While the traditional economic differentials may disappear or even be reversed, new differentials may appear under the influence of new principles of economic organization. For example, one of my colleagues, Guy Swanson, has suggested that in the present situation men who are involved occupationally in large bureaucratic enterprises with well-defined and secure career lines may be more inclined to early marriage and larger families than men who must face the uncertainties of occupations with a strong risk element either as professionals or entrepreneurs.