

TRENDS IN AGE-SPECIFIC FERTILITY RATES¹

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FERTILITY has been declining for over half a century in many of the countries of the Western World. As the culture pattern of family limitation diffuses throughout the populations of these countries, progressively fewer births are involuntary. It is conceivable that in the not so distant future of some of the more demographically "advanced" countries, only a very small residual of births will remain involuntary. The important question arises whether then their gross reproduction rates will continue to fall or whether they will be stabilized for a time below the replacement level but above zero. Until the family is relieved of some of the burdens of parenthood or until a new set of attitudes on the desirable family size develops, the gross rate may possibly fluctuate within a relatively narrow range about this level. The phase of the business cycle might well be the most important factor in these fluctuations.

Is there any evidence that such a period of stabilization has already begun in any areas or in any groups? If fertility stabilizes first in the more demographically "advanced" sectors, differentials between areas and different social and economic groups will be narrowed. There have been actually some instances of the narrowing of such differentials. Fertility, as measured by ratio of children to women of childbearing age, declined relatively more in the southern American states from 1920 to 1930 than in the Northeast, where the vital revolution first affected the United States.² Similarly from

¹ From the School of Public Affairs, Princeton University, in cooperation with the Milbank Memorial Fund.

² Space does not allow a discussion here of the alleged stabilization of fertility among native whites in New England, debated in this journal a few years ago. See Willcox, Walter F.: Changes Since 1900 in the Fertility of Native-White Wives. The Milbank Memorial Fund *Quarterly Bulletin*, July, 1932, x, No. 3, pp. 191-202, and Lorimer, Frank: Factors Influencing Ratios of Children to Native-White Women in the United States, 1900 and

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1910 to 1930 the fertility of native-white women declined 16 per cent while the fertilities of the more fertile foreign-born and Negro women were declining 30.2 per cent and 24.7 per cent, respectively.³ Stouffer found that the margin of superiority in fertility of Catholic over non-Catholic wives decreased in Wisconsin cities during the period 1919 to 1930.⁴ European studies have also revealed a few instances of the lessening of relative interclass differentials. However, all of these narrowings of differentials arose from divergent rates of decline in the fertility of the two groups compared and not from a rising or stabilized fertility in the group where the decline began earlier. The writer knows of no direct and conclusive evidence of the stabilization of fertility in any geographic region or social-economic class that has taken up the family limitation pattern. The absence of such instances may, of course, be due to the lack of proper data.

We do possess statistics on the birth rates of age groups, which are relatively comprehensive and comparable in time and space. The course of fertility in the different age groups has been by no means the same since the trends in these groups are partially independent. It would seem plausible, therefore, that a fixed level or plateau would be attained earlier by some age-specific rate than by the gross reproduction rate. Accordingly, it might be profitable to analyze these rates to determine at what ages fertility has decreased and is now decreasing most and least, the existence of increases or stabilizations in the rate, and similar points.

To consider first the United States, we may utilize data in the National Resources Committee's POPULATION STATISTICS. 2. STATE DATA. Table 1 of the present article presents from this source cor-

1930. "Preprint". See The Milbank Memorial Fund *Quarterly Bulletin*, July, 1933, xi, No. 3, pp. 240-241.

³ National Resources Committee: THE PROBLEMS OF A CHANGING POPULATION. Washington, Government Printing Office, 1938, p. 127.

⁴ Stouffer, Samuel A.: Trends in the Fertility of Catholics and Non-Catholics. *American Journal of Sociology*, Sept., 1935, xli, No. 2, pp. 143-166.

DATES	AGE							GROSS RE- PRODUCTION RATE
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	
1918-1921	51.7	159.6	157.4	121.0	83.0	33.2	4.0	148
1929-1931	47.2	130.8	125.5	91.4	58.5	22.8	2.4	116
Average Annual Percentage Change	-9	-1.9	-2.1	-2.6	-3.3	-3.5	-4.7	-2.3

¹ Adapted from: National Resources Committee: POPULATION STATISTICS. 2. STATE DATA, Washington, Government Printing Office, 1937, p. 3.

Table 1. Corrected fertility rates per 1,000 native-white women in the United States, 1918-1921 and 1929-1931, and their average annual percentage changes.¹

rected rates for native-white women in the United States, 1918-1921 and 1929-1931. These rates are partly estimated, but the Statistical Bureau of the Metropolitan Life Insurance Company has published⁵ age-specific birth rates for white females in the expanding Birth Registration Area, for 1920-1924 and 1930-1934, that exhibited a very similar pattern of declines.

There is in both sets of data a clear-cut relationship between the percentage decline in the rate and the age of the women. The percentage decline increases consistently with advancing age. The average annual decline shown here of less than one per cent at ages 15-19 is markedly lower than that of almost five per cent at ages 45-49.

The National Resources Committee's table also gave rates for individual states. In thirteen states and the District of Columbia, the rate for women 15-19 actually increased over the period.⁶ None of these was a southern state.

Let us see how similar to the American experience the trends in other countries have been. In order to secure some measure of

⁵ Metropolitan Life Insurance Company: Decline in Birth Rate in Relation to Age of Mothers. *Statistical Bulletin*, December, 1937, xviii, No. 12, p. 5.

⁶ Seven of these states were not in the Birth Registration Area in 1918 so that for at least some years their rates were estimated. Because of the War, fertility was somewhat unusual in the individual years of the earlier period; but the abnormalities tended to be mutually compensatory.

temporal and international comparability, the main analysis will be confined to the series in Table II of the STATISTICAL YEAR-BOOK OF THE LEAGUE OF NATIONS.⁷ Table 2 is adapted from this source.

A systematic analysis of these data is not easy. There is a wide variety of dates and of total periods spanned. International comparisons thus become difficult. Many rates are averages of several years, making it impossible to graph annual fluctuations for the age-groups. Accordingly attention has to be restricted largely to relative changes at different ages in a given country over a given period. However, in order to introduce some degree of international and temporal comparability, the percentage changes have been reduced to an average annual basis. A rate is assumed to have changed geometrically (i.e., with a constant annual percentage change) between the mid-points of the dates that delimit the period being considered.

Table 3, then, presents these average annual percentage changes in age-specific fertility rates and in gross reproduction rates over two arbitrary periods. Within these periods, which coincide only approximately for the different countries, it is possible to make some qualitative comparisons as to patterns of change. The first period includes the whole range of post-War years, extending as far as possible in both directions to bring out the underlying secular trend. The second is the most recent part of the first but includes some countries for which data were not available for the complete range. It begins about 1934 and often represents a time of partial economic recovery. Here new patterns of change in age-specific fertility rates may represent either the beginnings of new secular trends or merely cyclical or annual variations about the old ones.

Countries are ranked in order of their gross reproduction rates at the beginning of each period. The post-War experience as shown

⁷ Authorities may differ somewhat in the estimations often involved in calculating age-specific birth rates, particularly those for postcensal years. Hence it is not always safe to compare rates from different sources for different dates. The YEAR-BOOK's figures are not in every case the official ones. Not all of the rates are of equal reliability.

Table 2. Live births per 1,000 women of specified age, and gross reproduction rates.¹

COUNTRY	DATES	AGE							GROSS REPRODUCTION RATE
		15-19	20-24	25-29	30-34	35-39	40-44	45-49	
Sweden ²	1921-1925	17.9	97.2	132.2	120.3	93.5	48.2	6.1	1,239
	1935	17.2	76.4	90.9	77.4	52.2	22.5	2.5	808
Switzerland	1934-1936	7.9	67.4	116.2	98.1	56.7	21.0	2.0	898
	1937	7.0	65.6	111.0	92.2	54.1	18.9	1.7	856
Norway	1921	12.3	106.4	171.4	161.5	132.1	71.7	12.5	1,632
	1934-1935	7.5	61.4	99.5	90.8	64.1	32.2	5.1	877
	1936	8.0	62.5	103.0	90.8	63.7	30.8	4.6	883
Estonia	1922-1926	9.7	87.2	133.5	112.0	82.4	37.1	5.4	1,133
	1935	12.3	81.7	104.3	89.9	60.4	26.0	2.6	907
	1936	12.3	86.7	108.7	88.5	62.2	25.8	2.8	945
France	1921-1922	25.3	134.7	151.7	103.7	61.6	23.4	2.2	1,226
	1934	33.3	125.7	122.9	82.9	46.0	16.7	1.4	1,051
	1935	27.4	123.6	118.9	78.5	43.7	15.6	1.4	1,003
Czechoslovakia	1921-1925	22.4	152.8	189.6	145.9	96.6	40.3	5.7	1,579
	1934	28.6	115.6	122.9	85.4	52.7	20.8	2.2	1,039
Denmark	1921-1925	23.8	120.3	158.7	131.8	92.1	39.7	3.9	1,387
	1934-1935	23.0	103.1	122.1	94.0	57.9	22.9	1.9	1,029
	1936	22.9	106.5	126.4	93.2	55.6	21.1	1.6	1,042
Latvia	1934-1936	13.5	82.0	118.5	102.0	68.9	29.1	4.5	1,014
	1937	14.0	98.1	122.8	103.6	66.3	25.8	2.9	1,056
New Zealand ³	1921-1922	17.5	123.8	172.7	144.3	96.6	39.9	4.7	1,463
	1936	16.9	94.0	132.4	102.3	56.9	20.7	1.7	1,046
	1937	17.4	98.9	139.3	107.1	59.5	21.1	1.6	1,092
Hungary	1935	30.7	149.8	131.6	95.5	61.9	24.1	2.5	1,200
	1936	31.2	143.8	132.4	91.2	60.2	22.9	2.2	1,171
Finland ^{2 4}	1921-1922	14.1	120.3	164.7	150.1	128.4	73.8	12.2	1,569
	1930-1932	14.6	97.9	133.5	118.8	89.6	48.0	7.7	1,207
Netherlands	1935	11.1	81.0	147.5	138.0	99.1	43.3	4.3	1,262
	1936	10.7	81.7	146.3	137.0	96.5	42.8	4.2	1,256
Union of South Africa ³	1924-1929	28.4	145.7	184.5	153.9	117.5	51.5	9.5	1,674
	1933-1934	30.1	132.7	157.3	126.6	91.4	41.6	7.3	1,427
	1936	32.3	143.1	163.2	130.3	84.1	36.5	6.3	1,448
Bulgaria	1921-1922	31.5	264.5	300.3	226.6	172.6	92.4	41.3	2,731
	1934-1935	52.6	199.0	193.2	128.6	78.6	36.4	11.8	1,696

¹ Adapted from: STATISTICAL YEAR-BOOK OF THE LEAGUE OF NATIONS, 1937/38. Table II, pp. 58-59.

² Age-specific rates represent confinements.

³ White only.

⁴ Based on *de jure* population.

COUNTRY	DATES	AGE							GROSS RE- PRODUCTION RATE
		15-19	20-24	25-29	30-34	35-39	40-44	45-49	
FIRST PERIOD									
Estonia	'22-'26 to '36	2.0	-0.1	-1.7	-2.0	-2.3	-3.0	-5.3	-1.5
France	'21-'22 to '35	0.6	-0.6	-1.8	-2.0	-2.5	-3.0	-3.3	-1.5
Sweden	'21-'25 to '35	-0.3	-2.0	-3.1	-3.6	-4.7	-6.1	-7.2	-3.5
Denmark	'21-'25 to '36	-0.3	-0.9	-1.7	-2.6	-3.8	-4.8	-6.6	-2.2
New Zealand	'21-'22 to '37	-0.04	-1.4	-1.4	-1.9	-3.1	-4.0	-6.7	-1.9
Finland	'21-'22 to '30-'32	0.4	-2.1	-2.2	-2.4	-3.7	-4.4	-4.7	-2.7
Czechoslovakia	'21-'25 to '34	2.2	-2.5	-3.9	-4.8	-5.4	-5.8	-8.3	-3.7
Norway	1921 to 1936	-2.8	-3.5	-3.3	-3.8	-4.7	-5.5	-6.4	-4.0
U. of S. Africa	'24-'29 to '36	1.4	-0.2	-1.3	-1.7	-3.5	-3.6	-4.2	-1.5
Bulgaria	'21-'22 to '34-'35	4.0	-2.2	-3.3	-4.3	-5.9	-6.9	-7.1	-3.6
SECOND PERIOD									
Norway	'34-'35 to '36	4.4	1.2	2.3	0	-0.4	-2.9	-6.6	0.5
Switzerland	'34-'36 to '37	-5.9	-1.4	-2.3	-3.0	-2.3	-5.1	-7.8	-2.4
Estonia	1935 to 1936	0	6.1	4.2	-1.6	3.0	-0.8	7.7	4.2
Latvia	'34-'36 to '37	1.8	9.4	1.8	0.8	-1.9	-5.8	-19.8	2.0
Denmark	'34-'35 to '36	-0.3	2.2	2.3	-0.6	-2.7	-5.3	-10.8	0.9
New Zealand	1936 to 1937	3.0	5.2	5.2	4.7	4.6	1.9	-5.9	4.4
France	1934 to 1935	-17.7	-1.7	-3.3	-5.3	-5.0	-6.6	0	-4.6
Hungary	1935 to 1936	1.6	-4.0	0.6	-4.5	-2.7	-5.0	-12.0	-2.4
Netherlands	1935 to 1936	-3.6	0.9	-0.8	-0.7	-2.6	-1.2	-2.3	-0.5
U. of S. Africa	'33-'34 to '36	2.9	3.1	1.5	1.2	-3.3	-5.1	-5.7	0.6

Table 3. Average annual percentage changes in age-specific fertility rates and in gross reproduction rates.

in this table contains little evidence that the rate of decline in the gross reproduction rate varied directly with the initial amount of the rate. Thus for this period, fertility did not appear to be declining faster in the areas where the incidence of the downward movement was relatively recent.

Over the long-time period the pattern of increasing percentage decline in fertility with advancing age was very consistent. It will be recalled that the same type of association occurred in the United States during the 'twenties. There were only two discrepancies, one each in Norway and New Zealand. In six out of the eleven countries the fertility of women 15-19 rose.⁸ There were eleven instances,

⁸ The increases in Estonia and Finland were not quite significant statistically. It is well to bear in mind in reading Table 3 that the rates for women 45-49 and sometimes for

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in eight countries, of the fertility of a younger age-group becoming higher than that of an older one.⁹ This transposition was usually due to a more rapid decline in the fertility of the older women, not to a rise in that of the younger. It reflects the fact that the younger women were increasing their relative contributions to the gross reproduction rate.

That this direct association between relative fertility decline and age was not simply a post-War phenomenon is revealed in a table published by Kuczynski that includes the pre-War period.¹⁰ For some of the countries the data go back as far as the last quarter of the nineteenth century. The percentage decline in fertility increased regularly with the age of the women in Denmark, Finland, Germany, Norway, and Sweden. There was only one exception each in the cases of France and Austria. Further east, in Bulgaria, there was no particular association between the relative change and age.¹¹ There were actual rises in the fertility of women 15-19 in Denmark, Germany, Norway, and Sweden and of women 20-24 in France and Norway.

During the most recent years the previously described general pattern of age-specific fertility change was not nearly so consistent. The difference may be due to the fact that the shorter the period the more likely it is to exhibit cyclical or random fluctuations and to obscure the underlying secular trend. This short phase is noteworthy because the gross reproduction rate actually rose in six countries. It is necessary to go back to the years just after the World War to locate another such upturn in fertility. A very plausible explana-

those 15-19 are based on a few births so that the sampling errors of percentage differences between two such rates are rather high:

⁹ The age-groups involved were 15-19, which passed 40-44 or 45-49, and 20-24, which passed 25-29, 30-34, or 35-39.

¹⁰ Kuczynski, Robert R.: *THE MEASUREMENT OF POPULATION GROWTH*. New York, Oxford University Press, 1936, pp. 122-124.

¹¹ Similarly, in Japan from 1925 to 1930 the changes in fertility did not seem to be a function of age. However, it will be recalled that by the post-War period, fertility decline in Bulgaria conformed to that in Western Europe.

tion of at least part of the rises in this period is that marriages and births were postponed in the worst years of the depression and took place when economic conditions improved somewhat. Part of the upturn may have been due to a new secular trend, but the possibility does not seem to be very great. Fertility in the Union of South Africa was still relatively high, and we should not expect the beginning of a stabilization to appear there. Whether the gross rate increased or decreased seemed to have little relation to the association between relative change and age. To generalize very roughly, fertility rose somewhat among women below 30 but continued to decline among the older women. It rose even more frequently at 20-24 and 25-29 than at 15-19.

Other data from the same source as Table 2 show that, over the post-War years for which data are available, there was a rather consistent direct association between percentage decline of fertility and age in Australia and Poland. Except for a relatively very large drop among women aged 20-24, the Italian trends from 1930-1932 to 1935 were also quite in the usual pattern.

A very interesting finding was made by McCormick and Glick in a recent study of age-specific fertility rates in Wisconsin from 1920 to 1935 concerning the effects of the depression upon them. To quote from their article:

Between 1920 and 1930 women thirty-five years of age and over had experienced a marked loss of fertility, those of ages twenty to thirty-four had shown a moderate loss, and those below twenty years had made a slight gain. Under the stress of hard times this situation was reversed, it being the younger women who then placed the severest restrictions on child-bearing, while the pre-depression decline noted among the older women continued practically unchanged. As business improved in 1934 and 1935, there was an upturn in the fertility-rates of women under thirty-five, especially those of twenty-five to twenty-nine, but none in the older groups.¹²

¹² McCormick, Thomas C. and Glick, Paul C.: Fertility Rates in Wisconsin, 1920-35. *American Journal of Sociology*, November, 1938, xliv, No. 3, p. 404.

In order to see to what extent the development described by McCormick and Glick for Wisconsin took place elsewhere, the writer broke down the earlier part of the post-War range into two rough divisions. The first division may be termed the "pre-depression" period. It extended up to 1930. The second division could be called the "depression" period. It ran from about 1930 to about 1933 or 1934, births in the latter years usually representing conceptions in the trough of the world depression. It is realized that the course of economic activity varied somewhat from country to country, but no attempt was made to define national business cycles.

It is unfortunate that we had so few data that provided a comparison with the Wisconsin experience. Only Austria, Sweden, Norway, France, Czechoslovakia, Hungary, and the Union of South Africa had suitable rates for the depression phase. Briefly, very little parallelism could be found. Indeed, there were surprising rises during the depression in the fertility of French, Czechoslovakian, and Hungarian women aged 15-19. About the only similarity was furnished by Austria. This country has suffered chronic depression at practically all times since the War, but conditions began to get much worse about 1930 and reached their low point in 1933. Kuczynski's previously cited table reveals that from 1928 to 1931-1932, percentage fertility change varied with age in the usual way, there being even a rise among 15-19 year-old women. However, from 1931-1932 to 1933-1934 there was a very precipitate decline in the fertility of women 15-19 and the percentage decline decreased through 35-39, beyond which age group it increased.¹⁸ Partial similarity to the Wisconsin and Austrian experience was exhibited by Czechoslovakia and Luxemburg. Before the depres-

Wisconsin was one of the thirteen American states previously mentioned whose fertility rate at ages 15-19 increased from 1918-1921 to 1929-1931.

¹⁸ The percentage changes at each age were: 15-19, -14.4; 20-24, -6.3; 25-29, -4.0; 30-34, -3.8; 35-39, -3.5; 40-44, -4.4; 45-49, -5.1. It is interesting to note that, although Austria's gross reproduction rate was the lowest recorded for any country, the fertility rate at ages 15-19 has been higher than in most of the Western World.

sion and from 1930-1931 to 1932-1933 there was a direct association between Czechoslovakian fertility decline and age. From 1932-1933 to 1934, and in Luxemburg from 1930-1932 to 1935-1936, the declines were like those in Austria during the depression. It should be noted that the sequence of the patterns in these two countries corresponded only very roughly with the pre-depression and depression periods as previously defined. The fact that France and Sweden had the same type of association between fertility decline and age both before and during the depression makes it evident that this great catastrophe did not everywhere have the same kind of effect.

There was some tendency for the association between relative fertility change and age to be stronger in the pre-depression period than in the recovery phase. Here again the shorter average duration of the last period may be a partial explanation. In the pre-depression period relative fertility decline varied strictly with age in Sweden and Czechoslovakia and rather closely so in Estonia, France, Denmark, New Zealand, and Bulgaria. In all of these countries except Sweden and Denmark, the fertility of women aged 15-19 was increasing.

The data just described are not readily amenable to graphic presentation. From another source it is possible to show for Australia the annual movements in age-specific fertility rates from 1924 to 1935.⁴⁴ These rates are charted semi-logarithmically so that relative declines may be visualized. Here we see that annual fluctuations were small relative to the general trends. The same source also gave fertility rates for 1911 and 1921, and it is not surprising to find that the percentage decline in fertility from 1911 to 1935 varied uniformly directly with age. The usual pattern was also very well approximated throughout most portions of this range. (Figure 1.)

It may be contended that the observed variations of age-specific

⁴⁴ Wolstenholme, S. H.: The Future of the Australian Population. *Economic Record*, December, 1936, xii, No. 23, p. 197. These rates are for *female* births per 1,000 women. Hence they are slightly less than half the order of magnitude of the foregoing ones.

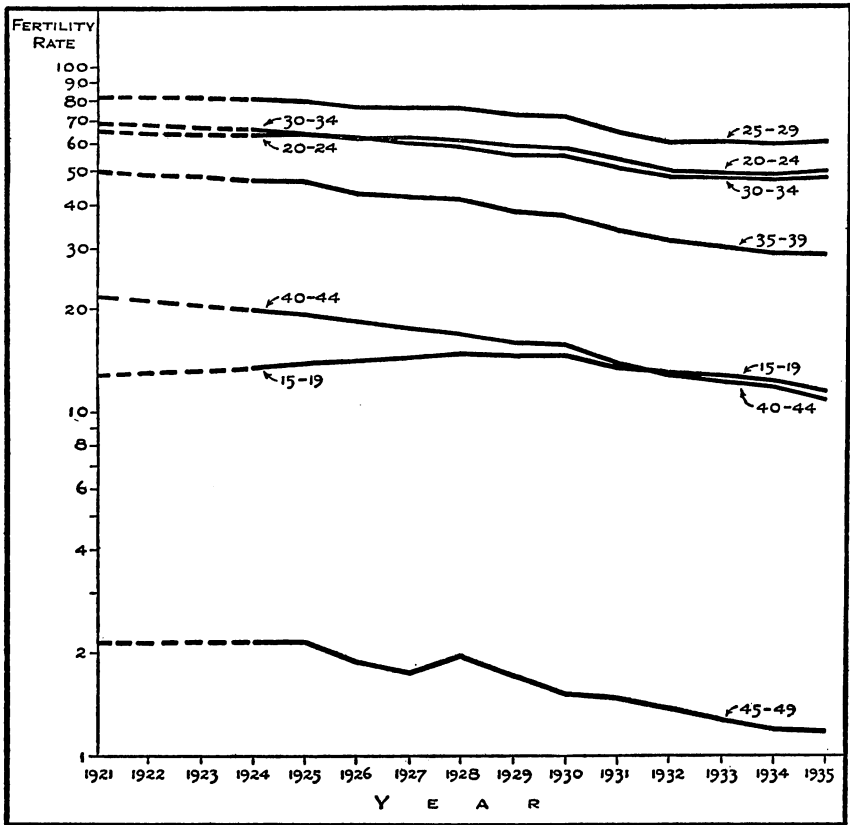


Fig. 1. Female births per 1,000 women by age-groups: Australia, 1921 and 1924-1935.

fertility changes were somehow largely a function of changing age-specific marriage rates. The effect of marriage may be examined directly through the course of age-specific marital fertility rates. Such data were available for three countries. The rates and their percentage changes are given in Table 4.

The figures for the United States are comparable with those abstracted in Table 1. The usual direct association between percentage decline and age is as consistent as before. The fact that the size of the percentage decline was greater for married women than for all women is in accord with the known decline of average age at marriage in the United States. (Illegitimate births are included in the

numerators of both types of rates.) We may conclude that changes in the proportion married at each age cannot account for either the fertility declines or for their incidence by age.

The Netherlands data are for 1906-1913 and 1935. Over this long period there was a rather good correspondence between percentage decline and age, except that there was little differentiation among ages 20-24, 25-29, and 30-34. The percentage loss in Italy from 1931 to 1936 decreased slightly up to age 30-34 and then rose regularly and sharply. (Curiously, there was no reflection in the marital fertility of the large drop in general fertility noted among women 20-24 from 1930-1932 to 1935.) Illegitimate births are not included for these two countries, but their distribution by age would have to have undergone an enormous shift to demolish the patterns found for legitimate fertility.

Although the evidence of just three countries is hardly conclu-

Table 4. Age-specific marital fertility rates and their percentage changes.¹

COUNTRY	DATES	AGE							
		10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49
U.S., Native-White	1918-1921	—	457.2	322.4	219.6	154.0	103.4	42.0	5.2
	1929-1931	—	408.1	258.5	160.0	112.4	71.4	28.4	3.1
	Average Annual Percentage Change	—	-1.1	-2.1	-2.5	-3.0	-3.5	-3.7	-4.8
Italy	1931	209.9	397.3	355.2	267.9	205.6	151.2	71.3	8.6
	1936	191.6	370.6	331.9	259.2	189.5	133.3	61.5	6.4
	Average Annual Percentage Change	-1.8	-1.4	-1.4	-0.6	-1.6	-2.5	-2.9	-6.7
Netherlands	1906-1913	—	745	479	372	286	219	106	12
	1935	—	533	308	239	185	126	56	6
	Average Annual Percentage Change	—	-1.3	-1.7	-1.7	-1.7	-2.1	-2.5	-2.7

¹ Adapted from data in:

National Resources Committee: POPULATION STATISTICS. 2. STATE DATA. Washington, Government Printing Office, 1937, p. 4.

Italy. Istituto centrale di statistica: La diminuzione della fecondità legittima secondo l'età dal 1931 al 1936, *Notiziario demografico*, May, 1938, xi, No. 5, p. 88.

Netherlands. Centraal Bureau voor de Statistiek: *Bevolkingsstatistiek*, September, 1937, No. 5, p. 3.

United States figures are all live births, Italian figures legitimate live and still-births, and Netherlands figures legitimate live births.

sive, it seems highly probable that the general pattern in the age-incidence of fertility change rested largely upon a corresponding pattern for marital fertility. However, the frequent stability of the fertility of all women 15-19, going back in some cases into the nineteenth century, may well be partly the result of the gradual decline in average age at marriage in many parts of the Western World. It is rather striking that specific fertility rates of these women should vary so much among countries of similar culture and with similar gross reproduction rates. However, there were also wide differences in the proportion married at this age, and this factor was responsible for much of the variation. Different illegitimate fertility rates constituted another, but less important, part of the explanation.

SUMMARY

We may tentatively conclude that the pattern of percentage decline in fertility varying directly with age had been quite well established in the experience of the Western World, possibly as far back as the beginning of the vital revolution in the last quarter of the nineteenth century. The major component of this pattern was very likely a similar pattern for marital fertility. Had it not been for a secular trend toward earlier marriage, there would probably have been a general slight decline in the fertility of women 15-19 rather than frequent stable and upward trends. Very few countries can be found where the relationship between fertility decline and age was reversed during the depression, with decreases up to about age 30 being then relatively greater among the young women. Only future rates can tell whether the frequent rises in the fertility of women below 30 since about 1935 represent the onset of a cessation of fertility decline there or whether they are simply the result of the recovery phase in a particular business cycle. At present the latter alternative seems more likely.

It has been suggested that the fertility rates of women in the later part of the reproductive period have been dropping rapidly as an

indirect result of their past fertility performances but that such declines at these ages will prove to be temporary. The argument runs that these older women had large families when they were younger because they practiced but little family limitation. Later in life, when they took up family limitation, they tended to put an abrupt stop to childbearing. Younger women of more recent cohorts are becoming increasingly familiar with family limitation methods. When these younger women reach the older ages, they may still be planning pregnancies. Hence there may soon be an upturn in age-specific fertility rates above 30 years. Such a development would mean the future destruction of the general inverse association between fertility decline and age. Present trends afford no evidence of this upturn.

All in all, it seems probable that gross reproduction rates, even in demographically "advanced" countries, are due for still further declines before stabilization. The experience of the next few years may well clear up some of the questions raised here. Fortunately, age-specific rates are being published more frequently and for an expanding coverage.