

Statistical and Social Inquiry Society of Ireland

An Analysis of Human Fertility in Northern Ireland

By A T PARK, M A , PH D

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Introduction

There has never been a special inquiry into the population of Northern Ireland such as that of the Royal Commission on Population (1946) in Great Britain. In fact, apart from three questions on fertility in the 1911 census which covered the whole of Ireland and for which the only published fertility tables relevant to Northern Ireland were in respect of Belfast County Borough, the 1961 census schedule was the first one to contain fertility questions. The fertility report from this census will probably be published some time in 1964.

For the purpose of this paper, it has been necessary to calculate a measure of fertility which would give an indication of the trend of fertility over the years in different areas within the Province.

Where the age structure of a population is subject to change over a period of time the crude birth rate—the number of live births per 1,000 of population—is an unsatisfactory indicator of fertility. Fertility is normally assessed by relating the number of births to the size of some relevant section of the population such as the number of married couples or the number of women of child bearing age. Clearly, the number of births, though dependent upon intention and willingness, is limited by the number of women exposed to risk of pregnancy.

The numbers of children produced by a group of married women in a given year will depend partly on their age, for example, if the proportion of married women under age 30 differs between two areas then the number of births per 1,000 married women at all child bearing ages is likely to be higher in the area with relatively more married women under age 30 simply because the birth rate for such women is higher than that for older women. In the absence of birth registration data by age of mother in Northern Ireland, a method was devised which equalises the effect of different age compositions in comparisons between areas or times.

This method involved calculating the expected number of children that would be born to married women on the assumption that, at each

age, they would bear the same number of children as a standard or control group of married women. The expected numbers of births were obtained in this case by applying the 1951 Scottish age specific legitimate fertility rates to the population of married women in corresponding age groups in Northern Ireland. The expected number of births were then compared with the average annual number of legitimate births in the five years in which the census year was intermediate. The ratio of the actual to expected births was then calculated as a percentage and is called the fertility ratio in what follows.

Fertility rates

The fertility rates and ratios for Northern Ireland, Belfast C B, Londonderry C B, and each of the six counties are given in Table 1.

The fertility ratio for Northern Ireland as a whole fell gradually during the years 1871 to 1911 and quite dramatically between then and 1951. It is most unlikely that the change in the country's constitution in 1921 could have been responsible for the rapid decline in fertility. In fact, a similar trend was reported in the Republic of Ireland by the Commission on Emigration and Other Population Problems (1955).

The pattern was however by no means uniform within Northern Ireland. Belfast, Antrim, Armagh, Down, Co Londonderry, and, to a lesser extent, Tyrone, followed approximately the same trend as the Province as a whole. In Londonderry C B, the ratio has been virtually unchanged over the period under review and was the same in 1951 as in 1871. In Fermanagh, the pattern of fertility has been quite different from any other area, there, the fertility ratio increased appreciably between 1871 and 1911, had fallen below the 1871 level by 1937 and increased again by 1951.

In Londonderry C B, Fermanagh and Tyrone, the fertility ratio was higher in 1951 than in 1937.

There is no doubt that Northern Ireland as a whole has followed the general trend observed in Western Europe, and in Great Britain in particular, but at a much higher level of fertility than the latter.

In England and Wales, for example, the fertility rates were 296 in 1871, 197 in 1911 and 105 in 1951, the corresponding figures for Northern Ireland were 313, 266, and 187. In other words, the England and Wales rate fell by 65% over the eighty years, while in Northern Ireland it fell by 40%, the Northern Ireland rate in 1951 was roughly the same as the England and Wales rate in 1911.

Regional differences in fertility are usually associated with factors like social class, religious affiliation, education, the proportion of women in employment, etc., that are known to influence the fertility of the population. It is extremely difficult to separate the influence of any

particular factor which may be responsible for the differentials, as, in any classification of possible factors, there will always be a certain amount of overlapping. In other words while the main effects of these factors can often be assessed, the interaction between them is so complex that the interpretation of the main effects is almost impossible.

The higher fertility in Northern Ireland compared with Great Britain is no doubt influenced by such factors as—

- (a) The lower income per head—75% of that in Great Britain
- (b) The higher proportion of Roman Catholics in the population— $\frac{1}{3}$ compared with $\frac{1}{10}$
- (c) The higher proportion of the population in agriculture—14% compared with 4%

A detailed analysis of the factors affecting fertility within Northern Ireland is hampered by lack of basic data, but certain inferences can be drawn from what is available

Urban-rural differentials

The old Poor Law Unions did not provide any clear cut division of urban and rural districts, so that urban-rural differentials in fertility cannot be calculated from the 1911 or earlier census reports. In this paper fertility rates have been calculated for the wards of Belfast and Londonderry, and each urban and rural area in respect of the year 1951, and are incorporated in Tables 2 and 3.

In general, fertility is higher in the rural than in the urban areas within each county but there are a few exceptions to this rule. There is the unusual situation in Londonderry where the county borough has a higher fertility rate than the surrounding county of Londonderry. Also, in Belfast, there are four wards—Falls, Smithfield, Dock and Court—which have higher fertility rates than the combined rural areas of the contiguous counties of Antrim and Down.

Fertility and economic status

One of the best indicators of the economic conditions in an area is the percentage of workers who are registered as unemployed but, unfortunately, the unemployment statistics are compiled for the areas of the local offices of the Ministry of Labour and National Insurance, and these areas are not coterminous with the administrative areas for which population data are available, consequently it was not possible to relate unemployment to fertility.

However, the proportion of people in any area who are in receipt of National Assistance payments affords a useful indicator of the amount of need in that area and so this was calculated for each administrative area and details are given in Tables 2 and 3.

Within Belfast, high fertility rates were associated with high National Assistance percentages and the four wards with the highest fertility—Falls, Smithfield, Dock and Court—were high in the list of National Assistance percentages

Within Londonderry, the South ward which had the highest fertility rate also had a larger proportion of its population on National Assistance than the other two wards

Among the urban and rural districts within the counties there appeared to be some association between fertility and the National Assistance percentage, this will be examined statistically later

Another useful indicator of economic conditions which was unfortunately only available for the wards of Belfast and Londonderry was the average valuation of houses at the time of the second revaluation in 1957

The general tendency was for those wards in Belfast with a high fertility rate to have low average house valuations, in Londonderry, the South ward which had the highest fertility had the lowest average valuation of houses

Fertility and religion

It has been shown that adherence to religious views affected fertility in such countries as far apart as America, Holland and Egypt, so that Northern Ireland is not unique in this respect

Although there has been a question on religion in every census schedule in Northern Ireland, the forms of the tabulations have been far from consistent, and there has never been an age distribution showing marital status separately for the counties or county boroughs by religion. In 1937 and 1951 the general reports did show these details for Northern Ireland as a whole

Moreover, as religion has never been required at birth registration it has not been possible to calculate fertility rates separately by religion but estimated fertility rates were calculated for Northern Ireland on the assumption that the proportion of children under age one year in each religious group shown in the census tables approximated closely to a corresponding proportion in the annual number of births

The average number of births for the five years round each census was proportioned in the above manner for the two religious groups. These estimated births were divided by the number of married women aged 15-44 in the relevant religious groups to give the estimated number of births per 1,000 married women

In 1937 the estimated fertility rate for Roman Catholics was 281, and that for other denominations 177, in 1951 the rates were 289 for Roman Catholics and 155 for the rest. Thus while the estimated fertility rate

for Roman Catholics increased by 2.8% over the 14 years, that for the rest of the population fell by 12.5%. These estimates ignore any differential infant mortality between the two religious groups, but that alone is unlikely to have accounted for such wide differences in the fertility rates.

In order to see how fertility within the religious groups has changed over the years since 1871, it was necessary to resort to a rather crude measure of fertility, namely, the percentage of females in the population who were under five years of age at each census date by religion. This information could be calculated for Belfast C.B. and each of the counties at six of the eight census dates—in the 1911 census the only age breakdown was at nine years of age, while no age analysis by religion was given in the 1926 county reports. In the 1937 reports the only breakdown was for Roman Catholics and Other Denominations—and for the sake of continuity and simplicity this grouping is used throughout this paper.

The percentage of females under five was open to the usual objections such as differential mortality, migration, age at marriage, etc., but it should give some indication of the changes in fertility over the eighty years.

The detailed figures are given in Table 4.

The percentage of females under five was lower for Roman Catholics than for Other Denominations in all areas except Fermanagh at the census dates 1871 to 1901, in that county it was lower in 1871 and 1881 and was the same for both groups in 1891 and 1901. In every area the percentage was higher for Roman Catholics in both 1937 and 1951. For Roman Catholics the percentage was higher in every area in 1951 than in 1871, for Other Denominations the percentage was lower in 1951 than in 1871.

A statistical relationship between fertility, economic status and religion

Having noted the urban-rural fertility differentials and the effect of economic conditions and religion separately on fertility, the statistical technique of discriminant function analysis was used in an attempt to determine the relationship between these factors.

The two groups selected were the areas of high and of low fertility, these groups were clearly different inasmuch as no area included in one group could possibly have been considered to fall in the other from the point of view of fertility. Separate calculations were made for the three different administrative categories—wards, urban areas and rural areas.

Ten areas were chosen in each of these categories—the five with the highest and the five with the lowest fertility rates in 1951. The indicators

used were (a) the percentage of Roman Catholics recorded at the 1951 census, (b) the percentage of the population aged 15 and over who were in receipt of National Assistance and (c) in the case of the wards only, the average valuation of houses (£)

If several different measurements are available on each of the two groups, the measurements can be compared with D^2 to find which best discriminates between the two groups—the greater the value of D^2 the better the discrimination

The value of D^2 was first calculated by including all the indices, subsequently D^2 was calculated for each index separately. The values of D^2 thus obtained together with the corresponding variance ratios and levels of significance are given in Table 5

The only value of D^2 in the wards for which the variance ratio was not significant was for the valuation index on its own

An interesting feature of the results was that in each of the three administrative categories, the value of D^2 was lowered by a larger amount when the Roman Catholic index was excluded than when the assistance index was left out. This suggested that in each case the Roman Catholic index was the better discriminator between high and low fertility areas, this difference was more pronounced in the rural areas than in either the wards or urban areas

Such an analysis cannot, of course, separate the real effect of religion from that attributable to religion, it may be that some of the effect on fertility attributed to religion in these calculations is due to environmental factors which it has not been possible to isolate

There is no current analysis of the main religious groups in Northern Ireland according to social class, and we have to go back to the census reports of 1911 and earlier, for evidence of social class differences within religious groups

These earlier census reports contained an analysis of the population aged 5 and over who could read and write. With the exception of 1901, the percentage of the male population in Belfast who were illiterate was at least twice as great for Roman Catholics as for the rest of the population in the city at each census. In five of the six counties the percentage illiterate for Roman Catholics was more than double that for other denominations at each census, while in the sixth county, Fermanagh, this applied at three of the five census dates.

These census reports also showed that the numbers of agricultural and general labourers per 1,000 occupied males was greater for Roman Catholics than for the rest of the population at each census date in every area, while in the professional class the number per 1,000 occupied was lower for Roman Catholics than for other denominations in every county at each census from 1871 to 1911

It is most unlikely that such wide differences in education and occupation could have disappeared within two generations, it is possible then that some of the high fertility among Roman Catholics is due to their lower social and economic status and not solely to their religious beliefs. It is known that there are fertility differentials according to social class among Roman Catholics, in the Republic of Ireland, for instance, the largest families occur among agricultural workers and the smallest in the high professional groups and among employers and managers.

Comment

We have seen that fertility in Northern Ireland as a whole has fallen appreciably since the turn of this century and the area, in effect, has been caught up in the wave of falling fertility that has swept across Europe, although at a later stage even than in Great Britain. There was only a 5% difference between the fertility rates in the two countries in 1871—by 1951, the Northern Ireland rate was 56% higher than that for England and Wales.

Few would deny that the decline in fertility in Western countries in the last century has been due to better living conditions, and all the evidence warrants the assumption of continuous interaction between the two. This could explain the delay in the fall in fertility in Northern Ireland. It has been a poorer country than England and Wales—in the thirties personal income was only about half that across the water, while today it is about 75%.

However, despite the fact that fertility in Europe first began to fall in Catholic France is religion the factor which still keeps fertility high in Northern Ireland? From the available data it is impossible to say how much the higher fertility among Roman Catholics is due to the historical fact that they were mainly to be found in the lower economic strata of the community. If there is still this social class difference between religions then, even discounting the religious differentials in fertility, one would expect fertility to be higher among Roman Catholics. This would be accentuated if relatively more of them lived in rural areas.

As religion is not required at birth registration, separate fertility rates cannot be calculated by religion, but from estimates based on the number of children under one year in 1951, the fertility rate for that year was probably about 289 births per 1,000 married women for Roman Catholics and 155 for the rest of the population.

When it is realised that the fertility rate for England and Wales in 1951 was 105, it would appear that even if the population in Northern Ireland had been wholly Protestant there would still have been an

appreciable difference in fertility between the two countries. The real reasons for this are no doubt to be found in the social and economic field.

Little is really known about the precise relationship between fertility changes and social and economic changes. It may be a question of dealing with changes caused by non-economic factors, but leading to far reaching economic effects, or it could be mainly the effects of economic development on the composition of human society.

Whatever the reason we now have the situation where Northern Ireland has a higher fertility rate and lower income per head than Great Britain and it is interesting to conjecture whether the high fertility has resulted from, or been the cause of, lower economic status.

As to the future, we should expect fertility to decrease with the higher living standards resulting from economic growth, but it is only fair to comment that this very necessary economic growth could be hampered by the high level of current fertility. I am not suggesting that Malthus' theory of population can be applied in any obvious way to Northern Ireland, but the very mention of his name draws attention to the simple but painful fact that the faster the growth of numbers, the slower the growth of income per head.

Population projection is hazardous at any time but it is more so in Northern Ireland where migration discounts so much of the natural increase of births over deaths.

Official estimates have been made of the future population of Northern Ireland on certain basic assumptions, briefly these are—

- (a) The number of births would be 30,000 per annum for the next ten years rising to 35,000 by the end of the century.
- (b) Net migration of 9,000 per annum rising to 10,000.
- (c) That mortality rates at ages under 45 would decline steadily and at ages over 45 the rates of decline would become progressively smaller with increasing age.

If the assumptions turn out to be true then the population will pass the 1,500,000 mark within ten years and will be nearing 1,700,000 in 25 years' time. The interesting point from the economic view, however, is the change in the age structure that will result. In the course of the next 25 years the total population may increase by 18%. In the three broad age groups the increases will be 24% for children, 13% for persons of working age and no less than 34% for persons above the minimum pensionable age.

Thus even if we can find jobs for the greater number of people of working age they are going to have to support relatively more children and elderly people than at present.

Perhaps this is straying a little from the subject but it does show that

TABLE 1 — THE FERTILITY RATES AND FERTILITY RATIOS BY COUNTY BOROUGHS AND COUNTIES 1871-1951

Area	Item*	1871	1881	1891	1901	1911	1926	1937	1951
Northern Ireland	(a)	313	282	290	286	266	228	196	187
	(b)	228	217	218	210	213	175	156	147
Belfast	(a)	303	284	293	290	251	211	176	160
	(b)	205	203	199	200	192	154	135	125
Londonderry	(a)	305	279	289	275	285	268	263	203
	(b)	203	196	205	194	218	197	201	202
Antrim	(a)	321	323	307	289	269	231	189	174
	(b)	241	248	240	219	217	180	152	134
Armagh	(a)	353	329	278	280	276	247	214	207
	(b)	265	261	221	217	226	199	171	167
Down	(a)	241	206	285	273	256	213	186	172
	(b)	184	166	224	207	212	170	152	137
Fermanagh	(a)	270	248	272	277	297	250	228	250
	(b)	203	207	229	222	258	219	197	214
County Londonderry	(a)	335	313	295	328	299	263	235	231
	(b)	252	252	242	271	256	205	184	182
Tyrone	(a)	319	280	281	279	294	261	239	253
	(b)	242	230	236	208	253	218	194	204

*(a) General fertility rates
(b) Fertility ratios

TABLE 2 — THE FERTILITY RATES, PERCENTAGE IN RECEIPT OF NATIONAL ASSISTANCE, PERCENTAGE OF ROMAN CATHOLICS AND THE VALUATION OF HOUSES IN THE WARDS OF BELFAST AND LONDONDERRY

Area	General fertility rates (1951)	National Assistance % (1954)	Percentage of Roman Catholics (1951)	Valuation of Houses (1957) (£)
<i>Belfast</i>				
Clifton	166	5.2	34	20.7
Court	199	9.9	30	9.6
Cromac	146	5.8	24	23.6
Dock	212	7.7	50	12.1
Duncairn	158	5.2	13	19.9
Falls	267	8.4	93	12.4
Ormeau	128	5.0	10	20.0
Pottinger	147	4.9	15	20.4
St Anne's	173	6.3	41	13.8
St George's	158	7.8	4	9.9
Shankill	130	5.2	6	13.6
Smithfield	262	9.1	91	8.3
Victoria	157	4.2	5	21.6
Windsor	157	4.3	15	31.9
Woodvale	174	5.4	8	13.3
<i>Londonderry</i>				
North	213	7.8	42	22.4
South	331	13.7	86	16.8
Waterside	211	8.5	40	19.7

TABLE 3—THE FERTILITY RATES, PERCENTAGE IN RECEIPT OF NATIONAL ASSISTANCE AND THE PERCENTAGE OF ROMAN CATHOLICS IN THE URBAN AND RURAL DISTRICTS OF NORTHERN IRELAND

County	Urban District	General fertility rates	National Assistance percentage	Roman Catholic percentage	Rural Districts	General fertility rates	National Assistance percentage	Roman Catholic percentage
Antrim	Ballycastle	220	11 8	59	Antrim	192	5 5	19
	Ballyclare	153	5 7	7	Ballycastle	262	12 6	51
	Ballymena	176	7 2	20	Ballymena	184	7 5	17
	Ballymoney	169	9 7	25	Ballymoney	220	10 5	21
	Carrickfergus	169	6 2	13	Belfast	180	4 1	33
	Larne	153	6 5	24	Larne	169	6 7	18
	Lisburn	142	5 9	19	Lisburn	175	4 8	18
	Portrush	179	7 5	16				
	Whitehead	170	4 8	11				
	Armagh	Armagh	190	9 6	57	Armagh	211	8 8
Keady		215	14 9	81	Lurgan	228	8 2	73
Lurgan		184	7 3	43	Newry No 2	245	13 2	12
Portadown		155	6 6	23	Tandragee	177	5 7	39
Tandragee		199	7 4	23				
Down	Bangor	136	5 1	9	Banbridge	188	6 9	28
	Banbridge	155	5 5	28	Castlereagh	147	3 5	9
	Donaghadee	128	5 4	7	Downpatrick	234	7 4	51
	Downpatrick	222	13 2	65	Hillsborough	140	4 9	9
	Dromore	164	6 7	14	Kilkeel	227	9 8	59
	Hollywood	150	4 6	19	Moura	162	6 4	18
	Kilkeel	262	7 7	34	Newry No 1	252	8 3	60
	Newcastle	155	7 0	46	Newtownards	151	5 7	16
	Newry	241	11 1	82				
	Newtownards	139	4 7	10				
	Warrenpoint	204	10 2	69				
Fermanagh	Enniskillen	218	9 5	56	Enniskillen	276	11 9	51
					Irvinestown	233	13 7	53
					Lisnaskea	263	13 2	61
Londonderry	Coleraine	174	8 3	23	Coleraine	227	10 8	26
	Limavady	243	10 0	39	Limavady	276	12 1	52
	Portstewart	131	7 9	23	Londonderry	256	9 9	50
					Magherafelt	255	10 8	54
Tyrone	Cookstown	238	6 3	41	Castlederg	245	13 1	51
	Dungannon	202	8 4	52	Clogher	223	11 5	51
	Omagh	227	6 4	61	Cookstown	264	11 8	53
	Strabane	233	12 8	77	Dungannon	258	11 8	53
					Omagh	256	12 1	61
					Strabane	251	11 9	51

TABLE 4 — THE PERCENTAGE OF THE FEMALE POPULATION WHO WERE UNDER 5 YEARS OF AGE BY RELIGION 1871-1951

Area	Religious Group*	Year					
		1871	1881	1891	1901	1937	1951
Belfast	RC	10.6	9.6	9.4	10.3	9.8	11.0
	OD	12.7	11.7	11.6	11.6	7.5	7.7
Antrim	RC	11.0	9.6	8.7	9.1	9.1	12.5
	OD	12.4	11.3	10.8	10.0	7.8	8.9
Armagh	RC	10.8	9.4	8.7	9.0	9.7	11.3
	OD	12.0	10.8	10.1	9.8	8.2	8.8
Down	RC	10.3	9.0	8.9	9.2	9.0	10.9
	OD	12.0	10.9	10.6	9.7	7.3	8.6
Fermanagh	RC	10.5	9.6	8.8	8.8	8.8	11.7
	OD	11.1	10.0	8.8	8.8	8.6	10.0
Londonderry (C B and Co)	RC	10.4	9.9	9.2	9.0	10.2	11.8
	OD	11.3	10.5	9.8	9.5	8.7	9.7
Tyrone	RC	10.8	9.2	8.1	8.4	9.2	11.8
	OD	11.5	10.4	9.3	9.1	8.7	10.0

*RC — Roman Catholics
OD — Other Denominations

TABLE 5 — THE VALUE OF D^2 FOR VARIOUS INDICES, SEPARATELY AND IN COMBINATION, WITH VARIOUS RATIOS BY WARDS, URBAN AND RURAL AREAS IN NORTHERN IRELAND

Indices ¹	D^2	Variance ratio	Degrees of freedom	Significance
<i>Wards</i>				
RC, NA and V	12 553	7 846	3 and 6	0.5 > p > 0.1
RC and NA	12 450	13 571	2 and 7	0.1 > p > 0.01
RC only	11 744	29 360	1 and 8	p < 0.01
NA only	5 669	14 170	1 and 8	0.1 > p > 0.01
V only	1 370	3 425	1 and 8	p > 0.5
<i>Urban Areas</i>				
RC and NA	5 857	6 384	2 and 7	0.5 > p > 0.1
RC only	5 846	14 615	1 and 8	0.1 > p > 0.01
NA only	3 456	8 640	1 and 8	p > 0.5
<i>Rural Areas</i>				
RC and NA	74 82	81 55	2 and 7	p < 0.01
RC only	74 75	186 87	1 and 8	p < 0.01
NA only	46 55	116 37	1 and 8	p < 0.01

¹RC — the percentage of Roman Catholics in the population
NA — the percentage of the population aged 15 and over in receipt of National Assistance
V — the average valuation of houses (£)

besides all the other problems in Northern Ireland there is also a population problem which is not simply one of religion, but has serious ramifications for the future of the country

On the basis of the last three census figures, the percentage of Roman Catholics in the population is unlikely to change appreciably in the next decade or two. In 1937, 33.5% of the population were Roman Catholics, in 1951 the figure was 34.4% and in 1961 it was 34.9%. In the latter year the percentage varied from 43.4% for the under 10's to 29.8% for the over 70's. It is interesting to note that, when the percentages for each ten year age group in 1951 are compared with those for the following ten year age group in 1961—i.e. the 0-9 age group in 1951 compared with the 10-19 age group in 1961, in effect the same group of people—the percentage of Roman Catholics is lower after ten years in every age group. It would seem that the effect of the higher fertility among Roman Catholics is more or less discounted by migration and any differential mortality that may exist between them and the rest of the population.

Finally, I would like to say how encouraging it is to know that after an interval of 50 years, the 1961 census will provide useful information on fertility, it should be possible to analyse the data in such a way that the economic differences in fertility can be separately examined for each religious group within Northern Ireland, and the social class differentials in fertility examined not only regionally here but also compared with those in Scotland and England and Wales.

DISCUSSION

Professor E. A. Cheesman said it gave him great pleasure to propose a vote of thanks to the speaker. He had known about this paper for two or three years. It was a small part of the total work. The paper was important in its implications. It was of interest in different ways, and underlined the extraordinary contortions a statistician had to go through to get simple facts. To have a real start you would need statistics for each religion—straightforward rates per 1,000 women aged so and so, but they are not available. The statistician therefore has to adopt a rather doubtful technique. I am doubtful about the standard technique. Dr Park has had to adopt another technique of using proportions under a given age indicative of what is happening to births and raises one or two difficulties which he has mentioned. Table 4 shows under age 5 in the Roman Catholic group and other denominations. These are proportions of total population being reported. They

may be due to changes in births rather than fertility—may be due to expectations of life. These comments do not detract from the general value of the work. The population forecasts are of great importance and the figures about the fertility rates. It is of importance in the field of medicine that we shall have these estimates. Professor Cheesman referred to the comparisons for Northern Ireland, England and Wales. He was not very happy about them. It seemed to him that England and Wales are heterogeneous populations. So is Northern Ireland, and although comparisons are helpful up to a point, they are not really informative. We want to know standards of these rates over all ages. We would like to see parts of England and Wales, where fertility rates may be higher than in Northern Ireland. The comparisons have limited value. Therefore he (Professor Cheesman) would not pay too much attention to the differences. Tests of significance are rather complex. It looks from this that Northern Ireland, England and Wales 1891 rates and 1921 rates do not seem right. How significant are they? They want looking into in more detail. The only other point I make on this in criticism of Dr Park's work are the closing remarks that the 1961 census will give us the answer to the many points raised. The fact that answers to religion are voluntary hampers our conclusions and will always remain a matter of speculation. Consider the people who have to analyse these answers. They are in great difficulty. I have, as I know to my cost, to get out data of this type. It is a tremendous undertaking and Dr Park deserves our hearty congratulations on the tables which support his paper and which shall prove of great value. I have pleasure in proposing a vote of thanks.

Dr Pollen I have heard of this paper and am very interested in it. We are interested in the problem of our infertility rates in Northern Ireland. I feel this is a work of collected information that has not been available at all in Northern Ireland and shall be tremendously useful in the future research in the subject and is of great interest not just in Northern Ireland but generally, considering the fact that this is a population with a high proportion of Roman Catholics and agriculture and is not an underdeveloped country like places in Asia. The paper is extremely useful in comparison of fertility rates in these countries with the rest of the world. The infant mortality rates in the thirties and fifties are doubtful and those for the Roman Catholics could be higher than the estimates, although that is not the fault of the paper. Modern medical treatment and the use of sulphonamides has reduced infant mortality dramatically. I would like to second this vote of thanks.