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Dublin Jewish Demography a Century Ago

CORMAC Ó GRÁDA*
University College Dublin

Abstract: This paper examines the demography of Ireland's Jewish community a century ago. Its focus is on Dublin Jewry, then mainly a community of immigrants from the Tsarist Empire and their children. It compares the marital fertility and infant and child mortality of immigrant couples with those of native couples living in the same neighbourhood. While 'economic' variables are shown to have mattered, there remains a large 'cultural' component to the distinctive demography of Jewish households.

I INTRODUCTION

[Jews] are better husbands than we are, better fathers, and better sons.

James Joyce (cited in Ellman 1983, p. 373)

Brendan Walsh has always been interested in Ireland's peculiar demographic history. His publications in this area range from analyses of the under-registration of births and the shifting gender gap in life expectancy to studies of the impact of emigration on domestic economic wellbeing and the impact of urbanisation on the spread of population across Ireland (e.g., Walsh 1969, 1975, 2000; Ó Gráda and Walsh, 1994; Walsh and Walsh, 1978). Several of these papers reflect his curiosity about the past. This paper is concerned

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Email address: cormac.ograda@ucd.ie

with another of Brendan's long-standing interests in the field: the association between religion and demographic patterns (e.g. Walsh, 1970; Ó Gráda and Walsh, 1995). It compares the demography of Ireland's Jewish population a century ago with that of the host population.

Today three features of Jewish demography stand out. These are the contrasting marital fertility rates of secular and non-orthodox Jews, on the one hand, and ultra-orthodox and Hasidic Jews, on the other; the increasing incidence of 'marrying out' among diasporic Jews; and the relatively high life expectancy of Jews everywhere. A century ago, it was the low infant and child mortality of Jewish populations everywhere that struck observers most. This low mortality and the fertility of Jewish marriages are the focus of the present study.

Historical demography is an inherently interdisciplinary field. Sociological, economic, and biological interpretations complement and compete with one another in accounting for variations in demographic behaviour, both over time and across groups and nations. In the analysis of, for example, Jewish mortality or Catholic fertility, cultural explanations usually bulk large. Disentangling economic and non-economic factors is typically difficult, however. Here, by concentrating on the differences between Jewish and non-Jewish couples living in similar housing in the same neighbourhoods in Ireland in the decades before the First World War, we will be seeking to partly control for socio-economic and environmental factors. Thus, for example, Jewish and non-Jewish households in Dublin's Little Jerusalem area shared the same water and air quality, and had access to the same medical facilities, and the same public services (such as they were). Household level data on housing quality, literacy, domestic servants, and male occupations offer a guide to the influence of living standards on mortality and fertility. By accounting as best we can for economic and environmental factors, we hope to better isolate and understand the impact of 'culture'.

II INFANT AND CHILD MORTALITY

Dublin's chief public health officer in the pre-First World War era, Sir Charles Cameron, and others repeatedly pointed to the city's poverty as the main cause of its high mortality. The sharp contrasts in death rates between rich and poor neighbourhoods and between professional and unskilled occupational groups support such claims (Ó Gráda, 2004). Research on infant and child mortality in Europe a century ago also stresses the importance of socio-economic factors (for recent research see Breschi and Pozzi, 2004). This

comes as no surprise, since not only did the rich consume healthier food and live in healthier neighbourhoods: they also had more resources to devote to childcare in general. In the first days and weeks of an infant's life, the role of genetic defects and the trauma of birth bulked large, but thereafter socio-economic factors mattered more. The impact of such factors was even greater during early childhood than in the first year of life. Yet as noted at the outset, the infant and child mortality rates of Jewish communities throughout Europe and North America a century ago were low, and this achievement has been linked less to their socio-economic status than to cultural factors.

Several scholars have focused on the higher survival prospects of Jewish infants and children in the past. In 1917 William Guilfoy, New York City's registrar of records, produced data showing that Jews in the city were at lower risk from all the major causes of infant and child mortality. Such was the impact of Jewish immigration that excluding Jewish children from both numerator and denominator in 1915 would increase the infant mortality rate in the city from 98 to 105 per thousand (Guilfoy's data are cited in Meyer, 1921, Table X). In R.M. Woodbury's classic study of infant mortality in eight American cities in the 1920s, the Jewish advantage over other ethnic groups (alas, the Irish are not included separately) is also highlighted. Woodbury emphasised the role of breast-feeding, but his cross-tabulations also allow some scope for other factors. He instanced the lower marital fertility of Jewish women and the higher average income of Jewish families. Noting the low mortality of the infants and children of Jewish immigrants to the US in the early twentieth century Samuel Preston, Douglas Ewbank, and Mark Hereward put it down to "… unmeasured child care practices, having mostly to do with feeding practices and general hygienic standards …". Invoking Woodbury's classic study, Preston *et al*., point in particular to the low incidence of Jewish infant and child deaths from 'gastric and intestinal diseases' as evidence that the Jewish diet was particularly 'pure'. They also speculate on the possible roles of community support systems, the care with which Jewish citizens upheld sanitary laws, the long experience of Jewish communities with urban living, and the likelihood that Jewish mothers were healthier (Woodbury, 1926; Preston *et al.,* 1994). The point that Jews had become adapted to city life over the generations, and that life in the *shtetl* was a good preparation for life in the slums of New York, Boston, or London, goes back at least a century (e.g., Bushee, 1903, p. 54). But these remain no more than plausible hypotheses, unsupported by firm evidence. The search for explanations continues. Closer to home, medical historian Lara Marks has also pondered the issue; in her study of Jewish mothers in London's East End a century ago, she put the healthiness of their children down to behavioural

factors such as inspections by the Jewish Board of Guardians and the ritual washing of hands before meals. Demographer Alice Goldstein and her co-authors conveniently isolate six factors that might explain the lower Jewish mortality: racial and biological differences; religious practices; personal cleanliness and housekeeping; socio-economic status; family and childcare practices; better access to scientific care (Goldstein *et al*., 1994; Marks ,1994; Garrett *et al.,* 2001, pp. 152-53). The first of these may be dismissed: there is no evidence that race *per se* influenced mortality. The last is less compelling when one is comparing Jewish and non-Jews living in the same or adjoining neighbourhoods (as I shall be doing here), since in that case the same medical practitioners, chemists, dispensaries, and hospitals were available to all – as long as one was prepared to pay. However, if Jewish culture valued medicine more than non-Jewish did, then the Jewish children may have had better access to medical facilities for cultural rather than locational reasons. Given the marked gradient in infant and child mortality rates in Dublin, socio-economic status presumably mattered, although its impact within the South Circular Road neighbourhood remains to be seen. The other factors noted by Goldstein *et al*. are tied up with culture.[1]

III NETWORKS AND SOCIAL INTERACTION

Modern research into the spread of fertility control in less developed countries emphasises the importance of social interaction and social networks. Women often obtain their information about contraceptive technologies

[1]A century ago a significant share of the high infant mortality in urban areas was due to deaths from diarrhoea/dysentery during the summer months (July, August, and September). Perhaps the Jewish mortality advantage stemmed from a proportionately lower incidence of deaths from this cause? If so, this should be reflected in the different seasonality patterns of Jewish and non-Jewish infant mortality. The relevant Irish data are lacking, but data on births and infant deaths for London in the 1900s should have a bearing on the issue. Comparing London as a whole with three East End registration sub-districts – Spitalfields, Goodman's Fields (both of which were heavily Jewish at the time), and Bethnal Green (which was not) – we find the following. The infant mortality rate in London (102.8 per thousand) was higher than in either Spitalfields (85.4 per thousand) or Goodman's Fields (95.0 per thousand), but lower than in Bethnal Green (132.8 per thousand). However, all four had roughly similar mortality peaks in the third quarter of the year. In Spitalfields the percentage was 32.1, in Goodman's Fields it was 30.2, and in Bethnal Green 27.3. In London as a whole 29.3 per cent of all infant deaths occurred in July-September. This suggests that a lower incidence of diarrhoea was just one of a range of factors responsible for lower Jewish mortality in the 1900s (Mooney, 1994). I am grateful to Graham Mooney of Johns Hopkins University for sharing his dataset of London births and infant deaths by registration sub-district.

informally from their neighbours. Neighbours can also offer reassurance and validation. The denser the social networks in which women participate, typically the quicker the diffusion of new information. Demographic behaviour and outcomes depend on living standards and cultural factors, but they also respond to the transmission of such information. An early study of family limitation in South Korean villages in the 1960s showed that socially isolated individuals (or couples) were significantly slower to use contraceptives; the more members of an individual's network were using contraceptives, the more likely that individual was to use them also. More recent research highlights the importance of gossip about family planning in societies as different as north-eastern Thailand and a Luo-speaking area in Kenya. The precise mechanism whereby networks help diffusion is not always clear. Sociologist Hans-Peter Kohler distinguishes between social learning and social influence. The former is about reducing uncertainty and helping the individual make the appropriate choice; the latter is more about how the behaviour of others generates copying and conformity.

The forces governing the diffusion of information about birth control should also apply, broadly speaking, to the spread of information about new health-improving technologies and personal hygiene. They may be less influential, however, since agents find it easier to identify the mechanisms resulting in an averted birth than those preventing the death of some child or infant. On the other hand, taboos of the kind possibly surrounding birth-control are less likely to hinder the spread of information about, say, soap or pasteurisation (compare Watkins and Danzi, 1995; Kohler, Behrman, and Watkins, 2001; Kohler, 2001).

The dense social networks operating within the Irish Jewish community, fortified by blood ties, are consistent with the faster spread of contraceptive knowledge and of new health-enhancing medical practices within that community. Gaps between Jewish and non-Jewish fertility and mortality in Dublin or urban Ireland would therefore have depended in part on how, and how quickly, new information or habits specific to one group were transmitted to the other. It would be nice to know how much contact there was, since this would have affected the extent of mutual influences on mortality and fertility. The degree of social integration or isolation of a minority group may matter in another respect: it may affect their exposure to infectious disease. A recent study of religious differentials in infant and child mortality in the Netherlands suggests that in the second half of the nineteenth century the isolation of the children of Jews and of members of minority Christian denominations may have increased their life chances, though the particular diseases and social mechanisms at work are not clarified (van Poppel, Schellekens and Liefbroer, 2002).

IV THE 1911 POPULATION CENSUS

The data used here are taken from the manuscript enumerators' forms of the 1911 Irish census of population.[2] The 1911 census, though largely modelled on its immediate predecessors, differed from them in one important respect: it required all co-resident couples to answer questions about marriage duration, the number of children born to them, and the number still alive (e.g., Ó Gráda, 1985). In this respect the Irish census was modelled on those conducted simultaneously across the Irish Sea and on the US censuses of 1900 and 1910. The new questions were prompted by an increasing eugenics-inspired concern in official quarters that the decline in the birth rate was unevenly spread across socio-economic and ethnic groups. The resultant data are a rich source of information on marital fertility patterns and trends. Though the ages at death of non-surviving children are not given, these data, taken together with data on marriage duration, also allow an analysis of infant and child mortality. The data are subject to the limitation that the reporting of infant and child deaths was retrospective and supposedly confined to the deaths of children of couples cohabiting on census night. It is hard to imagine that these data are perfect. Still, demographers and historians deem them sufficiently accurate for both cross-sectional and time-series inferences (see Watterson, 1988, p. 292; Preston and Haines, 1991; Garrett *et al.,* 2001).[3]

The database producing the results described here consists of 329 Dublin-Jewish households containing 2,112 people, or over two-thirds of all Jews living in Greater Dublin at the time.[4] The birthplaces of co-resident Jewish children bespeak an immigrant community. While most children were born in Dublin, 53 of the 290 couples on which there is information in the database had co-resident children born in 'Russia', while 44 had children born in Great Britain. About 40 Jewish children were listed as born elsewhere in Ireland.

The database contains several mixed marriages between Catholics and other Christians but none involving Jews. In the database 94 per cent of the Jewish husbands and 83 per cent of the wives had been born either in the Russian Empire (i.e., Lithuania) or Poland. There were 16 Jewish wives and 3 husbands Irish-born, while 9 husbands and 27 wives had been born in Britain.

[2]These are deposited and available for inspection in the Irish National Archives in Dublin.
[3]Note that children born out of wedlock are thus left out of the reckoning in our analysis.
[4]A significant, well-known limitation of the 1911 census is the misreporting of ages prompted by the Old Age Pensions Act of 1908 (Ó Gráda, 2002). By matching couples in the 1901 and 1911 censuses, we obtain a good sense of the extent of age misreporting. The outcome (not reported here) suggests that age misreporting was not serious in Dublin and that there was little difference between the three confessional groups in this respect.

Comparing Jews and non-Jews living in the same small districts of Dublin helps control for or neutralise the impact of factors such as water and environmental quality, access to hospitals and other medical facilities, and so on. Only streets on which there was at least a minimal Jewish presence are included in the database. The total number of households in the database is 1,185, of which 329 are Jewish, 558 Catholic, 219 Episcopalian, and the remaining 79 either belonged to other Christian denominations or were mixed marriages involving one Catholic partner. Given the small number in the last two categories, in some of the cross-tabulations reported below they are lumped together with members of the Episcopalian Church of Ireland. The exclusion of families headed by single parents and of children born outside of wedlock means that our measures of fertility are not comprehensive, though they are comparable with measures derived from enumeration forms in the US and in Great Britain.

The census also reports the occupation (if any) and the place of birth of everybody enumerated. Only the occupations of husbands were noted since it was quite exceptional for a married woman to work outside the home. Table 1 reports literacy (coded 0=Illiterate; 1=Read Only; 2=Read and Write) and numeracy as proxied by a simple index of age-heaping. The index used here is simply the proportion of those aged 30-34, 40-44, 50-54, and 60-64 years giving their ages as 30, 40, 50, and 60 years, respectively. Table 1 reports illiteracy and age-heaping levels for males and females by religious affiliation (Jewish, Catholic and Other). Both male and female Jews were more likely to age-heap than either of the other two groups.

Jewish literacy levels are perhaps lower than expected. Only 70 per cent of husbands and 56 per cent of their wives claimed that they could read and write. Older men and women were less likely to be literate. Socio-economic status was a factor too; for example, households in which the husband was able to read and write had an average of 7.8 rooms, while households in which the husband could neither read nor write had an average of 4.4 rooms. Forty per cent of Jewish women (and a striking 62 per cent of women aged 40 years and over) declared that they were unable to either read or write. Perhaps some respondents who were literate in Yiddish or Hebrew interpreted the question on literacy as referring to literacy in English only. In that event literacy might be seen as a measure of another kind of human capital, the ability to speak English. Other evidence, however, suggests that literacy among Russian Jews was far from universal. And it is worth noting that while more than one in four of those declaring illiteracy or partial literacy had 'proletarian' occupations, only one in nine of those declaring literacy did. Either way, the Dublin literacy rates largely mirror socio-economic status. It also bears noting that the literacy rates for men and women reported in Table 1 are higher than those

recorded for Russia's Jewish population in the 1897 census (Ó Gráda, 2006, Chapter 7).

Table 1: *Age-Heaping and Literacy in Dublin in 1911*

(a) Age-heaping:

	Jewish		*Catholic*		*Other*	
Age	*Male*	*Female*	*Male*	*Female*	*Male*	*Female*
30-34 Years	0.250	0.319	0.244	0.291	0.306	0.194
40-44 Years	0.383	0.424	0.308	0.434	0.256	0.294
50-54 Years	0.385	0.400	0.414	0.400	0.222	0.360
60-64 Years	0.667	0.400	0.417	0.391	0.333	0.300

(b) Literacy:

	Jewish		*Catholic*		*Other*	
Level	*Male*	*Female*	*Male*	*Female*	*Male*	*Female*
0	0.243	0.399	0.007	0.013	0.000	0.003
1	0.053	0.043	0.004	0.013	0.000	0.000
2	0.705	0.558	0.989	0.974	1.00	0.997

Table 2: *Housing and Occupations: 1911 Dublin Database*

(a) Housing:

	Jews	*Catholics*	*All Others*
Average No. of Rooms	5.4	4.4	5.2
Standard deviation	1.9	2.4	2.7
Density	1.29	1.63	1.16
% w. Dom. Servant(s)	27.7	9.3	15.50

(b) Occupations (%):

	Jews	*Catholics*	*All Others*
Unskilled	0.6	21.0	12.5
Commercial	64.4	7.2	9.8
Artisan	20.1	30.3	24.3
Professional	2.4	2.9	13.2
Clerical, w/collar	5.5	11.5	16.6
Police	0.0	5.6	5.1
Other	7.0	21.5	18.5
N	329	558	296

Source: 1911 database.

Table 2 reports on housing and occupational status in Dublin. The census data on housing quality is quite detailed: here we rely on the number of rooms as the best indicator of quality. By this yardstick, Jewish households had significantly more living space than Catholic households and marginally more than other residents. The higher percentage of Jewish households with one or more live-in domestic servants is also significant. Note too, based on the standard deviation of rooms per household, the implication that the gap between rich and poor was smallest in the Jewish community in 1911. Other data point to a social pecking order, however. For example, none of the 20 Jewish couples on working-class Martin Street had a domestic servant, while 9 of the 17 on middle-class Dufferin Avenue had one.

Table 3 compares the marital fertility and infant/child mortality levels of Dublin Jews and others. Note first how infant and child mortality in the Dublin Registration Area (or Greater Dublin, including the sub-urban townships) exceeded that in Ireland as a whole by a considerable margin. Within Dublin, the life chances of Catholic infants and children were presumably considerably worse. In the South Circular Road area that supplied our database, the Jewish advantage is clear. Catholics lagged behind both Jews and other non-Catholics.[5] Moreover, Jewish fertility was high, and completed family size higher than for either of the other groups. This was at least partly a product of early age at marriage, since Table 3 shows that Jewish age-specific fertility was highest at most durations and age-groups.

V INFANT AND CHILD MORTALITY IN JEWISH IRELAND

In the South Circular Road area all 42 infants born to Jewish mothers married for four years or less on census night in 1911 were still alive. This is indeed an impressive outcome: in the same area 15 per cent of Catholic infants and 10 per cent of all other infants born to mothers married for four years or less had died. The gaps for marriages of 5-9 years duration are proportionately narrower, but still striking: only 6.3 per cent of Jewish infants and children had died, as against 15.6 per cent of Catholic and 16.8 per cent of all others. The record of this artisanal, lower-middle class area was little better than that of the city as a whole in this respect (see Table 3).

[5]Although note the implied high mortality rate of 'Other Religions' at marriages of 5-9 years duration.

Table 3: *Marriage Duration, Fertility and Mortality in Ireland and in Dublin Before 1911*

Duration	*N*	*Avg. Ch. Born*	*% Dead*	*N*	*Avg. Ch. Born*	*% Dead*
		Pembroke			*SCR Catholics*	
0-4 Years		0.93	8.2	117	1.07	15.1
5-9 Years		2.47	11.2	112	2.52	15.6
10-14 Years		3.79	16.6	91	3.51	20.4
15-19 Years		4.91	20.1	70	5.06	20.4
20-24 Years		5.59	21.2	47	6.26	24.8
25-34 Years		7.26	25.1	77	5.83	27.4
		SCR Jews			*SCR 'All Others'*	
0-4 Years	42	1.12	0.0	64	0.64	10.0
5-9 Years	65	3.17	6.3	49	2.31	16.8
10-14 Years	60	4.68	9.6	40	2.28	19.2
15-19 Years	41	5.98	10.2	39	3.56	15.1
20-24 Years	38	6.76	13.2	23	4.13	10.5
25-34 Years	49	6.41	19.4	55	5.47	21.9
		Ireland			*Greater Dublin*	
0-4 Years		0.98	8.4		0.95	10.9
5-9 Years		2.81	11.2		2.62	16.8
10-14 Years		4.17	14.0		3.93	20.8
15-19 Years		5.20	16.0		4.91	23.9
20-24 Years		5.87	17.9		5.61	27.3
25-34 Years		6.57	20.3		6.24	30.4

Nevertheless, the gap between Irish Jews and non-Jews is perhaps not so striking when compared to rates recorded elsewhere around the same time. In Frankfurt-am-Main in the 1890s and 1900s, the infant mortality rate of Jews was 73 per thousand live births and that of the general population 155 per thousand live births; in Amsterdam in 1900-13 the rates were 77 per thousand for Jews and 102 per thousand for non-Jews; in Montreal in 1931 the rates were 43 for Jews and 113 for the general population. The evidence for mortality in early childhood suggests comparable gaps. Thus in Montreal in 1931 the mortality rates for children aged 0-4 years were 13.6 per cent for Jews and 36.7 per cent for the general population; in New York six years earlier the rates were 14.7 and 24.5 per cent; in Berlin in the mid-1920s 10.3 and 25.5 per cent. In Amsterdam the mortality rates of children aged 1-4 years in the 1900s were 11.2 per cent for Jews and 18.2 per cent for the general population. For first generation urban Irish immigrants in the US circa 1900 the probability of dying before age 5 was 0.246, for first generation urban East

European (and so disproportionately Jewish) immigrants it was 0.206 (Schmeltz, 1971, pp. 22-33; Preston and Haines, 1991: Table 3.4).

Our strategy of comparing Dublin's Jews with other residents of Little Jerusalem is a way of controlling for environmental factors: the air breathed and the water consumed by everybody in the neighbourhoods was presumably very similar. This reduces the Jewish mortality advantage, but there is still a considerable gap to account for. In modelling infant and child mortality, the number of children dead in a household (*CDEAD*) or the proportion of children dead (*PDEAD*) are probably the most obvious candidates for the dependent variable. Here, I rely on *PDEAD*.[6] In the estimation we also include the interaction term, *RCJETHOS,* which measures the impact of living on a more Jewish street on Catholic mortality.

The outcome of our estimation is given in Table 4. The coefficients measure marginal effects. The signs on most of the coefficients are as expected. Mortality was negatively correlated with the number of rooms and the number of domestic servants, while having a professional occupation, being a policeman, an artisan, or engaged in trade also reduced the risk of death. Similarly, female illiteracy and youthful marriage increased the risk, while the infants and children of women born in Dublin or in Great Britain were at less risk. Most striking of all, perhaps, is the big negative coefficient on being Jewish. An interesting feature is the implication of the negative coefficient on *CJETHOS* that Catholic mortality was lower on 'Jewish' streets. This is not so easily explained. That Catholics learned habits of hygiene and healthy eating from their Jewish neighbours seems unlikely. Perhaps there was a lower incidence of infectious disease on heavily Jewish streets. Perhaps too there was an element of selection bias at play here: some Catholics may have chosen to live on or to remain living on such streets because they were culturally closer to their Jewish neighbours to begin with. But precisely how that should have been so is less obvious.

The birth and burial records of the small 'pre-Litvak' Dublin Jewish community suggest that it too was characterised by 'low' infant and child mortality. Given the changing size and high mobility of this community, the data must be considered indicative rather than conclusive. The register recorded 299 births between 1838 and 1879. Among the deaths recorded in these years were five of children aged less than three months, seventeen of children aged between three months and a year, and fourteen of children aged between one and five years (Hyman 1972, pp. 244-266). With one exception, all these deaths were of children also included in the births register. The deaths

[6]Elsewhere I report very similar results using the mortality index devised by Samuel Preston and Michael Haines for their classic study of infant and child mortality in the United States a century ago (Ó Gráda, 2006).

Table 4: *Accounting for the Variation in Mortality: Marginal Effects*

Depvar	*PDEAD*	*PDEAD*	*PDEAD*	
Estimation	*Tobit*	*Tobit*	*Tobit*	
LL	–528.2	–524.6	–508.69	
Pseudo R^2	0.157	0.160	0.185	
N	991	986	986	
Variable	*dy/dx*	*dy/dx*	*dy/dx*	*Mean Value (**)*
ROOMS		–0.028 ^^	–0.025 ^^	4.94
DOMS		–0.038	–0.035	0.192
*JEWISH**	–0.209 ^^		–0.263 ^^	0.309
*CATH**	0.105		0.060	0.461
RCJETHOS	–0.392 ^^		–0.346 ^^	0.077
*PROF**		–0.064	–0.057	0.046
*CLERICAL**		–0.022	0.003	
*POLICE**		–0.068	–0.096	0.040
*COMM**		–0.190 ^^	–0.071	0.250
*ARTISAN**		–0.117 ^^	–0.078 ^^	0.273
HLIT		0.015	–0.045	1.82
AAMW	0.002	0.007 ^^	0.002	23.2
*WDUB**		0.002	–0.081 ^^	0.384
*WGB**		–0.039	–0.084	0.099
CHBORN	0.045 ^^	0.048 ^^	0.048 ^^	4.73
DUR	0.001 ^^	0.000 ^^	0.000 ^^	424.1

(*) dy/dx is for discrete change of dummy variable from 0 to 1.
(^^) significant at 1 per cent.

Variables: *ROOMS*=number of rooms; *DOMS*=number of domestics; *WDUB*=wife Dublin born; *WGB*=wife British born; *AAMW*=wife's age at marriage; *AAMW2*= wife's age at marriage squared; *HLIT*=husband's literacy (see text); wlit=wife's literacy; *JETHOS*=jewish ethos (see text); *MIXED*=rc-prot marriage; *PROF*=professional; *RCJETHOS*=*CATH***JETHOS*; *COMM*=commercial.

of children and infants who left the country immediately, or soon after birth are excluded. Presumably these were a small fraction of the total. The implied infant mortality rate was therefore almost certainly under 100 per thousand, and the mortality rate of children aged 1.0-4.9 years considerably less than that. Though the lack of reliable civil registration data for this period rule out

a formal comparison with rates in Dublin as a whole, the gap between Jewish and non-Jewish rates can only have been substantial, since the rates reported in Table 3 were almost certainly exceeded in earlier decades. Data on Jewish infant mortality elsewhere in western Europe before 1900 are scarce, but our rough guess at Ireland's rate compares favourably with e.g., Westphalia's (96 per thousand in 1819-1870), Glasgow's (about 90 per thousand c. 1880-1900), Berlin's (about 170 per thousand in 1816-66), or Florence's (139 per thousand in 1818-47) (Schmeltz, 1971, pp. 21-23; Collins, 2000, pp. 79-80).

VI THE FERTILITY TRANSITION

Today the control of births within marriage is virtually a worldwide phenomenon. By a recent reckoning only a handful of the world's poorest economies have yet to embark on a 'fertility transition'. Yet for most of recorded history it is reckoned that *homo* and *mulier sapiens* did not control fertility within marriage. The decades that are the primary focus of this study – the 1870s to the 1930s – were central in this regard. These were the years of the so-called European Fertility Transition, when an increasing proportion of married couples throughout Western Europe began to limit family size. The transition was the focus of a famous research project by a team of scholars led by Princeton University's Ansley J. Coale and of an extensive, interdisciplinary literature. Coale and his colleagues offered both new measures of the timing and extent of the transition, and a theoretical framework for describing it. The monographs that flowed from their Princeton European Fertility Project between the late 1960s and mid-1980s highlighted the role of sociological and cultural factors; they could find little correlation between economic backwardness or economic growth, on the one hand, and the onset or intensity of the transition, on the other. They found that Catholic populations almost everywhere, regardless of the economic context, were more reluctant to control births. So, it seemed, were certain categories of workers, such as coalminers. In the Princeton view, the spread of birth control owed more to culture and to social networks and who-met-whom than to strictly economic considerations. Subsequent research has placed more emphasis on economic factors such as urbanisation and shifting occupational opportunities for women, but the relative importance of 'culture' and 'economics' is still debated (Coale and Watkins, 1986; Galloway, Hammel and Lee, 1994; Brown and Guinnane, 2002).

In this literature, the Irish are well known for having been unenthusiastic participants in the fertility transition. Ireland's low rates of industrialisation and urbanisation and the dominance of the Roman Catholic religion are the

explanations usually invoked to explain this. Nonetheless, scrutiny of published data reveals that in Ireland a significant minority of married couples were already controlling births by 1914, and estimates of the standard Princeton measure of marital fertility (I_g) suggest considerable variation across the counties of Ireland even before the turn of the century. Analyses of 1911 household level data confirm that Catholic couples were slower to adjust their behaviour and that the decline in fertility was fastest in urban, middle-class Ireland. Studies of households in the relatively well-off Dublin suburbs of Rathmines and Pembroke yield evidence of birth 'spacing' early in marriage, of a socio-economic class gradient to fertility, and of higher fertility in Catholic households. Within a few decades there would be a sizeable gap between the marital fertility of Catholics, who formed the overwhelming majority of the population, and non-Catholics (Ó Gráda, 1993, pp. 206-207; Ó Gráda and Duffy, 1995). Shifts in Irish fertility after 1911 have been less scrutinised, but the drop in marital fertility was modest: according to the Princeton survey I_g in the two Irelands, north and south, fell from 0.610 in 1926 to 0.570 in 1936 and 0.548 in 1961. Yet a US Jesuit sociologist studying Dubliners in the late 1940s and early 1950s was informed by 'several priests' and a doctor that the Catholic middle and lower-middle classes were increasingly resorting to birth control. This entailed abstinence, not reliance on contraceptives (Coale and Treadway, 1986, p. 120; Ó Gráda and Walsh, 1995; Ó Gráda, 1997, pp. 193-195).

West European Jews, on the other hand, were precocious participants in the fertility transition. The marital fertility of Italy's small Jewish community had already fallen significantly before the fertility decline reached other groups. In the kingdom of Bavaria the Jewish birth rate fell by half, from 32.7 per thousand in 1876-1880 to 16.3 per thousand three decades later, while the Catholic birth rate fell by only a sixth, from 43.3 to 36.0 per thousand, over the same period. Evidence from Munich shows that the mainly urban character of Bavaria's Jewish population only partly accounts for this. Between 1875 and the early 1890s the marital fertility of Munich's Jews fell from 0.522 to 0.299 on the Princeton I_g scale, while that of Munich Catholics registered a gentler decline from 0.660 to 0.532. In late nineteenth-century Berlin the confessional gap was narrower: I_g was 0.337 for Jews, 0.393 for Lutherans, and 0.446 for Catholics. John Knodel, who supplied these numbers, suggests that the closeness of family and cultural ties within the Jewish community "… provided a situation in which changing norms regarding family size and family limitation could spread rapidly and relatively independently of the rest of German society". Given these signs of fertility control among German and Italian Jews, it is hardly surprising to find that already in the mid-nineteenth century Anglo-Jewry was showing some signs of a population embarking on

the fertility transition (Livi Bacci, 1986; Knodel 1974, pp. 136-138; Kosmin, 1982).

In Ireland in the 1930s and 1940s the marital fertility of Jewish couples was less than half that of Catholic couples and also less than that of Church of Ireland couples. This statement is based on an admittedly rather crude but serviceable measure of marital fertility, taken from the Irish census of 1946. It is the number of children aged 0-2 years divided by the weighted sum of married women aged 15-49 years. The weights used are the so-called Hutterite weights, familiar to historical demographers, and also used in constructing I_g. (e.g. Coale and Watkins, 1986; Vann and Eversley, 1992, p. 45). The Hutterites are an Anabaptist sect found mainly in rural communities in North America. Their marital fertility in the early twentieth century exceeded that of all other recorded populations, and was therefore used as a standard in the Princeton European Fertility Transition Project. The weights refer to the number of children born per thousand married Hutterite women in five-year age-groups from 15-19 to 45-49 years. The outcomes for the Irish Free State and for Dublin in 1946 are given below. A separate estimate for Dublin Jews is impossible, but since a majority of Jews lived in the capital, that for the country as a whole would not be far off the mark.

	Ireland	*Dublin*
All	1.88	1.60
Catholic	1.92	1.65
Church of Ireland	1.27	1.03
All Others	1.33	1.04
Jewish	0.99	–

This measure makes no allowance for infant and child mortality, but since (as indicated above) Jewish mortality was almost certainly lower than non-Jewish mortality, it probably underestimates the marital fertility gap between Jews and others.[7] The calculations surely imply that the marital fertility of Ireland's Jews was lower than that of any other significant confessional group in the 1940s. Ireland's Jewish community thus shared the enthusiasm with which other immigrant Jewish communities from Eastern Europe participated in the fertility transition in the 1920s and 1930s (compare Marks, 1994, pp. 85-86).

[7]The underlying data are in Saorstát Éireann, *Census of Population 1946*, Vol. 3, p. 32.

VII LITVAK AND GENTILE FERTILITY

Fifteen children he had. Births every year almost. That's their theology … Increase and multiply.

James Joyce, *Ulysses*

East European Jewish marriages were highly fertile in the late nineteenth and early twentieth centuries. One of the 'surprising results' of the Princeton study of Russian fertility was that in the census year of 1897 there was very little variation across provinces in the marital fertility of *urban* Jews, and that Jewish marital fertility was higher than that of the rest of the *urban* population in all but one of fifteen provinces. Ansley J. Coale and his co-authors found corroboration for this outcome in 'an odd place': the 1910 US census revealed that the average parity among Russian-born (and thus mainly Jewish) women aged 45-49 years and married at least twenty years was exceeded only by that of French-Canadians and Poles (Coale, Anderson and Härm, 1979, pp. 78-80. See too Bushee, 1903, p. 46). In this respect the Jews of Eastern Europe differed markedly from those of Western Europe, whose fertility had already been declining for a century or two, and was lower than that of most, if not all, other confessional groups (Livi-Bacci, 1986, pp. 189-195).

So what of Dublin's Litvaks? First, their women married young and few of them remained unmarried. In Dublin's case the mean age at marriage of Jewish women was very low by local standards before 1911, four years lower than that of other women living in the same part of the city (Table 5). Jewish men married young too, though the gap between Jewish and non-Jewish males was about a year less.

Table 5: *Average Age at Marriage in Little Jerusalem*

Mean	*Jews*	*Catholics*	*Others*
Male	24.8 (5.0)	28.9 (7.3)	29.0 (8.0)
Female	20.9 (3.5)	24.9 (5.3)	25.7 (6.7)
Female, duration 0-9	21.8	25.9	26.0
Female, duration 10-19	20.9	24.7	27.0
Female, duration 20+	20.2	23.8	24.3
Median			
Male	21	28	27
Female	24	24	24
Average duration	17.1 (12.1)	14.9 (11.4)	16.2 (12.2)

Note: standard deviations in brackets.

The high marital fertility of the Jewish community was undoubtedly due in part to early marriage. But was age-specific marital fertility also higher? The great care that Jewish women took of their young, the religious restrictions on sexual intercourse after giving birth and menstruation, and the prevalence of breast-feeding might argue for longer intervals between births. However, Table 6 suggests that, for more recent marriages at least, age-specific Jewish marital fertility was higher than that of Catholics living in the same part of south Dublin. For marriages of less than twenty years' duration, the difference is striking. Note too, however, the implication that the Jewish fertility advantage did not persist for longer marriage durations.[8] This probably means that Jewish mothers stopped having children at an earlier age than non-Jewish mothers. If so, they bore a higher proportion of their children when they were younger and healthier.

Another remarkable feature of Jewish fertility in Dublin is the much lower incidence of childless marriages. It holds across all marriage durations (Figure 1). The lower incidence of Jewish childlessness is partly due to Jews marrying younger, though it also holds true when the age at marriage is controlled for.[9] To some extent the gap may reflect the better health status of Jewish couples and the lower incidence of sexually transmitted diseases, but it is also evidence that fewer of them wanted to limit family size. In Dublin a significant minority of both Catholic and Protestant couples were already spacing births early in their marriages on the eve of the First World War (Ó Gráda, 1991; Ó Gráda and Duffy, 1995). There is no evidence here of spacing on the part of Jewish couples, though. For the most part, these patterns suggest that the better survival chances of Jewish infants and children were not the product of lower fertility.

[8] This is suggested by comparing the changes in the mean number of children from one duration category to the next for Jews and Catholics. The increases for Jews are significantly bigger between durations of 0-4 and 5-9 years and between 5-9 and 10-4 years, but not so thereafter.

[9] For marriages where the female age at marriage was 20-24 years, the percentages childless were as follows:

	Jews		*Catholics*	
Duration	*Percentage*	*Number*	*Percentage*	*Number*
0-4	20.7	29	21.6	37
5-9	5.6	36	6.7	45
10-14	2.6	39	12.8	39
15-19	14.3	21	15.2	33
20-24	5.9	17	9.5	21
25-29	9.1	11	13.6	22

On the relation between age at marriage and childlessness see Wrigley (2004), pp. 410-11.

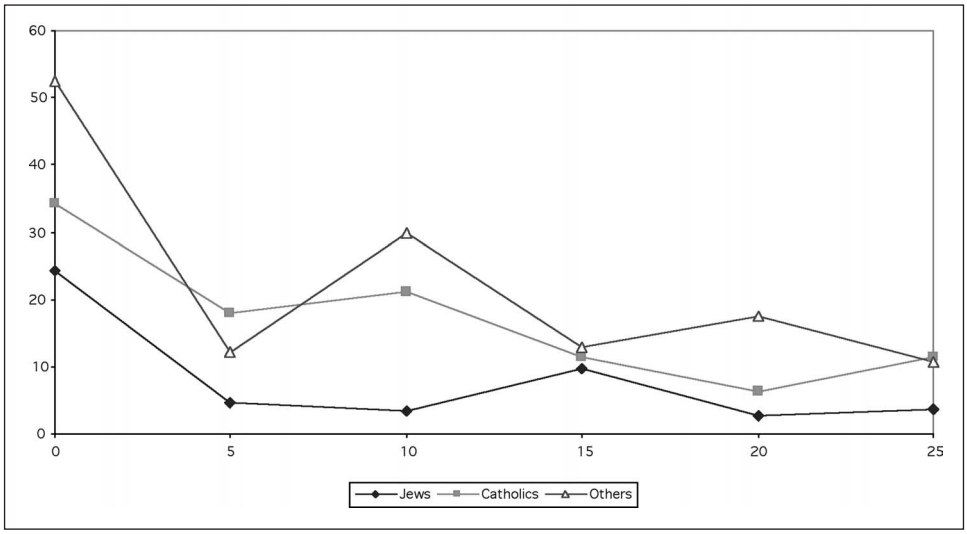
Table 6: *Duration and Average Number of Children*

	Jews		*Catholics*		*All Others*	
DUR=0-4	*Average*	*N*	*Average*	*N*	*Average*	*N*
AAM15-19	1.71	7	1.25	8	0.75	8
AAM20-24	1.10	29	1.18	39	0.75	20
AAM25-29	0.60	5	1.02	48	0.67	21
AAM30-34	–	0	1.00	16	0.64	11
DUR=5-9						
AAM15-19	3.44	18	2.71	7	3.20	5
AAM20-24	3.11	37	2.96	45	2.91	23
AAM25-29	3.00	7	2.50	34	1.50	4
AAM30-34	2.67	3	2.10	20	1.50	10
DUR10-14						
AAM15-19	5.31	13	3.86	8	–	0
AAM20-24	4.59	39	4.26	39	3.58	12
AAM25-29	4.14	7	3.44	27	2.00	10
AAM30-34	4.00	1	0.90	10	2.00	5
DUR15-19						
AAM15-19	6.11	18	6.18	11	4.80	5
AAM20-24	6.00	21	5.76	33	4.43	14
AAM25-29	8.00	1	3.94	17	2.75	12
AAM30-34	–	0	3.71	7	2.50	8
DUR20-24						
AAM15-19	7.47	17	9.20	10	1.67	3
AAM20-24	6.76	17	6.05	21	4.88	8
AAM25-29	3.75	4	5.20	10	5.50	4
AAM30-34	–	0	3.80	5	3.33	3
DUR25-34						
AAM15-19	6.76	17	8.50	22	8.00	9
AAM20-24	6.48	23	5.08	26	6.04	27
AAM25-29	4.33	6	5.56	18	5.00	15
AAM30-34	5.00	1	2.38	8	2.67	3

Source: 1911 database.

Econometric estimation corroborates the impressions gained from cross-tabulations. The data used are not ideal in a number of respects. One shortcoming of the records has already been noted. In most cases, neither the year of birth nor the age at death nor the parity of dead children can be derived from the data. Thus in the case of long duration marriages, a dead child could as well be the victim of tuberculosis in adolescence as of a difficult

Figure 1: *Percentage Childless by Duration*



high parity birth late in marriage. A second problem is that the occupations listed in 1911 were not necessarily the same as those when the decisions about having children were made. As noted earlier, some occupations, particularly in the Jewish community, were more likely to be chosen by younger men. Third, quite apart from this life-cycle aspect, some occupations are uncomfortably vague. A baker or might be a journeyman or a self-employed businessman; an engineer might be a skilled craftsman or a professional; while 'clerk' and 'civil servant' cover a wide range of occupations. Still, the insights to be gained from such data are important. Here we include the bulk of the occupations listed

[10]We also estimated a zero inflated negative binomial (ZINB) version which allows for the possibility that the *CHBORN*=0 is a function of both choice (couples deciding not to have children) and necessity (couples not being able to produce children). The outcome was virtually the same as in the negative binomial version.

[11] The resulting regression produced:

	Coefficient	*z*
AAMW	–.0285	–2.24
AAMH	–.0210	–2.10
DOMS	–.4068	3.16
CMR	0.0253	11.37
CONSTANT	–2.876	–6.35
Pseudo R^2		0.077

Table 7: *Accounting for the Variation in Fertility: Marginal Effects*

		[1]		[2]		[3]		
Estimation Method		*NB*		*NB*		*NB*		
Number of obs		*1180*		*1076*		*1076*		*Mean Value*
LR chi2(16)		*934.97*		*705.86*		*711.32*		*of Variable*
Prob > chi2		*0.0000*		*0.0000*		*0.0000*		
Log likelihood		*–24237.54*		*–2221.75*		*–2219.02*		
Pseudo R2		*0.161*		*0.137*		*0.138*		
Variable	*dy/dx*	*z*	*dy/dx*	*z*	*dy/dx*	*z*	*n=1180*	*n=1076*
DUR	0.294	18.60	0.447	16.48	0.443	16.38	15.82	13.44
DUR2	–0.005	–14.22	–0.009	–12.39	–0.009	–12.23	389.7	266.3
JEWISH*	1.31	4.03	1.275	2.84	1.120	2.54	0.2788	0.2732
CATH*	0.074	0.27	0.491	1.42	0.700	1.90	0.4720	0.4768
PROT*	–0.034	–0.12	–0.224	–0.58	–0.227	–0.59	0.1847	0.1831
CDJEW	0.422	7.20						0.1839
CDCATH	0.641	12.71						0.4314
CDPROT	0.546	7.26						0.1398
XBJEW	0.162	0.61	0.103	0.39				0.2031
XBCATH	0.312	1.31	0.301	1.27				0.2946
XBPROT	0.718	2.07	0.668	1.93				0.1097
PROF*	–0.411	–1.54	–0.417	–1.49	–0.380	–1.34	0.0517	0.0539
POLICE*	0.555	1.62	0.548	1.53	0.536	1.51	0.0390	0.0409
ARTISAN*	0.352	2.59	0.434	2.94	0.415	2.80	0.2593	0.2584
HDUB*	0.294	1.88	0.398	2.37	0.391	2.29	0.3466	0.3513
WDUB*	0.084	0.56	–0.012	–0.08	–0.007	–0.005	0.3907	0.3996
ROOMS	0.061	2.34	0.034	1.18	0.043	1.50	4.872	4.869
AGEDIFF	–0.019	–1.78	–0.023	–2.04	–0.024	–2.13	3.782	3.795
OTHIRTY	–0.059	–9.47	–0.056	–8.54	–0.056	–8.65	4.901	5.158
JETHOS			0.923	2.33			0.2248	
RCJETHOS			–1.08	–1.53			0.0785	

(*) dy/dx is for discrete change of dummy variable from 0 to 1.

variables: AGEDIFF=age difference between husband and wife; OTHIRTY=age of wife if 30+, zero otherwise; CDJEW=CHDEAD*JEWISH, CDCATH=CDEAD*CATH, CDPROT=CDEAD*PROT; DUR2=duration squared

Note: [2] and [3] include marriages of only 0-34 years duration.

into one of five groups: unskilled, commercial, professional, police. We also experiment with the variable *OCCODE*, which gives each occupation a ranking between 1 and 5.

Table 7 summarises the results of estimating three similar models of fertility variation.[10] The first imposes a negative binomial distribution (*NB*) on the dependent variable *CHBORN*. The second and third regressions attempt to take some account of the endogeneity of infant and child mortality. This refers to the likelihood that some couples will seek to replace a child who dies. Indeed, this replacement effect is a measure of the prevalence of family planning. The available data make taking account of endogeneity very difficult. In these regressions *CHDEAD* was first regressed against the ages of marriage of the husband and wife (*AAMH*, *AAMW*), the child mortality rate in Greater Dublin during the first four years of marriage (*CMR*), and the number of domestics (*DOMS*), and the expected value of the dependent variable, *XB*, then interacted with religion dummies in the second stage. *CMR* is included to capture the shifting incidence of risks such as the prevalence of infectious diseases. This measure too fell over time, but with a blip in 1896-1900 (Ó Gráda, 2004).[11] The outcome is reported in the second and third set of results in Table 7. In these, our preferred specifications, being Jewish was associated with an extra child being born (the coefficients on *JEWISH* being 1.27 and 1.12). The father having a professional occupation reduced the number of children born by about 0.4, while being a policeman increased it by over 0.5 and being an artisan also increased it by 0.43. The coefficient on *rooms* also had the right sign. Economic considerations therefore mattered. The father being a Dubliner increased fertility; fertility was positively correlated with housing quality (measured by the number of rooms), and negatively with mothers being aged over thirty at marriage (*OTHIRTY*) and the age difference between husband and wife (*AGEDIFF*). Note too how in the third specification the 'Jewishness' of a street increased Jewish fertility but reduced that of Catholics. It is not clear how this result should be interpreted. However, the most interesting result concerns the coefficients on the interaction variables *XBJEW, XBCATH*, and *XBPROT*. These are intended to capture how the replacement effect varied by religion. Both specifications indicate that the replacement effect was much stronger for both Catholics and members of the Church of Ireland in the South Circular Road neighbourhood than for Jews. Note too how the effect is much weaker for Jews and Catholics when *CHDEAD* is endogenised. Since the strength of the replacement effect is a measure of family planning, this outcome suggests that along the South Circular Road other Christian couples were further along the fertility transition in the 1900s than Catholic and, especially, Jewish couples.

VIII CULTURE MATTERED

Though separated from its neighbours by history, religion, and language, Dublin's Jewish immigrants were much less segregated than, say, those of London's East End or New York's Lower East Side. Nonetheless, their demographic characteristics were quite distinct from both those of Dublin at large and those of its south city non-Jewish neighbours. The most striking difference is that the infants and children of Dublin's Jews were much more likely to survive than non-Jewish children growing up in the same neighbourhood. The higher socio-economic status of their parents only partly explains their better survival prospects.

Nor had differential fertility much to do with it. This may seem surprising, given that throughout Europe Jewish couples were in the vanguard of the marital fertility transition, deciding early on to invest their parental resources in the 'quality' rather than the 'quantity' of children. Yet the fertility of our first generation of Jewish immigrant women, nearly all of them born in Lithuania, was largely unaffected by the transition. Age-specific Jewish marital fertility was higher than that of either Catholics or other Christians in the same neighbourhood. And Jewish couples were less likely than others to have another child in order to replace any infants or children who died. Their high fertility was undoubtedly one part of their culture or belief-system that this first generation of Ireland's Jewish immigrants had not left behind in Lithuania. At the same time there is a hint in the data that the age at which Jewish women 'stopped' having children was lower. In the following generation, as the occupational status and aspirations of the Jewish community shifted, so did their marital fertility.

The dramatic contrast between the situation in 1911 and that in 1946 suggests that Irish Jews replicated a pattern described by Israel Kosmin for Great Britain. There over four-fifths of Jewish couples marrying in the 1920s relied on artificial methods to control births. "The important point here", noted Kosmin, "is that the majority of these Jewish women were the daughters of women from a natural fertility regime". Kosmin mentions two other features of Jewish demography that survived this remarkable transition in both Britain and Ireland: a low illegitimacy rate, and a low percentage of childless couples (Kosmin, 1982, pp. 258-259). In their rapid transition to low marital fertility Irish Jews had much more in common with their English co-religionists than with their non-Jewish neighbours.

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