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Fernihough, Alan; Ó Gráda, Cormac; Walsh, Brendan M.

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Mixed marriages in Ireland: A century ago

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Mixed Marriages in Ireland A Century Ago

Alan Fernihough, Cormac Ó Gráda and Brendan M Walsh, University College Dublin

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Mixed Marriages in Ireland A Century Ago*

Alan Fernihough[†] Cormac Ó Grada[‡] Brendan M. Walsh[‡]

Abstract

This paper explores the characteristics associated with marriages between Roman Catholics and members of other religious denominations ('mixed marriages') in 1911 Ireland. Using the recently-digitized returns of the 1911 census of population, we find that such marriages were relatively rare, varying from two to three percent of all marriages in Dublin to less than half a percent in Connacht. However, at the turn of the century in the Dublin area mixed marriages represented 12 per cent or more of marriages where at least one of the partners was a non-Catholic. When mixed marriages did occur the Catholic partner was more likely to be the wife. Using regression analysis we examine the individual characteristics of the partners to these marriages and find a number of characteristics significantly associated with them. However, the strength and even the direction of predictors like socioeconomic status vary substantially across regions, most notably between Ulster and the rest of Ireland. In Ulster mixed marriages tended to occur between partners in lower socioeconomic positions, whereas in the rest of Ireland the partners tended to be from higher social strata. Since the religion of the children born to mixed marriages was a contentious issue, we match our sample of partners of mixed religions to their children and find that the religion of the children was strongly influenced by the mothers religion. Couples of mixed religions had lower fertility than the general population, even when the influence of socioeconomic class and other potentially confounding variables is allowed for. This, as well as the evidence of higher infant-child mortality among families of mixed marriages, potentially indicates a lack of family and social support due to the general public disapproval of couples who married across the religious divide.

JEL-Classification: N83, J12, J13

Keywords: Mixed Marriage, Historical Population

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[†]Queen's University Belfast. Email: alan.fernihough@gmail.com.

[‡]University College Dublin.

One of the few points about which all religions in Ireland are in complete agreement is a rooted objection to mixed marriage... A Protestant girl who dances with a Catholic knows that she is wasting her time; and why should her mother have fresh tea made and distribute her cakes and scones to a man who is clearly unmarriagable. This consideration runs through the whole social life... The hatred existing between religions in Ireland is much less than the hatred existing between the different classes in the same religion. Catholic and Protestant do not edge away from each other on a tram, as the middle classman edges away from an artisan. Compare those two events, of which we all know instances, a mixed marriage and a mesalliance—which of them causes more commotion and heart-burning in a family?

Arthur Clery, Professor of Law, University College Dublin.¹

1 Introduction

In today's globalized world, mixed marriages² are more likely to involve couples from different parts of the world than neighbors belonging to different faiths. The prevalence of mixed marriages is a measure of the acceptance of outsiders from contrasting and often distant backgrounds (Lucassen and Laarman, 2009; Chiswick and Houseworth, 2011; Lanzieri, 2012; Muttarak and Heath, 2010; Voigtländer and Voth, 2013). In the past, however, the rarity of such marriages, as well as the taboos and legal prohibitions which limited them, reflected religious and ethnic separateness or hostility (Fryer, 2007; Muttarak and Testa, 2013). By the same token, the presence of mixed-religion sibling families might be considered as a sign of social integration across religious groups.

The focus of this paper is on marriages before the First World War between members of the Roman Catholic Church ('Catholics') and members of other churches in Ireland, whom we dub for convenience OD (for 'Other Denominations'). The latter were overwhelmingly members of either the Church of Ireland or of non-conforming (Protestant) churches. Mixed marriages in nineteenth- and early twentieth-century Ireland were controversial enough to

¹Clery (1915, pp. 439–440).

²Marriages between partners of different religions are normally referred to as 'mixed marriages' in Ireland. The phrase 'intermarriage' can confusingly relate to the same phenomenon or to endogamy, that is, marrying within one's family, tribe or clan. We use the two words interchangeably here.

be the stuff of sensational court cases and literary fiction.³ But how common were they? And when they did occur, how did those who 'married out' without changing their religion differ from the population at large? What can be said about the religion of the children of intermarried couples? How did mixed marriage households differ from the average household regarding fertility and mortality? To what religion were the offspring of mixed marriages assigned? In attempting to answer these questions, we use the recently digitized household enumeration forms of the Irish census of 1911. This source provides useful demographic and socioeconomic information on every individual in Ireland and, unlike the digitized 1901 census, it contains additional data on marital fertility and child mortality.

The remainder of the paper is structured as follows. The following section introduces our data and provides an overview of the patterns of mixed marriages. Section 3 focuses on the religious upbringing associated with the children of mixed marriages. In this section, we explore the determinants of the offspring's religion, and quantify the role that the parent's religion, alongside other factors, played in the outcome. Section 4 looks at a subsample of the intermarried households wherein the siblings are reported to be of mixed religions. Section 5 discusses the variables associated with intermarriage. Section 6 analyses the fertility of intermarried couples, comparing these marriages to those between couples of the same religion. We also examine the mortality of the children of intermarried couples in this section. Section 7 concludes.

2 Frequency of Mixed Marriages

For reasons still debated by historians (Ford, 1997; Murray, 2009), the Protestant Reformation largely failed in Ireland. A century ago pre-partition Ireland contained 3.24 million Catholics with 1.15 million belonging to other religions. Thus the Catholic share amounted

³See e.g. *Irish Times*, 15 September 1900; 16 May 1905; 24 November 1905; 3 August 1912. The McCann case in Belfast in 1910 resulted in demonstrations and an appeal to the Lord Lieutenant (*IT*, 7 January 1911; 8 February 1911). On mixed marriages in literary fiction see Ervine (1911); Hoult (1935); Foster (2008, pp. 140–143).

to 74 per cent and it would increase between 1911 and 1961. It always tended to be highest in the south and west. In 1911 it ranged from 44 per cent in Ulster to 96 per cent in Connacht, but in Belfast it was only 24 per cent while in Dublin it was 79 per cent. Note too that by 1961 the Protestant proportion of the twenty-six counties in the Republic of Ireland (i.e. omitting the six counties in Northern Ireland) had shrunk to a very low level compared with any area of Ireland in 1911. Less than 2 per cent of the population of Connacht was non-Catholic in 1961 (see Table 1).

[Table 1 about here.]

Nineteenth-century Ireland was not a fertile ground for mixed marriages. Quite apart from very real confessional tensions, Catholics tended to differ from non-Catholics in their politics, in their sporting and cultural pursuits, in where they were educated, in how they spoke, and in socio-economic status (Campbell, 2009). Thanks to the digitization of the 1911 census, the extent of mixed marriages before 1911 can be ascertained by looking at households where one spouse was a Catholic and the other was not at the date of the census.⁴ The individual-level data from the 1911 census, has been recently digitized and is available online, provides a rich source of information on the historic Irish population.⁵ However, the use of this source entails a number of caveats. Firstly, all of these data are self-reported. Budd and Guinnane (1991) have shown that this led to a biased age-distribution. However, this bias is most common amongst the very elderly, who are mostly excluded from our analyses. Another potential issue arises from the enumeration process. The census required each household to return an enumeration form listing all persons present in the household on Sunday the 2nd of April 1911. Thus, household members that were missing on the day of the census are excluded from our data (but may have been surveyed in the household or institution where they were on Census night, for example as a visitor or hospital patient).

⁴We lack any information on marriages where the partners were of different religions at the time of the marriage but one subsequently converted to the partners religion.

⁵Interested readers can browse the census at: http://www.census.nationalarchives.ie/pages/1911/.

This is a problem in as far as our main unit of analysis, the married couple, requires both the husband and wife present. Thankfully, the absence of spouses was rare, and from individual level reports we successfully matched 472,475 cohabiting married couples (where at least one of the partners is Irish born), or 944,950 married individuals amounting to almost the entire married population (BPP, 1912–1913). We linked our subset of intermarried couples to their children who were present in the household on the census day.

[Figure 1 about here.]

Our database suggests that on the day of the 1911 census only 3,834 out of 472,475—less than one per cent—co-resident married couples comprised Catholics married to ODs. Figure 1 illustrates trends in the frequency of mixed marriages, both as a percentage of the total number of married couples and of the total of married couples where at least one partner was from the ODs (that is excluding marriages where both partners were Catholics). The temporal element is deduced from the 'number of years married' variable, so a couple married ten years will have wed in 1900 or 1901. The most recently married couples appear on the right of each plot. We create 'years married' categories to aid visualization, and stratify our trends by six locations. The first or left-hand-side panel in Figure 1 indicates that, except in Dublin City and Belfast, mixed marriages were rare. In Dublin they exceeded three per cent of the total marriages in the 1890s and 1870s, but had fallen back towards two per cent by the early twentieth century. In Belfast, they rose from one per cent in the 1870s to two per cent in the early twentieth century before falling sharply in 1906–1911.

These small percentages relate to the total population of married couples and belie the fact that relative to the size of the OD population, mixed marriages were quite significant, especially in Dublin and Munster. The right-hand-side panel of Figure 1 adjusts for the relative supply of Catholics and ODs. This panel reveals that the raw calculations underlying the first panel turn out to be somewhat deceptive. In Dublin, for example, between 1871 and 1911 mixed marriage represented 12 per cent or more of the marriages in which one spouse was an OD. In Munster this proportion fluctuated between 8 and 12 per cent over

this period. In these areas the scarcity of OD partners may be credited with the relatively larger impact mixed marriages had on the minority religion.

There was a pronounced increase in the proportion of mixed marriages in the late nineteenth century. Their share of all marriages almost doubled (from around 0.6 per cent to almost 1.0 per cent) comparing marriages recorded 1901–1911 with those recorded in 1871 or earlier. This increase was primarily driven by marriages in Leinster (excluding Dublin city) (Figure 1).

Such percentages help place earlier studies of mixed marriages during the twentieth century in historical perspective. Walsh (1970, pp. 27–29) estimated that 30 per cent of Protestant grooms, and 20 per cent of Protestant brides, were married to Catholic partners in the Republic of Ireland in 1961. In other words, by 1961 one marriage in four involving a Protestant spouse was with a Catholic. The rise in the impact of mixed marriages on the minority population between 1911 and 1961 in the twenty-six counties is plausible in view of the absolute and relative decline in the OD proportion of the population—from 8.3 per cent in 1911 to 5.1 per cent in 1961 or from 313,000 persons in 1911 to only 130,126 persons in 1961. In Northern Ireland in 1971, however, only 1,177 out of a total of 76,009 Catholic husbands, or 1.5 per cent, were married to OD wives, while 2,434 out of 77,266 Catholic wives, or 3.75 per cent, were married to OD husbands (Lee, 1985a, p. 69).

Walsh's estimates tally with those of O'Leary (1999, p. 126) who inferred from new data in the 1991 census that the proportion of native-born Protestants marrying Catholics in the Republic of Ireland rose from 6.1 per cent before 1926 to 12.2 per cent in 1942–1946 and 33.5 per cent in 1962–1966. Thanks perhaps to the post-Vatican II liberalization of Catholic teaching in regard to inter-faith marriages the proportion rose further thereafter. O'Leary found that part of the reason for the rise in the proportion of partners recorded with different religions was a reduction in the post-marital conversion rate in more recent decades (one-half in the early 1970s, one-seventh in the mid-1990s). Urbanization and secularization

also helped erode the barriers between Protestant and Catholics.⁶

[Figure 2 about here.]

Figure 2 shows that when the prevalence of mixed marriages is analyzed by year of occurrence for the period 1896–1911 a striking decline in the incidence of mixed marriages in Belfast is evident from 1905 through 1911. There is also evidence—although less clear-cut—of a decline in the importance of mixed marriage over these years in Dublin. The *Ne Temere* decree, issued in August 1907 and taking effect at Easter in April 1908, stipulated that for a Catholic's marriage to an OD to be valid it had to be witnessed by his or her parish priest or the priest's nominee (de Bhaldraithe, 1988; Buck, 2011). Perhaps the decline in the incidence of mixed marriages in Belfast and Dublin can be attributed to the anticipation and implementation of this decree.⁷

The proportion of mixed marriages as a proportion of all marriages was lowest in areas that were overwhelmingly Catholic. It is striking that in nearly three-quarters of mixed marriages (2,761 of 3,834) the wife was Catholic and the husband OD. The share of Catholic brides in mixed marriages did not vary much by marriage duration, although it was slightly lower for marriages before 1876 (66.3 per cent) than marriages after 1901 (73.5 per cent). Nor did it vary much by location—with the notable exception of Belfast City where the figure was 79.2 per cent compared with the norm elsewhere of about 70.5. Gender imbalances between the partners of mixed marriages are not unknown in other contexts. For instance, while between the 1920s and the 1950s black men and women in the United States were equally likely to marry a white partner, today black men are twice as likely as black women to marry a white partner (Fryer 2007; compare Baber 1937).

⁶On patterns in Northern Ireland compare Morgan et al. (1996) and see too Harris (1972).

⁷Contrary to widespread belief *Ne Temere* did not refer to the religious upbringing of children. Indeed, the stipulation that children should be raised as Catholics long predated *Ne Temere*. Pope Benedict XIV's encyclical *Magnae Nobis* (1748) demanded that 'children of both sexes born of the union [the mixed marriage] should be educated in the sanctity of the Catholic religion' (David Jameson, 'Letter to Editor', *Irish Times*, 19 Dec. 2013). Closer to home, the Synod of Thurles (1850) required that interfaith couples make a written undertaking that children would be raised as Catholics (Rafferty, 1994).

The ages at marriage of couples can be inferred from their ages in 1911 and the duration of the marriage. In the period covered by the present study, Catholic Ireland exhibited a version of the 'European marriage pattern' identified by Hajnal as postponement of marriage on a scale that made a significant contribution to lowering the birth rate (Kennedy 1977; compare Watkins 1986). Therefore, it is not unreasonable to speculate that some Irish Catholic women, faced with the extreme reluctance of the male co-religionists to marry, saw a mixed marriage as their best opportunity of escaping from spinsterhood. Table 2 provides some support for the view that this strategy succeeded. It may be seen that except in the city of Dublin, where there was little difference, Catholic women who married OD husbands were younger than those marrying Catholic husbands. This difference was as high as 2.8 years for Catholic wives in Connacht and 1.8 for OD husbands in Connacht, Leinster and Munster. Except in Dublin and Belfast, the husbands of mixed marriages were also younger than husbands who married women of the same religion.

[Table 2 about here.]

3 Children's Religion

Writing to a colleague in Rome in 1919, Joseph McRory, Catholic bishop of Down and Connor, claimed that mixed marriages represented a gain, since 'in fully nine out of ten cases it is the girl who is the Catholic, and in practically all such cases all the children are reared Catholics'. However, his colleague in the neighboring diocese of Dromore, Edward Mulhern, lamented that 'in this protestant place mixed marriages have been in the past the cause of many losses to the church; but they will go on' (cited in Harris, 1993, p. 38 fn. 31).

[Table 3 about here.]

[Table 4 about here.]

 $^{^8}$ However, Section 5 below explores an alternative explanation for why Catholic brides who 'married out' were younger.

Table 3 shows that the children of mixed marriages tended to be raised as Catholics. In 1911 70 per cent of the children still living with parents of mixed religion were recorded as 'Catholic'. This proportion was higher (73 per cent) where the mother was Catholic. Table 4 shows that the share of Catholics among the offspring does not seem to have changed much over time. These results corroborate those presented by Martin Maguire for a sample of Dublin parishes, and support his contention that *Ne Temere* 'probably only introduced compulsion into a process that was already established of the children of such marriages becoming Catholic' (Maguire, 1993, p. 50).

[Table 5 about here.]

[Table 6 about here.]

[Table 7 about here.]

Tables 5 and 6 present two simple tabulations related to the religion of children from mixed marriages. These tables show unconditional relationships. In Table 7 we extend our analysis to model the child's religion as a function of several variables using regression models. The child's religion is related to demographic and socioeconomic controls contained in the census for a sample that consists of children from intermarried couples. Since the outcome, whether the child is a Catholic, is binary we choose to use a probit regression model. Table 7 reports the marginal effect estimates obtained by applying a probit regression to our complete sample and six subsamples split on the basis of location. The results confirm that the religious denomination of the parents was an important determinant of the child's religion in mixed marriages. The marginal effects in column (1) related to the child's gender and the mother's religion can be interpreted relative to the omitted category: female child with OD mother. Thus, the marginal effect of 0.470 indicates that a female child with a Catholic mother is approximately 47 per cent more likely to be a Catholic than an equivalent female child with an OD mother, holding all of the other regressors constant. The child's gender appears to be very important too, as the effects are evidently less pronounced for

males, as shown by the large negative marginal effect associated with the Male × Catholic Mother variable. Taking these marginal effects together it appears that a male child with a Catholic mother was approximately 23 per cent more likely to be Catholic compared to their female OD mother counterpart. We find that this pattern is roughly consistent across each of the six locations. The fact that we find similar results for predominantly rural Connacht and Dublin City runs counter to the notion that the choice of religion for the male offspring might have been influenced by considerations relating to land inheritance.

Interestingly, the control variables associated with the age and age at marriage do not reveal any significant effect, suggesting the absence of time trends in the probability of a child from a mixed marriage being Catholic once conditioned on the other variables in our analysis. We have also used the father's reported occupation, which we classify to a HISCO code (van Leeuwen et al., 2002) and then a HISCAM index (Lambert et al., 2013), alongside information on the parent's literacy as socioeconomic measures. Since we use interaction effects, the HISCAM marginal effects reveal that in cases where the husband is Catholic, the children are more likely to be Catholic the higher the occupational prestige associated with the father's occupation. ¹⁰ In cases where the father is OD, this relationship is reversed, but the marginal effects are quantitatively small and we do not place much emphasis on this result. The coefficient on the mother's literacy tells us that the offspring of literate mothers are much more likely to be Catholics in both Leinster and Connacht, but less likely in Ulster and Belfast. The religious composition of the neighborhood (District Electoral Division or DED) appears to play a relatively minor role in determining the child's religion, although there is some evidence that children from Catholic dominated areas are more likely to be Catholic. Finally, each specification included a dummy variable which was set equal to 1 for children born after Ne Temere came into effect. We also include age variables to capture

⁹Although Ireland's historical occupations have not been classified by the HISCO project, we match these occupations to the corresponding HISCO codes for Great Britain. A complete repository of the HISCO project's occupational coding can be found at the following url: http://hisco.antenna.nl/. Details for the related HISCAM project are available at: http://www.camsis.stir.ac.uk/hiscam/.

¹⁰A small number of occupations could not be converted into HISCO codes, and we omit observations associated with these from all our proceeding analyses.

existing trends. Given this specification, we do not find that *Ne Temere* had a sharp effect on the probability that children from mixed marriages are Catholics, outside Dublin City and Connacht, where the marginal effects in these two locales indicate that *Ne Temere* may have increased the probability that the child was Catholic significantly—by up to 13.8 per cent in Dublin City.

4 Mixed Denomination Siblings

In theory, tensions about children's religion could be mitigated by observing the rule—supposedly customary in eighteenth- and nineteenth-century Ireland—whereby sons of mixed marriages would follow their father's religion and daughters their mother's. Such a compromise had the advantage of removing the uncertainties imposed by mixed marriage, and 'allow[ing] the perpetuation of two belief systems, one through the male line and one through the female line' (Buck, 2011). It is also important to note that this arrangement would also keep inherited land in the patrilineal denomination. Table 7 in the previous section has already provided some evidence of this effect, showing that female children with Catholic mothers were the most likely to be Catholic.

Our data show that in practice in Ireland most mixed couples chose either one religion or another for all children, but there were exceptions to this rule. As we have seen the children of mixed marriages were much more likely to be Catholic than OD and this was partly because mothers were more likely to be Catholic. It also reflected the fact that mothers had more influence on children's religion than fathers. In all cases, the wife's religion mattered more than the husband's, underling the influence of the wife regardless of religion. In our sample that consists of all children from mixed marriages, 73 per cent of the children of Catholic mothers were Catholic, but only 60 per cent of the children of Catholic fathers. In Ulster the Catholic shares were lower, 66 and 50 per cent, while Dublin occupied an intermediate position.

[Table 8 about here.]

[Table 9 about here.]

[Table 10 about here.]

[Table 11 about here.]

Table 8 describes the influence of parent's religion on children's religion in the subsample of marriages where the offspring were reported in different religions ('Mixed Sibling Religion Sample'). A small minority of the mixed-marriage children (1,007 from 8,858 or 11.4 per cent) grew up with siblings of another denomination. OD parents in Munster and Connacht were more likely to have children of more than one religion than those in Ulster in particular (Table 9). A striking outcome (Table 10) is the implied reduction over time in the proportion of mixed marriage children in mixed sibling households: the proportion was one in six for children over 24 years of age, but only half that for children aged less than ten years in 1911 (Table 10). This outcome is subject to the caveat that children who had already left the family home by 1911 are not represented but it is not evident why there was any selection bias at play here. However, the finding would also reflect any increase in single-child marriages.

A total of over one thousand children were recorded to mixed marriages in families where the siblings were of different religions. Just over half (53 per cent) of these children were Catholic, a proportion that fails to rise when the mother was Catholic and to 80 per cent of the girls where the mother was Catholic. The influence of the mother's religion is also evident from the fact that three quarters (73 per cent) of the girls whose mothers were Protestant were recorded as Protestant. However, the proportion of the boys in mixed marriages with siblings of different religions who were Protestant was high (62 per cent) even when the mother was Catholic—higher in fact than when the mother was Protestant (19 per cent).

Table 11 shows the marginal effect estimates from two probit models that regress children's religion on gender and parental religion for our sample of children from mixed marriages with mixed sibling religions. The two columns here highlight the importance of distinguishing between gender and religious effects. The first column fits the model with the religion of the parents and gender as the variables. The results here show that male children are less likely to be Catholic, but that the religion of the mother is irrelevant. However, once we incorporate heterogeneous effects, that allow the impact of the parent's religion on the child's religion to vary by the parents' religion, we obtain a much better model fit, as is evident in column (2). In cases where the fathers are Catholic, the male children will be Catholic and female children OD. Similarly, in cases where the father is OD, the male children will be OD and the female children Catholic.

5 Marrying Up or Down?

Did the men and women who married out marry up (to a partner of higher socioeconomic status) or marry down? O'Leary (2001) surveys the US sociological literature; similar questions have also generated a considerable economics literature (Becker, 1991; Chiswick and Houseworth, 2011; Chiappori et al., 2012). In the case of Jewish/non-Jewish marriages it has been suggested that while Jews in early twentieth-century United States were a low status group, some 'Jewish men were able to marry "up" in status while Jewish women were less able to do so' (Pagnini and Morgan 1990, p. 424; compare Baber 1937, p. 710). More generally, one might expect males to trade their higher economic position for personal characteristics (such as beauty and youth) that they find attractive in a prospective partner (Becker, 1973, 1991). But one might equally expect a male from a high status religion but with low economic status to trade his high religious status for his partner's high economic status. O'Leary (2001) posits that 'where social exchange takes place it will be especially a feature of marriages between women who rank high on a non-economic characteristic and

men who rank low on that non-economic characteristic but who have a high economic level.'

O'Leary (2000) found that the superior social status of Protestants enabled working-class

Protestant women to marry up.

A shortcoming of our data is they contain little information on women's occupations since the vast majority of married women did not work outside the home. As mentioned before, our measures of socioeconomic status consist of the husband's HISCAM score and the (self-reported) literacy of husband and wife. To differentiate mixed marriages from the population at large, we estimate a logit regression model that models the probability of intermarriage based on a number of observable covariates, including our socioeconomic variables. Since intermarriage was a rare event (occurring in less than 1 per cent of all marriages) we model using a logit regression model and use odds ratios to interpret the model coefficients. The odds ratios are multiplicative effects and tell us, relative to a baseline, how a one unit increase in any variable effects the odds of the event occurring (in this case mixed marriages). For example, an odds ratio of 2 indicates that a one unit increase in the variable in question doubles the probability of the outcome (even if the event is rare). Therefore, an odds ratio of less than one indicates that the variable in question is negatively associated with the occurrence of the outcome. We suspect that the determinants of intermarriage may differ depending on whether the husband/wife is Catholic/OD, thus we stratify our analysis, first looking at mixed marriages with a Catholic husband, then looking marriages wherein the husband is OD.

[Table 12 about here.]

[Table 13 about here.]

Table 12 addresses the choice of spouse in mixed marriages—where the outcome is an indicator whether or not the marriage is between a Catholic Husband and OD wife. Some interesting features emerge. The odds ratios differ substantially based the location where the couple resided. Overall, for mixed marriages where the husband is Catholic, we

see that the husband's socioeconomic position appears to be a weak influence on the rate of intermarriage. However, the same is not true of OD wives, as literacy is an important predictor of intermarriages—with an odds ratio of 1.4. Overall, it would appear that Catholic men are more likely to marry up when they intermarry. Nevertheless, these overall figures mask substantial heterogeneity throughout the country and if we stratify by location we obtain different results. It appears that a significant split existed between Ulster, including Belfast, and the rest of Ireland.

Outside of Ulster, we see a strong positive correlation between the husband's HISCAM score and/or literacy and the propensity to intermarry (except in Connacht where there are few mixed marriages of this type). Contrasting this with the weak correlation between wife's literacy and intermarriage outside of Ulster, indicates that it was higher-positioned Catholic men who intermarried OD women, but these OD women were probably not of a lower status. Considering that in these locations the OD population were generally those of a higher socioeconomic group, it would appear that higher positioned Catholic men would marry OD women from a similar or perhaps loftier socioeconomic position. When we look at Ulster, we obtain a different set of results. Here, the relationship between our socioeconomic variables is negative for both Ulster excluding Belfast City and in Belfast City itself. In this sense, Ulster shares a similarity with the rest of Ireland in that mixed marriages of this type did not reflect either spouse marrying up or down. Unlike the rest of Ireland, these intermarriages occurred between those from the lower socioeconomic bracket, as the husband's socioeconomic bracket alongside the literacy of both husband and wife is negatively correlated with the incidence of intermarriage.

Interestingly, Table 13, which uses an indicator that captures whether the marriage is between an OD husband and Catholic wife, tells a similar story to that of Table 12. Once again column (1), which looks at the full sample, hides significant regional differences. We see the same split between Ulster and the rest of Ireland that we found in Table 12. Mixed marriages with an OD husband are more common, but the patterns remain the same. Outside

Ulster it is males from the higher socioeconomic groups who intermarry whereas within Ulster males from the lower socioeconomic groups are the ones who intermarry. Furthermore, we do not find evidence in favor of the hypothesis that either cohort either marries 'up' or 'down'. The lower socioeconomic position of mixed marriages in Ulster may reflect cross-community tensions. As we have seen in Section 2, mixed marriages as a fraction of OD marriages were a rarer occurrence here than in the rest of Ireland. To this is extent, it appears that mixed marriages, of either kind, were discouraged, and therefore the negative correlation between the HISCAM occupational prestige score and intermarriages may reflect a labor market penalty levied on males who entered into a mixed marriage. That we see this negative correlation extending to the literacy of both spouses is clearly indicative of a selection element. In other words, a labor market penalty may have been applied to those who took the rare decision to intermarry, but these pre-marital determined variables also tell us that educated couples were more likely to be dissuaded from a mixed marriage in the first place, possibly because of the anticipated penalty.

The other odds ratios reported also provide some insights into the dynamics of mixed marriages in Ireland. Consistent with the cross tabulations shown in Table 2, we find that in the case of an OD husband the Catholic wives are younger, a pattern that is roughly consistent across all locales and indicates that perhaps OD husbands were, to some extent, exerting their superior social status in order to wed younger Catholic women. This implies that once education is accounted for (with illiterates representing the lowest socioeconomic rung) younger Catholic women were marrying up. We would expect the probability of a mixed couple meeting to be a function of the religious mix in an area. It appears that mixed marriages were most likely to occur in areas with smaller share of Catholics. Bearing in mind that the population of most areas contained large proportions of Catholics—so there would have been few areas where there was a shortage of eligible Catholics—this result is reasonable.

6 Fertility and Childhood Mortality in Mixed Marriages

The marital fertility gap between Irish Catholics and ODs in the past has been the focus of research and debate (Walsh, 1970; Ó Gráda, 2008). Here, the concern is the fertility of mixed denomination couples and we model marital fertility (defined as number of children born to a couple, which includes non-survivors) as a function of parent's religion and a number of other covariates considered important in the literature. Since biology is typically the most important predictor of marital fertility in historical demography (for obvious reasons), we include control variables for marital duration and the ages of both spouses. We also include the number of non-surviving children as a regressor to capture the replacement effect, that is whether couples seek to 'replace' children who die: the less birth control there is, the lower the coefficient on this variable is expected to be. As before, the husband's HISCAM score and literacy are proxies for socioeconomic status. We control for whether marriages were all-Catholic or not, and use the percentage of Catholic marriages in a DED as a proxy for how Catholic an area was, while the variables of most interest are those regarding intermarriage.

[Table 14 about here.]

[Table 15 about here.]

[Table 16 about here.]

[Table 17 about here.]

Since our dependent variable, the number of children born, is a count variable, the most appropriate estimation method is a negative binomial regression.¹¹ We ran regressions separately for marriages of less than 20 years duration and of 20 years and over. The marginal

¹¹In earlier work with comparable data (Guinnane et al., 2006; Ó Gráda, 2006, 2008) significant 'zero inflation' was absent, so we ignore that possibility here.

effects reported in Tables 14 and 15 refer to the entire population of couples, whereas Tables 16 and 17 are restricted to couples with at least one OD partner. As before, we report outcomes for the country as a whole and then stratify the analysis sample into the six regions.

All the results (Tables 14–17) highlight the dominant role of marriage duration and the spouse's age. The coefficients on All Catholic Marriage in range from 0.144 in Belfast to 0.892 in Connacht for marriages of less than 20 years, and from 0.071 in Belfast to 1.101 in Connacht for marriages of 20 years and more, in Tables 14 and 15 respectively. Thus, on average all-Catholic couples had approximately 0.5 additional children per marriage (compared to the entire population of couples with at least one non-Catholic partner), with the gap being much wider in rural than in urban areas. The coefficient on Number of Children Dead ranges between 0.6 and 0.9 suggests a strong replacement effect, which is consistent with couples planning family size. In the majority of cases the coefficients on the 'economic' variables (HISCO and literacy) are positive and statistically significant indicating that wealthier couples had more children. This result is consistent with the notion proposed by Becker (1960) and others, that children are 'normal' goods with reference to a utility maximizing parental choice model. However, we refrain from attaching a causal explanation to these findings—something that lies beyond the scope of this paper.

Mixed marriages tended to produce fewer children than either all-Catholic or all-OD marriages. This rather striking outcome may reflect the 'modernity' of mixed marriages. Couples who were prepared to marry out may also have been more willing to control family size. However, the outcome could also be due to the higher psychic costs of having children in mixed faith households. Further evidence of the psychic costs is implied the regional heterogeneity, as this effect appears to be amplified in Ulster (including Belfast)—a region where considerably more cross-religious tension existed—compared to the remainder of the country.

Tables 16 and 17 focus on all-OD and mixed couples only. Looking at the intermarriage interaction terms for Ireland as a whole, there are signs that the impact of marrying out was greater in the case of those married 20 years or more than in the case of those marrying more recently. Both tables corroborate our earlier findings, although the influence of socioeconomic factors appears diminished in these regressions. Once again, we find a strong negative correlation between intermarriage and fertility in both the Ulster and Belfast samples, but it appears weaker elsewhere in the country.

[Table 18 about here.]

[Table 19 about here.]

Tables 18 and 19 model the variation in infant and child mortality for marriages of less and more than (or equal to) 20 years duration. The dependent variable is one minus the ratio of the number of children still living to the number born alive as reported in the census. The value of the coefficient on this variable is bounded by zero and one: only couples who have given birth at least once are included. The explanatory variables included, in addition to those already defined, are the number of children born per year of marriage. We expect the coefficient on this variable to be positive. Plainly, the duration of marriage does much of the explaining, returning consistently positive and statistically significant coefficients. This reflects a downward tend in mortality over the years. The number of births per year of marriage also consistently returns a large positive coefficient: the higher was fertility within marriage, the higher the proportion of infants and children who die (compare Ó Gráda 2006, 2008). The children of women who married young had better survival prospects. As expected, the children of literate parents had better survival prospects; this was particularly the case for the wife's literacy. Infant and child mortality also fell with the husband's HISCAM score. Given the lower economic status of Catholics, the positive coefficient on All Catholic Marriage is not surprising. But note too the surprising and intriguing finding that infant and child mortality rates were higher in mixed marriages, regardless of which spouse was Catholic. Once again this effect appears to be primarily driven by marriages in the Ulster and Belfast City samples. We do not have a ready-made explanation for this outcome, although it may reflect at least in part a lack of family support networks for couples ostracized by their families and communities.

Finally, our data suggest that infant mortality was concentrated in a relatively small number of our mixed faith families. While the total number of dead offspring over all marriage durations was fewer than the number of couples in the database, two-fifths of all deaths occurred in households where four or more children died and well over half in households where three or more children died. The most obvious explanation for this finding is the contagion of siblings within families. (Arulampalam and Bhalotra, 2008) refer to as 'a scarring effect' whereby the death of one child reduces the survival probability of a later birth, but we set that issue aside here.

7 Conclusion

Thanks to the availability of the recently digitized 1911 Irish census, more can be said about the prevalence and characteristics of mixed marriages in Ireland during the three or four decades before 1911 than for much of the twentieth century. This paper has shed new light on temporal and spatial variations in the frequency of mixed marriages, on the socioeconomic characteristics of those involved, and on outcomes in terms of fertility and infant and child mortality.

Some of our main findings may be summarized.

Mixed marriages were rare relative to the general population but not inconsiderable relative to the non-Catholic population of some locales. Mixed marriages were predominantly between Catholic brides and non-Catholic grooms. The children of mixed marriages tended to be raised overwhelmingly as Catholics, especially when the mother was Catholic.

In the minority of cases where siblings of mixed marriages were of different religions,

the mother's religion is still an important factor, but when the father was OD the tendency was for male children to be OD and the female children Catholic.

Bearing in mind that the population of most areas contained large Catholic majorities, we found that mixed marriages were most likely to occur in areas this share was relatively low.

The picture regarding whether those marrying outside their own religion married 'up' or 'down' is complex and differs across locales. While there was no clear association between the husband's socioeconomic position and the rate of intermarriage, overall Catholic men were more likely to marry up when they married an OD bride. On the other hand OD husbands may have used their superior social status to wed younger Catholic women.

Intermarriage was a significant influence on family size, with marriages where both spouses were Catholic having on average 0.5 additional children relative to marriages with at least one OD partner. Interestingly, mixed marriages tended to produce fewer children not only than all-Catholic marriages but also than all-OD marriages.

As might be expected, infant and child mortality was higher in marriages of longer duration and in marriages with more children born per year of marriage and where the the education/occupational level of the parents was lower. But surprisingly mortality rates were higher in mixed marriages, regardless of which parent was Catholic. This effect primarily reflected the situation in Ulster.

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Table 1: Catholics as Proportion of Total Population in 1861, 1911, and 1961

Place	1861	1911	1961
Leinster	85.9	85.2	93.6
Dublin (county and city)	75.5	78.7	92.4
Munster	93.8	94.0	97.3
Connacht	94.6	96.2	98.1
Ulster (3 counties)	76.4	78.7	86.7
Antrim	24.8	20.5	24.4
Armagh	48.8	45.3	47.3
Belfast	34.1	24.1	27.5
Down	32.5	21.2	28.6
Fermanagh	56.5	56.2	53.2
(London)Derry	45.3	41.5	50.6
Tyrone	52.1	55.4	54.8
Six Counties	40.9	34.4	34.9
Twenty Six Counties	89.4	89.6	94.5
All-Ireland	77.7	74.0	74.8

Sources: Central Statistics Office, Census of Population, Historical Series, http://www.cso.ie/en/census/census20021996resultsandearliercensuses/historicalreports/;
Northern Ireland Statistical Research Agency, 1821 to 1911 Census Reports, http://www.nisra.gov.uk/Census/previous_census_statistics/pre1921.html.

Table 2: Average Age at Marriage by Type of Marriage

				Averaş	ge Age Marriage
	Avera	ge Age at M	arriage	Relati	0
	71 VC1 G	Sc 118c at 111	arriage	Non-N	
				Marria	
Marriage Type	Wife	Husband	Gap	Wife	Husband
			Belfast		
Mixed, Catholic Husband	25.3	28.7	3.4	1.1	1.6
Mixed, OD Husband	24.0	27.3	3.3	-0.2	0.1
Not Mixed	24.2	27.2	3.0		
		\mathbf{C}	onnach	\mathbf{t}	
Mixed, Catholic Husband	26.4	32.2	5.8	-1.4	-1.2
Mixed, OD Husband	25.1	31.9	6.8	-2.8	-1.5
Not Mixed	27.9	33.4	5.5		
			ıblin Ci	v	
Mixed, Catholic Husband	25.5	29.8	4.3	1.3	1.8
Mixed, OD Husband	24.4	29.2	4.8	0.1	1.2
Not Mixed	24.2	28.0	3.7		
	a - 1		Leinster		
Mixed, Catholic Husband	27.4	30.9	3.5	0.9	-0.7
Mixed, OD Husband	24.6	29.9	5.3	-1.9	-1.7
Not Mixed	26.5	31.6	5.1		
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Mixed, Catholic Husband	26.1	30.2	4.0	-0.6	-1.5
Mixed, OD Husband	24.9	29.9	5.0	-1.9	-1.8
Not Mixed	26.7	31.6	4.9		
Mixed, Catholic Husband	27.8	31.0	Ulster 3.2	1.3	-0.4
Mixed, OD Husband	26.6	$31.0 \\ 30.8$	3.2 4.2	0.0	-0.4 -0.6
Not Mixed	26.5	31.4	4.2	0.0	-0.0

Table 3: Religion of Children of Mixed Marriages by Religion of the Mother

	Other Denomination Mother	Catholic Mother	Total
Ireland			
Other Denomination Child	847	1831	2678
Catholic Child	1286	4871	6157
Total	2133	6702	8835
Ulster incl. Belfast			
Other Denomination Child	370	856	1226
Catholic Child	372	1638	2010
Total	742	2494	3236
Dublin City			
Other Denomination Child	224	324	548
Catholic Child	299	1235	1534
Total	523	1559	2082

Table 4: Catholic Share of Children by Children's Age

Age Group	Other Denomination	Catholic	Total	% Catholic
0-4	696	1695	2391	71
5–9	660	1453	2113	69
10 – 14	492	1205	1697	71
15 - 19	445	918	1363	67
20 – 24	220	467	687	68
25 – 29	89	230	319	69
Over 29	76	189	265	71

Table 5: Mixed Siblings as a Proportion of All Siblings, by Age

Age Group	Non-Mixed	Mixed	Total	% Mixed
0–4	2205	186	2391	8
5–9	1902	198	2113	10
10 – 14	1499	215	1697	12
15 - 19	1176	187	1363	14
20 – 24	567	120	687	17
25 – 29	261	58	319	18
Over 29	218	47	265	18

Table 6: Outcomes with 'Mixed Children' Households

	Families with 'Mixed' Children	All Interfaith Families	%
Connacht	48	314	13
Leinster	458	3258	12
Munster	235	1286	15
Ulster	266	2970	8
Ireland	1007	7828	11

Table 7: Religion is Catholic, Children from Intermarriage. Probit Maginal Effects.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Age	-0.004*	-0.010**	-0.004	-0.004	0.008	-0.008	-0.001
	(0.002)	(0.004)	(0.007)	(0.005)	(0.006)	(0.005)	(0.008)
$ m Age^2$	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Mother's Age	0.013	0.028*	-0.031	0.022	0.034**	-0.012	-0.024
	(0.008)	(0.015)	(0.025)	(0.020)	(0.017)	(0.029)	(0.025)
Father's Age	-0.010	-0.020	0.033	-0.019	-0.056***	0.028	-0.027
	(0.009)	(0.013)	(0.023)	(0.019)	(0.018)	(0.031)	(0.032)
Mother's Age ²	0.000	0.000	0.000	0.000	0.000**	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Father's Age ²	0.000	0.000	0.000	0.000	0.001***	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Father's Age at Marriage	-0.001	0.003	-0.009*	0.004	0.000	-0.003	-0.007
	(0.002)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.007)
Catholic Mother	0.470***	0.478	0.346	0.917***	0.129	0.589***	-0.108
	(0.109)	(0.310)	(0.384)	(0.087)	(0.258)	(0.211)	(0.638)
Male	0.123***	0.127***	0.073	0.136**	0.119**	0.173**	0.099
	(0.024)	(0.044)	(0.052)	(0.065)	(0.050)	(0.068)	(0.084)
$Male \times Catholic Mother$	-0.236***	-0.261***	-0.195***	-0.305***	-0.179***	-0.252***	-0.220*
	(0.030)	(0.051)	(0.065)	(0.084)	(0.065)	(0.070)	(0.124)
Father's Occupation HISCAM Score	0.003**	0.001	0.000	0.011***	0.003	0.005	0.003
	(0.002)	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)	(0.009)
Father's Occupation HISCAM Score \times Catholic Mother	-0.005**	-0.004	-0.003	-0.013***	-0.001	-0.007	-0.006
	(0.002)	(0.004)	(0.004)	(0.005)	(0.005)	(0.006)	(0.009)
Literate Father	0.005	0.032	-0.024	-0.029	0.020	0.017	-0.053
	(0.040)	(0.118)	(0.117)	(0.107)	(0.065)	(0.092)	(0.092)
Literate Mother	-0.047	-0.011	0.199	0.046	-0.153^{***}	-0.132**	0.335^*
	(0.039)	(0.095)	(0.150)	(0.135)	(0.059)	(0.063)	(0.181)
% of Catholic Marriages in DED	0.002***	0.001	0.005	0.002	-0.004*	0.011**	-0.009
	(0.001)	(0.002)	(0.003)	(0.004)	(0.002)	(0.005)	(0.008)
$\%$ of Catholic Marriages in DED \times Catholic Mother	0.000	0.001	0.000	-0.003	0.006***	-0.008	0.006
	(0.001)	(0.002)	(0.003)	(0.004)	(0.002)	(0.005)	(0.010)
Ne Temere Effect	0.053	0.138***	0.061	0.060	-0.110	-0.001	0.132***
	(0.035)	(0.049)	(0.081)	(0.093)	(0.119)	(0.076)	(0.034)
Sample	Full	Dublin City	Leinster	Munster	Ulster	Belfast	Connacht
Num. obs.	7824	2056	1255	1300	1440	1439	334

Standard Errors are clustered at the DED level. ****p < 0.01, ***p < 0.05, *p < 0.1. Leinster and Ulster samples do not include Dublin city or Belfast.

Table 8: Religion of Children of Mixed Marriages by Religion of the Mother: Mixed Sibling Religion Sample

	Other Denomination	Catholic	Total
All Children			
Other Denomination Mother	98	117	215
Catholic Mother	374	418	792
Total	472	535	1007
Boys			
Other Denomination Mother	21	88	109
Catholic Mother	296	109	405
Total	317	197	514
Girls			
Other Denomination Mother	77	29	106
Catholic Mother	78	309	387
Total	155	338	493

Table 9: Outcomes in Mixed Sibling Religion Sample

	Families with 'Mixed' Children	All Interfaith Families	%
Connacht	48	314	13
Leinster	458	3258	12
Munster	235	1286	15
Ulster	266	2970	8
Ireland	1007	7828	11

Table 10: Mixed Siblings as a Proportion of All Siblings, by Age: Mixed Sibling Religion Sample.

Age Group	Non-Mixed	Mixed	Total	% Mixed
0-4	2205	186	2391	8
5-9	1902	198	2113	10
10-14	1499	215	1697	12
15-19	1176	187	1363	14
20-24	567	120	687	17
25-29	261	58	319	18
Over 29	218	47	265	18

Table 11: Religion is Catholic: Mixed Sibling Religion Sample. Probit Maginal Effects.

	(1)	(2)
Catholic Mother	-0.010	0.507***
	(0.047)	(0.055)
Male	-0.302***	0.536^{***}
	(0.052)	(0.085)
$Male \times Catholic Mother$		-0.849***
		(0.042)
Num. obs.	1007	1007

Standard Errors are clustered at the household level. ****p < 0.01, ***p < 0.05, *p < 0.1.

Table 12: Intermarriage between Catholic Husband and Other Denomination Wife. Logit Model Odds Ratios.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Husband's Age	1.092	1.247*	1.180	1.199	0.993	0.905	1.089
_	(0.059)	(0.143)	(0.178)	(0.140)	(0.105)	(0.124)	(0.176)
Husband's Age ²	0.998*	0.996	0.997	0.996^{*}	1.000	1.001	0.998
	(0.001)	(0.002)	(0.003)	(0.002)	(0.002)	(0.003)	(0.003)
Husband's Age ³	1.000*	1.000	1.000	1.000**	1.000	1.000	1.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Husband's Age at Marriage	0.985***	1.010	0.967***	0.960**	0.985	1.041^{*}	0.985
	(0.006)	(0.010)	(0.009)	(0.016)	(0.011)	(0.022)	(0.022)
Wife's Age at Marriage	1.019***	1.019	1.039***	1.006	1.038***	1.002	0.970
	(0.006)	(0.012)	(0.014)	(0.017)	(0.013)	(0.019)	(0.026)
Husband's Occupation HISCAM Score	1.000	1.020***	1.019^*	1.042***	0.969***	0.984^{*}	0.957^{*}
	(0.005)	(0.005)	(0.011)	(0.013)	(0.008)	(0.009)	(0.026)
Literate Husband	1.064	0.733	1.251	1.974**	0.525***	0.665	1.500
	(0.114)	(0.268)	(0.359)	(0.641)	(0.096)	(0.241)	(0.686)
Literate Wife	1.375**	5.934***	5.989***	2.300**	0.631**	0.833	3.907^*
	(0.181)	(4.002)	(3.667)	(0.943)	(0.115)	(0.274)	(2.865)
% of Catholic Marriages in DED	0.992***	0.994	0.965***	0.952***	0.981***	0.995	0.980**
	(0.001)	(0.007)	(0.005)	(0.006)	(0.003)	(0.005)	(0.010)
Sample	Full	Dublin City	Leinster	Munster	Ulster	Belfast	Connacht
Num. obs.	461998	32919	84965	105779	131740	40935	65660
Num. CH Intermarriages	1073	275	185	185	246	140	42

 $\text{Standard Errors are clustered at the DED level.} \ \ ^{***}p < 0.01, \ ^{**}p < 0.05, \ ^*p < 0.1. \ \text{Leinster and Ulster samples do not include Dublin city or Belfast.}$

Table 13: Intermarriage between Other Denomination Husband and Catholic Wife. Logit Model Odds Ratios.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Husband's Age	1.044	0.965	1.004	0.984	0.974	1.055	0.992
	(0.038)	(0.095)	(0.076)	(0.087)	(0.075)	(0.085)	(0.152)
Husband's Age ²	0.999	1.002	0.999	1.000	1.000	0.999	1.000
	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)
Husband's Age ³	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Husband's Age at Marriage	1.004	1.024***	1.005	0.994	1.008	1.024***	1.010
	(0.004)	(0.007)	(0.009)	(0.009)	(0.007)	(0.008)	(0.019)
Wife's Age at Marriage	0.972***	0.980^{**}	0.962***	0.958***	1.001	0.979^{**}	0.936***
	(0.004)	(0.008)	(0.013)	(0.009)	(0.008)	(0.009)	(0.018)
Husband's Occupation HISCAM Score	0.986***	1.026***	0.995	0.998	0.958***	0.987^{**}	0.944***
	(0.004)	(0.005)	(0.006)	(0.007)	(0.006)	(0.006)	(0.021)
Literate Husband	1.815***	2.082***	3.871***	5.597***	0.790*	0.653**	6.496***
	(0.161)	(0.570)	(0.932)	(1.596)	(0.100)	(0.118)	(3.023)
Literate Wife	0.760^{***}	1.152	1.110	1.192	0.497^{***}	0.460^{***}	1.250
	(0.065)	(0.172)	(0.228)	(0.274)	(0.066)	(0.091)	(0.477)
% of Catholic Marriages in DED	0.993***	1.002	0.967***	0.949***	0.988***	1.004	0.967^{***}
	(0.001)	(0.003)	(0.005)	(0.006)	(0.002)	(0.005)	(0.006)
Sample	Full	Dublin City	Leinster	Munster	Ulster	Belfast	Connacht
Num. obs.	461998	32919	84965	105779	131740	40935	65660
Num. ODH Intermarriages	2761	675	482	463	506	532	103

 $\text{Standard Errors are clustered at the DED level.} \ \ ^{***}p < 0.01, \ ^{**}p < 0.05, \ ^*p < 0.1. \ \text{Leinster and Ulster samples do not include Dublin city or Belfast.}$

Table 14: Number of Children Ever Born. Parents Married Less Than 20 Years. Negative Binomial Marginal Effects.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Number of Children Dead	0.561***	0.557***	0.552***	0.579***	0.570***	0.561***	0.546***
	(0.006)	(0.012)	(0.013)	(0.011)	(0.010)	(0.017)	(0.014)
Husband's Age at Marriage	-0.007^{***}	-0.027^{***}	-0.009^{***}	-0.006***	-0.011^{***}	-0.024^{***}	-0.009^{***}
	(0.001)	(0.003)	(0.001)	(0.002)	(0.001)	(0.002)	(0.002)
Wife's Age at Marriage	-0.115***	-0.089***	-0.126***	-0.111***	-0.126***	-0.084***	-0.126***
	(0.002)	(0.004)	(0.003)	(0.003)	(0.002)	(0.004)	(0.003)
Marital Duration	0.972***	0.891***	0.951***	1.095***	0.842***	0.864***	1.103***
	(0.014)	(0.046)	(0.033)	(0.033)	(0.026)	(0.032)	(0.037)
Marital Duration ²	-0.586^{***}	-0.558***	-0.589^{***}	-0.668***	-0.475^{***}	-0.528^{***}	-0.661^{***}
	(0.014)	(0.047)	(0.032)	(0.033)	(0.026)	(0.029)	(0.036)
Marital Duration ³	0.127***	0.123***	0.132***	0.145***	0.097***	0.117***	0.143***
	(0.004)	(0.015)	(0.009)	(0.010)	(0.008)	(0.009)	(0.011)
All Catholic Marriage	0.424***	0.355^{***}	0.589***	0.866***	0.316***	0.144***	0.892***
	(0.017)	(0.075)	(0.039)	(0.041)	(0.020)	(0.043)	(0.062)
Husband's Occupation HISCAM Score	0.013***	0.000	0.007^{***}	0.015^{***}	0.007^{***}	0.001	0.022***
	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)
Literate Husband	0.023	0.138**	0.194***	0.017	0.094***	0.121***	0.062**
	(0.015)	(0.057)	(0.027)	(0.029)	(0.021)	(0.044)	(0.028)
Literate Wife	0.256***	0.295^{***}	0.299***	0.398***	0.191***	0.245***	0.178***
	(0.018)	(0.041)	(0.035)	(0.042)	(0.026)	(0.050)	(0.039)
% of Catholic Marriages in DED	0.003***	-0.002	0.009^{***}	0.019***	0.004^{***}	-0.001	0.007^{***}
	(0.000)	(0.002)	(0.002)	(0.003)	(0.001)	(0.002)	(0.002)
Intermarriage with Catholic Husband	-0.523***	-0.072	-0.140	-0.093	-0.531***	-0.306**	-0.729*
	(0.069)	(0.158)	(0.218)	(0.194)	(0.178)	(0.127)	(0.384)
Intermarriage with Other Denomination Husband	-0.330***	0.129	0.012	0.240	-0.407***	-0.160*	-0.046
	(0.045)	(0.111)	(0.127)	(0.151)	(0.112)	(0.083)	(0.438)
Sample	Full	Dublin City	Leinster	Munster	Ulster	Belfast	Connacht
Num. obs.	238488	19521	44672	52842	66927	24243	30283

Table 15: Number of Children Ever Born. Parents Married 20 Years or More. Negative Binomial Marginal Effects.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Number of Children Dead	0.757***	0.846***	0.760***	0.752***	0.773***	0.850***	0.729***
	(0.005)	(0.010)	(0.013)	(0.008)	(0.009)	(0.012)	(0.011)
Husband's Age at Marriage	0.007***	-0.034^{***}	0.000	0.008***	-0.007^{***}	-0.025^{***}	0.012***
	(0.001)	(0.005)	(0.003)	(0.003)	(0.002)	(0.005)	(0.003)
Wife's Age at Marriage	-0.236^{***}	-0.172***	-0.255***	-0.239***	-0.250***	-0.176***	-0.234***
	(0.003)	(0.009)	(0.006)	(0.005)	(0.004)	(0.009)	(0.004)
Marital Duration	0.094***	0.092	-0.025	0.078	0.124***	0.127	0.191***
	(0.026)	(0.103)	(0.071)	(0.071)	(0.045)	(0.137)	(0.042)
Marital Duration ²	0.009	-0.004	0.043**	0.019	-0.005	-0.013	-0.018
	(0.007)	(0.030)	(0.020)	(0.021)	(0.013)	(0.041)	(0.011)
Marital Duration ³	-0.004***	-0.002	-0.007***	-0.005***	-0.002*	-0.001	-0.002*
	(0.001)	(0.003)	(0.002)	(0.002)	(0.001)	(0.004)	(0.001)
All Catholic Marriage	0.574^{***}	0.340***	0.835^{***}	1.064***	0.437^{***}	0.071	1.101***
	(0.028)	(0.094)	(0.061)	(0.078)	(0.034)	(0.092)	(0.092)
Husband's Occupation HISCAM Score	0.025^{***}	0.004	0.011^{***}	0.028***	0.010***	0.000	0.033***
	(0.002)	(0.004)	(0.002)	(0.002)	(0.002)	(0.002)	(0.004)
Literate Husband	-0.003	0.392***	0.146^{***}	-0.007	0.053	0.413***	0.201***
	(0.022)	(0.102)	(0.044)	(0.040)	(0.034)	(0.112)	(0.039)
Literate Wife	0.191***	0.484***	0.359***	0.336***	0.159***	0.348***	0.272***
	(0.022)	(0.112)	(0.043)	(0.052)	(0.035)	(0.061)	(0.039)
% of Catholic Marriages in DED	0.007^{***}	-0.013***	0.020***	0.027^{***}	0.010***	-0.002	0.006**
	(0.001)	(0.004)	(0.003)	(0.005)	(0.001)	(0.004)	(0.003)
Intermarriage with Catholic Husband	-0.819***	-0.304	-0.553	0.204	-0.725**	-0.763**	-0.139
	(0.178)	(0.411)	(0.556)	(0.403)	(0.311)	(0.340)	(0.814)
Intermarriage with Other Denomination Husband	-0.781***	0.173	-0.737***	-0.339	-0.696***	-0.599^*	1.083^*
	(0.101)	(0.190)	(0.269)	(0.238)	(0.202)	(0.317)	(0.603)
Sample	Full	Dublin City	Leinster	Munster	Ulster	Belfast	Connacht
Num. obs.	180936	9700	32117	43224	53206	12279	30410

Table 16: Number of Children Ever Born. Parents Married Less Than 20 Years. Other Denomination Only Sample. Negative Binomial Marginal Effects.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Number of Children Dead	0.570***	0.534***	0.612***	0.633***	0.582***	0.549***	0.747***
	(0.010)	(0.025)	(0.029)	(0.029)	(0.015)	(0.023)	(0.062)
Husband's Age at Marriage	-0.010^{***}	-0.022^{***}	-0.005	-0.006	-0.013***	-0.028^{***}	-0.004
	(0.001)	(0.005)	(0.004)	(0.005)	(0.001)	(0.002)	(0.007)
Wife's Age at Marriage	-0.110^{***}	-0.091^{***}	-0.112^{***}	-0.094^{***}	-0.120***	-0.084^{***}	-0.123***
	(0.003)	(0.005)	(0.005)	(0.007)	(0.003)	(0.005)	(0.009)
Marital Duration	0.774***	0.747^{***}	0.860***	0.644***	0.733***	0.808***	0.851***
	(0.023)	(0.093)	(0.085)	(0.102)	(0.032)	(0.033)	(0.179)
Marital Duration ²	-0.452^{***}	-0.480***	-0.593***	-0.364***	-0.397***	-0.478***	-0.531***
	(0.023)	(0.095)	(0.083)	(0.101)	(0.032)	(0.028)	(0.173)
Marital Duration ³	0.096***	0.109***	0.143***	0.074**	0.079***	0.103***	0.116**
	(0.007)	(0.029)	(0.025)	(0.030)	(0.010)	(0.008)	(0.051)
Husband's Occupation HISCAM Score	-0.002	-0.008***	-0.012***	-0.010***	0.002*	-0.002	0.001
	(0.001)	(0.002)	(0.002)	(0.002)	(0.001)	(0.002)	(0.005)
Literate Husband	-0.022	-0.002	0.195	-0.321	0.082**	0.002	-0.027
	(0.030)	(0.164)	(0.148)	(0.376)	(0.035)	(0.051)	(0.398)
Literate Wife	0.124***	-0.265	-0.294	-0.130	0.141***	0.193***	0.517
	(0.029)	(0.166)	(0.210)	(0.325)	(0.036)	(0.059)	(0.321)
% of Catholic Marriages in DED	0.000	0.006***	0.006**	0.002	0.003***	0.000	-0.008
	(0.001)	(0.002)	(0.002)	(0.004)	(0.001)	(0.001)	(0.006)
Intermarriage with Catholic Husband	-0.425^{***}	-0.197	-0.199	-0.104	-0.537^{***}	-0.312**	-0.554**
	(0.062)	(0.121)	(0.163)	(0.150)	(0.167)	(0.123)	(0.259)
Intermarriage with Other Denomination Husband	-0.289***	-0.058	-0.168	0.022	-0.411***	-0.199***	-0.210
	(0.040)	(0.074)	(0.105)	(0.104)	(0.108)	(0.076)	(0.285)
Sample	Full	Dublin City	Leinster	Munster	Ulster	Belfast	Connacht
Num. obs.	69719	4179	5550	3318	36555	18811	1306

Table 17: Number of Children Ever Born. Parents Married 20 Years or More. Other Denomination Only Sample. Negative Binomial Marginal Effects.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Number of Children Dead	0.803***	0.893***	0.882***	0.934***	0.779***	0.854***	0.830***
	(0.009)	(0.021)	(0.033)	(0.031)	(0.014)	(0.013)	(0.053)
Husband's Age at Marriage	-0.004	-0.034****	0.002	0.013	-0.012^{***}	-0.028****	0.027^{*}
	(0.002)	(0.009)	(0.009)	(0.011)	(0.003)	(0.004)	(0.016)
Wife's Age at Marriage	-0.232^{***}	-0.161^{***}	-0.217^{***}	-0.211***	-0.251^{***}	-0.183^{***}	-0.248***
	(0.005)	(0.013)	(0.012)	(0.015)	(0.006)	(0.009)	(0.018)
Marital Duration	0.146***	0.039	0.145	0.318	0.131**	0.135	0.540^{**}
	(0.055)	(0.159)	(0.194)	(0.259)	(0.062)	(0.148)	(0.223)
Marital Duration ²	-0.011	0.025	-0.013	-0.044	-0.008	-0.015	-0.111^*
	(0.016)	(0.045)	(0.055)	(0.073)	(0.017)	(0.044)	(0.059)
Marital Duration ³	-0.001	-0.005	-0.001	0.000	-0.002	-0.001	0.007
	(0.001)	(0.004)	(0.005)	(0.007)	(0.002)	(0.004)	(0.005)
Husband's Occupation HISCAM Score	0.001	-0.011**	-0.015***	-0.002	0.004*	-0.002	-0.021^*
	(0.002)	(0.005)	(0.004)	(0.006)	(0.002)	(0.002)	(0.012)
Literate Husband	-0.100**	0.063	-0.255	0.004	0.028	0.299**	0.256
	(0.048)	(0.317)	(0.245)	(0.373)	(0.052)	(0.152)	(0.334)
Literate Wife	0.132***	0.426	0.496*	0.448	0.103**	0.340***	-0.326
	(0.043)	(0.432)	(0.260)	(0.301)	(0.050)	(0.069)	(0.360)
% of Catholic Marriages in DED	0.003***	-0.009*	0.024***	-0.007	0.008***	0.001	0.006
	(0.001)	(0.005)	(0.005)	(0.010)	(0.001)	(0.003)	(0.008)
Intermarriage with Catholic Husband	-0.694^{***}	-0.298	-0.525	-0.052	-0.745^{**}	-0.784**	-0.478
	(0.160)	(0.358)	(0.466)	(0.322)	(0.297)	(0.339)	(0.691)
Intermarriage with Other Denomination Husband	-0.753***	0.058	-0.954***	-0.588***	-0.723***	-0.651**	0.222
	(0.092)	(0.180)	(0.222)	(0.205)	(0.195)	(0.301)	(0.472)
Sample	Full	Dublin City	Leinster	Munster	Ulster	Belfast	Connacht
Num. obs.	48122	2476	3619	2410	28656	9852	1109

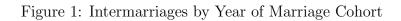
 $\text{Standard Errors are clustered at the DED level.} \ \ ^{***}p < 0.01, \ ^{**}p < 0.05, \ ^{*}p < 0.1. \ \text{Leinster and Ulster samples do not include Dublin city or Belfast.}$

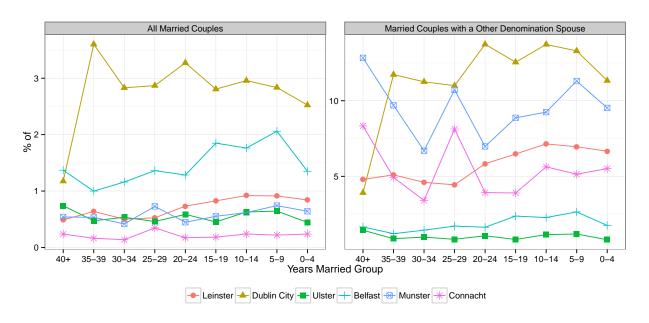
Table 18: Proportion of Children Born Reported Dead. Parents Married Less Than 20 Years. OLS Regressions.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Intercept	0.123***	-0.066*	0.091***	0.170***	0.052***	0.078***	0.072***
•	(0.009)	(0.040)	(0.023)	(0.023)	(0.016)	(0.030)	(0.022)
Child Born Per Years Married	0.117***	0.188***	0.125***	0.110***	0.108***	0.207***	0.093***
	(0.004)	(0.017)	(0.008)	(0.007)	(0.007)	(0.015)	(0.008)
Husband's Age at Marriage	-0.001***	-0.001^*	-0.001***	-0.001***	-0.001***	-0.001**	0.000**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Wife's Age at Marriage	0.001***	0.001***	0.002***	0.001**	0.002***	0.001	0.002***
	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)
Marital Duration	0.013***	0.021***	0.014***	0.007^{*}	0.014***	0.024***	0.010**
	(0.002)	(0.005)	(0.004)	(0.004)	(0.003)	(0.007)	(0.004)
Marital Duration ²	-0.004**	-0.006	-0.007	0.001	-0.008**	-0.011^*	-0.002
	(0.002)	(0.005)	(0.004)	(0.004)	(0.003)	(0.007)	(0.004)
Marital Duration ³	0.001	0.001	0.001	-0.001	0.002**	0.002	0.000
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)
All Catholic Marriage	0.017***	0.036***	0.018***	0.013***	0.010***	0.023***	0.005
	(0.002)	(0.006)	(0.003)	(0.005)	(0.002)	(0.005)	(0.006)
Husband's Occupation HISCAM Score	-0.002^{***}	-0.001***	-0.001***	-0.002***	-0.001***	-0.002***	-0.002***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Literate Husband	-0.005***	-0.026***	-0.012^{***}		-0.007***	-0.039***	-0.009***
	(0.002)	(0.007)	(0.004)	(0.004)	(0.003)	(0.011)	(0.003)
Literate Wife	-0.033***	-0.046***	-0.034***	-0.041***	-0.026***	-0.037***	-0.020***
	(0.003)	(0.008)	(0.006)	(0.006)	(0.004)	(0.008)	(0.005)
% of Catholic Marriages in DED	0.000***	0.001***	0.000**	0.000**	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Intermarriage with Catholic Husband	0.049***	0.062**	0.021	0.026	0.016	0.049**	0.057
	(0.011)	(0.025)	(0.018)	(0.028)	(0.024)	(0.023)	(0.042)
Intermarriage with Other Denomination Husband	0.045***	0.023*	0.027**	0.012	0.048***	0.051***	0.032
	(0.006)	(0.012)	(0.012)	(0.014)	(0.017)	(0.012)	(0.033)
Sample	Full	Dublin City	Leinster	Munster	Ulster	Belfast	Connacht
Num. obs.	204027	16534	37656	45658	56922	20843	26414

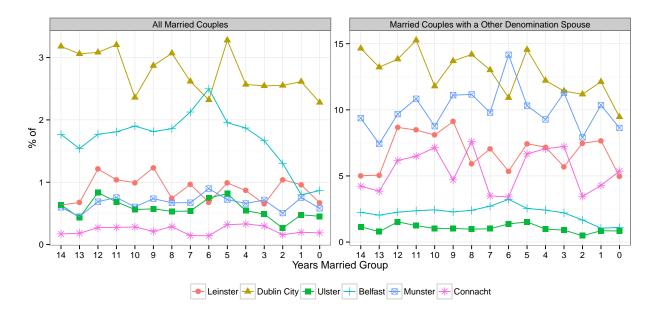
Table 19: Proportion of Children Born Reported Dead. Parents Married 20 Years or More. OLS Regressions.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Intercept	0.180***	-0.055	0.097	0.210***	0.083**	0.320***	0.103**
•	(0.024)	(0.133)	(0.061)	(0.056)	(0.039)	(0.099)	(0.045)
Child Born Per Years Married	0.220***	0.360***	0.243***	0.250***	0.180***	0.313***	0.264***
	(0.007)	(0.032)	(0.014)	(0.011)	(0.014)	(0.026)	(0.014)
Husband's Age at Marriage	-0.002^{***}	$0.000^{'}$	-0.002^{***}	-0.002^{***}	-0.001***	-0.002^{***}	-0.001****
	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Wife's Age at Marriage	0.002***	0.002**	0.003***	0.003***	0.003***	0.003***	0.004***
	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)
Marital Duration	0.003	$0.005^{'}$	0.006	$0.005^{'}$	0.004	-0.017^{*}	0.002
	(0.002)	(0.011)	(0.005)	(0.004)	(0.003)	(0.009)	(0.003)
Marital Duration ²	0.001	0.001	0.000	0.000	0.000	0.007***	0.001
	(0.001)	(0.003)	(0.001)	(0.001)	(0.001)	(0.003)	(0.001)
Marital Duration ³	0.000	$0.000^{'}$	0.000	0.000	0.000	-0.001^{***}	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
All Catholic Marriage	0.020***	0.037***	0.014***	0.020***	0.017***	0.040***	-0.008
	(0.002)	(0.008)	(0.004)	(0.005)	(0.003)	(0.007)	(0.007)
Husband's Occupation HISCAM Score	-0.003^{***}	-0.001^{***}	-0.002^{***}	-0.002^{***}	-0.002^{***}	-0.001^{***}	-0.003^{***}
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Literate Husband	0.004**	-0.027^{**}	-0.009^{**}	$0.004^{'}$	0.001	-0.029^{***}	
	(0.002)	(0.011)	(0.004)	(0.003)	(0.003)	(0.007)	(0.003)
Literate Wife	-0.013***	-0.037***	-0.018***	-0.024***	-0.013****	-0.026***	-0.015^{***}
	(0.002)	(0.011)	(0.004)	(0.004)	(0.003)	(0.006)	(0.003)
% of Catholic Marriages in DED	0.000***	0.002***	-0.001^{***}	-0.001^{***}	0.000***	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Intermarriage with Catholic Husband	0.064***	0.034	-0.004	0.067**	0.041	0.155^{*}	0.115
	(0.017)	(0.037)	(0.035)	(0.031)	(0.030)	(0.084)	(0.075)
Intermarriage with Other Denomination Husband	0.071***	$0.005^{'}$	0.089***	0.095***	0.044**	0.077**	$-0.016^{'}$
	(0.009)	(0.014)	(0.023)	(0.018)	(0.017)	(0.038)	(0.031)
Sample	Full	Dublin City	Leinster	Munster	Ulster	Belfast	Connacht
Num. obs.	166338	8760	29035	40202	48464	11244	28633









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