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A Simple Baronial Analysis**

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Abstract

This paper complements a much larger study of school attendance in pre-famine Ireland by FitzGerald (2010). It exploits some of the data generated by that study to analyze further some of the determinants of schooling and literacy in the 1820s and 1840s.

Keywords: Ireland; economic history; literacy; human capital

SCHOOL ATTENDANCE AND LITERACY IN IRELAND
BEFORE THE GREAT FAMINE: A SIMPLE BARONIAL ANALYSIS¹

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SCHOOL ATTENDANCE AND LITERACY BEFORE THE FAMINE

Long before the creation of a national publicly-funded school system in the 1830s, private schooling, usually secular although sometimes supervised or subsidized by the clergy, was widely available in Ireland. In the late 1770s touring agronomist Arthur Young found that ‘hedge schools [were] everywhere to be met with’ (1780: II 107*). By 1800 most Catholic parishes in Kilkenny had ‘one or two’ schools, ‘not infrequently kept in the chapel’ (Tighe 1802: 511). These schools—mostly small one-teacher establishments—seemingly catered to a widespread demand for basic literacy and numeracy. In the wake of his travels in Ireland in the late 1800s, Edward Wakefield (II: 397) pronounced the Irish ‘anxious, nay eagerly anxious for the education of their children’. There is plenty more in the same vein (see Akenson 1973: 45-58; Mokyr 1985: 183; Ó Ciosáin 1997; McGrath 1999: 163-65, 171). David Dickson (2000: 217) has described the ‘pool of anglophone literates’ to be found throughout the countryside in the 1790s as the product of a rise in informal schooling after mid-century in the wake of an upswing in rural incomes in mid-century, and Niall Ó Ciosáin (1997) has linked this literacy to the significant demand for popular literature in the pre-famine era.

Given the limited employment prospects awaiting most young Irishmen and Irishwomen in the pre-famine era the extent of this demand is rather remarkable. If we assume, following David Mitch’s analysis of occupation and

literacy in Victorian England (1992: 14-15, 213-14)², that literacy was unlikely to have been of use to men and women working as spinners, farm labourers, domestic servants, carmen, or labourers and porters, then in Ireland on the eve of the famine well over half of all males and three quarters of all females aged 15 and above worked in jobs not requiring literacy. In Leinster the percentages were 54.3 per cent for males and 77.1 per cent for females; in Connacht they were 63.5 and 87.3 per cent (BPP 1843: 152, 430, 440). These are broad categories; they exclude many less important occupations also unlikely to require literacy.

Yet basic literacy was already common across much of Ireland in the early nineteenth century.³ This claim finds corroboration in the 1841 population census, which includes the earliest comprehensive survey of literacy in Ireland (BPP 1843). Some summary findings of the 1841 census at national level are reported in Figures 1a-1c and 2a-2d. The former give the percentages by birth cohort of those who declared an ability to read and write (1a), who could read only (1b), and who could neither read nor write (1c). The birth cohorts span the period between the 1760s and the 1820s.

As previous studies have emphasized, the 1841 census data are subject to some obvious caveats. First, they are based on self-evaluation. Were

² Mitch (1992: 214) deems domestic service an occupation with ‘possible (or ambiguous) use of literacy’, but we assume literacy was of little use to servants in pre-famine Ireland.

³ For more on the history of literacy and schooling in nineteenth-century Ireland see Daly 1979; Daly and Dickson 1990; Logan 1990, 1997; Ó Ciosáin 1997: 25-51; McManus 2002.

people more likely to exaggerate literacy skills than to conceal them? Given the likelihood that some people attended school only briefly and that some elderly people were likely to have lost the ability to write through lack of practice, the inclusion of the intermediate ‘read only’ category, which allows for semi-literacy, is useful. Second, the returns refer to only survivors who had not emigrated. If literacy was a function of living standards—as seems likely—then survivors were more likely to be literate. But if—as also seems likely—those who emigrated for good were more likely to have been able to read and write, the bias would then operate in the opposite direction. A recent analysis of assisted migration from the United Kingdom to Australia in 1841 reveals, not surprisingly, that the Irish were the least educated of all of her majesty’s subjects, but that they were much more likely to be literate than Irish people in their age-group who remained at home. Further evidence of a selection effect is that emigrants were more likely to be literate than the involuntary emigrants who had travelled from Ireland to Australia as convicts a few years previously (Richards 1999: 352-54). After 1815 emigration from Ireland was substantial and rising, and the emigrants seem to have been born in disproportionately from better-off and more literate counties (Ó Gráda 1994: 74-78). Still, historians believe that the 1841 census data provide a tolerably accurate picture of how literate the Irish were in the pre-famine decades.

Figure 1a indicates a gradual improvement over time in literacy levels in pre-famine Ireland.⁴ More striking is the implication that more than two-fifths

⁴ O Ciosáin (1997: 31-39) and Mokyr (1985: 183-84) also analyze these data and present them in tabular form.

of males in all birth cohorts as far back as the 1760s could read and write. Less than half of all males in those birth cohorts professed total illiteracy. Males throughout the decades covered by the census were more than twice as likely to declare an ability to read and write as females (compare Logan 1997). However, the gap in illiteracy was not commensurate, given the higher proportions of semi-literate females who declared an ability to read only (Figure 1b).

Schooling involved a double cost. Paying even the weekly penny or two per child charged by most rural schoolteachers in the 1820s would have been a burden on households trying to survive on a few shillings a week. A more serious constraint, particularly in areas where domestic industry was important, would have been the opportunity cost of child labour forgone. This could explain why in 1821 Bishop James Doyle of Kildare and Leighlin claimed that although in south Leinster ‘nine-tenths of the farmers’ children and all those of the better classes...receive education of a very imperfect kind’, the children of the poor in rural areas were ‘entirely neglected’ and in the towns ‘many of them left in complete ignorance’ (cited in McGrath 1999: 164). Still, it bears noting that Irish literacy rates before the Great Famine were high relative to GDP per head. In 1841 nearly half of those aged 5 years and over could at least read, while 53 per cent of those aged over 15 years declared some literacy. Literacy in, say, Italy or the Iberian peninsula was less than half the Irish rate at this time, and in the late 1820s more than half of [male] recruits in half of France’s eighty-six *départements* were illiterate (Tortella 1994: Table 6; Aron *et al.* 1972: 64-5; compare Ó Ciosáin 1997: 44-45). Does

this mean that in pre-famine Ireland the demand for schooling outstripped the demand for literate workers?

Figures 2a and 2b describe the percentages of males and females who could read only in the four provinces. Both indicate Ulster's early edge in this respect, and the slower growth in the proportion of those who could read only in that province. Figures 2c and 2d describe the percentages that could neither read nor write in the four provinces. Both male and female illiteracy decreased steadily in all provinces from the 1780s on. The slower rate of decrease in female illiteracy in the province of Connacht is noteworthy, as are the earlier declines in male and female illiteracy in Munster. There are signs too of both males and females in Leinster catching up on Ulster.

The literacy described in Figures 1 and 2 was mainly the product of the widespread availability of schooling that so impressed Young, Wakefield, and others. The first two estimates of school attendance in Ireland, in 1808 and 1821, were incomplete. The 1808 figure is a grossed up estimate based on 17 of 22 diocesan returns, while the 1821 census returns are also clearly incomplete (Ó Gráda 1993: 24). The third estimate was produced by special commissioners appointed by parliament in 1824 to inquire into Irish educational resources. It refers to school attendance in autumn 1824. The detailed outcome was published in a 1,300-page parliamentary report in 1826 (BPP 1826).

The 1824 survey, which is the focus of the extensive analysis in Garret FitzGerald's 'Irish Primary Education in 1824' (2010), must be placed in context (Ó Canainn 1983). It was conducted at a time of heightened sectarian tension

and of fears, chiefly on the Catholic side, that schooling was being used as a means of proselytism. The Catholic clergy was particularly hostile to the Society for the Promoting the Education of the Poor in Ireland (widely known as the Kildare Place Society). The Society had begun its work in an atmosphere of goodwill in 1811, and its early success had won it an annual subsidy out of public funds in 1816. By 1819-20, however, its insistence on schoolchildren being read the 'Bible without note or comment' and the increasingly evangelical character of its board of directors led even moderate Catholics such as Daniel O'Connell and Lord Cloncurry to shun it (Whelan 2005: 83-5, 103-4, 202-3). The 1826 commission recommended a system of public non-denominational schooling that would be sensitive to confessional beliefs. Its report, which represented a victory for moderate Catholic opinion and pleased neither the Kildare Place Society nor Catholic 'ultras' such as John McHale (later archbishop of Tuam), would ultimately form the basis of the system on national education introduced in 1834 (Ó Canainn 1983; McGrath 1999).

The survey of schools was carefully executed and the likelihood of reliable data enhanced by asking clergymen of the three main denominations for separate, sworn evidence on *all* schools in their own areas. Thus, the 1824 inquiry, based on detailed school-by-school information supplied by parochial clergy of both Catholic and Established churches and 'several Presbyterian ministers', contained returns for nearly twelve thousand schools, attended by over half a million boys and girls. These data, rich in detail and of high quality, have now been analyzed exhaustively by Garret FitzGerald (2010).

As FitzGerald documents, the schools surveyed varied widely in size, quality, confessional profile, and endowments. Accommodation ranged from ‘a wretched cabin built with stone and covered with scraws’ in Rathdowney (Queen’s County) to ‘good’ dwelling-houses costing £200-£300 in Forkhill (County Armagh); and from ‘a mere hut, literally a hedge school’ in Kilkabern (County Cork) to ‘a thatched cabin worth £6 built by the parents of the children’ in Clogher (County Tyrone) (BPP 1826: 294, 472, 774, 912). For the most part, however, the schools were one-teacher, fee-paying establishments.

By combining his own meticulous analysis of the schooling returns with corrected age and gender data derived from the 1821 census, FitzGerald can show that 35 per cent of boys and girls of school-going age (i.e. in the 6 to 13 age-group) were attending schools, 44 per cent of boys and 26 per cent of girls. These are impressive percentages: over two decades ago, Mokyr (1985: 184) interpreted the 1824 data as placing Ireland ‘at the forefront of Europe as far as education is concerned’.

The details of school attendance by province ‘on an average of three months in the autumn of 1824’ are given in Table 1. It emerges that the education of young males was particularly prized in Munster, where over half those aged 6-13 years were attending school. The gender gap was greatest in Munster and Connacht. Given its more developed economic status and its confessional composition, and the evidence for relatively high literacy levels in the 1841 census, school attendance rates in Ulster in 1824 were, at first glance, surprisingly low (Ó Ciosáin 1997: 45).

<i>Table 1. School Attendance Rates by Province in 1824 [%] (based on the 6-13 year age group)</i>			
Province	Male	Female	All
Leinster	45	31	38
Munster	52	27	40
Ulster	37	24	31
Connacht	37	20	29
Total	44	26	35

The outcome is probably explained by the disproportionate importance of part-time institutions that were not included in the 1824 inquiry in imparting literacy in Ulster at this juncture. In areas where the demand for child labour in the textile sector and elsewhere was strong, Sunday schools and evening schools compensated, at least in part, for any resultant educational deficit (Hempton and Hill 1992: 114-15; Holmes 2006). The strongly evangelical ethos of the earliest Sunday schools—where instruction was free and the main reading material was scripture-based—also appealed to the mainly Presbyterian and Anglican population of east Ulster. In Ulster at least, however, Catholics soon set up their own rival Sunday schools and these were also well attended.⁵ Most of the Sunday schools focused on spelling and reading rather than writing skills, and this may help explain the high proportions of both males and females in Ulster who could ‘read only’ in 1841 (Figures 2a and 2b), although it bears

⁵ The Ordnance Survey Memoirs list many. See e.g. Day and McWilliams (1990: 20-1, 62-3, 102-03) for the confessionally mixed parishes of Artrea, Ballyscullion, and Magherafelt.

noting that Ulster's high proportions of semi-literates predate the Sunday School movement. In an analysis of the variation in literacy and semi-literacy across Ulster baronies in 1841, Ó Ciosáin (1997: 35, 211fn23) has shown that 'the influence of religion on female reading-only levels was relatively strong, whereas that of wealth was negligible'.

Irish historians have perhaps underestimated the educational and cultural importance of the Sunday schools. After all, at the time of the 1824 inquiry Irish Sunday schools monitored by the evangelical Sunday School Society for Ireland were attracting over-fourth the number attending day schools, and in east Ulster attendance at such Sunday schools exceeded that at day schools. Funded by evangelical philanthropy and manned by volunteer teachers, the schools offered the poor a bundle that combined affective and cognitive skills; literacy was to be acquired through the 'infusion of the principles of decency, order, social harmony and true religion' (Sunday School Society 1818: 18).

The Belfast Sunday School was founded in 1811 to afford education to 'servants and apprentices who are employed during the rest of the week and to those whose parents cannot afford to pay for their education'. By the late 1810s over three thousand children in Belfast—then a town of fewer than forty thousand inhabitants—were attending twenty schools run by the Sunday School Society for Ireland (PRONI 1973: 48; Hempton and Hill 1992: 114). Although hard data are unavailable, it is likely—since the schooling was free—that the gender gap in the Sunday school attendance was much smaller than that in the mainly fee-paying day schools.

In Ireland the Sunday school movement was overwhelmingly an east Ulster phenomenon. In 1825/6 the five Ulster counties (Antrim, Down, Armagh, Tyrone, and Derry) which stood ‘pre-eminent in Sunday School instruction’ accounted for over three-fifths of the 152,391 attending schools run by the Sunday School Society for Ireland⁶, while Connacht and Munster together accounted for only 8 per cent. Whereas Antrim provided 20,842 scholars and Down 27,038 in 1825/6, Galway supplied only 1,167 and Mayo only 1,083. Throughout Munster ‘there were large and dreary districts unmarked by the pleasing sight of a Sunday School’ (Sunday School Society 1826: 7-13).

In this respect the eastern counties of Ulster, in particular, bore a closer resemblance to Britain than to the rest of Ireland (compare Lunney 1990; Kirkham 1990). In Scotland, England, and Wales, where non-conformism and child labour were strong predictors of Sunday school attendance, the role of the schools in inculcating discipline and increasing literacy was paramount, and before mid-century Sunday schools and day schools were substitutes rather than complements (Laqueur 1976: ch. 4; Brown 1981; Mitch 1992: 137-38; Stephens 1987: 93-94, 155-60; Snell 1999). Another feature of school attendance in Ulster, evident from the data in the 1841 census data though not from the 1824 inquiry, is that scholars in Ulster were younger on average, and left at an earlier age: this may also help account for the relatively high proportion of semi-literates in the province (Ó Ciosáin 1997: 45-48).

This note elaborates on some of the findings of Garret FitzGerald’s study, by reporting the results of statistical analysis based on the 1824 school

⁶ Originally known as the Hibernian Sunday School Society.

attendance data he has compiled. It owes a lot to earlier work on pre-famine schooling and literacy, notably that by Akenson (1970), Daly and Dickson (1990), Adams (1980, 1998), and Ó Ciosáin (1997). In what follows, the unit of analysis is the barony, an obsolete administrative unit roughly halfway in size between the parish and the county. A considerable amount of official data was still collected at baronial level until the mid-nineteenth century. Baronies, like counties, varied considerably in size; those in parts of north Leinster were particularly small, whereas in areas such as Donegal and north Cork they were large. Baronial borders were prone to change over time. In the following exercise we have collected schooling and other data on over three hundred baronies on which we could assemble data on relevant variables.

The variables used in the analysis are described in Appendix Table A1. The regression results in Table 2A and 2B use the percentage of children attending school as the dependent variable. *MPCAS* is our acronym for ‘male percentage attending school’, and correspondingly for *FPCAS* (female) and *TPCAS* (total). The regressions link attendance to religious affiliation (as captured by *CATHOLIC*, the Catholic percentage of the total), occupational structure (on which more below), the prevalence of the Irish language (*IRISH*), and teachers’ pay in 1824 (*TEACHPAY*). Teachers’ pay operates partly as a proxy for living standards in a barony—and in the 1820s it was strongly correlated with farm wages⁷—although it may also reflect teacher quality.

⁷ Wage data are available only at county level. However, *TEACHPAY* and money wages in 1829 (using the relevant county wage for each barony) were highly correlated

Median teachers' earnings were highest in Leinster (£15.1) and lowest in Connacht (£12.6), with considerable dispersion across baronies in each province. Such rates were modest—about double what a farm labourer might have earned in a year—but they might have been supplemented by seasonal work and even part-time farming.⁸ We estimated median rather than average teachers' pay as a means of averting the problem caused by a small number of highly-paid outliers in several counties. While in low-income baronies highly paid teachers might reflect a particularly high demand for schooling, it seems more plausible to interpret teachers' pay as a proxy for living standards more generally.

The data on religion refer to 1831.⁹ The occupational data in the 1821 census, although rather crude and entirely lacking in the case of four baronies, are worth using. They refer to the number of persons 'chiefly employed' in either 'agriculture' or 'trades, manufactures, and handicrafts', and a residual category of 'all other persons occupied and not compromised in the two previous classes'. These are described as *AGR*, *MANUF*, and *SERV* below. In Ireland in 1821 manufacturing consisted mainly of the production of everyday

($r=0.362$; $N=299$); the Spearman correlation coefficient between the two was 0.233. The 1829 wage data are given in Bowley (1899).

⁸ These are simple averages across baronies within each province. The computed average wages for the four provinces are (standard deviations in parentheses): Leinster £15.1 (6.39); Munster £13.4 (3.71); Ulster £13.4 (3.12); Connacht £12.6 (3.28).

⁹ See Miller (2005) for a sophisticated appraisal and analysis of this source.

goods for the local market on a small scale; large-scale factory employment was still uncommon. In much of Ulster and north Connacht, and in pockets elsewhere, the spinning and weaving of linen in the home were still important; and in the towns and cities, manufacturing also encompassed work in tanneries, distilleries, breweries, processing plants, and refineries. While *MANUF* was high in several baronies that would make successful transitions to modern factory-based industry, it was also high in poor baronies, particularly in south Ulster and north Connacht, which would experience de-industrialization in the following decades (Ó Gráda 1994). The residual *SERV* category would have included motley occupations ranging from servant to barrister, from soldier to nurse, and from watchman to merchant. Occupations in this category were most likely to require literacy.

Fitzgerald (1984) provides baronial-level data on the minimum proportions of Irish-speakers by decade; we chose to focus on the 1821-31 birth cohort here. We assume that since the schools operated mainly through the medium of English, the demand for them might have been less in areas where the great majority of the population did not often use or even know English.¹⁰ In the early nineteenth century Irish was dominant was still dominant across much of the south and west (FitzGerald 1984).

The results presented in Tables 2A and 2B use robust regression estimation, in order to minimize distortions caused by a few likely outlying

¹⁰ Although reading ability in Irish was not unknown in the pre-famine era: see Ó Ciosáin (1997: 155-57); McGlinchey (1986: 11-12, 108).

observations. Our choice of ordinary least squares (OLS), which is dictated by the data, assumes that our explanatory variables are truly exogenous to school attendance. In this respect, *TEACHPAY* is probably most problematic, since teachers' earnings may have been a function of the demand for schooling. The coefficients measure elasticities (i.e. ratios of proportional changes). The outcome may be summarized in words as follows:

1. When occupational structure, the proportion of Irish-speakers, and living standards are controlled for, religious affiliation *per se* does not account for much of the variation in school attendance. If anything, being Catholic marginally increased the likelihood of attendance. However, as noted, this does not allow for attendance at Sunday schools.
2. Children in more Irish-speaking baronies were marginally less likely to attend school—again, other things being equal. However, the effect is statistically significant only for girls, and even then it is weak (at an elasticity of -0.08 to -0.1).
3. Children living in baronies in which occupations in manufacturing as defined in the 1821 census were important were less likely to be attending school in 1824.

4. Table 2B suggests that baronies where employment in the tertiary sector (i.e. employment outside agriculture and manufacturing in 1821) was relatively important registered high attendance rates.
5. *TEACHPAY* was associated with higher school attendance, more so for girls than for boys. This is the closest we have to a measure of living standards by barony in the 1820s. The caveat noted above applies, but the implication that attendance was positively correlated with parental income comes as no surprise (compare Long 2006).

<i>Table 2a. ACCOUNTING FOR SCHOOL ATTENDANCE, 1824</i>			
Explanatory Variables [↓]	<i>MPCAS24</i>	<i>FPCAS24</i>	<i>TPCAS24</i>
<i>CATHOLIC</i>	0.019 [0.36]	-0.018 [-0.51]	0.005 [0.13]
<i>IRISH</i>	-.014 [-0.52]	-.096 [-5.25]	-.058 [-2.63]
<i>MANUF</i>	-.334 [-4.93]	-.214 [-4.72]	-.278 [-5.08]
<i>TEACHPAY</i>	0.608 [3.17]	0.723 [5.63]	0.696 [4.49]
Constant	46.38 [7.32]	28.63	37.10 [7.26]
N	295	295	295
Prob > F	0.0000	0.0000	0.0000
Note: t-stats in brackets, N = number of observations			

Table 2b. ACCOUNTING FOR SCHOOL ATTENDANCE, 1824

Explanatory Variables [↓]	<i>MPCAS24</i>	<i>FPCAS24</i>	<i>TPCAS24</i>
<i>CATHOLIC</i>	0.090 [2.05]	0.020 [0.71]	0.062 [1.78]
<i>IRISH</i>	0.003 [0.12]	-0.082 [-4.66]	-.042 [-1.95]
<i>SERV</i>	0.636 [5.80]	0.499 [7.03]	0.573 [6.56]
<i>TEACHPAY</i>	0.166 [0.82]	0.378 [2.88]	.295 [1.82]
Constant	21.68 [4.85]	12.38 [4.27]	16.27 [4.56]
N	295	295	295
Prob > F	0.0000	0.0000	0.0000

Note: t-stats in brackets, coefficients are elasticities

THE GENDER GAP IN 1824:

Today Irish females have higher participation rates than males in both second and third level education, and they also outperform males academically by a considerable margin.¹¹ This female advantage is relatively recent. In 1824 male school attendance rates were higher than female attendance rates in all

¹¹ Brian Mooney, 'Talkback' *Irish Times*, 15 December 2009 [available at: <http://www.irishtimes.com/newspaper/education/2009/1215/1224260708032.html>]

counties and baronies. Given that females had a comparative advantage in brain over brawn, their disadvantage in terms of literacy may seem curious. Gender discrimination in the market for labour requiring literacy may well account for this; it may be assumed that parents responded to the higher return on investment in male human capital at the time (compare Fitzpatrick 1986). At county level the gender gap, measured by the ratio of male to female attendance rates, was greatest in Kerry (2.7), Limerick (2.2), and Mayo (2.1) and smallest in Dublin (1.2), Queen's (1.2), and Donegal (1.3). The gap tended to be smaller in north Ulster and south Leinster, and greatest in the west and south.

For the purposes of the baronial analysis reported in Table 3 we define the gender gap as $200(MPCAS24 - FPCAS24) / TPCAS24$. Again, *TEACHPAY* is used as a proxy for living standards in a barony, while *IRISH* and *CATHOLIC* arguably reflect both culture and living standards. *VAL21*, the Poor Law Valuation divided by population in 1821, is used as a proxy for the capital stock or wealth. *ULSTER* is a dummy variable set at one for the five Ulster counties mentioned above, and zero otherwise.

The outcome is described in Table 3 below. We find that the higher the proportion of Irish speakers and Catholics, and the lower teachers' pay, the higher was the gender gap. In other words the female disadvantage was positively associated with poverty and economic and cultural isolation. We also find that the gender gap was lower in baronies in which employment outside agriculture and manufacturing was important, although the coefficients here

are not so robust. The big coefficient on *ULSTER* indicates that there is a strong Ulster effect.

LITERACY ON THE EVE OF THE FAMINE:

Tables 4a and 4b report the results of an analysis of the variation in literacy across baronies on the eve of the Great Famine. *MLIT41*, the proportion of literate males aged 5 and above in 1841, is the sum of *MRR41* (the proportion who could read and write) and *MRO41* (the proportion who could read only), and analogously for *FLIT41*. The negative impact of *IRISH* and *CATHOLIC* on literacy levels in 1841 is striking. *BADHOUSING* (an index of housing quality defined as the proportion of families residing in 4th-class housing)¹² also reduced literacy, while *TEACHPAY* and school attendance in 1824 increased it. Does this mean that the returns to schooling in Irish-speaking, heavily Catholic areas were much lower than elsewhere? Or were the costs of fee-paying schooling still prohibitively high for much of the population? The latter possibility is supported by the link between living standards, as proxied by *BADHOUSING* and *TEACHPAY*, and literacy.

¹² 4th class housing referred to mud cabins of only one room. This classification admittedly fails to reflect conditions in places such as Dublin, where ‘many...reside in a first or second class house who, nevertheless, are living in the most wretched state as to accommodation’ (BPP 1843: xvi).

TABLE 3. Accounting for the gender gap in school attendance in 1824

	[1]	[2]
<i>TEACHPAY</i>	-1.203 [-2.57]	-1.078 [-2.34]
<i>IRISH</i>	0.604 [9.64]	0.597 [9.71]
<i>SERV</i>	-0.465 [-1.84]	-0.349 [-1.39]
<i>CATHOLIC</i>	0.267 [2.40]	0.772 [4.21]
<i>ULSTER</i>		35.22 [3.23]
Constant	89.07 [8.62]	37.42 [2.01]
N	295	295
Prob > F	0.0000	0.0000
Note: t-stats in brackets, coefficients are elasticities		

Table 4a. Accounting for literacy 1841

	<i>MLIT41</i>	<i>MRR41</i>	<i>MRO41</i>	<i>FLIT41</i>	<i>FRR41</i>	<i>FRO41</i>
<i>MPCAS24,</i> <i>FPCAS24</i>	.152 [6.75]	.158 [8.18]	.001 [0.13]	.174 [4.61]	.142 [5.39]	.048 [2.06]
<i>IRISH</i>	-.214 [-16.10]	-.113 [-9.87]	-.112 [-20.08]	-.234 [-16.17]	-.059 [-5.81]	-.178 [-20.04]
<i>CATHOLIC</i>	-.248 [-7.31]	-.173 [-2.93]	-.064 [-4.52]	-.418 [-11.10]	-.204 [-7.75]	-.211 [-9.12]
<i>BADHOUSING</i>	-.139 [-4.31]	-.122 [-4.37]	-.004 [-0.31]	-.137 [-3.83]	-.093 [-3.75]	-.091 [-1.42]
<i>MANUF</i>	-.079 [-2.77]	-.102 [-4.13]	.012 [1.07]	-.204 [-6.67]	-.169 [-7.92]	-.040 [-2.15]
<i>TEACHPAY</i>	.318 [3.94]	.361 [5.18]	-.046 [-1.38]	.406 [4.650]	.492 [7.97]	-.091 [-1.68]
<i>ULSTER</i>	3.80 [1.92]	1.61 [0.95]	2.03 [2.46]	1.92 [0.86]	-3.21 [-2.07]	3.98 [2.92]
Constant	76.66 [20.11]	49.45 [15.03]	25.76 [16.19]	80.77 [18.41]	35.51 [11.81]	47.33 [18.00]
N	295	295	295	295	294	294
Prob > F	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Table 4b. Accounting for literacy 1841

	<i>MLIT41</i>	<i>MRR41</i>	<i>MRO41</i>	<i>FLIT41</i>	<i>FRR41</i>	<i>FRO41</i>
<i>MPCAS24,</i> <i>FPCAS24</i>	.157 [6.85]	.160 [8.08]	.009 [0.94]	.172 [4.30]	.127 [4.67]	.061 [2.55]
<i>IRISH</i>	-.216 [-16.01]	-.113 [-9.79]	-.110 [-20.48]	-.236 [-15.66]	-.058 [-5.66]	-.176 [-19.50]
<i>CATHOLIC</i>	-.235 [-6.99]	-.155 [-5.35]	-.060 [-4.51]	-.382 [-9.99]	-.174 [-6.72]	-.192 [-8.40]
<i>BADHOUSING</i>	-.121 [-3.57]	-.096 [-3.30]	-.019 [-1.38]	-.099 [-2.59]	-.057 [-2.18]	-.038 [-1.66]
<i>SERV</i>	.100 [2.01]	.192 [4.47]	-.082 [-4.12]	.272 [4.91]	.309 [8.20]	-.024 [-0.72]
<i>TEACHPAY</i>	.255 [3.04]	.286 [3.96]	-.018 [-0.54]	.234 [2.50]	.368 [5.78]	-.102 [-1.82]
<i>ULSTER</i>	3.23 [1.63]	1.22 [0.72]	1.99 [2.52]	.326 [0.14]	-3.88 [-2.49]	3.77 [2.75]
Constant	70.97 [19.74]	40.82 [13.20]	27.33 [19.06]	70.18 [16.87]	22.05 [7.80]	45.23 [18.76]
N	295	295	295	295	294	294
Prob > F	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

GENDER IN 1841:

Another interesting and rather well-known feature of the 1841 census data on literacy is the rather high proportion of females who declared an ability to read only. This could have been the product of the shorter time

spent at school by females, because parents may have focused on both sending sons to school and keeping them there longer. Or perhaps a high proportion of females who could read only reflects a disproportionate reliance by females on Sunday schools or a demand for a form of literacy limited to an ability to consult the scriptures.

In Table 5 we report the results of regressing the ratio of females who could 'Read Only' to females who could 'Read and Write' on a list of variables, including the proportion of females attending school in 1824 (*FPCAS24*). School attendance in 1824 reduced the ratio of semi-literates, as did income as proxied by *VAL41* (poor law valuation, as reported in the 1851 census, divided by 1841 population) and *TEACHPAY*. *IRISH* and *CATHOLIC* also reduced the ratio, after controlling for living standards as best we could. Evidence, albeit weak, that Catholicism increased the relative importance of female semi-literates does not support the case for a demand for bible-reading. However, the prevalence of agriculture and manufacturing occupations (*AGR* and *MANUF*) limited full female literacy in 1841, while that of services tended to increase it.

	[1]	[2]	[3]
VAL41	-13.54 [-5.59]	-8.96 [-3.77]	-8.80 [-3.83]
BADHOUSING	0.268 [1.23]	0.171 [0.84]	-0.167 [-0.82]
CATHOLIC	0.133 [0.59]	0.283 [1.32]	.111 [0.55]
TEACHPAY	-2.64 [-4.55]	-2.84 [-5.43]	-1.72 [-3.32]
IRISH	-0.903 [-10.22]	-0.826 [-9.73]	-0.786 [-9.48]
AGR	-0.570 [-2.25]		
MANUF		1.11 [6.10]	
SERV			-2.173 [-7.06]
FPCAS24	-0.844 [-3.80]	-0.627 [-2.92]	-0.455 [-2.13]
ULSTER	32.36 [2.44]	25.43 [2.01]	29.41 [2.42]
Constant	239.88 [9.48]	156.40 [6.24]	242.84 [10.96]
N	294	294	294
Prob > F	0.0000	0.0000	0.0000

SCHOOLING AND THE FAMINE:

Did literacy offer any insurance against the Great Famine? Literacy *per se* can hardly have mattered much during the famine, but mostly likely it was a proxy for associated human and physical capital attributes such as health and household wealth. There is evidence, for instance, that literacy was linked to height in the pre-famine era, and height is a good proxy for nutritional status in

infancy and youth.¹³ In our final cross-baronial exercise, reported in Table 6, percentage population change between 1841 and 1851 is used as an index of the famine's severity. This variable captures the combined effects of the famine on mortality and emigration.¹⁴ As might be expected, the prevalence of poor quality housing in 1841 reduced population growth in 1841-51, while high poor law valuation (*VAL*) per head increased it. Surprisingly, perhaps, people living in more heavily Catholic baronies were not more likely to suffer, once these other explanatory variables are included. More surprisingly still, Irish-speaking baronies were *more* likely to escape lightly, again when living standards are controlled for. Is this just because *IRISH* serves as an unsuspected proxy for some hidden variable, topographical or other? What difference did literacy make? When *LIT41* and *TPCAS24* are added together as reported in [Column 1], only the former has any impact on the outcome. The higher the literacy rate in a barony, other things being equal, the lower was the rate of population decline during the famine decade [Column 2]. When *TPCAS24* is added on its own [Column 3], its impact is greater (.073 versus .023), but still rather small. This is perhaps because, as explained earlier, *TPCAS24* is an incomplete measure of potential literacy in the 1820s. Nonetheless, the outcome offers some support for the case that literacy captured something that variables such as housing conditions or the poor law valuation per head failed to capture.

¹³ See e.g. Mokyr and Ó Gráda (1996).

¹⁴ Following Ó Gráda (1999: 29-34).

<i>TABLE 6. Schooling, Literacy, and Famine</i>			
	[1]	[2]	[3]
<i>CATH</i>	-.027 [-0.78]	-.024 [-0.71]	-.080 [-2.45]
<i>BADHOUSING</i>	-.203 [-3.84]	-.204 [-3.85]	-.254 [-4.77]
<i>AGR21</i>	-.316 [-5.72]	-.319 [-5.75]	-.319 [-5.55]
<i>LIT41</i>	.388 [3.65]	.400 [4.18]	
<i>TPCAS24</i>	.023 [0.51]		0.73 [1.72]
<i>IRISH</i>	.119 [5.28]	.121 [5.40]	.105 [4.68]
<i>VAL</i>	4.021 [5.75]	4.292 [6.13]	5.845 [8.39]
<i>Constant</i>	-19.12 [-3.93]	-19.18 [-3.94]	-6.22 [-1.93]
N	291	291	291
Prob > F	0.0000	0.0000	0.0000
Note: the dependent variable is percentage population change 1841-1851			

CONCLUSION:

Garret FitzGerald's multi-dimensional analysis of the 1824 Education Inquiry (FitzGerald 2010) is an important resource for future historians. This short paper has been concerned merely with drawing attention to some of the correlates of school attendance and literacy before the famine. It highlights the role of income in constraining the demand for schooling, and in influencing the gender gap in attendance. It shows that attendance in the 1820s was not affected much by religious affiliation or living in an Irish-speaking area, once income is controlled for. It also draws attention, at least by implication, to the

importance in the pre-famine era of Sunday schools as an alternative source of education in the eastern counties of Ulster. The evidence on school attendance and literacy rates raises some intriguing and unanswered questions about the private and social return to investment in human capital in pre-famine Ireland.

Figure 1a. 'Read and Write' by Decade of Birth, 1841

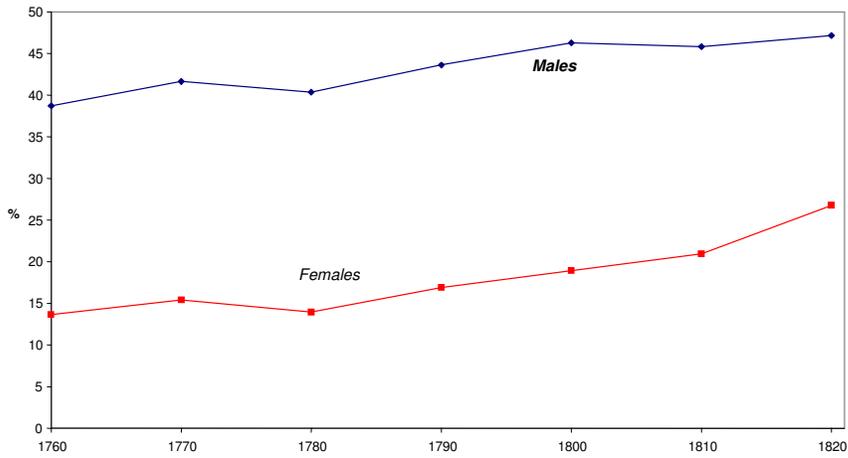


Figure 1b. 'Read Only' by Decade of Birth, 1841

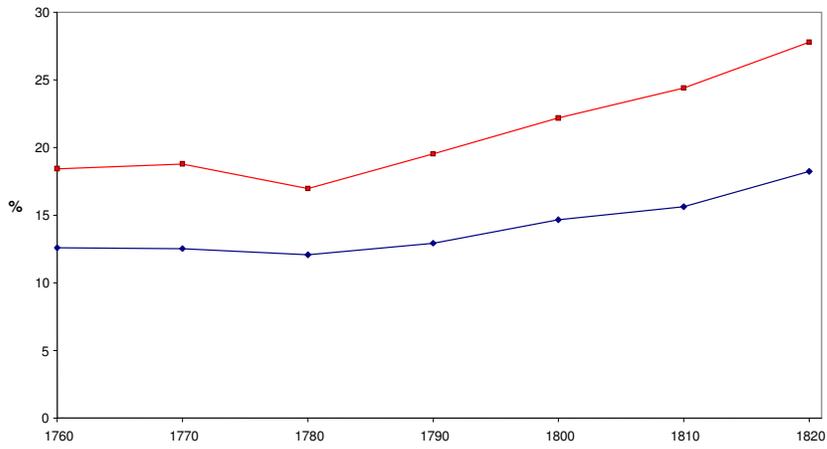


Figure 1c. Illiterate by Decade of Birth, 1841

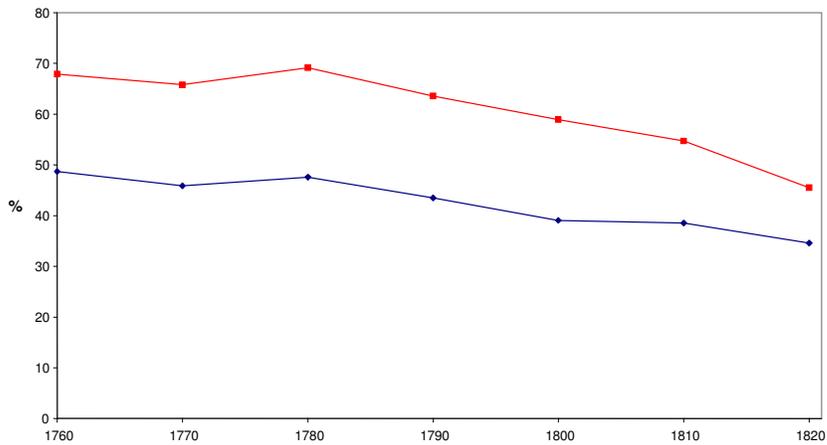


Figure 2a. Read Only By Birth Cohort, Males 1841

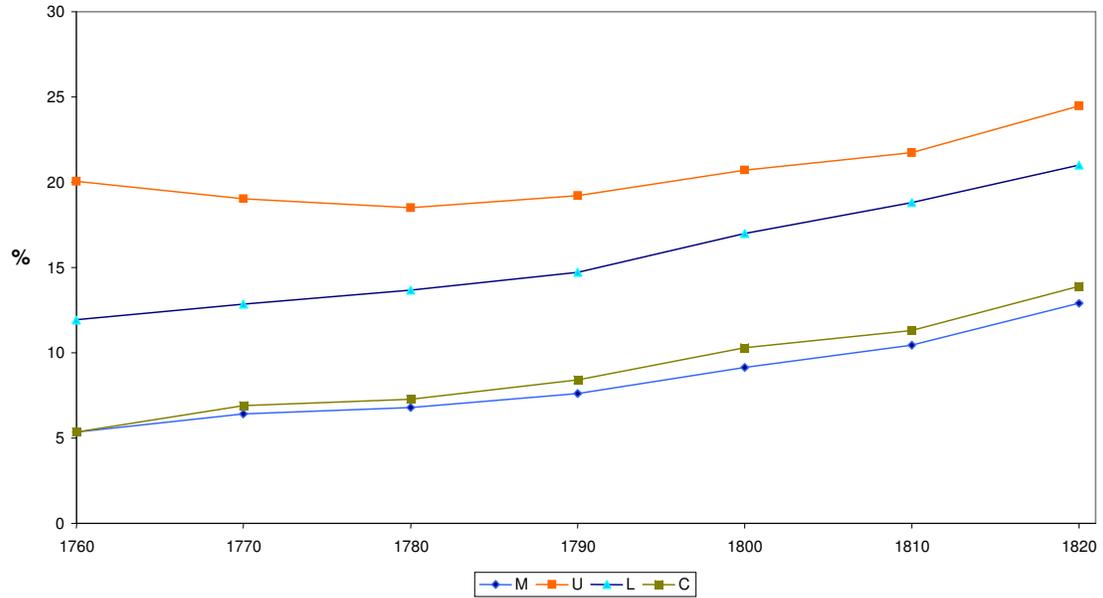


Figure 2b. Read Only by Birth Cohort, 1841: Females

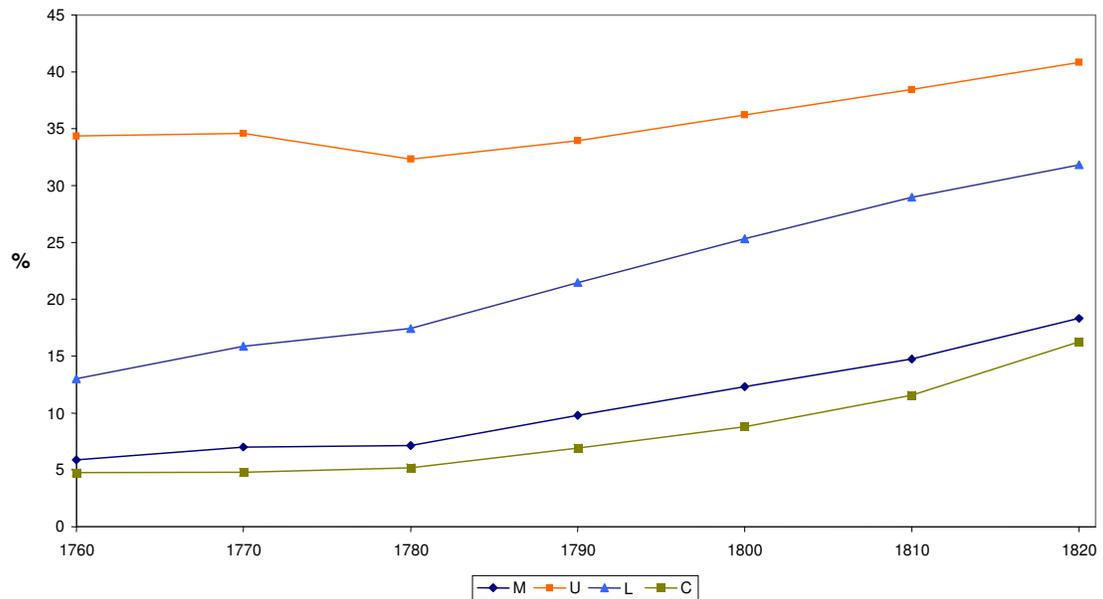


Figure 2c. illiterate by Birth Cohort, 1841: Males

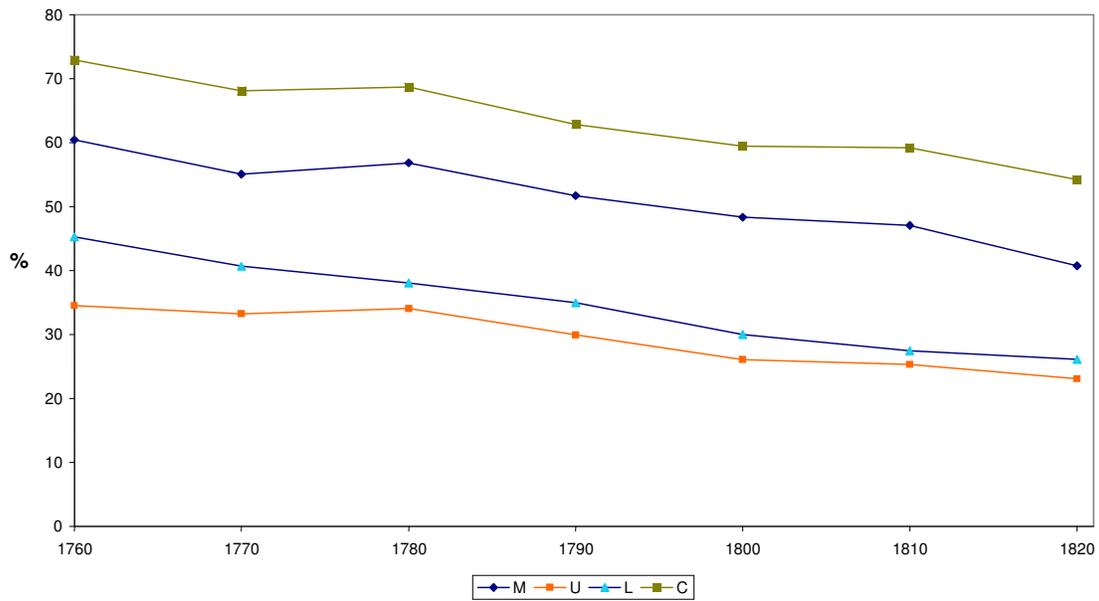
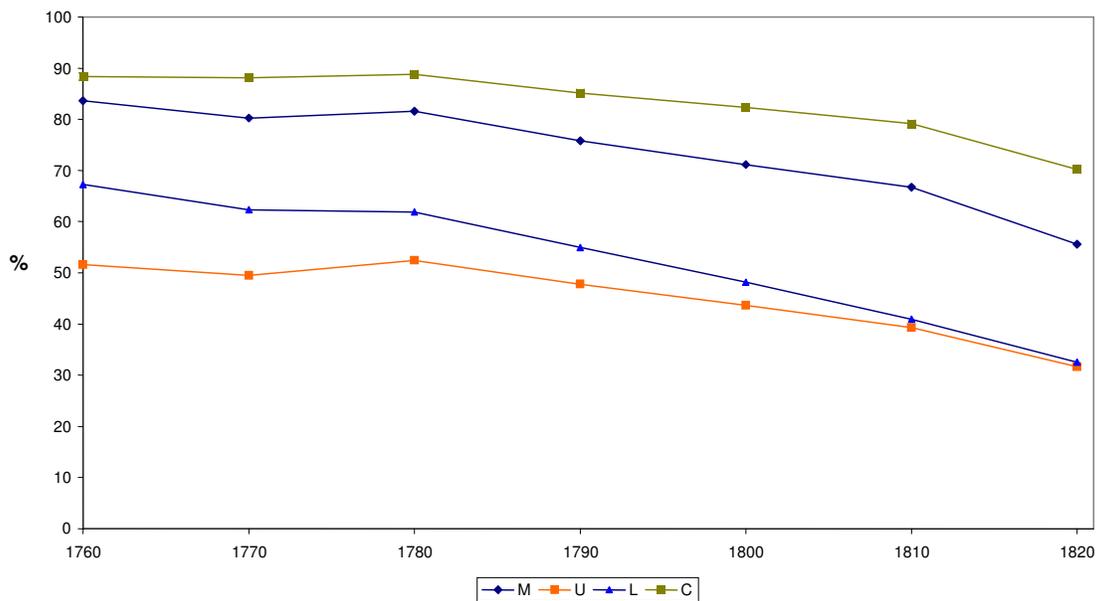


Figure 2d. Illiterates by Birth Cohort, 1841: Females



APPENDIX TABLE A1. Variables Used in the Analysis					
Variable	Description	Mean	Std Devn	Min	Max
<i>MRR41</i>	% males who could read and write in 1841	36.67	10.5	8.26	67.17
<i>FRR41</i>	% females who could read and write in 1841	18.41	8.75	2.83	51.96
<i>MRO41</i>	% males who could read only in 1841	17.27	6.13	3.67	35.52
<i>FR041</i>	% females who could read only in 1841	23.05	11.76	2.11	57.65
<i>MLIT41</i>	% literate males in 1841	53.93	15.13	12.58	88.40
<i>FLIT41</i>	% literate females in 1841	41.46	18.23	5.33	87.76
<i>MANUF</i>	% of families in manufacturing	33.63	16.37	6.64	76.54
<i>SERV</i>	% of families neither in agriculture nor manufacturing	20.96	8.81	2.70	59.25
<i>CATHOLIC</i>	% Catholic	82.47	22.87	7.20	99.92
<i>MPCAS24</i>	% of males aged 3-10 at school in 1824	45.99	17.18	7.71	102.26
<i>FPCAS24</i>	% of females aged 3-10 at school in 1824	27.69	12.20	2.45	69.39
<i>TPCAS24</i>	% of all aged 3-10 at school in 1824	36.84	13.95	5.08	84.96
<i>IRISH</i>	% Irish-speaking	30.90	36.63	0	100
<i>TEACHPAY</i>	Median teacher pay (£)	13.94	4.84	6	40
<i>ULSTER</i>	Sunday School dummy	0.168	3.74	0	1
<i>VAL41</i>	Poor Law Valuation (PLV) per head in 1841	1.64	1.09	.236	11.08
<i>VAL21</i>	PLV per head in 1821	2.07	2.74	.256	43.71
<i>GAP24</i>	Defined as $200(MPCAS24 - FPCAS24) / TPCAS24$	103.57	47.15	-20.18	266.85
<i>BADHOUSING</i>	% families living in 4 th -class (i.e. one-room housing) in 1841	35.32	15.31	0	85.1
<i>POPCH4141</i>	% population change between 1841 and 1851	-20.36	14.84	-83.87	37.16

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