

Chapter 32

The Modern History of Literacy

David Vincent

The Dimensions of Literacy

In 1915 the Registrar General of England and Wales reported a moment of victory: “The proportion of husbands who failed at the time of marriage to sign their names in the marriage register has gradually fallen from 32.6 per cent. in 1841-45 to 0.9 in 1913, and of wives from 48.9 to 1.0.”¹ Full nominal literacy had been achieved as Europe was plunged into war. In statistical terms, the capacity to read and write was almost everywhere a narrative of progress. Different countries began at varying levels in the early-modern era, improved at different rates, but always there was a sense of a common journey towards the possession of the basic skills of written communication.

This chapter is principally concerned with the countries of Europe and with North America, where mass literacy became an objective if not a reality during the long nineteenth century. Just before the First World War Britain was one of a handful of countries in northern and western Europe to report the conclusion of the drive against illiteracy. In the United States performance varied extensively by region, but the national average had reached the low 90s by 1910. Countries in southern and eastern Europe and in the recently-colonised parts of the world were further from their destination, but all seemed to be on the same track. Whereas other indices of civilisation, such as mortality or crime, showed alarming fluctuations under the manifold pressures of modernisation, there were no cases of an epochal collapse of the capacity to read and write, a generational reversal of the basic skills of written communication. Nor was there doubt that eventually the challenge would be met. Even the

First World War itself, which challenged so many notions of Victorian progress, had little discernible effect on either the possession or use of literacy.²

The print revolution of the sixteenth and seventeenth centuries generated in the more stable and prosperous European countries a growing expectation of literacy amongst most men and a minority of women in the middling and upper ranks of society. Reading was learned before writing and was more widely disseminated. In northern and north-western Europe, countries such as Denmark and Finland and city-states such as Geneva would expect most of their male populations to be able to decode basic texts by the end of the early modern period. A similar achievement was displayed by New England. The mother country, on the other hand, had unfinished business. About a third of men recorded signature literacy in the mid-seventeenth century, and nearly two thirds by the mid-eighteenth. Women progressed from around one in ten to two in five. By the time the industrial revolution commenced, there was a tradition of near-universal literacy as far down the scale as male artisans, and even amongst the labouring poor the wholly oral community, bereft of any contact with or use of the written word, had long disappeared. Elsewhere in Europe at the end of the eighteenth century, literacy could not be assumed of any social group, even, in the case of Serbia, of the monarch himself. Where they could be counted, the aggregate male rates were below a quarter and often in single figures. After a period of relative stasis, the countries in the most advanced sector began a drive towards nominal literacy for both men and women in the second third of the nineteenth century. Starting from a lower base, women and poor working men doubled their scores in little more than a generation. Only on the fringes of Europe, largely untouched by economic growth or urbanisation, were the rates slow to move. Progress was sluggish in Russia, Spain and the Balkans but even here the middle and upper classes became able to correspond with each other and their counterparts elsewhere in the

modernising world.³ The Universal Postal Union, founded in 1874 to promote the global use of literacy, embraced 135 states or colonies by the outbreak of the First World War.

The Invention of Literacy

It is possible to address the capacity to decode and create texts as far back as written history exists. Literacy, on the other hand, as both a word and a concept, is of recent coinage. In 1840, the recently-established General Register Office of England and Wales published a half-page table that transformed the way in which reading and writing was understood. Three columns of figures expressed the “proportion per cent. in the Metropolis, in each English county, and in North and South Wales, of persons married in the Year ending June 30, 1839, who have signed with marks.”⁴ The data was derived from a recalculation of information in the marriage registers which had become compulsory, standardised documents under an Act of 1836. The bride and groom, and two witnesses, had to attach either their names or a mark to the form. The staff of the Register Office realised that if these entries were added up, it might be possible to represent on one sheet of paper the communication capacity of an entire society, in all its local variation, in all the confusion of educational provision. It was a means of visualising on a national basis what was coming to be seen as a key cultural artefact. To the surprise of the officials, subsequent returns indicated that information derived from so contingent an act as the decision to marry was generating a stable time series, creating the possibility of establishing the dynamics of change. The discovery was associated with the contemporary invention of ‘statistics’ as a term referring not, as once it had, to any information relating to a state, but rather to the quantitative representation of social and economic behaviour. The inability to write appeared an absolute condition, and soon became described as “illiteracy” (or just “ignorance”). But as it was clear that the inscription of two words could imply many levels of writing competence, commentators were slower to reduce

the converse to a single word, and “literacy” itself did not become a widely used term for another four decades.⁵

Literacy and illiteracy, and corresponding terms in other European languages, were, in this sense, artefacts of the growth of the modern state. The data was derived from the new capacity to record and publish the characteristics of entire populations, whether through information on demographic events, or censuses which in some countries included questions on reading and writing, or military records where mass conscription was practiced. Prior to the second quarter of the nineteenth century, such quantitative information remained latent in intermittent public documents such as court depositions, or in the archives of particularly well-organised churches. These had to await re-analysis by historians to reveal long-distance national trajectories. The earliest such exercise was conducted in France where in 1877 Louis Maggiolo, a retired schoolmaster, was funded by the government to conduct the first large-scale historical study of literacy based on the registers kept by past generations of parish priests. Later in the twentieth century a series of archaeological investigations were undertaken into local deposits, most notably Egil Johansson’s reconstruction of Swedish literacy on the basis of records kept by parish ministers under the Church Law of 1686.⁶

The self-taught practitioners of the emerging discipline of statistics worried about their data. In the case of marriage registers or conscript records, they were describing entire populations on the basis of cohorts mostly in their late teens to late twenties. In periods of sustained growth in literacy levels, the figures both understated the capacity of the school-age population, and overstated the attainments of the population as a whole. Re-analysis of the returns suggests that in countries such as England and Wales where there was steady improvement in the second two thirds of the nineteenth century, the parental generation was as much as twenty points less literate than their offspring, and equally more literate than their own parents. Where there was a sudden growth, such as in late-nineteenth-century Belgium,

the gap could be much wider. The apparent pre-1914 triumph of literacy in north-west Europe was an achievement of the young. Inter-war society was still populated by elderly men and women displaying the shortcomings of earlier educational provision.

The statisticians were also aware of the range of capacity concealed by the single act of signing a name. Micro-studies of captive populations such as prisoners, or later, school-children, revealed large variations in comprehension of what was read and fluency in what was written. But they and the governments who sponsored their work were persuaded that there was a worthwhile trade between nuance and generalisation. However crude the measure of signature of literacy, it was at least consistent over time, and unlike the self-reporting in many census returns, it was second-order data established for another purpose and less subject to witness or observer bias. This form of counting made it possible for the first time not only to describe the problem of inadequate communication skills but also to measure the consequence of intervention. Literacy tables became one of the first key performance indicators of public investment. As the education budgets grew to become second only to poverty relief as categories of non-military state spending, so both the need for additional taxation and its outcome could be displayed. Further, the modernisation of the postal systems following the introduction of the flat-rate, pre-paid penny post in Britain in 1840, led to the creation of a new measure of use. With the final decline of private postal networks, the state possessed a monopoly of communication data, first of letters and shortly of telegrams. And everywhere the graphs were upwards. Literacy became a means by which in the modernising west the nineteenth-century could describe itself as the era of progress.

The legacy of the discovery of literacy still informs contemporary engagement with the subject. There remains a binary understanding of possession, driven by press commentary which forever seeks to construct national league tables of achievement that are no longer automatically headed by former global leaders such as the UK or the USA. The economy of

sampling techniques, not discovered until the end of the nineteenth century, permits more intensive surveys of capacity. However in published reports these tend to be expressed as national literacy figures based on aggregated individual scores rather than social practice. The Victorian statisticians occasionally pondered the event which created their data. ‘Each marriage constitutes a family’, wrote the Registrar General in 1857, “and to the family the fact that one of its members can read and write, is of more importance than the fact both can read and write.”⁷ Intermittent attempts were made to embody this insight in statistical analysis, but the arithmetic was complicated and the results difficult to interpret. Viewed in these terms the data suggested that those nineteenth-century societies such as the UK, Prussia, France, Sweden, the Netherlands, the north-eastern states of America, with long traditions of capacity, were much more at home with literacy than the official tables indicated. Even the allegedly illiterate labouring poor could readily find a witness capable of signing a name, a family member who could decode a fragment of print, a neighbour who could help with composing or reading a letter. They were familiar with the materials of written communication through the basic religious texts distributed by the churches and cheap imaginative literature hawked through the countryside. The luboks, the bibliotèque bleue, the chap books, provided the opportunity both to gain and use the skills of literacy for little more than a drink in a public house. They were read by those who had learned their letters to those who had time to listen, integrating the role of print in popular culture. But as it was counted, literacy was seen as a form of property, owned or absent, rather than one amongst a bundle of skills for living that could be begged, borrowed or appropriated as need and opportunity arose.

Literacy and Schooling

The individualised conception of reading and writing was reinforced by twin developments in the modernising economies and in the state infrastructures that facilitated their growth. Increasingly employment was seen as a contract in which personal labour was sold for a weekly cash wage, rather than a domestic undertaking in which family members pooled their work for collective gain that might be only partly monetised. And education was a process in which isolated pupils came together in a formal classroom, away from and in key regards opposed to the socialisation of the home. The aspiration of a wholly literate society was accompanied by the vision of an all-embracing elementary education system. Both were dreams of the Enlightenment. During the course of the eighteenth century, some of the more advanced European states introduced sweeping blueprints for national provision that they could neither afford nor administer. The Prussians led the way as early as 1717, followed by the Swedes in 1723, the Danes in 1739, the Bavarians in 1771, and even the Poles in 1783. It was inevitable that as the French Revolution laid the foundations for a new society, it should turn its attention to elementary schooling, introducing the *Loi Lakanal* in November 1794, and the *Loi Daunou* passed by the Convention on its last day in October 1795. These prescribed comprehensive national systems of secular education which, in the case of the final legislative act, would teach reading, writing, arithmetic and republican morality.

The emergence of the post-revolutionary states after 1815 was accompanied by the growth of a European and North American project of literacy training. As countries began to measure their attainments in relation to each other, so they shared ideas about how to tackle the challenges that they had identified. Innovations were copied, manifestos were written and translated, fact-finding tours were undertaken. The monitorial system invented by the English church societies was admired and copied. The Mulhauser method of teaching writing was developed by a Swiss schoolteacher in 1831 and became the basis for teaching a range of European languages. Horace Mann, Secretary of the Massachusetts Board of Education,

visited Europe in 1843, and his subsequent report, deeply influenced by the Prussian system, was in turn widely read on both sides of the Atlantic. The outcome was a pattern of legislation which sought to turn elementary instruction into a profession, and the state into the principal provider of literacy training. In England it was hoped that a combination of subsidy, inspection and measurement would translate the work of the churches into a *de facto* national structure. By 1870, with the marriage register scores indicating a stubborn residuum of illiterate working class children, the state finally committed itself to ensuring provision in every locality, making attendance compulsory ten years later. In 1833 through the *Loi Guizot*, the French State required communes to establish schools for boys, but waited until 1881 and 1882 before making instruction free and compulsory. Sweden, where the notion of a comprehensive provision had been pioneered by the churches, introduced universal compulsory instruction as early as 1842, but resisted full state funding until 1875. Elsewhere the process of reform reflected the gulf between the aspirations of educational reformers and the continuing inability of central government to raise taxes and to enforce its will over either the obstruction of the churches or the recalcitrance of parents and other vested interests. The model of the secular common school was promulgated in the USA in the 1830s but during the second half of the nineteenth century, states across the Union passed and re-passed comprehensive legislation without achieving a national system of provision. In southern and eastern Europe, every country had to have an educational law, in the same way that they possessed a railway and a post office. But the less developed the economy, the wider the gap between prescription and reality. Spain's *Ley Moreno* of 1857 embodied best contemporary practice but took another century to be properly implemented. Russia passed laws in most decades but was still faced with a fragmentary system when the Romanov dynasty collapsed in 1917. Faced with a weak state infrastructure, peasants seeking to become literate had to pick up their education wherever they could. At the end of the nineteenth century, just 16%

of the men in the Russian province of Voronezh could read and write. Of these, 39% had learned their skills during military service, 34% had been taught by other villagers, 21% had taught themselves, and just 6% had been instructed in a formal school.⁸ The uneven relationship between the discovery of literacy by nineteenth-century states and the creation of the machinery of official instruction calls into question two related assumptions about reading, writing and the process of modernisation. The first, which was embodied in the commentary on the new literary tables, was that progress towards universal capacity was a measure of external provision, initially by the churches and then by governments.

Introducing the first table of marks and signatures in England and Wales the Registrar General wrote that, ‘in considering in what manner the records deposited in this office may be rendered useful in illustrating the condition of the people, I have found the Registers of Marriages calculated to throw much light upon the state of education with respect to writing, among the adult population of England and Wales.’⁹ Subsequent improvements were entirely attributable to the growth in public investment in this field. The illiterate parents of illiterate children could be expected to neither entertain the ambition of instruction nor possess the means of supplying it. The second was that the skills of decoding texts and composing at least simple messages were fundamental requirements of an industrialising economy. They were essential for the creation of a flexible, self-disciplined workforce capable of adapting to the new regimes of factory production. And they were a means more generally of instilling a rational popular culture in the urbanising populations.

The first assumption is challenged by the basic issue of compulsion. Most professional educationists wanted to compel parents to send their children to school; with the exception of Prussia, few were able to do so until late in the nineteenth century and even then they were frequently forced to compromise with the demands of the local economy and expectations relating in particular to the role of daughters in the work of the household. Until

that point, every child that learned to read and write did so, in the last resort, because its parents sanctioned the activity. They either paid for instruction directly or through the foregone earnings of a son or daughter, or they arranged for some kind of informal instruction within the family or neighbourhood. In the general absence of any kind of national statistics on schooling before the nineteenth century it is impossible to give a precise account of who bought what from whom, but light can be shed simply by shining the torch of literacy data backwards. All the official narratives on the literacy problem in the nineteenth century focussed attention what still needed to be done, and then, after a time, on how effective the educational reforms had been. But the data demonstrated that the leading countries in northern and western Europe had by the 1840s already achieved signature literacy levels stretching far down into the culture of the labouring classes. For generations, literate artisans had raised literate sons, and whilst their daughters were less often educated, there remained a fair chance of a marriage at that level of society involving two partners who could at least read to each other. And as the state began to address the agenda it had set itself, progress remained dependent on the parents of the labouring poor sending their children to school in increasing numbers. If allowance is made for the elapse of time between the ending of formal schooling around the ages of ten or eleven, and the average age of marriage some fifteen years later, most of the children in these advanced countries were at school before the state dared to start punishing those few parents who were still resisting the process of instruction. Compulsion was made possible by consent, not the other way around.

Learning to Read and Write

In essence, learning to read and write was a function of market demand until the state finally began to achieve a monopoly of instruction as universal nominal literacy was achieved. Prior to the nineteenth century, the skills were everywhere acquired separately and sequentially.

Learning to read was held to be the easier task. It could be taught by women to children still too young to be of much value in the domestic economy. There was no necessary progression to writing, which was learned in early teens or beyond as part of preparation for work in counting houses and other commercial occupations. In the case of reading, the influence of the professional male teachers who emerged at the beginning of the eighteenth century was felt in their role as producers of spelling books. The first primer in reading English appeared in 1538, not long after the invention of printing. Subsequent texts extended and ordered what was a fixed model of instruction. Words were comprised of sounds, beginning with individual letters, progressing through common syllables and advancing to words of increasing complexity, particularly those found in the Bible. In 1707 Thomas Dyche, a schoolmaster in Stratford Bow in London, published the *Guide to the English Tongue*. Once they had become familiar with the alphabet, pupils were faced with a list of disconnected syllables: ba, be, bi, bu, ca, ce, co, cu. Learning was by repetition and combination. Although slates, blackboards and chalk were beginning to find their way into the classroom, the process of mastering the decoding of texts was vocal. Silent reading did not become an aspiration of the formal classroom until late in the nineteenth century. Children sounded the fragments and eventually complete words individually or in unison.

The textbooks were self-contained aids to instruction, supplying both pedagogy and learning materials. They were clear, well-organised, cheap, and sold in such numbers that a large second-hand market soon developed. In London in the 1730s and 1740s, a single publisher brought out more than a quarter of a million copies of one amongst a range of competing cheap reading books. Dyche's *Guide* went through several hundred editions, crossing the Atlantic in mid-century, and remaining in print as publicly-sponsored elementary education began to appear in the 1830s and 1840s. A rival manual, William Markham's *An Introduction to Spelling and Reading English* was first published in 1728 and remained on

sale in nominally new editions until 1885. Elsewhere in Europe a combination of technology and growing public engagement with reading supported a burgeoning publishing industry, regardless of confessional practice. The instructional literature became as commonplace as the religious texts it was designed to support. In the early 1720s a Swedish study discovered that the six hundred families of rural parish owned four hundred ABC books as well as between six hundred and fifty and seven hundred and fifty catechisms, over a thousand psalters, and over two hundred other religious books including Bibles. The industry was not confined to the more literate corners of Europe. Over a third of a million Slavic primers were published in Muscovy in the second half of the seventeenth century.

In 1810, George Crabbe in his poem *The Borough* looked into a classroom after the children had left for the day:

Various our day-schools: here behold we one
Empty and still: - the morning duties done,
Soil'd, tatter'd, worn, and thrown in various heaps,
Appear their books, and there confusion sleeps.¹⁰

The texts in whatever tattered shape were accessible to dame school or day school teachers taking in pupils for a few pence, to Sunday school teachers supplying instruction between working weeks from the late eighteenth century onwards, to parents supplementing paid schooling or supplying it themselves where none was available or could be afforded, and to children or adults seized with the ambition to instruct themselves. At this level the children of the prosperous parents learnt much the same lessons in much the same way as those of artisans and at least some labourers, and increasingly girls as much as boys. Those with money to spend on the task could during the eighteenth century purchase a range of additional study aids, such as alphabet dice, reading cards, puzzles and board games. Gathering pupils together in a classroom was the most efficient mode of instruction. Literacy rates generally

were propelled upwards by an increase in the volume of schooling. But accounts left by working men and women who learned their letters in this period indicate an absence of any kind of system or order of learning. The same was true of colonial America where John Rury writes that “there were multiple avenues to the attainment of literacy.”¹¹ Dame and day schools opened and closed according to the health and energies of the teachers and fluctuations in local demand. Attendance was interrupted by the rhythms of seasonal labour, by illness, by bad weather, and by the fortunes of the family economy. “I was put for two or three years to a day-school kept by an old woman”, recalled James Lackington, “but my career of learning was soon at an end, when my mother got so poor that she could not afford two-pence per week for my schooling.”¹² Additional instruction might be supplied by the chance presence of an educated older sibling, relative or neighbour with time on their hands. And a visit to a market could permit the acquisition of a primer to practice upon in private. In the eighteenth century, the primers were the connecting link between widely contrasting contexts for learning literacy. “All in all,” writes Jennifer Monaghan, “the importance of spelling books in teaching children to read in provincial America can hardly be overestimated.”¹³ Order was to be found in the pages of the manuals, not in the contexts in which they were used. An intersection of parental demand and unemployed labourers or poor widows led to the emergence of unofficial schooling all over Europe. In Russia, the *vol'nye shkoly* or private “wild” schools catered for rural children. French peasants organised classes on winter’s evenings, taught by the least illiterate among them. Irish “hedge schools” often lacked any kind of premises, collecting children together on the edge of a field or in a temporarily vacant barn. Unlicensed *Winkelschulen*, or corner schools, were started up in Prussia and Austria by ex-soldiers, wandering preachers and broken-down working men, to instruct the children of the urban poor. Their attraction was a concentration on literacy to the exclusion of extraneous knowledge, including religious instruction.¹⁴

The process of change from the later eighteenth century onwards at once entrenched and challenged this diverse model of instruction. On the one hand the explosion of popular print, driven by a combination of technical innovation, political crises, growing urban populations and relatively high basic reading capacities, further increased the opportunities for unofficial instruction and self-study. It became easier and more interesting to practice half-grasped skills, and there were increasing numbers of active readers to assist those still unsure of their capacities. Booksellers' catalogues embraced both the latest editions of Dyche or Markham, and broadsides which were selling in tens of thousands. For a penny a would-be reader could practice their skills on a dramatic narrative, illustrated with a picture for those yet to read, and accompanied by a simple verse to memorise the contents. In England, William Cobbett, a leading voice in the movement for Parliamentary Reform, connected insubordination and educational self-help with his *Cobbett's Grammar*, first published in 1818 and selling over a hundred thousand copies by 1834. On the other hand, the threats to moral and political order posed first by the French Revolutionary crisis and then the emergence of nascent industrial societies, provoked the state and the churches to mount an attack on all forms of unofficial schooling. The Danish founding laws of 1814, passed as Europe began to look forward to the post-Napoleonic era, captured the twin ambitions of the new system of instruction. The function of the elementary school, it proclaimed, was "to educate children to be good and upright persons in accordance with the teaching of the evangelical Christian church; and also to give them the knowledge and training necessary to become useful citizens in the State."¹⁵ Even where the schooling was technically non-denominational, as in Horace Mann's Massachusetts' common schools, the enterprise was strongly supported by Protestant ministers who supplied funding, leadership and pedagogic resources. For the most part the emerging public sector was only too grateful to ally itself with the resources and energy of the churches which saw in the schoolroom the last great opportunity for resisting the tide of

secularisation. The state was nowhere more prominent than in Prussia, but the education remained organised on denomination lines. As late as 1862, all but one per cent of Protestants and three per cent of Catholics attended schools of their own confession. Governments at the national or local level still lacked the infrastructural power to achieve their educational objectives alone. Instead they joined with the revitalised religious orders to professionalise the occupation of elementary teaching, setting up training colleges or “normal schools” to turn bright working class pupils into public employees and creating systems of inspection to ensure the appropriate application of their newly-defined skills.

The traditional primer both facilitated and obstructed the campaign to impose system upon the process of becoming literate. The journey from disconnected fragments to polysyllabic words provided a structure for the progress through the elementary school. The convention of learning by sounding appeared suitable for large groups of pupils under the supervision of a single teacher. In the widely-admired Prussian system, class sizes had reached an average of eighty by 1848. Growing demand and constrained public funding continued to drive up class sizes. They stood at ninety-one in Silesia in 1861 and reached a hundred and three in Westphalia. At the beginning of the final quarter of the century the figures were still in the seventies for Austria and the Netherlands, and as high as ninety-two for the United Kingdom. The one innovation was the integration of writing with reading. Just as texts were decoded by first breaking them down into their constituent elements, so under the Mulhauser system, letters were separated into lines, curves and hooks and then recombined on carefully-drawn horizontal grids. The difficulty was that the growing availability of printed materials of all kinds, made it increasingly easy for parents who wished to avoid the cost and discipline of school days and terms to make their own arrangements for instruction. In conventional accounts of the history of education, the nineteenth-century is the era of foundation-building, as the architecture and methods of the modern classroom were

established across Europe and North America. In practice it took the form of prolonged conflict between the inspected and unofficial classroom. In mid-nineteenth-century London, nearly half a century after the church societies pioneered the monitorial system designed to deliver mass instruction with mechanical efficiency, there were still more pupils learning their letters in unofficial dame and day schools than in the inspected classrooms. Some kind of victory was achieved in the closing years of the century by a government apparatus armed with a range of regulatory instruments.¹⁶

The sense of progress in the nineteenth century is also qualified by the limited ambition held for literacy. The early primers were designed to enable pupils to spell their way through the Bible and other religious literature. There was little expectation that children would be able to explore the meaning of what they read, or to conduct their own journeys into the literature of the period. Writing, where it was taught, was essentially a process of copying, and only became a creative skill when combined with sufficient command of arithmetic to permit engagement in commercial activity. It is possible to trace the emergence of an epistolary literacy amongst not only the middling ranks of society but also, at times of acute need, amongst artisans and even paupers petitioning for relief. However such skills were learned, if at all, not in the classroom but from manuals published for adults. Early attempts to stress comprehension in the official curriculum and creativity in the use of writing were swamped by the overwhelming emphasis on producing large numbers of basic readers and scribes. "Composition", which in effect meant drafting a simple letter, did not enter the English Code until 1871, and only applied to the one child in fifty who reached the top Standard 6. Able pupils were now permitted to encounter anthologies of poetry and prose in the classroom, which in some cases fired a life-long passion for literature. In the same year, the "General Regulation" for the elementary schools of unified Germany created space both for composition and for the study of national poets. In terms of constructing a bridge

between education and the active use of literacy, the most significant changes lay outside the classroom. A penny or its equivalent would purchase Sunday newspapers from mid-century and daily papers a generation later, and for the price of a loaf of bread or a pint of beer, complete reprints of classic novels could now be bought and read in private. The mass production of paper, ink and steel nibs made it increasingly easy to practice such rudimentary writing skills as had been acquired. During the last third of the century changes in regulations permitted the introduction of the picture postcard, with its minimal requirements for inscribing and decoding a short text, thus finally engaging the bulk of the population in postal communication, if only a few times a year.

Literacy and the Economy

The qualifications that need to be made about the role of formal schooling in the creation of mass literacy also call into question the assumed relationship between elementary education and economic growth. At face there appears a direct causal connection. Those countries with nominal male signature rates of over 40% in the later eighteenth century were amongst the earliest to industrialise, and by the end of the following century, the most successful economies generally had the most literate workforces. The order and scale of the inspected classroom appeared to foreshadow the developing system of mass production and to prepare its pupils for the new regime of disciplined factory labour. Criticism of this model began with the first modern analysis of literacy data. The evidence suggested that the capacity to read and write may have been a victim rather than a cause of economic change. Michael Sanderson and others pointed out that in the early “take-off” period of the industrial revolution, nominal literacy scores across the expanding European economies were at best flat, and in local instances went into decline for several decades. A succession of studies has suggested that increases stalled or were forced backwards until the second quarter of the

nineteenth century when in the modernising economies they began an uninterrupted rise to universal literacy.¹⁷

The emergence of new working practices and the rapid growth of urban communities provided ample cause for the dislocation of basic education. Amongst the labouring classes, literacy was always a luxury good. It was purchased when the necessities of life had been paid for, or provided when literate family members could find some spare time in the daily round of productive and household labour to take a child through the alphabet. As such it was eminently deferrable, and accounts by those who did learn their letters in the early nineteenth century are full of breaks in whatever instruction was provided. It was not so much that they left school at a certain point, but rather that one amongst a succession of interruptions finally proved to be permanent. An immediate effect of new working practices was to place further pressure on the investment decisions that needed to be made. There was a shift in the balance between direct and opportunity costs in purchasing schooling. During the early phase of the industrial revolution, changes in the value of a child's labour increased the penalty of taking it out of the economy and placing it in a classroom. With a cash wage available at an age where previously young boys or girls could make only intermittent and non-quantifiable contributions to the family economy, literacy became an increasingly expensive acquisition. Furthermore, the communities that supported the complex structures of informal and formal education were themselves being disrupted by rapid growth. Analysis of the occupational and residential composition of the literacy tables in England and Prussia suggests that a major cause of short-term declines in literacy scores was the tendency of the rapidly expanding urban communities to suck in workers and their families from the less literate rural hinterland. In New York, for instance, it seems likely that literacy rates were driven down in the early years of the nineteenth century by a combination of an influx of ill-educated migrants and a labour force expanding faster than the availability of employment.¹⁸

However if the “take-off” period threatened literacy rates, it is less easy to take a pessimistic view of the longer process of industrialisation. The falls in literacy rates where they occurred rarely lasted more than a generation, and usually involved a halted improvement or a decline of a few percentage points. A recent study of proto-industrialisation in Leicester, for instance, finds male literacy rising until 1810, falling from 68.6 to 61.8 in the next two decades, before resuming its upward growth.¹⁹ The major difference after about 1830 was that the educational attainments of the city’s population were no longer subject to fluctuations in its economy. It is evident that the rapid growth of framework knitting had for a time disrupted the mechanisms for learning to read and write, but given the elapse of time between schooling and the measurement of literacy at marriage, the effect was over by about 1815. If the complex structure of formal and information education is situated in the general body of social conditions and amenities in the towns and cities of the period, such as infant mortality, recreational provision, crime and church attendance, literacy even in the periods of decline, seems relatively robust. Thereafter, a combination of changing modes of factory production, increasing child protection legislation, and the provision, later in the nineteenth century, of nominally free, publicly-provided elementary schooling, made it less expensive to keep a child out of the labour force before the ages of ten or eleven. As has been noted, literacy rates were rising rapidly well before the state attempted to force parents to send their offspring to school.

In some parts of the economy, new incentives for learning to read and write emerged. The uniformed working class, principally postmen, railway workers and policemen, grew rapidly in the second half of the nineteenth century, providing secure, even pensionable incomes in return for demonstrable educational attainment. For girls there were openings as typists and nurses late in the period, and more generally a basic literacy was of value in securing a position in the expanding servant class. Yet whilst there was some kind of

consonance between the upward graphs of economic performance and literacy, the scale and direction of cause and effect remains difficult to specify. This is partly an issue of counting. The invention of literacy as a quantifiable condition in the nineteenth century, together with related forms of measuring the provision of official schooling and communication practices such as the use of the post and the telegraph, has tempted economists to apply human capital theory to the industrial revolution. The essence of this approach to explaining growth is that it is possible to place in the same equation the performance of the economy and the investments workers made in their skills. But it is by no means clear that in this period, the educational data will stand up to such analysis. David Mitch, who has undertaken the most theoretically and statistically informed study of the topic, observes that, “since systematic census evidence on adult attainment did not begin until the mid-twentieth century, estimates of labor force education attainment prior to 1900 should be treated with some scepticism.”²⁰ His own work uses literacy data as a proxy for schooling, but as we have seen, there was no consistent route to the acquisition of the capacity to sign a name, and no constant value in the communication skills that this achievement represented. Michael Sanderson’s recent review of professional boundaries notes that, “there are difficulties in these studies sometimes more evident to the historian than the economist.”²¹ Those who have immersed themselves in all the complexities of formal and informal learning, and all the meanings that can be attached to the inscription of a signature, will erect reliability warnings around every aspect of the data that is available. They will resist accepting the assumption of the early statistical movement that behaviour that could not be counted was intrinsically worthless. The very absence of system from which figures could be derived was seen as a measure of inadequacy. It was by this means that the immense provision of dame and private day schools was written out of the record.

Historians will also challenge the view inherent in the binary divide of the official tables that literacy everywhere generated economic opportunity and conversely that illiteracy was a condition of ignorance and incapacity. Since the publication of *The Literacy Myth* in 1979, Harvey Graff has argued strongly against the view of educationalists and commentators in the nineteenth-century and subsequently that literacy dissolved structural inequalities of class, ethnicity and gender, and that the inability to write your own name necessarily implied exclusion from gainful economic activity.²² As far back as the invention of printing, the basic hierarchies of status and identity have been the leading indicators of literacy levels, and the growth of formal schooling largely reproduced these inequalities. Studies of nineteenth-century social mobility suggest that most children who learned their letters occupied at marriage much the same occupational level as their less literate parents. Whilst the proportion using their schooling to rise to white-collar positions tripled in the second half of the century, it still only accounted for 3.8% of those born into the working class. The key factor was not the growth of elementary schooling but the failure to establish a bridge for all but a fortunate few to secondary education. The one transformation in the nineteenth century was that in the inspected classroom, girls for the first time enjoyed much the same educational experience and came to display almost the same outcomes as boys, but the implications of their achievements for their future participation in the economy remained sharply different. Further, it is misleading to equate schooling with skill in the industrialising workplace. As Jane Humphries has argued, the child-rearing agenda of working class parents was dominated not by the acquisition of literacy, which might be taken for granted at least in artisan families, but rather by whether it would be possible to arrange an apprenticeship with a suitable master at the age of fourteen. For their part factory employers generally delegated the selection of recruits to their existing employees because their interest

was not in examinable attributes but rather in habits of discipline and good conduct best understood and guaranteed by parents and older relatives.

Conclusion

The grand narrative of literacy and economic growth thus dissolves into a range of indirect connections and smaller interactions. If literacy can be included in the causal framework of the early take-off of the industrial revolution, it related to the long-standing ability of men in the middling orders of societies in north-western Europe to engage in the paperwork required for commercial endeavour. The early factories made few demands on the educational attainments of their workforce. Familiarity with print may have accelerated the acceptance of paper currency hence improving trade and investment. Once economies had begun to take off, there was a link between the capacity of governments to raise taxes from at least a rising middle class and the increased funding of public elementary schooling. But there was no direct correlation between regional levels of literacy and the incidence of industrialisation. Bavaria, for instance, was well-schooled but still largely an agricultural economy in the later nineteenth century. Lars Sandberg has suggested in his study of Sweden that whilst literacy did not guarantee growth, when for exogenous reasons the economy began to expand, it was aided by existing high levels of literacy, if only by the absence of a need suddenly to divert investment into the sector. The volume of manual occupations directly requiring educational qualifications grew faster than the overall workforce in the second half of the nineteenth century, but in the most detailed study of occupational requirements suggests that in England the “literacy required” sector embraced in 1891 only one in nine working men and half as many women. The most striking feature of the final drive to nominal literacy up to the First World War is that the men gaining literacy for the first time were largely those who described themselves as unskilled labourers at marriage. These entrants into the world of written

communication were destined for jobs in which their new skills were virtually irrelevant.²³

Taking the statistics at face value, there is just one consistent association across Europe and North America in the later nineteenth century. The hierarchy of postal flows, the best measure of functional literacy in the period, is directly associated not with signature levels or with school attendance, but with passenger miles travelled on the railway systems that all modernising countries possessed. Literacy's place was in the communications revolution of the era. It belonged to the movement of people, goods and ideas rather than the making of objects and money

¹ *Seventy-sixth Annual Report of the Registrar-General of Births, Deaths, and Marriages, in England*, (London: 1915), xiii.

² David Vincent, *The Rise of Mass Literacy. Reading and Writing in Modern Europe* (Cambridge: Polity, 2000), 8-18; Edward E. Gordon and Elaine H. Gordon, *Literacy in America. Historic Journey and Contemporary Solutions* (Westport, Connecticut: Praeger, 2003), 265; David Vincent, "The Progress of Literacy," *Victorian Studies*, 45, 3 (2003): 408-409.

³ Kenneth A. Lockridge, *Literacy in Colonial New England* (New York: W. W. Norton, 1974), 13-19; David Cressy, "Levels of Illiteracy in England 1530-1730", *Historical Journal*, 20, 1 (1977): 1-23; Helen Jewell, *Education in Early Modern England* (Houndmills: Macmillan, 1998), 146-154; István G. Tóth, *Literacy and Written Culture in Early Modern Central Europe* (Budapest: Central European University Press, 2000), 208; R. A. Houston, *Literacy in Early Modern Europe: Culture and Education 1500-1800* (London: Longman, 1988), 130-154.

⁴ *Second Annual Report of the Registrar-General of Births, Deaths, and Marriages, in England* (London: 1840), 5.

⁵ David Vincent, "The Invention of Counting: the statistical measurement of literacy in Nineteenth-Century England," *Comparative Education*, 50, 3 (2014): 271; Ian Hacking, *The Taming of Chance* (Cambridge: Cambridge University Press, 1990), 2.

⁶ François Furet and Jacques Ozouf, *Reading and Writing: Literacy in France from Calvin to Jules Ferry* (Cambridge: Cambridge University Press, 1982), 4-9; Egil Johansson, "The History of Literacy in Sweden," in *Literacy and Social Development in the West*, ed. Harvey J. Graff (Cambridge: Cambridge University Press, 1981), 165-174.

⁷ *Eighteenth Annual Report of the Registrar-General of Births, Deaths, and Marriages, in England*, (London: 1857), v.

⁸ Ben Eklof, *Russian Peasant Schools. Officialdom, Village Culture and Popular Pedagogy, 1861-1914* (Berkeley: University of California Press, 1986), 85.

⁹ *Second Annual Report of the Registrar-General of Births, Deaths, and Marriages, in England*, (London: 1840), 4.

¹⁰ George Crabbe, *The Borough* (1810, Paris: A and W Galignani, 1829), 119.

¹¹ David Vincent, *Literacy and Popular Culture. England 1750-1914* (Cambridge: Cambridge University Press, 1989), 66-72; John L. Rury, *Education and Social Change. Contours in the History of American Schooling* (4th ed., New York: Routledge, 2013), 38.

¹² James Lackington, *Memoirs of the First Forty-Five Years of the Life of James Lackington ... Written by Himself. In a Series of Letters to a Friend* (London: for the Author, 1791), 14-15.

¹³ Jennifer E. Monaghan, *Learning to Read and Write in Colonial America* (Amherst: University of Massachusetts Press, 2005), 231.

¹⁴ Eklof, *Russian Peasant Schools*, 84; J. R. R. Adams, *The printed word and the common man : popular culture in Ulster, 1700-1900* (Belfast: Institute of Irish Studies, Queen's University of Belfast, 1987), 12-15; James Van Horn Melton, *Absolutism and the eighteenth-century origins of compulsory schooling in Prussia and Austria* (Cambridge: Cambridge University Press, 1988), 11; Karl A. Schleunes, *Schooling and Society. The Politics of Education in Prussia and Bavaria 1750-1900* (Oxford: Berg 1989), 12.

¹⁵ Willis Dixon, *Education in Denmark* (London: G. G. Harrap, 1958), 48.

¹⁶ Marjorie Lamberti, *State, Society, and the Elementary School in Imperial Germany* (New York: Oxford University 1989), 19; Anthony J. La Vopa, *Prussian Schoolteachers: Profession and Office, 1763-1848* (Chapel Hill: North Carolina University Press, 1980), 92; Andy Green,

Education and State Formation. The Rise of Education Systems in England, France and the USA (London: Macmillan, 1990), 23; Mary Jo Maynes, *Schooling in Western Europe: a social history* (Albany, N.Y.: State University of New York Press, 1985), 76; Vincent, *Literacy and Popular Culture*, 69.

¹⁷ Michael Sanderson, "Educational and Economic History: The Good Neighbours," *History of Education*, 36, 4/5 (2007): 443; Jane Humphries, *Childhood and Child Labour in the British Industrial Revolution* (Cambridge: Cambridge University Press, 2010), 306.

¹⁸ Rainer Block, *Der Alphabetisierungsverlauf im Preussen des 19. Jahrhunderts: quantitative Explorationen aus bildungshistorischer Perspektive* (Frankfurt am Main: Peter Lang, 1995), 197; Vincent, *Literacy and Popular Culture*, 97-100; Gordon and Gordon, *Literacy in America*, 102.

¹⁹ Elaine Browne, "Gender, occupation, illiteracy and the urban economic environment: Leicester 1760-1890," *Urban History*, 31, 2 (2004): 191-209.

²⁰ David Mitch, "Education and Economic Growth in Historical Perspective," *EH.Net Encyclopedia*, ed. Robert Whaples (July 26, 2005): 6. <http://eh.net/encyclopedia/education-and-economic-growth-in-historical-perspective/>.

²¹ Sanderson, "Educational and Economic History": 440.

²² Harvey J. Graff, *The Literacy Myth literacy and social structure in the nineteenth-century city* (New York: Academic Press, 1979). For the most recent restatement of his view, see, "The Literacy Myth at Thirty," in *Literacy Myths, Legacies, & Lessons*, ed. Harvey J. Graff (New Brunswick: Transaction Publications, 2011), 50-71.

²³ David Mitch, "Education and skill of the British labour force," in *The Cambridge Economic History of Britain*, ed. Roderick Floud and Paul Johnson, 3 vols. (Cambridge: Cambridge University Press, 2004), 1, 354; John E. Murray, "Literacy and Industrialization in Modern Germany," in *The Industrial Revolution in Comparative Perspective*, ed. Christine Rider and

Michéal Thompson (Malabar, Florida: Krieger, 2000), p. 24; Lars G. Sandberg, "The Case of the Impoverished Sophisticate: Human Capital and Swedish Economic Growth before World War 1," *Journal of Economic History*, 39, 1 (1979): 227-31; David Mitch, *The Rise of Popular Literacy in Early Victorian England: The Influence of Private Choice and Public Policy* (Philadelphia: University of Pennsylvania Press, 1992), 14-18, 200-1.

Bibliography

Eklof, Ben, *Russian Peasant Schools. Officialdom, Village Culture and Popular Pedagogy, 1861-1914* (Berkeley: University of California Press, 1986).

Furet, François and Jacques Ozouf, *Reading and Writing: Literacy in France from Calvin to Jules Ferry* (Cambridge: Cambridge University Press, 1982).

Gordon, Edward E. and Elaine H. Gordon, *Literacy in America. Historic Journey and Contemporary Solutions* (Westport, Connecticut: Praeger, 2003).

Graff, Harvey J., *The Literacy Myth literacy and social structure in the nineteenth-century city* (New York: Academic Press, 1979).

Houston, R. A., *Literacy in Early Modern Europe: Culture and Education 1500-1800* (London: Longman, 1988).

Johansson, Egil, "The History of Literacy in Sweden," in *Literacy and Social Development in the West*, ed. Harvey J. Graff (Cambridge: Cambridge University Press, 1981).

Kaestle, Carl F., *Literacy in the United States: Readers and Reading since 1880* (New Haven: Yale University Press, 1993).

Lamberti, Marjorie, *State, Society, and the Elementary School in Imperial Germany* (New York: Oxford University 1989).

Lockridge, Kenneth A., *Literacy in Colonial New England* (New York: W. W. Norton, 1974).

Maynes, Mary Jo, *Schooling in Western Europe: a social history* (Albany, N.Y.: State University of New York Press, 1985).

Mitch, David, *The Rise of Popular Literacy in Early Victorian England: The Influence of Private Choice and Public Policy* (Philadelphia: University of Pennsylvania Press, 1992).

Monaghan, Jennifer E., *Learning to Read and Write in Colonial America* (Amherst: University of Massachusetts Press, 2005).

Schleunes, Karl A., *Schooling and Society. The Politics of Education in Prussia and Bavaria 1750-1900* (Oxford: Berg 1989).

Vincent, David, *Literacy and Popular Culture. England 1750-1914* (Cambridge: Cambridge University Press, 1989).

Vincent, David, *The Rise of Mass Literacy. Reading and Writing in Modern Europe* (Cambridge: Polity, 2000).