The Schoolmasters of Birmingham and the West Midlands, 1750-1790:

Private Education and Cultural Change in the English Provinces During the Early Industrial Revolution

by John MONEY*

In a recent essay J. H. Plumb writes of a "cultural revolution," which, three centuries after its first germination, "burst into vigorous manhood" in eighteenth century England. Here, the ancient dualism in human history between the formal culture of the governing aristocracies and the popular traditions of the peasantry was for the first time decisively replaced by "a mass culture, belonging essentially to the middle class,... which, if it did not quite obliterate the other two, drove them into smaller and smaller enclaves."[1] If the metaphors are mixed, so was the transformation which they describe. It is not hard to agree with Professor Plumb when he lists the three conditions of his revolution as technological advance, considerable dissemination of wealth and freedom; it is, in fact, tempting to continue the same train of thought a step further by spelling out a fourth condition which is surely implicit in the third: the achievement of political stability in ways which remained compatible with freedom.[2] It was this, we might conclude, which guaranteed the success of the revolution by maintaining an environment in which it could proceed undisturbed by the constrictions of authority, or by the threat of political turmoil. But was the process of change as straightforward or as progressive as this view of it suggests? In considering the cultural experience of eighteenth century England from a somewhat different, but related point of view, that of the tension between rationalism — "the movement of the search for causation to the observable world and the spread of such an attitude," and its opposite — the recurrence of an attitude which sought to justify rather than to explain, Professor Plumb has himself suggested that once achieved, stability favoured the latter, rather than the former.[3] If this was so, and if it is to be squared with the occurrence of a cultural revolution, we must accept, either as a limit to that process, or as an integral part of it, the existence of a

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[1] J.H. PLUMB, "The Public, Literature and the Arts in the 18th Century," in Paul FRITZ and David WILLIAMS, eds., *The Triumph of Culture: 18th Century Perspectives* (Publications of the McMaster Association for 18th Century Studies, Vol. II, Toronto, 1972), p. 27.

[2] The temptation to do Professor Plumb's thinking for him is of course reinforced by the fact that the phenomenon of political stability, and the ways in which it was achieved in England, have been one of his own most significant concerns. J. H. PLUMB, *The Growth of Political Stability in England, 1675-1725* (London, 1967).

[3] "Reason and Unreason in the Eighteenth Century: The English Experience," *Seminar Papers of the William Andrews Clark Memorial Library* (Los Angeles, 1971), pp. 3-26, and reprinted in J. H. PLUMB, *In the Light of History* (London, 1972), pp. 3-24.

widening rift between the persistence of tradition and myth as these were successively adopted by those who had achieved an established position in the social structure, and the equal persistence of an attitude of critical empiricism which, though it soon disappeared from the world of government and policy, where it had shown itself at the start of the century, continued to broaden down among those who remained outside the social and political establishment of later Hanoverian England.[4]

Far from being a simple matter of the replacement of two obsolescent cultures by a single progressive successor, the process of cultural change in eighteenth century England thus appears as one of great complexity. It affected different parts of English society at different times and in different ways; it meant different things to each of them, and it therefore produced new contradictions at least as fast as it eliminated old ones. Any attempt to understand it must therefore pay particular attention to the expanding range of mental communications by which ideas and attitudes were transferred from one part of society to another. The development of these and the role which they played in the process of cultural change were especially important in what were beginning to be explicitly known as "the provinces;"[5] for it was here, in the newer centres of intellectual as well as of economic life beyond London, that the transformation of English culture during the eighteenth century exerted its profoundest influence on the subsequent course of the country's history.

A particularly good example of the way in which mental communications developed in the provinces is provided by what happened in Birmingham and the West Midlands. As the geographical base of the celebrated Lunar Society, the most distinguished and influential of the provincial élites which played such an important part in the marriage of science and industry, the region's place in the high intellectual history of the industrial revolution is already secure.[6] As a brief survey of the principal features of the West Midlands' development will suggest, however, this was only one aspect of the region's exceptionally diverse cultural experience during the later eighteenth century.

Because it is so obvious, the determining feature of that experience may seem to have been the growth of Birmingham itself;[7] but it would be a serious oversimplification to continue thinking for very long in such indiscriminately metropolitan terms. Birmingham did not expand into a vacuum. Though it was certainly beginning to dominate its surroundings, both by its growth and by the steps taken by its leaders to meet the problems of local

[4] PLUMB, *op. cit.*, esp. pp. 6, 20. The same argument is foreshadowed in the final reflections of *The Growth of Political Stability*, esp. p. 187.

[5] See Donald READ's discussion of the term's etymology in *The English Provinces, c. 1760-1960: A Study in Influence* (London, 1964).

[6] See R. E. SCHOFIELD, *The Lunar Society of Birmingham, a Social History of Provincial Science and Industry in Eighteenth Century England* (Oxford, 1963).

[7] I have dealt at length with the developments summarized below in the course of a full length study of the Birmingham area's social, cultural and political development during the second half of the eighteenth century which I hope to publish in the near future.

government which growth produced, the town was not yet the acknowledged centre of a recognized area of its own. On the contrary, its situation at the meeting point of the three counties of Warwick, Worcester and Stafford, and on the common boundary of two ecclesiastical sees, meant that in many important aspects of its life, it still looked to the older example of the county towns, the diocesan capitals at Lichfield and Worcester, and the ancient city of Coventry. A close mutual relationship therefore continued to exist between the aspirations of Birmingham and the influence of the older communities and interests on which these were being superimposed. Despite the increasing pace of change, continuity also marked the economic development of the West Midlands. By 1750, the towns and villages of the region had been already specializing for nearly two hundred years in the manufacture of hardware goods of all kinds, and mineral and industrial profits had long been an important element in the wealth of its landed families, more than one of which, like the Foleys of Herefordshire, or the Jennens of Erdington Hall, near Birmingham, could be held up as examples of the successful passage from forge to freehold and beyond.[8]

What was true of the West Midlands in general also was true of Birmingham in particular. In the traditional explanation, the town's success is attributed principally to the untrammeled scope which it was able to give to the entrepreneurial energies of Protestant Dissent, thanks to its freedom from corporate restriction. By itself, however, this negative condition was equally true of many other towns whose dissenting populations were proportionately at least as large. Though Birmingham's historical debt to its own dissenters is considerable, it owed as much to the ready availability of skilled labour in the area, and to the accessibility of capital provided by its close relationship with local landed families, not to mention the positive incentives to emulation which the latter also gave, as it did to the absence of restraint on dissent alone. The significance of Birmingham's vaunted freedom is in fact wider and simpler. It helped to sustain the process of mutual accommodation between the town and its surrounding communities, and it facilitated a pattern of development which was marked by readjustment and adaptation rather than by any drastic break with the past.

This was particularly visible in the course of Birmingham's industrial development, and in the complexity of its social structure. The greater part of the town's wares, described in 1754 as "all sorts of tools, smaller utensils, toys, buckles, buttons, in iron, steel brass etc.,"[9] were made by independent masters employing at most a small number of apprentices and skilled journeymen. During the 1760s, improvements in transport, both of

[8] For the economic development of the region, see W.H.B. COURT, *The Rise of the Midlands Industries* (London, 1938); T. J. RAYBOULD, *The Economic Emergence of the Black Country: a Study of the Dudley Estate* (Newton Abbot, 1973). On Birmingham more specifically, see M. J. WISE, "Birmingham and its Trade Relations in the early Eighteenth Century," *University of Birmingham H storical Journal*, II no. 1 (1949): 54-79; *Victoria History of the Counties of England: Warwickshire, Vol III* (London: 1964), henceforth cited as *VCH Warwicks*, VII; and C. GILL, *History of Birmingham, Vol I: Manor and Borough to 1865* (Oxford, 1952).

[9] John BARROW, *A New and Universal Dictionary*, cited in *VCH Warwicks*, VII: 87-8.

raw materials and of finished goods, the growth of domestic and foreign markets, and the formation of a number of larger firms in which production and distribution were brought under the same direction, inaugurated the first major period in the town's modern industrial history. Nevertheless, the basic unit of manufacture remained small. Boulton and Fothergill may have employed a thousand hands at Soho, and it may have been John Taylor's button works that furnished the Earl of Shelburne with a classic example of the division of labour;[10] but though production as a whole may now have been co-ordinated on a large scale, the product itself was still a non-standard one, whose separate components, made to patterns which were constantly changing, and often to unique specifications, had to pass through numerous different processes before they were assembled into the finished article. On the manufacturing side, therefore, the operations of the major firms remained highly individual. Work was subcontracted frequently to autonomous specialists, and alongside the famous enterprises which were pointed out to Birmingham's rising tide of wealthy tourists, there existed an increasing number of medium-sized businesses and one-room workshops, whose tenants, operating with no capital commitment beyond the minimum needed for personal equipment, fuel and materials, relied on skill and versatility to keep up with the specialized, but changeable demands on which their livelihood depended. From the bare information provided by contemporary trades directories, which give no systematic indication of the size, permanence or prestige of the firms which they list, it is impossible to tell exactly how many separate branches of trade existed in Birmingham, how many hands were engaged in each at any one time, or what was the standing of each in the community. Nevertheless, the directories do testify to the town's exceptional occupational diversity. Samuel Sketchley's *Birmingham, Wolverhampton and Walsall Directory* of 1767, for example, which was the first of its kind, listed some sixty different branches directly connected with the hardware and toy trades, ranging from such predictable categories as Merchants, Brassfounders, and Toy Makers to such particular designations as Steel Snuffer Maker, Steelyard Maker, Cock Founder, Glass Pincher, Gimlet, Thimble, and even "Nutcrack" Maker. Nor was this all. Some of the classifications, most notably the Chape Makers and the Gun Makers, were introduced by a general note drawing attention to further subdivision within them,[11] and under Miscellaneous, the directory listed several even more esoteric specialists, such as "Caster, Roller and Cooper Blank Maker," "Button Mould Turner" and "Pocket-Book Lock Maker in General." The result, as such meticulous attention to detail suggests, was the formation among the tradesmen of Birmingham of a finely graded scale of precedence, whose intricate distinctions indicated, not the existence of real social barriers, but rather the opposite: a community cha-

[10] *VCH Warwicks*, VII: 95; and cf. Adam SMITH, *Wealth of Nations*, ed., E. Cannan (London, 1904), p. 8.

[11] Thus, the Gunmakers were divided into Barrel Makers, Borers, Filers, Ruff Stockers, and Lock Forgers, Furniture Casters, Engravers, Polishers, and Finishers. By the early nineteenth century, fifty-one different branches were being listed in the gun trade alone, with from one to 156 entries per branch (*VCH Warwicks*, VII: 99).

racterized at all its levels by a high degree of individual emulation, whose separate members had to be precisely differentiated because contact between them was so close. This was already being contrasted with the very different situation which was developing in industrial Lancashire, in what was to become a commonplace of nineteenth-century social comparison.[12]

The directories also demonstrate how much of Birmingham's population worked outside the town's main industries. In addition to the sixty different branches connected with the manufacture of toys and hardware, Sketchley also gave twenty-eight more classifications, either in what would now be called the service sector, or in other, ancillary trades. As might be expected the largest of these listings were those whose members fed, clothed, shod and housed the town; but in addition to these, Birmingham was already supporting twenty-one attorneys and a like number of Apothecaries and Surgeons, not to mention its "Professors of the Polite Arts" (the more eminent medical men, two musicians, several schoolmasters of differing specialization and the Secretary of the General Hospital).[13] Among Sketchley's other notable classifications were seven booksellers, a figure which is almost certainly too low;[14] small but significant groups of brokers

[12] Cf. John MORFITT, *Supplementary Gleanings Collected in the Years 1782 and 1783, Including the Communications of J. Morfitt Esq.* (London, 1805), pp. 450-1. The Cotton industry "has a strong tendency to destroy that pleasing and salutary gradation which exists in this and in most manufacturing places, among the workmen themselves..." Of later examples, the best known is probably Richard Cobden's: "The social and political state" of Birmingham "is far more healthy than that of Manchester... There is a freer intercourse between all classes than in the Lancashire town, where a great and impassable gulf separates the workman from his employer" (*cit., VCH Warwicks*, VII, 223). The theme is now of course part of the established canon of nineteenth-century English social history.

[13] With some rearranging of Sketchley's original listings, and the addition of appropriate entries from his "miscellaneous" class, the main service and ancillary classifications can be grouped as follows: — *Food and non-alcoholic drink*: Grocers, 50; Bakers, 49; Butchers, 32; Huxters, 11; Corn Chandlers, 5; Confectioners, 5; Dealers in Flour and Oatmeal 5; Poulterers, 4; Fishmongers, 2; Cheesemongers, 2; Salt Warehouses, 2; Tea Warehouse, 1. *Drink*: Publicans, 294; Maltsters, 32; Distillers and Spirit Dealers, 6; Hop Merchants, 2. *Dress and Footwear*: Tailors, 64; Peruke Makers, 54; Shoemakers, 47; Milliners, 10; Hatters, 9; Breeches Makers, 2; Collar Maker, 2; Stocking Maker, 1; Glover, 1. *Miscellaneous Textiles*: Linen and Wool Drapers, and Mercers, 26; Threadmakers, 13; Upholsterers, 6; Flax Dressers, 3; Weavers, 3; Dealers in Rags, 2; Woolcombers, 2; Worsted Dealer, 1; Dyer, 1; Jersey Comber, 1; Sacking Weaver, 1. *Construction and allied trades*: Joiners, 26; Masons and Bricklayers, 20; Cabinet Makers, 12; Carpenters, 9; Timber Merchants, 4; Plumbers and Glaziers, 4; Stone Cutters, 3; Builders, 3; Brickmaker, 1; Paviour, 1. *Business and Professional*: "Professors of the Polite Arts", 21; Attornies, 21; Apothecaries and Surgeons, 20; Factors and Chapmen, 20; Druggists, 11; Warehousemen, Shopkeepers and Salesmen, 9; Excisemen, 7; Booksellers, 7; Brokers, Appraisers and Auctioneers, 6. *Others*: Curriers, Skinners and Leathersellers, 14; Gardeners, 14, Brushmakers, 12, Coopers, 9.

[14] The history of printing, publishing and bookselling in Birmingham goes back to the seventeenth century. The town was already supporting seven booksellers in the 1730s, when it also played an important part in the operations of Robert Walker, the principal promoter of cheap serial publication in England. By 1770, nine printers were at work, chief among them John Baskerville, whose various pupils and journeymen were active, not only in book production, but also in significant ventures in newspaper and magazine journalism. In addition to a library attached to St. Philip's parish, Birmingham was already supporting two, and possibly three circulating libraries, whose stock had expanded considerably during the 1760s. In addition to the important proprietary which was established by the town's dissenters in 1779, two more circulating libraries appeared in the 1770s and another four before the end of

and appraisers, and a small army of publicans. Of these, there were two hundred and ninety-four, and they constituted by far the largest single class in the entire directory. In this case, of course, direct numerical comparison with other classifications does not mean very much, since many of the taverns listed were clearly not much more than pothouses which were either kept on the side by men whose main work lay elsewhere, or managed by their wives as a subsidiary source of support. Nevertheless, the total is impressive, and its significance is increased rather than diminished by the publicans' direct involvement with other occupations. A good example of this is provided by Christopher Earl, a former journeyman of John Baskerville the printer, who combined printing with auctioneering and also kept the Engine Tavern in Dale End.[15] Such combinations can only have enhanced the publicans' role as central figures in the informal growth of community and communications.[16]

In addition to these general characteristics, two aspects in particular of Birmingham's social and economic development had a pronounced effect on its cultural experience. The first of these, which can be briefly stated as the town's role as a shopping centre, is amply demonstrated by a detailed estimate of the yield of the Younger Pitt's proposed shop tax in September 1785. The estimate was based on expected revenues from London and twenty-nine other towns and cities, calculated from rates of duty of between one and two shillings in the pound according to the size and rental value of the individual premises involved. Excluding the capital, Birmingham ranked second only to Bath and Bristol (combined) in number of shops, and fifth, behind Bath and Bristol, Worcester, Salisbury and Liverpool, in actual yield.[17] Manchester and Norwich are conspicuous by their absence from the sample, which gives no indication of the types of commodity involved in each place, or of rates of turnover, so the estimate cannot be considered comprehensive. But it does point convincingly to Birmingham's rising prominence, not only as a manufacturing town, but also as one of the principal provincial centres of retail trade and domestic consumption.

Birmingham thus played a significant part on the demand, as well as on the production side, of the process of economic growth. The second particular aspect of the town's development shows how close the connection was between the two. This was the direct sensitivity of a large part of Birmingham's manufactures to the changing pronouncements of fashion and taste. Again, the trades directories provide abundant illustration,

the century. See *VCH Warwicks*, VII: 210-212; Joseph HILL, *The Bookmakers and Booksellers of Old Birmingham* (Birmingham: privately printed, 1907); Charles PARISH, *History of the Birmingham Library* (London, 1966); G.A. CRANFIELD, *The Development of the Provincial Newspaper, 1700-1760* (Oxford, 1962), pp. 51-56.

[15] Joseph HILL, *Bookmakers*, p. 82.

[16] According to contemporary estimates, Birmingham's population grew from 23,688 in 1750 to 42,250 in 1778 (*VCH Warwicks*, VII: 8). This suggests a figure of approximately 35,000 in 1767, which, in combination with Sketchley's list, gives a ratio of pubs to people of about 1:120.

[17] Public Record Office: Home Office Papers, H.O. 42/7: "Calculation of the Duty upon Shops," September 1785.

whether it be sought in such forms as Sketchley's general description of the work done by the enamellers in 1767 ("candlesticks, snuff boxes, ink stands, tweezers, toothpick cases, quadrille pooles, smelling bottles, clock and watch faces and all sorts of small trinkets for ladies' watches, etc."); in the individually engraved advertisements of such later compilations as James Bissett's *Poetic Survey Round Birmingham and Magnificent Directory* of 1801, or in the whole example of the latter itself, a lavish extravaganza which combined the functions of tourist guide, directory and illustrated catalogue (in colour) in a form well calculated to commend the town and its goods to the genteel shopper. It was this aspect of Birmingham which Edmund Burke captured when he described the town to the House of Commons in 1777 as "the Great Toy Shop of Europe,"[18] and contemporaries were very conscious of the imponderables which it involved. If Adam Smith himself could not help conveying a slight sense of unease at the impermanence which seemed to be inherent in Birmingham's pursuit of fashion and fancy rather than use and necessity,[19] Birmingham people themselves, like the ironical promoter of the *Trifler*, a local periodical whose prospectus appeared in the *Birmingham Gazette* in 1776, knew quite well how precarious the commercial distinction was between the two:

> The production of Triflers, like the manufactory of toys, which pander to the luxury of the present age, may boast the same advantage to society with the rest, of according bread and comfort to the industrious artificer... As to any great use that either may be to the community, otherwise than that of promoting commerce, the Trifler and the Trinket-maker may be equally silent.

It would be too much to suggest that this condition placed Birmingham people in the same degree of clientage to aristocratic society as that which existed between the court and the luxury tradesmen of preradical Westminster;[20] but it is certainly true that their outlook was noticeably modified by their material interest in the individually more modest, but cumulatively more extensive wants of "middle class' affluence.[21] Here already were the

[18] He coined it in 1777 in the course of moving the first reading of a bill to establish a Licensed Theatre in Birmingham: was not Birmingham, "the Great Toy Shop of Europe,... *on that account — the most proper place* in England to have a *licensed theatre*?" *Aris' Birmingham Gazette,* 31 March 1777.

[19] Cf. *Wealth of Nations* (Cannan edition), pp. 115-6; also R. KOEBNER, "Adam Smith and the Industrial Revolution," *Econ. Hist. Rev.*, 2nd Series XI (1958-0): 381-391.

[20] Cf. N. ROGERS, "Aristocratic Clientage, Trade and Independency: Popular Politics in Pre-Radical Westminster," *Past and Present*, 61 (Nov. 1973): 70-106.

[21] The evidence for this is most apparent in the 1790s. Among the circumstances which attended the Priestley Riots of 1791 was the presence of serious unemployment among the buckle and button makers of Birmingham, two of the most numerous branches of the town's trade. This had been caused by a recent and drastic change in fashion: the virtual abandonment of the shoe buckle, hitherto taken for granted as a necessary part of respectable attire, whatever incidental changes in design it might undergo from year to year, and the adoption of cloth covered buttons. There is good evidence that these changes, the first in particular, were associated in the popular imagination with "foreign", new-fangled views on society and politics, and that this association helped to give special point to the traditionalism of the Birmingham mob. This aspect of the riots goes completely unnoticed in the standard account by R. B. Rose ("The Priestley Riots of 1791," *Past and Present*, 18, Nov. 1960: 68-88), which explains what happened in terms of a general transitional conjunction between traditional prejudices and the social tension latent in Birmingham's industrial development, but does not ask how or why the conjunction took the particular form which it did, or what happened to it af-

lineaments of a consumer society, whose appetites were, in the words of James Bissett's advertisement for his own Modern Museum, to be fed, renewed and increased by "a continual succession of original designs and some thousands of fancy articles always on sale."

The broad characteristics of the West Midlands' experience during the later eighteenth century thus made the area sensitive to a very wide range of cultural influences. The results are not far to seek. The close relationship which existed between Birmingham's leaders and the neighbouring gentry, for example, was firmly entrenched in a dining society, the Birmingham Bean Club, which had been established soon after the Restoration as a forum within which the mutual interests and concerns of town and county could be freely discussed. By the 1780s, the Bean Club was playing a highly influential part in local affairs through a membership which was by then being drawn from distances of up to fifty miles. Similary, a close mutual relationship developed between Birmingham and the Parliamentary constituencies of the West Midlands, which not only meant that the town could mobilize an impressive political lobby when the occasion called for it, but also that the people of Birmingham were themselves actively and articulately involved in practical politics, even though they sent no members of their own to Westminster. Against this background, it is not surprising that *Aris' Birmingham Gazette* and *Swinney's Birmingham and Stafford Chronicle*, the region's two principal newspapers, had both established distinctive characters for themselves as positive agents in the formation of public attitudes long before the techniques of "opinion" journalism in the modern sense began to be developed at the end of the century. In addition, the area's growing prosperity brought with it a widening range of other channels through which cultural influences could flow. Some of these were embodied in recognized institutions, like the triennial festivals of oratorio given in support of the Birmingham General Hospital, which from 1779 onwards established themselves as major attractions for the Quality of the West Midlands, or the New Street Theatre, opened in 1774, which was sponsored by Matthew Boulton in particular as a business proposition which also provided a way of using the demand for entertainment as a

terwards. Whether the ambiguity of Birmingham's subsequent part in the democratic political movement of the 1790s had anything tangible to do with the dependence of a large part of the town's artisan population on the conspicuous consumption of its betters is a moot point. But that dependence was certainly a dominant theme of local antijacobin propaganda, much of which, appropriately, was put out over the pseudonyms of Job Nott, Bucklemaker, and John Nott, Button Burnisher. The comparison is a long one, but it is perhaps worth setting the situation of Birmingham in this respect alongside that of the Electorate of Mainz, in Germany, at the same time. Here, a somewhat similar dependence on aristocratic consumption and established social forms was demonstrably linked, contrary to the suppositions of both contemporary political doctrinaires and of historians, especially those who seek a single democratic, or Atlantic, revolution, to a marked lack of popular enthusiasm for French freedom: see T.C.W. BLANNING, *Reform and Revolution in Mainz, 1743-1803* (Cambridge, England, 1974). Compare, for example, the Birmingham Trifler's tone with the complaint of Georg Forster, a leading Mainzer radical, at "a swarm of craftsmen, shopkeepers, artists, servants and dependents, who all see in the person of their master their ideal of what a man should be and the model which they should all seek to copy. If idleness and pleasure stand at the head of the people as their standards, is it not inevitable that the morals of the working classes must deteriorate in the long run?" (*op. cit.*, p. 293).

means to improve the taste and execution of his workers. Others were less public, but nevertheless represented a continuous and increasingly important aspect of Birmingham's social and cultural development. This is perhaps most conspicuously illustrated by such associations as the Free Debating Society and its various derivatives, or by the Birmingham Book Club and the personal circle gathered by its host, John Freeth of the Leicester Arms Tavern,[22] through which a continuous connection can be traced between the first formative period in the town's political experience during the years before the American Revolution, the democratic reform movement of the 1790's and the fully fledged emergence of Birmingham radicalism after 1815. The significance of these groups was not, however confined to politics alone, and they themselves were only the more visible part of an interlocking series of informal circles through whose activities not only Birmingham's middle class, but also an increasing section of its artisan population as well, was infected with a passion for reading, discussion and enquiry almost universal in its scope. It was this which was the most remarkable aspect of the whole extension of mental communications.

A full examination of all the traceable components of this network would go far beyond the scope of a single paper, but one which can be considered effectively here is that represented by the private shcoolmasters who advertised in the Birmingham papers in increasing numbers from the mid-century onwards. Little can be recovered about the individual characters of these men, and the quality of their offerings must have been enormously variable. Nevertheless, their work illustrates an aspect of educational development in the eighteenth century whose importance is generally acknowledged, though still largely unexplored in detail,[23] and enough can be retrieved about their activities and movements to suggest that they formed an element in the general community which was not only more mobile and more articulate than most, but also closely connected with others of a similar nature. Both in Birmingham itself, where they accounted for well over half the opportunities available for practical schooling, and in the other towns and villages of the West Midlands, they were responsible for a major part of the basic context within which mental communications developed, and in their own concerns, they reflected many of the cultural influences which were at work in the region.

An examination of these men and their activities is also pertinent to the general problem posed by the role of literacy in the Industrial Revolution. Recent approaches to this, concerned mainly with quantitative rigour, are sceptical of inferences drawn from indirect sources, whether these be

[22] For Freeth and the Leicester Arms, see my "Taverns, Coffee Houses and Clubs: Local Politics and Popular Articulacy in the Birmingham Area in the Age of the American Revolution," *The Historical Journal*, XIV (1971): 15-47.

[23] The principal authority is still N. HANS, *New Trends in Education in the Eighteenth Century* (London, 1951). However, see also Brian SIMON, ed., *Education in Leicestershire, 1540-1940* (Leicester, 1968); Derek ROBSON, *Some Aspects of Education in Cheshire in the 18th Century* (Manchester, 1966); G. A. GRANFIELD, *The Development of the Provincial Newspaper, 1700-1760* (Oxford, 1962) pp. 215-6, and J. H. PLUMB, "The New World of Children in Eighteenth Century England," *Past and Present*, 67 (May 1975), 64-95, which was published after this article was written.

developments in education or the increased volume and variety of printed publication. Instead, they seek a direct measure of literacy in the signing or marking of the Anglican marriage registers from 1753 onwards.[24] The evidence from this source certainly warns against the optimistic general assumption that industrial growth and rising literacy went hand in hand. No detailed study of literacy in the West Midlands during the late eighteenth and early nineteenth centuries has yet been done; but J.M. Sanderson's conclusion that the overall level fell in industrial Lancashire during the early nineteenth century is ominous,[25] and a second, more distant warning is sounded by the first comprehensive figures provided by the Registrar General in 1839, which showed the West Midlands among the lowest literacy areas in the country.[26] A number of considerations must, however, be weighed on the other side of the balance. Within the counties which comprised the West Midlands as a whole, it is the manufacturing area comprised of Birmingham and the hardware towns of north Worcestershire and south Staffordshire, rather than the territorial unit as a whole, which is of concern; and any comparison between the situation here and that in the cotton belt must take into account the major differences in industrial and social structure between the two. Incontrovertible though the direct evidence may be, it must also be asked whether its meaning can be fully understood if all other sources are to be uniformly disqualified. R.S. Schofield, the chief proponent of direct measurement from the marriage registers, dismisses inferences from educational development because he has doubts about the general accessibility and effectiveness of eighteenth century schooling. Yet he bases his reservations on an account of the contemporary system which accepts without question the traditional view of the Grammar Schools, regards the private schools as predominantly the preserve of the rich and considers the Sunday Schools as providing not much more than moral instruction plus a little reading. His further point on the uncertainty and irregularity of school attendance is well taken, particularly as a reminder that even less is known, let alone knowable, about the pupils than about the schools themselves. Nevertheless, the evidence from Birmingham and the West Midlands suggests that there is good ground for modification of this view of eighteenth century education on all three counts.

This is especially so if it is accepted that what mattered from the point of view of literacy and the Industrial Revolution was not so much the general level of basic ability, provided of course that it stayed above a certain minimum, as the more particular development of functional literacy among the working class élite.[27] In the latter process, the most important element, at least until the formation of the major educational societies in

[24] See R. S. SCHOFIELD, "The Measurement of Literacy in Preindustrial England" in J. GOODY, ed., *Literacy in Traditional Societies* (Cambridge, England, 1968), pp. 311-325.

[25] J. M. SANDERSON, "Social Change and Elementary Education in Industrial Lancashire, 1780-1840," *Northern History*, III (1968): 131-154, and "Literacy and Social Mobility in the Industrial Revolution in England," *Past and Present*, 56 (Aug. 1972): 75-104.

[26] *Cit.*, R. S. SCHOFIELD, "The Dimensions of Literacy, 1750-1850," *Explorations in Economic History*, X, no. 4 (Summer 1973): 437-454, at p. 444.

[27] See discussion between T. W. LAQUEUR and J. M. SANDERSON, *Past and Present*, 64 (Aug. 1974): 96-112.

the early nineteenth century, and probably for some time after that, was the activity of groups and individuals more intensively educated and more responsive to the printed word than those around them. It is in this context that the development of private education during the later eighteenth century becomes significant. It has, for example, been suggested that the decline in literacy in industrial Lancashire during the early nineteenth century was, at least in part, the result of demographic strain upon an existing system of schooling which was wrongly placed in relation to the areas of industrial growth and unable to adjust to changing conditions until reinforcements arrived, in the shape of a powerful Sunday School movement and the activities of the new nation-wide education societies.[28] What happened in other regions, also affected by industrial growth, where the manufacturing areas differed from Lancashire, both in social organization and in their relationship to older communities? To what extent can it be suggested that the activities of private schools and masters helped to bridge the gap between an existing system of provision based mainly on traditional centres of population and the circumstances of the new manufacturing towns, if not by providing a substitute for all the deficiencies of the old system, then indirectly, through their connections with those who were later to assume the local leadership in the educational initiatives of the following century? Not all of these questions can be fully answered here; but there are certainly signs that such links were important in the Birmingham area.

Private education in Birmingham itself was characterized above all else by the proliferation of day and evening schools offering instruction in a wide range of subjects, most of them practical, some of them less so, to pupils of all ages and both sexes.[29] Some masters can hardly have inspired much confidence, like M. de St. Raymond, who in 1774 was promising to teach his pupils more French in a month than they would get from others in six, while his wife cleaned and preserved teeth, fitted false ones and drew stumps with a hand "lighter, if not more skilful than that of any man."[30] Others were too good to be true, like the Revd. Mr. Machin, who in 1767 and 1768 was offering everything from Reading, Writing and Arithmetic to Hebrew, Chaldee, Heraldry, Architecture, Logic, Metaphysics, Oratory and Rhetoric, not to mention Shorthand and "most other branches of polite literature."[31] At least as many schools, however, were kept by men with respectable credentials, offered a choice of subjects amply wide enough for practical purposes without being extravagantly so, and remained in existence for appreciable lengths of time. Mr. Wheatcroft, for example, had been assistant master at Nottingham Academy before he opened his school in St. Martin's Court Birmingham, in January 1782 to teach Writing, Arithmetic, English, Reading, Mensuration, the Use of Globes, Astronomy, Na-

[28] LAQUEUR and SANDERSON, *loc. cit.*

[29] The basis of the following examination is a tabulation by five year intervals of school advertisements appearing in *Aris' Birmingham Gazette* between c. 1743 and 1793, according to type of school, syllabus offered and place of origin. The details of this are given as an appendix. Unless otherwise specified, all dates given in subsequent footnote references apply to the relevant issue of the *Birmingham Gazette*.

[30] 2 May 1774.

[31] 13 July 1767; 19 Dec. 1768.

vigation, Algebra, Fluxions and Drawing.[32] John Giles, who first advertised his drawing school in New Meeting Street in 1755, was also holding classes in Walsall in 1764 and was still advertising in 1780, by which time there must have been some truth in his claim to have taught "many fine artists in Birmigham and elsewhere."[33] Despite several metamorphoses, the school which Thomas Baker started in Lichfield Street when he arrived from London in 1761 was equally long lived. Baker, who offered Arithmetic, Bookkeeping and Accounts, Mensuration, Geography, Globes and Maps, Algebra and Mathematics, moved to Dale End in 1765, where he gave evening classes on four nights a week in addition to his daytime teaching. When he died in 1776, his school was taken over by James Riley, who was himself succeeded three years later by John Barber and William Richardson. By this time, the syllabus had admittedly contracted considerably. Of the original offerings, only Arithmetic remained and the rest had been replaced by French, English and Drawing. Nor was the school helped by Barber's absence during most of 1781 and 1782, when he tried unsuccessfully to open a boarding school at Newport in Shropshire. After this, however, its fortunes revived, and though subsequent advertisements for "Barber's French Language School" suggest that its main specialization had changed, the hiring of an assistant to teach Mathematics once more in 1784 bespeaks equally some attempt to restore the more essential parts of the original curriculum.[34]

It is difficult to form precise conclusions about such mixed evidence. Whatever the merits of individual examples may have been, however, the prices charged by most masters — from between three and five shillings per quarter for elementary subjects to between ten and fifteen shillings for languages and mathematics — must have put at least some of their offerings within reach of Birmingham's tradesmen. This was particularly true of the large number of evening classes which were given. These early opportunities for adult education must have been responsible for a large part of whatever stock of knowledge most artisans managed to acquire outside their particular occupations. Scientific and mathematical masters, for example, like John Bogle of Worcester Street, Thomas Hanson of the Hinckleys and Samuel Porter of Suffolk Street, complemented the work of the travelling lecturers who visited the town in bridging the gap between theoretical and applied science, and in raising the standard of technical knowledge among its tradesmen.[35] In the same way, the specialized language schools which were advertised in increasing numbers from the 1770s on-

[32] 31 Dec. 1781.

[33] 20 Oct. 1755; 13 Feb. 1764; 27 March 1780.

[34] 3 Aug. 1761; 7 Oct. 1765; 7 Oct. 1776; 12 April 1779; 19 March 2 July 1781; 22 July 1782; 16 Feb. 1784; 30 Dec. 1793.

[35] Bogle (25 Oct. 1756) — Arithmetic, vulgar, fractional and decimal; Extraction of Roots; Multiplication in feet and inches; Plane and Solid Geometry. Hanson (29 Dec. 1760) — Writing; Algebra; Navigation; Astronomy; Gunnery; Statics; Hydraulics. Porter (10 Nov. 1788) — Reading; Writing; Arithmetic; Mensuration; Extraction of Roots; Geometry; Trigonometry; Surveying; Drawing in Architecture and Perspective. For the lecturers, see A. E. MUSSON and Eric ROBINSON, *Science and Technology in the Industrial Revolution* (Manchester, 1969) Ch. 3.

wards helped to satisfy the needs created by Birmingham's growing involvement in European markets. In a more general sense, too, establishments like Mr. Wood's Academy in the Cherry Orchard did provide a means by which a man could do something to remedy his lack of formal culture. Admittedly, it does seem rather optimistic of Mr. Wood to have promised that "the unhappiness of not understanding the meaning of various hard words, which daily occur both in reading and conversation" would be replaced, within six months' attendance at his school, by an understanding of English as good for practical purposes as that conferred by a regular classical education.[36] But the Academy in the Cherry Orchard was ministering to a widely felt need, to which attention was drawn, especially towards the end of the century, by the increasing emphasis which many schools placed on proper style, in both written and spoken English, as an essential complement to the technical training provided by their more practical subjects.[37]

Quite apart from the individual contributions which they made by their teaching, the private masters as a group constituted a distinctive element in Birmingham life. A significant number of them were immigrants from other parts of the country, especially from London,[38] and many had more than one string to their bow. Charles Martin, for example, a Londoner who opened a drawing school in Birmingham in 1763 and also taught the German Flute, was also a chaser and die-sinker, and most of the drawing schools in the town were in fact run by practising designers and decorators. In the same way, the language teachers also worked as translators of business correspondence, and several of the more general schools were run by men who also offered their professional services in such tasks as surveying and accounting. James Meer, for example, who kept a school in the Bull Ring, also advertised as a surveyor. So did John Lowe, who took over Meer's school in 1771.[39] Particularly important was the extent to which the activities of the private masters overlapped both socially and physically with other channels for the exchange of ideas and information. During the 1770s, for example, "the Academy" at 89 Dale End, which was shared by

[36] 26 Nov. 1764.

[37] See, for example, the notice from Mr. WATSON, "professor of penmanship from an academy in London," 16 Sept. 1782. Watson not only listed a very full practical syllabus, which included Arithmetic, Bookkeeping and Accounts, Mensuration, Gauging, Trigonometry, Surveying, Euclid's Elements, Navigation, Algebra and the Use of Globes; he also taught his pupils "to read and write their native language with propriety and elegance," trained them to recite from the works of Milton and Young with proper emphasis and cadence, and remarked that "the want of an English Education" was "but too visible in the youth of both sexes." Similarly, Mr. Landon, who ran what must have been a veritable school of speech and drama, taught his pupils the art of reading, like music, by visible signs, so that they learnt to express the passions, and gave adult classes in "the glorious art of reading prose" (25 June 1787; 28 Sept. 1788; 31 May 1790).

[38] Discounting M. de St. Raymond and his dentist wife, identifiable Londoners were Thomas Baker, whose long lived school has already been mentioned, Charles Martin (14 Feb. 1763), Richard Gardiner (23 Jan. 1769), "Messrs Whites" (21 Jan. 1771), John Mayne, who moved from his first post in the Birmingham area at Winson Green Academy in 1775 and opened a Mathematical School of his own in the town itself (9 Oct. 1775) and Mr. Watson (see above, n. 37).

[39] 8 Aug. 1768; 6 May 1771.

ventures as diverse as Mr. McCorkell's Dancing School, Mr. Linnington's Language, Accounts and Mathematical School and M. de Vallenais' language and fencing classes,[40] must on occasion have acted as a meeting place similar to other, more explicit *rendezvous*, like the Long Room at the Red Lion in Digbeth, where the Birmingham Robin Hood Free Debating Society held its weekly sessions. Many masters indeed shared the same background and outlook, and even the same premises, as the tavern and coffee house keepers, the printers, the booksellers, the circulating library promoters and the other middling businessmen who were active in Birmingham's discussion clubs and reading societies. In addition to his school and his surveying business, for example, John Lowe was probably also responsible for the establishment of one of Birmingham's most successful commercial libraries in 1776;[41] John Freeth tried his hand as a teacher of Geography and the Use of Globes before he found his true *métier* as landlord of the Leicester Arms, host of the Birmingham Book Club and composer of topical doggerel and election verse, and of Freeth's particular cronies, two at least maintained a similar combination of interests. James Sketchley, who was primarily an auctioneer, but managed to combine this with a variety of newspaper and magazine partnership, the running of the Birmingham Universal Register Office and the production of the town's first trades directory, never actually ran a school himself, though he set his daughter up with a girls' boarding school; but he was not above leasing his business premises to those who did, and he made at least one venture into educational publishing.[42] James Bissett, a Scotsman who came to Birmingham from Perth in 1776 as an apprentice Japanner, ran the "Society for Free Debate" at Mr. McCorkell's rooms until it was suppressed in 1793 and inherited some part of Freeth's local role as convivial poet, also gave lessons in drawing and reading, and kept an informal lending library.[43] If space permitted the digression, the associated ramifications of the Freeth circle and of the membership of the Birmingham Book Club could indeed be raced dout, not only into the roots of political radicalism in the town, but also into such widening fields as the development of Freemasonry in the Birmingham area, the foundation of the town's dissenting Sunday Schols and the derivation from the latter of its first formal institute of adult education: the Birmingham Brotherly Society of 1796.[44]

[40] 21 April 1771; 25 Dec. 1775; 26 Feb., 24 June 1776.

[41] Joseph HILL, *The Bookmakers and Booksellers of Old Birmingham*, p. 97.

[42] For Sketchley's career, see Benjamin WALKER, "Birmingham Directories" *Transactions of the Birmingham Archaeological Society*, LVIII (1934): 1-36.

[43] See T. B. DUDLEY ed., *Memoir of James Bissett, Written by Himself* (Birmingham, 1904).

[44] The Birmingham Brotherly Society was in many ways a forerunner of the Mechanics' Institutes of George Birbeck thirty-five years later. Of its eight original managers, four, including James Luckock, its principal founder, were members of the Birmingham Book Club. They had already been involved in the Brotherly Society's own predecessor, the Birmingham Sunday Society, which had been formed in 1790 by a group of Joseph Priestley's pupils from the New Meeting Sunday School to teach a wider range of subjects to those who had passed through a basic Sunday School, and to give free lectures to working men. Besides Luckock, who in 1793 was also a leading member of the Birmingham Society for Constitutional Information and remained active in local reform politics until the days of Thomas Attwood's Birmingham Political Union on the eve of the Great Reform Act, others involved included Thomas

On a reduced scale, the situation in Dudley, Wolverhampton, Walsall and Wednesbury was similar to that in Birmingham. In Wolverhampton in particular, several masters taught day and evening classes of the kind familiar in Birmingham, and a number of the latter's own masters also extended their scope by teaching on a regualr basis at other places in the hardware district. In addition, notices from several more extensive day and boarding schools suggest that there was no lack of opportunity to get a good education, both practical and polite, in the manufacturing towns of the Black Country. Within the West Midlands as a whole, however, the most noticeable features of the development of private education were its close relationship to the revival of the existing grammar schools, and the large number of masters, among them some of the most interesting in the entire region, who established themselves, not in its main centres, but in its lesser towns and villages.

To say the least, the usual judgement that the eighteenth century grammar schools were, with few exceptions, stagnant ponds of local corruption and educational backwardness, requires substantial modification.[45] While it would be equally misleading in the opposite sense to suggest that they were all in the vanguard of progress, it is nevertheless true that within the limits imposed by the terms of their endowments and by economic circumstances, many schools made real efforts to adapt to changing times, and the measured success which they achieved deserves to be recognized. During the second half of the century, an increasing number of grammar schools added non-classical subjects to their curriculum, either free, or on a fee-paying basis, even though this frequently involved an implicit alteration in the interpretation of their charitable function. At the same time, many of them also began to take boarders.[46] Strictly speaking, these developments did not fall within the "private" sector, and it could therefore be argued that they are outside the scope of this study. In a number of instances in the West Midlands, however, the existence of a grammar school pro-

Wright Hill, father of Sir Rowland Hill of the penny post, and founder of Hazlewood School, one of the 19th century's most original and influential experiments in education. Connections of the kind noticed here are, of course, easier to trace through Unitarian circles, since these were highly self-conscious and therefore at least reasonably well documented, than they are in the case of other denominational groups. It is, unfortunately, not possible at present to say anything very precise about the affiliations of other groups of masters.

[45] See R. S. TOMPSON, *Classics or Charity? The Dilemma of the Eighteenth Century Grammar School* (Manchester, 1971), which mounts a powerful attack on the traditional view, based on a close examination of three hundred and thirty-four endowed schools in fifteen representative counties. Tompson's main source is the thirty-two reports of Lord Brougham's Commission to Inquire Concerning Charities, which, between 1818 and 1837 conducted an exhaustive examination of the history and state of the endowed schools. He sees the eighteenth century, not as a period of stagnation, but as one of gestation during which a great many schools revised their original educational objectives. The introduction of a "modern" curriculum took a long time to become generally accepted, and the technical subjects in particular remained for the most part in the domain of the private schools. Nevertheless, an increasing number of grammar schools, which seem to have functioned in close association with their private counterparts in any case, adopted a modern curriculum during the later decades of the century.

[46] See Tables in TOMPSON, *op. cit.*, pp. 60, 71: Curriculum Changes by decade (especially marked 1760-89); 80, 92: admission of boarders and charging of fees.

vided a private master with the chance of steady work until he was in a position to set himself up independently.[47] In any case, a grammar school which had added fee-paying subjects to its curriculum was often indistinguishable from a private academy, especially if its specialist assistant masters were allowed to keep their own independent boarding houses. In practice, therefore, the development of the grammar schools and the activities of the private masters were closely related to each other; and though the former did not usually advertise as frequently as the latter, there are enough exceptions to this general rule to show that the grammar schools were often active participants in the process of innovation.

By far the best example of this was the Free Grammar School at Wolverhampton. Certainly, there was nothing particularly extraordinary about this school's claim in 1767 that its pupils were "qualified completely for business," backed as it was by an advertised syllabus consisting only of Latin, Greek, French, Writing, Arithmetic, the Use of Globes and Drawing.[48] Two years later, however, the Merchant Taylors' Company, which governed the school, replaced its headmaster by Dr. William Robertson, a liberal clergyman who was soon to gain a controversial reputation as an associate of the Unitarians, Theophilus Lindsey and Joseph Priestley, and as one of the instigators in 1771-2 of the Feathers Tavern petition for relaxation of the Anglican articles of subscription. Though he did not do so specifically as headmaster of the Grammar School, Robertson was soon offering an enlarged course of study. On December 11, 1769, "Dr. Robertson's school at Wolverhampton" announced that it was now ready to take pupils, to whom it offered English, French, Latin, Greek, History, Geography, Chronology, the Use of Globes and the principles of Natural and Moral Philosophy, as well as instruction in Writing, Arithmetic, "Brachygraphy" (Shortland), Drawing and Dancing.

These additions mark a definite advance on the original curriculum, and, in words which recall Dr. Priestley's *Essay on a Course of Liberal Education for a Civil and Active Life*, Robertson went on to promise that "every method" would be used to make his pupils "useful and agreeable to themselves, their families and their country". He must, however, have been hampered by the difficulties of his position. His stipend as headmaster was a mere seventy pounds a year, of which forty had to be paid as pension to his superannuated predecessor for the first five years of his tenure. In addition, his headmastership became particularly difficult after his involvement in the subscription controversy of 1771-2 had led him, like many of his fellow-members of the Feathers Tavern Association, to resign his orders. In 1778 in fact, Robertson was on the point of joining Theophilus

[47] For example: Thomas Sandalls of Solihull (ex Solihull G. S.), 2 Feb. 1756; Mr. Tristram of Bridgnorth (ex Bridgnorth G. S.), 11 Jan. 1773; Henry Swinborn of Sutton Coldfield (ex S. Coldfield G. S.), 15 May 1780. The best example, however, is William Draper, who arrived in Wolverhampton in March 1784 bringing several of his own pupils with him from London. Draper ran a boarding house in Stafford Street in conjunction with the Free Grammar School, where he was appointed Writing and Mathematics master, but he was soon advertising his own "Commercial and Classical Academy" at Deanry Hall (28 March 1785; 20 March 1786; 8 Jan. 1787; 17 March 1788).

[48] 28 Dec. 1767.

Lindsey at the Essex Street Chapel in London, though he eventually decided to stay in Wolverhampton rather than retreat before the threat of prosecution for teaching without proper episcopal licence.[49] These circumstances must have affected the progress of Wolverhampton school; but when Robertson died in 1783, his innovations, far from being abandoned, were confirmed and put on an even more extensive footing. Between 1784 and 1787, the Merchant Taylors' Company raised the headmaster's stipend to one hundred and fifty pounds, appointed two assistants at eighty and seventy pounds respectively, expanded the facilities for boarders and developed the curriculum still further. When the "General Free School," as it was now called, was opened in its new form by the Revd. Mr. Lawson, M.A., fellow of Trinity College, Cambridge, on April 4, 1785, the terms charged for boarders, twenty-five guineas by Mr. Lawson or twenty and sixteen guineas respectively by his assistants, Mr. Tyndall and Mr. Draper, rather belied the new title and placed the school among the more expensive in the region. As announced on December 10, 1787, however, the full curriculum seems to have been worth the money, including as it did Classics, the cultivation and composition of the English language, Mathematics, Geography and use of globes, French, German, Drawing, Writing and Accounts, with provision (for an extra eight guineas) for lectures in the senior classes on Natural Philosophy, Mechanics, Astronomy, Newton's *Principia* and the higher branches of Mathematics.[50]

The development of Wolverhampton Free School was admittedly exceptional, and it is fitting that it should have taken place in one of the most important of the region's centres, but this was by no means the only example of innovation. In December 1759, the Revd. Mr. Wolfe, newly appointed to the grammar school at Stone, announced that "the methods of education used in Westminster, Eton and Hackney schools etc. have been procured, whence the most sound and expeditious plan has been endeavoured to be extracted and will be used in the above school".[51] Three years later, William Brownwall was proposing to apply experience gained at Manchester Grammar School to the curriculum of the Free School at Bilston, where he offered Writing, Arithmetic "logarithmical and instrumental in all its branches with the application thereof to business," Accounts, Extraction of Roots, Geometry and Algebra as well as Greek, Latin an English.[52] Quite apart from the simple reopening of several schools which had previously been closed,[53] similar additions were introduced in

[49] For Robertson's career, see *Dictionary of National Biography*: b. Dublin 1705; M. A. (Glasgow) 1724; persuaded to forsake Presbyterianism after introduction to Benjamin Hoadly and William Wake; took Anglican orders and held various livings in Ireland, 1728-1759; resigned his livings, 1759, but for the present disclaimed any explicit Arian or Socinian views, and advocated a comprehensive establishment of religion based simply on general affirmation of belief in Bible; D. D. (Glasgow) 1768; appointed to Wolverhampton G. S. 1769; d. 1783.

[50] 29 Nov., 20 Dec. 1784; 28 March, 4 April 1785; 10 Dec. 1787.

[51] 24 Dec. 1759. For Hackney Academy, see HANS, *New Trends*, pp. 67, 70-77.

[52] 24 May 1762. For Manchester, see HANS, *New Trends*, pp. 39-41.

[53] Wenlock: 12 Sept. 1768; Market Drayton: 14 Jan. 1771; Alcester ("on a liberal and extensive plan"): 13 June 1785; Atherstone: 28 June 1786; Market Bosworth: 5 Jan. 1789.

other places. In July 1770, Mr. Houghton of Nantwich Grammar School in Cheshire announced the engagement of John Stubbs, formerly writing and accounts master at the Grammar School and Academy in Macclesfield, to teach Writing, Arithmetic, Book keeping and Mathematics "on the same principles now practised by the most approved masters in London." Though it did so in unspecific terms, Dilhorne school in Staffordshire was offering a good deal more than "grammar school instruction" in 1787, and the following year, the Revd. Mr. Jones listed an ambitious syllabus for Beaudesert Grammar School near Henley-in-Arden, Warwickshire. Even the "Charity School" at Tong in Shropshire was obviously much more than that, at least in the plans of James Jones, who became its master in 1787 and offered Accounts, Solid and Superficial Mensuration, Geometry, Trigonometry, Land Suveying by chain, theodolite, sextant and plane table, Gauging, Navigation, Algebra and the Use of Globes.[54]

When these developments among the grammar schools are added to the large number of private academies which were advertised in the Birmingham *Gazette*, the impression is amply confirmed that by the second half of the eighteenth century, there were few towns of any consequence in the West Midlands without at least one school of some pretensions. For at least the thirteen years between 1758 and 1771, for example, Benjamin Talbot combined the professions of teacher, surveyor and instrument maker, first at Newport in Shropshire and later at Cannock in Staffordshire, where he taught all branches of Mathematics, Mechanics, Hydraulics, Optics, Perspective Drawing and other branches of Natural Philosophy, not to mention Astronomy, the calculation of lunar eclipses by a new and easy method and surveying by means of his own patent theodolite.[55] Though their offerings were none of them quite so extensive as this, several other masters were also teaching at the same time in the villages of Staffordshire and Shropshire. In 1761, Thomas Britgen, self-styled philomath, was offering his services at Newbury, near Eccleshall, and in Eccleshall itself, Richard Warren, who taught not only Latin, Greek, English, Writing and arithmetic, but also Vulgar and Decimal Fractions, Solid and Superficial Mensuration and the Extraction of Roots "at a very reasonable rate," was qualifying "boys of tolerable genius to be apprentices to any profession." In April 1768, a similar school was started at Rowley Regis by the Revd. Mr. Bagnall; five years later, Mr. Smallwood of Coppice Hall near Aldridge opened a boarding school which was still prospering when it was taken over by the Revd. James Lomax in 1788, and in the latter year also, Mr. Higgs of Chaddesley Corbett in Shropshire was giving instruction in a number of technical skills besides the usual basic subjects of English, Writing, Arithmetic and Accounts.[56]

[54] Nantwich: 16 July 1770; Dilhorne ("as well as grammar school instruction will be added whatever is necessary to form youth for the Gentleman, the Gown, the Counting House or whatever line of life the learner may be capable of"): 30 July 1787; Beaudesert: 15 Dec. 1788; Tong: 3 Jan. 1787.

[55] 18 Sept. 1758; 19 July 1762; 19 Dec. 1768; 6 May 1771.

[56] Britgen: 16 Feb. 1761: Warren: 7 Dec. 1761; Bagnall: 4 April 1768; Smallwood: 18 Jan. 1773; Lomax: 7 Jan. 1788; Higgs: 21 Jan. 1788.

Many other ventures could be mentioned, such as Mr. Hull's academy at Kemsey near Worcester, Mr. Foster's at Meriden near Coventry or the Revd. Mr. Deane's school at Shifnal in Shropshire, which William Withering of the Lunar Society recommended on account of its individual tuition as a possible choice for the recalcitrant James Watt junior in 1780.[57] But though it is thus possible to pick schools almost at random from most parts of the region, one feature of their distribution deserves some attention, and that is the location of many of the most conspicuous examples in or near certain of the region's market towns. As early as 1742, for example, John Ward's Writing and Mathematical School at Leominster in Herefordshire was teaching Arithmetic, Geometry, Trigonometry, Navigation, Gauging, Drilling, Book keeping, the Use of Globes, Sliding Rule and other mathematical instruments.[58] Ward, who was also a contributor to the mathematical puzzles and competitions which were a feature of the *Birmingham Gazette* in its early years,[59] was admittedly the only master who advertised such an extensive syllabus so early, but by the 1760s, similar notices were appearing from other places too. Benjamin Talbot's school at Cannock has already been mentioned; and just as Talbot's syllabus and his move to Cannock in 1762 put him in a position both to serve and to profit from the major developments which were soon to affect Staffordshire, so the stimulus given to the northern parts of Worcestershire by the completion of the Staffordshire and Worcestershire Canal in 1772 and the construction of the link to Stourbridge and Dudley between 1776 and 1779[60] must have been a material factor in the success of the school which Robert West opened near the old church in Stourbridge in 1774. Besides the usual basic subjects, West taught Geography and the Use of Globes and Maps, Drawing, Mensuration, Gauging, and "the use and application of the Carpenter's Sliding Rule and those more particularly adapted for the use of Officers of Excise, Land Surveying and Mapping." In addition, he lectured on the several branches of Mathematics and Mechanics outside school hours, and rounded out his prospectus by providing for the attendance of a dancing master and instructing his pupils in English grammar and composition.[61] Such a curriculum, which combined an appropriate, but not excessive awareness of the ornamental aspects of education with its primary stress on useful knowledge, was eminently well suited to the needs and aspirations of the community which it was intended to serve. It is not surprising, therefore, to find that though West himself died in 1776, his school survived him, under the care of William Taylor, who added Dialling and Astronomy to its curriculum; or that in 1784, Henry Peale thought it worth his while to open a second school barely a mile away, near Old Swinford

[57] Hull: 12 April 1779; Foster: 22 June 1778; Deane: 27 May 1776, emphasizing the smallness of his school and the individuality of his teaching, 5 June 1786; 31 Dec. 1792; also, MUSSON and ROBINSON, *Science and Technology*, pp. 202-3.

[58] 6 Sept. 1742.

[59] 27 Sept. 1742; 10 Jan. 1743.

[60] Charles HADFIELD, *The Canals of the West Midlands* (Newton Abbot, 1966), pp. 49-53, 73-76.

[61] 26 Dec. 1774.

church, whose technical syllabus closely resembled that advertised earlier by West and Taylor.[62]

Like those in Birmingham itself, and in the hardware towns, schools like these were clearly called into existence by the needs of manufacture and commerce. But if it is easy to account in this way for the success of men like Benjamin Talbot, Robert West, William Taylor and Henry Peale, it is harder to explain why John Ward was offering such an extensive course of study in agricultural Herefordshire some fifteen years before any comparable syllabus began to be advertised closer to the region's main centres of growth. And it is equally difficult to explain the teaching of "Classical, Commercial and oher branches of Useful Literature" at Uttoxeter school in northern Staffordshire in 1766,[63] or why towns like Sutton Coldfield in Warwickshire, Bromsgrove in Worcestershire and Bridgnorth in Shropshire should have been considered particularly suitable situations for a private school, in terms of a process which was not itself conspicuously associated with such places. This does not mean that in cases like these, the region's development can be discounted; but it does suggest that the opportunities which drew masters to one part or another of the West Midlands were as often those created by existing local circumstance as those produced by the new centres of growth. The careers for which the Writing and Mathematical School at Leominster trained its pupils, for example, are more likely to have been those ancillary to the progress of landed society than those distinctively required by manufacture and commerce. Nor was John Ward by any means alone in this. Though a general association can fairly be made between Benjamin Talbot's school and the economic progress of Staffordshire, it must consider also that Talbot had been teaching for some time before he moved to Cannock in 1762, and that his only specific reference to the vocational purposes of his curriculum was a claim to have "qualified several boys for the sea since the commencement of the present war." For the most part indeed, the technical subjects taught by the private masters were still those more immediately appropriate to the estate steward, the land developer or the builder of roads and canals, not to mention the soldier and the sailor, than to the pioneer of manufacturing industry. In time, the emphasis changed, though so far as general knowledge of science and technology was concerned, travelling lecturers like Adam Walker, Henry Moyes and John Warltire[64] played a more immediate part than did the schools; but the situation in the West Midlands suggests that

[62] 23 Sept. 1776; 2 Aug. 1784.

[63] 7 April 1766.

[64] See MUSSON and ROBINSON, *Science and Technology*, Ch. 3. By the 1790s Birmingham had been visited at least once, and in most cases more often than that, by a minimum of seventeen lecturers who gave courses on scientific subjects (*Aris' Birmingham Gazette, passim*). The most frequent visitors were John Arden, John Warltire, Adam Walker and James Booth, and Warltire in particular made regular tours of the other towns in the surrounding region during the 1780s. How the reception accorded these men is to be associated with the equal enthusiasm aroused by others of less certain pedigree, like "The Sieur Herman Boaz," whose "Grand Thaumaturgick Exhibition of Philosophical, Mathematical, Sterganographical, Sympathetical, Sciateroconatical and Magical Operations" drew a large red herring across Warltire's plans in 1780, or like the notorious Gustavus Katterfelto, is another story.

the new manufacturing areas themselves were not so much the initial source of the demand for useful education, as the indirect beneficiaries of the practical knowledge and experience of men from older communities who taught the wide range of skills required by society as it already existed.

In addition, another consideration, of future rather than past importance, also encouraged the establishment of schools in the region's lesser towns. To the parent, concerned as much for the acceptable formation of his sons' manners, and for their health, both physical and moral, as for their practical education, they offered the best obtainable combination of contact with the world of affairs and seclusion from the less desirable features of the main manufacturing areas. The force of this can be seen very clearly in the importance attached to it by Matthew Boulton and James Watt. In 1777, Matthew Robinson Boulton was attending Winson Green Academy near Birmingham as a day boy. Two years later, his father was strongly advised to send him as a parlour boarder because as a day pupil, he would "necessarily acquire a vicious pronunciation and a vulgar dialect," and in 1780, when he was still only ten, he was sent right away to continue his education according to his father's "liberal and genteel plan" at Twickenham in Surrey. James Watt junior followed a similar course. Like young Boulton, he began his schooling at Winson Green, but his father was soon complaining of his "insolence sauciness and disobedience." In 1780, James Watt was seeking a change, not so much because his son's actual learning was suffering, but because he wished a "strict attention" to be paid to the boy's "manners and morals these being the most essential and also the prevailing reason with me to remove him from a public school."[65] The masters themselves, of course, were as conscious of this aspect of education as the parents of their pupils, and in their advertisements, many of them dwelt as long on the eligibility of their schools as they did on the details of their courses of study. Thus, Uttoxeter school assured its prospective patrons that "the place is rich and plentiful, situation pleasant and air salubrious," and that "as the master chuses but a small number in his own house, there are genteel families in the town ready to receive young gentlemen."[66] Even Benjamin Talbot, in other respects the most practical of masters, felt it necessary to say that Cannock was "a most delightful, healthy and genteel place,"[67] and before Mr. Braithwaite of Bridgnorth opened his academy at the Bowling Green there in 1783, he too dwelt at some length on the beauties of the place and the care that would be taken to keep his boarders free from any harmful plebeian influence:

> Bridgnorth has been celebrated for its beautiful, romantic and healthy situation. The Bowling Green is universally allowed to be one of the most beautiful spots of ground in this kingdom, situated in the middle of that delightful eminence, the Castle Hill, being full three roods of ground, which will be entirely appropriated to the recreation and amusement of the Boarders; who will never be permitted to depart its bounds without being properly attended.[68]

[65] MUSSON and ROBINSON, *Science and Technology*, pp. 201-3.
[66] 7 April 1766.
[67] 19 July 1762.
[68] 16 Dec. 1782.

Bridgnorth indeed seems to have combined all the virtues. Removed from the direct course of economic development after 1772, when the completion of the Staffordshire and Worcestershire canal made Stourport the main shipping point for goods and materials passing between the West Midlands and the river Severn, it was still in other respects well situated in relation to the main manufacturing areas of the region. In addition to its grammar school, it supported no less than four private boarding schools at various times, of which at least two offered notable curricula or other amenities, not to mention three more in the immediate vicinity, of which one at least offered a syllabus comparable to the best available in any other part of the region.[69]

That such a town should have supported so many schools illustrates well the complexities which influenced the growth of private education in the West Midlands. Within the general context provided by th development of the region as a whole, a number of factors were at work in variable combination. The growing need of the main manufacturing areas for a working population at least part of which was proficient, not only in a wide range of technical skills, but also in such things as modern languages, book keeping and accounts, was reflected in the proliferation of day and evening schools which became the dominant characteristic of private education in Birmingham itself, and to a lesser extent in the other Black Country towns. Here, the private masters became closely associated with other groups of similar nature; and played a significant part in the formation of a popular articulation which left a permanent mark, not only on the political experience of the area, but also on many other aspects of its life. Against the influence of the main centres, however, must be weighed the fact that many masters, among them some of the most interesting, established themselves in the region's lesser towns, to which they were drawn as much by existing circumstances as by any newer developments. The evidence shows, in fact, that the new centres of growth were not themselves the sole, nor even the initial source of the demand for practical education, and that their needs, when they did begin to grow, did so within an existing matrix which was well able to supply them. In the West Midlands at least, the development of private education, which played a major part in broadening the front over which England's school system was reoriented during the later eighteenth century, was therefore able to meet the needs of the new manufacturing areas by a combination of innovation and the transfer of experience

[69] In Bridgnorth itself: Mr. Medlicott: 14 June 1762; Mr. Tristram, formerly writing and accounts master at the Free Grammar School: 11 Jan. 1773; Mr. Jones, late of Bristol, who put his extensive library at his pupils disposal and taught the Classics, English, French, with Maths and Music as extras: 29 June 1778; Mr. Braithwaite, who offered English, Latin, Greek, Writing, Arithmetic, Bookkeeping, Mensuration, Geometry, Trigonometry, Algebra, Surveying and Planning, Navigation, Gauging, Use of Globes and "all kinds of Sliding Rules an and Mathematical instruments": 16 Dec. 1782.

In the vicinity: unnamed boarding school at Worfield: 10 Jan. 1780; Mr. Jandrel of Norton, who offered Accounts, Mensuration, Artificers' Works, Surveying and Mapping, Trigonometry and Navigation, plus dancing and the usual basic subjects: 8 Jan. 1787; The Revd. H. Crump of Cloverly: 16 July 1792.

already gained elsewhere. This transfer was in keeping with the continuous relationship between different communities, old and new, which was characteristic of many other aspects of the region's life, and it was as yet comparatively unhampered by rigid social barriers. It is true that the terms for boarders quoted by many country schools put them beyond the reach of any but the well-to-do; but it would be a mistake to regard them as already the exclusive preserve of the provincial *nouveaux-riches*, eager even at this early stage to lose the tradesman and the manufacturer in the gentleman. Quite apart from the numerous masters who confined themselves to a limited syllabus and charged proportionately less than their more sophisticated colleagues, many, like Benjamin Talbot of Cannock and Henry Peale of Stourbridge, took day-pupils at rates similar to those charged in the main centres, and in the case of Birmingham at least, several either moved freely between the boarding schools in the neighbourhood and the various day and evening schools in the town itself, or taught in both at the same time.

Nevertheless, lines of future social demarcation were latent[70] in the whole development of private education in the West Midlands; for another factor, the genteel aspirations of an increasingly prosperous urban middle class, also counteracted the direct attraction of the main centres, even though in large part it was dependent upon them. This became increasingly apparent towards the end of the century, when it showed itself in the tendency of schools to advertise their physical and social amenties rather than the details of their syllabus. This marks the beginning of the process by which, contrary to all apparent logic, a boarding school in a country market town came to be considered the most suitable setting for the education of the sons of the bourgeoisie, and by which the better placed of the old grammar schools, together with the more successful private ventures which were often closely associated with them, were transformed, by the later years of the following century, into the minor public schools. The development of private education in the West Midlands thus illustrates a central paradox in the nature of the first industrial revolution: that the cultural resources on which it was able to draw at its beginning, and the circumstances in which it did so, also contained the seeds of its ultimate end. It is perhaps appropriate that this should have been demonstrated so clearly in the region dominated by "the Great Toyshop of Europe".

APPENDIX

For each five year interval, information from advertisements for boys' (m) and mixed (m&f) schools has been listed in six categories according to type of community from which it came: —

A. From Birmingham.
B. From the immediate vicinity of Birmingham: Specifically from Hall Green, Soli-

[70] Mr. Hartley of Bronsgrove (21 June 1784) provides a telling example, half way between two worlds. He tried to grade his offerings and fees in order to cover a wider social bracket than he might otherwise have done, and his scale indicates his own hierarchy of values: for those "only intended for mercantile transactions or mechanical professions" twelve guineas: for Classics, Modern Languages or Practical Maths, fifteen; for Higher Maths, eighteen.

hull, King's Norton, Winson Green, Moseley, West Bromwich, Castle Bromwich, Bromwich Heath, Wake Green, Barr, Kingswood (Balsall Heath), Harborne and Erdington.

C. From the other main manufacturing towns: Dudley, Wolverhampton, Walsall and Wednesbury.
D. From the county towns and cathedral cities of the region: Coventry, Lichfield, Worcester, Warwick, Stafford and Shrewsbury.
E. From market towns.
F. From other minor township and villages.

In addition to these, a seventh category, G, lists girls' schools. These have been treated *en masse* because the advertised information on their offerings was for the most part considerably less complete and consistent in form than that for boys' and mixed schools. In category G, the aggregate for each five year period is given in the left hand column, while that on the right breaks the overall total into its component parts in the first six categories. In all seven categories, it proved difficult to keep track of the continued existence of schools. Towards the end of the period, a fairly predictable rhythm developed in the appearance of notices as schools announced their prospectuses, their calendars and other routine business early in each year and again at mid-summer. Before this, however, there was little regularity, and in many cases, several years elapsed between a particular school's notices, during which no sign was given of its continued existence. In these cases, schools have been recorded, even though they did not in fact advertise during a given five year period, according to the details of their last notice. For example, a school first advertised in 1761-65 and second in 1771-75 appears through the intervening quinquennium in the form given by its first notice.

The composition of the advertisements followed a more or less standard pattern. Terms for tuition and board were given together with a summary list of the syllabus offered, and these basic facts were normally accompanied by a brief description of the school in question: its size and location, the master's qualifications, remarks on his methods of teaching and other features which were thought likely to recommend his venture to prospective patrons. Within this general form, however, there was considerable room for variation in the presentation of the detail. This causes difficulty in the interpretation of specific notices. As far as possible, the list of subjects has been taken directly from the terms actually used, but some of the latter have been abridged when long and esoteric words were employed to make a syllabus sound more impressive. For example, "Longimetry," "Planimetry" and "Stereometry," which a few masters listed separately, have been grouped under "Mensuration." Drawing likewise covered a wide variety of skills, ranging from simple sketching to the laws of perspective, anatomical and botanical illustration, and the intricacies of architectural and engineering design. Sometimes these were differentiated; but usually the simple word was considered sufficiently explanatory, though the importance attached to drawing in all its branches is clearly shown by the number of entries under this heading in most categories throughout the period. The term Mathematics requires some explanation, since it was used in two different senses. In its ordinary sense, when it was listed as a single subject distinct both from Geometry, Trigonometry and Algebra on one side and from simple Arithmetic on the other, Mathematics seems to have meant such operations as the use of decimals and fractions, the extraction of roots and the use of logarithms. Mathematics, or slightly more explicitly "the useful branches of Mathematics" was, however, used almost as frequently as a comprehensive term instead of the more detailed subject specifications. In these cases, the word has been taken to include Arithmetic, Geometry and Trigonometry, but not Algebra, which seems to have been thought worthy of separate mention even when Mathematics was usued as a comprehensive term. Occasional references were made to "the higher branches of Mathematics," but these were not included in the offerings of most schools. In the few notices for girls' schools which used the word as a comprehensive term, Mathematics has been interpreted as including only Arithmetic, and its own simple sense. One heading, Elocution, was not actually used in any advertisement, but has been included in order to take account of the concern for proper style and correct pronunciation which showed itself during the later years of the period. The figures derived from the advertisements cannot claim to represent reality in any absolute or objective sense. At most they provide the basis for an informed estimate; and since this is derived from a single source, the *Birmingham Gazette*, it reflects, the paper's idiosyncracies, particularly as regards its circulating area and its advertisement clientele. As a result, some features, of the probable reality have undoubtedly been artificially exaggerated. For example, many of the smaller

schools at some distance from Birmingham are unlikely to have considered it worthwhile to repeat their advertisements as frequently as those in or near the town, which means that though many of them may well have continued to exist for longer periods of time than are credited to them in this estimate, the fact cannot be registered through the evidence in Aris' paper. Similar considerations probably help to explain the marked lack of information from the older centres in category D. The same treatment of advertisements in *Berrow's Worcester Journal* or *Jopson's Coventry Mercury* would probably yield results similar in general outline, but noticeably different in detail. On the other hand, once admitted, the distortion produced by taking the *Birminghan Gazette* as a standpoint can be regarded as a positive advantage, since it emphasizes the particular avenues which were taken by Birmingham's growing influence on its surrounding region. Despite its limitations, the estimate does therefore reveal a number of features with some clarity.

Summary of School Advertisements in *Aris' Birmingham Gazette*, c 1743-1793

	Evening	Day	Boarding	Arithmetic	Mathematics	Geometry	Trigonometry	Algebra	Navigation	Gauging	Dialling	Drilling	Mensuration	Surveying	Use of Globes & Maps	Drawing	Slide Rule & Math. Instrmts.	Artificer's Works	Mechanics	Hydraulics	Statics	Gunery	Optics	Astronomy	Natural Philosophy	Moral Philosophy	Logic	Metaphysics	Chronology	History	Geography	English	Reading & Spelling	Writing	Shortland	Book keeping & a/cs	French	German	Italian	Spanish	Latin	Greek	Hebrew	Chaldee	Heraldry	Oratory	Rhetoric	Elocution	Fencing	Music	Dancing	Needlework & c	Cookery
1743-50																																																				
A m																																																				
mf																																																				
B m																																																				
mf																																																				
C m																																																				
mf																																																				
D m																																																				
mf																																																				
E m		1	1	1	1	1	1		1	1		1			1		1		1													1		1																	m 1
mf																																																			
F m																																																				
mf																																																				
G-total																																																			
1			1																																																C 1
1751-55																																																			
A m																																																				
mf	2	6														2															1	5																			1		mf 7
B m			1																																						1	1										m 1
mf																																																			
C m																																																				
mf																																																				
D m																																																				
mf																																																				
E m			1	1																														1								1	1								m 1
mf																																																			
F m			3																																																m 3
mf																																																			
G-total																																																				D5. F1
6		1	6																													2	3			1	1										2	3	2	

Summary of School Advertisements in *Aris' Birmingham Gazette*, c 1743-1793

		Evening	Day	Boarding	Arithmetic	Mathematics	Geometry	Trigonometry	Algebra	Navigation	Gauging	Dialling	Drilling	Mensuration	Surveying	Use of Globes & Maps	Drawing	Slide Rule & Math. Instrmts.	Mechanics	Hydraulics	Statics	Gunery	Optics	Astronomy	Natural Philosophy	Moral Philosophy	Logic	Metaphysics	Chronology	History	Geography	English	Reading & Spelling	Writing	Shortland	Book keeping & a/cs	French	German	Italian	Spanish	Latin	Greek	Hebrew	Chaldee	Heraldry	Oratory	Rhetoric	Elocution	Fencing	Music	Dancing	Needlework & c	Cookery	
1756-60																																																					
A	m	2	1		2	2	2	2	1	1										1	1	1		1								1			1																	m 3
	mf	4	7		1	1	1	1	1							3														2	5	1		1	1													1			mf
B	m		3	3	3	1	1	1																						1	3	6		3				2	1											m 6
	mf																																																		
C	m			1	1																									1		1		1	1				1											m 1
	mf																																																	
D	m		2	2	1	1																										1																		m 2
	mf		1																															1		1	1												mf 1
E	m		2	4	4	2	2	2	1					1			2														1		3		2	1			3	2							1	1		m 5
	mf																																																	
F	m		2	2	2	1	1	1						1	1																			2					1											m 4
	mf																																																	
G-total																																																			A5, C2, D6,
	22		4	19													3														2	1	4		4													1	3	4	E6, F3
1761-65																																																			
A	m	2	5		4	2	2	1	1					1		2	1													1	2	2	2	3		2	1			3	1										m 5
	mf	7	16		3		1	1		1				2			6													1	4	8	4		3	4		1	1									1			mf 19
B	m		3	3	4		2	1	1								1														2	3	6		4				2	1								1		m 6
	mf																																																	
C	m		3		1									1			1																																			m 3
	mf		2														2																																		mf 2
D	m		1	1																																													m 1
	mf		3		1																													1		1	2		2	2									mf 3
E	m		4	6	4	1	1	1	2							1	3															2		5			2			5	3							2	2		m 7
	mf																																																	
F	m		5	8	7	4	3	4	3	1				3	1		2		1	1			1	1	1							4	1	8		6	1			5	4							1	2		m 12
	mf																																																	
G-total																																																			A2, B1, C1
	16		3	15	1												2														3	1	4		1	4											3	4	5	1	D6, E3, F3

Summary of School Advertisements in *Aris' Birmingham Gazette*, c 1743-1793

		Evening	Day	Boarding	Arithmetic	Mathematics	Geometry	Trigonometry	Algebra	Navigation	Gauging	Dialling	Drilling	Mensuration	Surveying	Use of Globes & Maps	Drawing	Slide Rule & Math. Instrmts.	Artificer's Works	Mechanics	Hydraulics	Statics	Gunery	Optics	Astronomy	Natural Philosophy	Moral Philosophy	Logic	Metaphysics	Chronology	History	Geography	English	Reading & Spelling	Writing	Shortland	Book keeping & a/cs	French	German	Italian	Spanish	Latin	Greek	Hebrew	Chaldee	Heraldry	Oratory	Rhetoric	Elocution	Fencing	Music	Dancing	Needlework & c	Cookery	
1766-70																																																						
A	m	1	2		1	1	1	1						1			1										1	1			1		1	2						1	1	1	1	1	1	1						m 3
	mf	13	21		3		2	1	1	1		1		1			6														1	5	7	4		1	6																	mf 25
B	m		3	6	7		3	1	1					1		1	2														1	5	4	8		6	4			5	2									2			m 9
	mf																																																				
C	m			3	3		1		1							2	2								1	1				1	3			3	1	2	2			3	3									1			m 3
	mf		2		1												1																	1			1			1													mf 2
D	m		1	1																																																m 1
	mf	1																																1		1																mf 1
E	m		6	10	6	3	3	3	2							1	2														4	2	8		6	2			8	5								2	3			m 11
	mf			1	1												1														1	1	1		1																	mf 1
F	m		6	10	8	4	3	3	2	1			2	1			1							1	1	1					1	4	1	9		4				7	7								1	2			m 13
	mf																																																				
G-total																																																					A1,B5,C1
	26		4	25	2	1											4														1	2	7	14		2	8												6	12	13	D8,E4,F7
1771-75																																																				
A	m	1	4		2	1	2	2									2														1	1	1	4		4	1															m 4
	mf	13	20		3	1	1	2	1	2		1		2			4								1				1	2	2	8	6		6	5	1	1				1	1								mf 22
B	m	1	4	5	6	1	2	1	1		1			2	1	1	2														1	4	3	7		6	2			3	2								2			m 8
	mf																																																			
C	m			2	2											2	2								1	1				1	1	2		2	1	1	2			2	2									1			m 2
	mf	1	2		1												2																	1			1			1												mf 3
D	m		2	2																																															m 2
	mf																																																			
E	m		7	13	9	4	4	4	3		1			1	1	2	3	1		1											1	5	5	11		7	2			10	7								2	4			m 14
	mf																																																			
F	m		5	5	8	4	4	3	2	1			2	2			2			1	1			1	1							3	1	8		4	1			4	4								1	2			m 8
	mf																																																			
G-total																																																				A6,B6,C1,
	36		6	32	4	1										1	7												1	3	5	8	14		2	8										1		8	13	18	D8,E4, F11

Summary of School Advertisements in *Aris' Birmingham Gazette*, c 1743-1793

		Evening	Day	Boarding	Arithmetic	Mathematics	Geometry	Trigonometry	Algebra	Navigation	Gauging	Dialling	Drilling	Mensuration	Surveying	Use of Globes & Maps	Drawing	Slide Rule & Math. Instrmts.	Artificer's Works	Mechanics	Hydraulics	Statics	Gunery	Optics	Astronomy	Natural Philosophy	Moral Philosophy	Logic	Metaphysics	Chronology	History	Geography	English	Reading & Spelling	Writing	Shortland	Book keeping & a/cs	French	German	Italian	Spanish	Latin	Greek	Hebrew	Chaldee	Heraldry	Oratory	Rhetoric	Elocution	Fencing	Music	Dancing	Needlework & c	Cookery	
1776-80																																																						
A	m	4	8		4	1	2	2						1		1	3													1	2	2	3	6		6	4	1			2									2				m 9
	mf	12	16		5	3	3	3		1				1			8														1	2	9	5		2	4																	mf 20
B	m	3	9		8	1	1	1	1					1		3	5														4	5	4	10		7	6				6	4								1	5			m 12
	mf																																																				
C	m		1	1	2		1	1		1	1	1			1	1	1								1							1		2		1	1				1	1											m 2
	mf		3														3																																				mf 3
D	m			3																																															m 3
	mf																																																			
E	m		8	14	9	5	5	5	4			1		1		1	3								1							1	7	6	13		8	3				10	6				1		3	5			m 16
	mf		1														1																																				mf 1
F	m		5	11	14	6	6	5	2	2				3	2	1	3			1	1			1	1	1					1	2	6	2	14		8	4				7	7							1	3			m 14
	mf																																																				
G-total																																																					A4,B7,D6
	38		7	34	5	1										1	9													1	7	11	10	17		1	12									2		11	14	26		E7,F14.
1781-85																																																					
A	m	7	11	2	7	3	6	4	2	2	1			4	2	3	4								1						1	4	5	6	10		6	3				1	1											m 12
	mf	11	17		6	4	4	4		1				1			5														1	3	3	10	6		3	5															mf 20
B	m		3	7	7	1	2	1	1					2	1	2	3															3	5	5	8		6	3				4	2							3			m 9
	mf																																																			
C	m			2	1	1	1	1								1	1																1		1		1	1				1	1											m 2
	mf		1														1																																				mf 1
D	m																																																			
	mf																																		1																		mf 1
E	m		10	16	10	5	6	6	5	1	2			2	2	2	4	1															8	5	13		9	4				11	8							3	6			m 19
	mf																																																			
F	m		4	11	14	5	6	5	2	1	1			2	2	2	2														1	1	7	2	14		9	6				9	7							1	3			m 14
	mf																																																			
G-total																																																					A3. B5, D10,
	44		4	43	7	2										1	10													2	7	11	8	23		1	8		1							2		11	18	25	1	E7, F19

Summary of School Advertisements in *Aris' Birmingham Gazette*, c 1743-1793

		Evening	Day	Boarding	Arithmetic	Mathematics	Geometry	Trigonometry	Algebra	Navigation	Gauging	Dialling	Drilling	Mensuration	Surveying	Use of Globes & Maps	Drawing	Slide Rule & Math. Instrmts.	Artificer's Works	Mechanics	Hydraulics	Statics	Gunery	Optics	Astronomy	Natural Philosophy	Moral Philosophy	Logic	Metaphysics	Chronology	History	Geography	English	Reading & Spelling	Writing	Shorthand	Book keeping & a/cs	French	German	Italian	Spanish	Latin	Greek	Hebrew	Chaldee	Heraldry	Oratory	Rhetoric	Elocution	Fencing	Music	Dancing	Needlework & c	Cookery	
1786-90																																																						
A	m	7	12	3	8	4	7	5		1	1			4	3	1	5													1	6	3	9	11		8	4			2	1											m 13
	mf	9	10		4	2	2	2		1				2		1	4														3	3	9	5		4	4		3	3							1					mf 20
B	m		3	8	8	2	3	2	1					1		4	5														4	6	5	9		6	5			6	3	1							4		m 11
	mf																																																			
C	m			2	2	2	2	2	1							1	1			1				1	1	1					1	2		2		2	1	1		2	2					1					m 2
	mf		1																																																mf 1
D	m			3																																														m 3
	mf																																																		
E	m		10	18	11	7	7	7	3	1	1			1	1	4	3								1					1	2	8	3	15		8	5		1	12	9							3	7		m 21
	mf																																																			
F	m		5	15	18	11	10	9	3	2	2			5	4	4	7	1												1	3	10	7	18		13	5			11	9					1		2	8		m 18
	mf		1																																											1				mf 1
G-total																																																			
	58		12	52	12	2										4	23													2	11	23	14	33	1	1	20		2							2		15	27	35	A9,B8,C2, D14,E8,F17.
1791-93																																																				
A	m	5	8	4	8	3	6	4			1			3	2	1	3													1	5	3	7	10		7	4			1											m 10
	mf	10	13		7	3	3	3		1				2		1	4														4	3	10	6		5	3		1							1					mf 16
B	m		3	8	8	1	2	2	1					1		3	4														3	6	4	9		5	5			6	4	1							1	4		m 11
	mf																																																			
C	m			3	3	2	2	2	1							1	1			1				1	1	1					2	2	1	3		2	1	1		2	2					1					m 3
	mf		1														1																																		mf 1
D	m			1																																														m 1
	mf																																																		
E	m		10	19	13	8	8	8	3	1	1			1	1	4	5								1					1	2	9	4	17		9	7		1	14	11							5	9		m 22
	mf																																																			
F	m		4	18	18	9	8	8	2	1	1			5	2	2	7													1	3	11	10	21		13	6		1	12	8							3	7		m 21
	mf																																																			
G-total																																																				
	47		12	43	7	1										5	22													1	11	19	13	27		2	13		3							2		17	22	28	A5, B8, C1, D6, E11, F16