

INTRODUCTION

Adult Education and Social and Economic Problems

Some Aspects of Rural Adult Education
with Special Reference to East Lothian

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CHAPTER 1

INTRODUCTION

Adult Education: Social and Economic Problems

There is a long-standing debate among educationalists and sociologists whether education is a factor strong enough, or potent enough, to influence the initiation of major social or economic change of permanent or irrevocable nature in the structure of human society. In other words, can the introduction of a new educational change of direction or method, or the adoption of some radical or innovative alteration in aim or purpose in a country's educational system, in itself, be of sufficient potential to influence society into a different channel of development?

The trend of development of our thought in supplying a cogent answer to these questions appears to have altered markedly in recent years when compared with the views of educationalists and politicians of the nineteenth century. Henry Brougham, for example, in a speech to the House of Commons (8th May 1818) on the "Education of the Poor and Charitable Abuses", places education as the prime and dominant element in the elevation of society generally, to the higher status he seeks:

... the best means of altering this deplorable state of circumstances [i.e. the low standards of living of the poorer strata of the community], and of introducing among the people that knowledge and that mental improvement, on which the happiness

and progress of society so entirely depend..(1).

Today, even the most adamant and enthusiastic advocate of education as a vehicle of social change would feel himself bound to amend and qualify this sentiment. He would be compelled to put education in perspective as one of many factors contributing to change in society, or as Ottoway concludes

It is sometimes suggested that education is one of the causes of social change.

The opposite is more true. Educational change tends to follow other social changes, rather than initiate them...

Education cannot be changed until the culture changes -- except by a few pioneers who are ahead of their time and are trying to educate society. (2).

It is of vital importance to keep those admonitions in mind when investigating the development brought about by the agricultural improvers of the eighteenth and nineteenth centuries. There was a problem of an educational nature to be overcome, in seeking to bring to fruition aims and aspirations for the improvement of Scottish methods of farming. This however, was only one among many factors present, and to see the whole as solely, or even predominantly, an educational problem would be to neglect the major influence of these other factors. This paper will attempt to analyse the educational factors that were involved in the vast, uphill task of Scotland's agricultural

improvement, while bearing in mind constantly that the educational element was only one of many influences present.

Indeed, the danger of attributing too great an influence to the writings of educational enthusiasts, and the pitfalls endemic in the neglect of political and economic factors is well illustrated by Smout and Fenton:

The early experiences of some of the first post-Union improvers confirm how little headway could be made in a country where demand was slack. Cockburn of Ormiston, who injected from his private income and was wild with contagious enthusiasm for enclosures, turnips and new rotations, failed to make a profit himself and certainly failed to convert his neighbourhood. Many such men -- even Grant of Monymusk is not immune from the stigma in his early days -- were rich men playing at farming, and their experiments had little relevance to the ordinary farmer. Not until a generally expanding market put money into the pockets of the farmer and landowner for the first time since the late sixteenth century could there be a basic change in the structure of farming.

... Not until then did the general farming community (as opposed to a few enthusiasts) become really contemptuous about old ways. (3).

Thus we must see educational aspects of this line of development and change as contributory, rather than completely dominant factors which can be readily isolated or treated solely as completely separate entities. A problem of an educational nature, however, there certainly was, and this by its nature, was one falling into the broad province of adult education. In the early eighteenth century, Scottish agriculture was backward in the extreme in comparison with that of England or Holland, and a major impediment to its improvement lay in the attitude of mind of the vast majority of its practitioners. Here, it might be contended that this was more a problem relevant to practical training (our present-day 'vocational education' or 'further education') rather than 'education' as such, but if one requires to change attitudes as well as transmit knowledge and skills, the simple definition of 'training' is not wide enough to cover this. In adult education particularly, this fineness of hair-splitting division has bedevilled rational definition for decades. As Dr Lowe points out in a recent article:

The distinction between vocational and non-vocational education is rapidly becoming irrelevant and unpopular. Many adult educationalists now regard the polarisation between the two as unrealistic and mischievously divisive. (4).

In using the term 'adult education' then, with reference to the individuals and societies who improved Scottish

agriculture in the eighteenth and nineteenth centuries, and whose work continues today in the hands of their successors, the wider, more comprehensive meaning is that intended.

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- (2) Ottaway & S. S., Education and Society, Routledge & Kegan Paul, 1953, p. 12.
- (3) The Agricultural History Review, Edw. T. S. & Fenton, Alexander, Scottish Agriculture before the Improvers--an Exploration, Vol. III, Part 1, 1984.
- (4) Scottish Journal of Adult Education, Lowe, John, Recurrent education, Vol. I, No. 1, Autumn 1973, p. 8.

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CHAPTER II

The Nature and Scope of the Problem

Consensus of opinion among historians tends to paint a most unimpressive picture of Scottish agriculture at the beginning of the eighteenth century. The distinguishing features of the century that had gone before had been constitutional and religious strife which from time to time erupted in rebellion or civil war, and this undoubtedly left its mark on economic progress. But, major impediment though this internal canker was, it was far from being the only one. Other countries too, had suffered gravely from religious and civil disruption, but these had not permitted economic enterprise to slide or stagnate to anything like the same extent as in the Scottish pattern.

It must seem little short of astounding that a country which had pioneered a parochial school system of education (admittedly never carried through to the full extent proposed in Knox's 'First Book of Discipline'), leading on to comparatively free entry to her four universities, should, at the same time so neglect to develop the economic sinews basically necessary for its people's wellbeing. The intention of the founding fathers of the Reformed Kirk is clearly expressed:

But they must be exorted, and by censure of the Church compelled to dedicat their sones by good exercise to the profit of the Church and to the commonwealth ... If thei be fund apt to letteris and learning,

then may thei not ... be permittit to
reject learnyng: but must be chargeit
to continew their studie, sa that the
commonwealthe may have some comfort by
them. (1).

There would seem to be a paradox here for all who believe that educational development is basic to economic advancement. The key to the solution of this may well lie in the operative phrase '... by censure of the Church compelled ...', for the church's idea of what would 'profit' the 'commonwealthe', though spiritually above question, might well have been practically unsound. The 'learnyng' which the church referred to here was academic learning along fairly well defined, non-innovatory channels in the Christian and classical tradition. The stories of village schoolmasters and their 'lads o' pairts' all feature the success of classical scholars, and it would be an extension beyond justification to suppose that practical or technical education, as we understand the terms in the modern idiom, were included until long after the Industrial Revolution had struck deep roots. Even then, such areas were predominantly for 'second stream' abilities.

An innate conservatism in the educational system the Kirk had inaugurated died hard. The belief that there was no advancement to be had from the land sustained the cliché of popular fiction of the farm-worker's son who worked his stubborn way through the parochial school and university

to 'the ministry'; not the one who succeeded in his farming. (2). This attitude of mind to a large extent helps to explain how, in a comparatively enlightened country, agriculture should be so backward. For backward it certainly was, as Professor Pryde describes it:

At the opening of the eighteenth century the Scottish farmer still clung stubbornly, even superstitiously, to the laborious and unproductive ways of his forebears. His inability to make a decent living from the land proclaimed itself to the traveller in the very appearance of the countryside -- the gaunt expanses of treeless waste, the many marshes, peat-bogs and patches of whin and broom, the open, unfenced fields, some of them climbing up the stony hillsides, ... the long, narrow strips or 'rigs' of plough-land separated by weed-covered 'baulks'.

Crops were poor, farm animals were stunted, and life was hard and insecure even in normal times; but, when famine stalked the land, as it did in the 'Seven Ill Years' (1695-1702), nothing could save thousands of country folk from starvation and death. (3).

The works of economic historians of this period are

legion. Tracing the lines of development of technical and economic improvements which changed the situation described above, through enclosures, the introduction of new methods in arable and stock management, planting shelter-belts, drainage, liming and the rest, has been faithfully recorded in detail both in contemporary commentaries and secondary works. How important however, was the educational task of the improvers and pioneers in this movement? How difficult was it to wean the Scottish agricultural population from the reticence and indifference of peasant farming methods, virtually unchanged from medieval patterns, to the new improved methods? Though impossible to quantify accurately in any statistical sense, an indication of the contribution of instruction and example as potent factors (even initiating factors), in the process of change, may be gleaned from the current beliefs and opinions of contemporaries. It is equally evident in the frustrated irritation, thinly concealed, or even at times openly expressed by the improvers at the waywardness, irresponsibility, or hostility they frequently encountered. It would be wrong to attribute this ultra-conservative antagonism to change, entirely to an innate wrongheadedness of the Scot, as many contemporary writers of the period have done, for social and economic influences played a vital part in the enclosure and improvement of Scottish farming. For example, there is considerable evidence to show that many poor tenants suffered from the

changes in farming:

After my father was ejected and four or five of these small farms had been thrown into one the whole was let to one of their number.

Still amongst their own customers, with some small debts still due to them about the place, they my parents felt inclined to linger in the village ... and became simply cottars, retaining nothing of their former stock but three or four barn-door hens. (4).

Nevertheless, though some individuals suffered, from a national point of view the changes in farming which began in Scotland in the eighteenth century brought immense benefit and prosperity to the population at large. Also, Scotland could never have developed into the industrial, urbanised country we know today without basic and substantial improvement of her agriculture. This however is a long-term view, not at all obvious to many of those who lived through the period of change. Indeed, many of the objections put forward by tenant farmers who practised the old runrig methods sound preposterous to modern logic. Symon quotes instances for example, where nothing improving landlords could do or say would induce some of the old farm-workers to plough straight furrows, in case elves might shoot bolts along these causing 'elf-ill' (a mysterious lameness) in their horses, which the crooked

furrows of the run-rig strips had effectively prevented.(5)
Another instance of the depth to which superstition could
drag reasoning is contained in an entry in the Old Statis-
tical Account from the parish of Lochcarron in Ross-shire
by the parish minister, the Rev. Lachlan Mackenzie:

Now good Sir John it was for you

I gathered all my news

But you will say that I forgot

To count the sheep and cows.

Of these we have a number too

(But then twixt you and I)

The number they would never tell

for fear the beasts would die. (6).

Against reasoning of this sort rational logic could
prove of little avail, and certain factors inherent in
Scottish farming practice in the eighteenth century tended
to perpetuate such superstition, and to undermine all
efforts to eradicate these relics of medieval thought and
belief. Looming large among these undesirable influences,
according to some contemporary writers of the period,
was the bothy system. In the bothies young lads beginning
their work on the farm were quartered together with the
older hands, and received, in Stuart's opinion, the type of
mental and moral contamination from the older men which
a young 'first offender' might receive from an 'old lag'
he was confined with in the same prison cell. He attrib-
uted the rapid progress of recent years of agriculture

in the Lothians to the decay of the bothy system in this area, and the consequent growth of an enlightened generation of farm-workers, eager and capable to give thought and study to the new methods and scientific practice which had so advanced Lothian farming generally. The basis of his argument was, that without an enlightened, educated body of farm-workers real progress was impossible, and that the bothy system constituted a major hindrance to this. His estimation however, as to how this section of the agricultural community could be persuaded to acquire education in the applied science relevant to their work seemed rather pessimistic:

I would strongly recommend farmers to afford them good newspapers and to have a small farm library for them of their own, kept in the farmhouse ... Their ignorance is often truly deplorable, in a few years after leaving school. Their work being so heavy all day, they get drowsy at night, and cannot sit up to read: but very many have no conveniencies -- both as to light and quiet ... These lads will not go any distance to an evening school, in winter: and although they would, I am not sure if congregating them so would be at all prudent, for many reasons. (7).

Undoubtedly, this need for reasonably educated farm-workers, with some degree of enthusiasm for their calling was a basic necessity to improvement. It was, to a large extent the early realisation of this, that enabled the farmers of the Lothians to progress so quickly in comparison with other areas. The Rev. Henry Stuart had been most insistent on this in his address to the Forfarshire farmers, and his views are corroborated in a paper drawn up by George Hepburn of Smeaton for the consideration of the Board of Agriculture and Internal Improvement in 1794:

At the same time, if the husbandman should be instructed in the first principles of agriculture, before he enters upon the practice of it, and if he shall thereby be enabled to carry science to the field, he would proceed with more confidence, and his experience and observations would ripen into system more rapidly than by any other mode. (8).

However, this view of general education for such sections of the community as the farm-workers, as the key to improvement, was by no means universally accepted. Despite the optimism contained in the opening words of Brougham's speech to the House of Commons, in 1818, on the education of the poor, there was scepticism in many quarters, and downright hostility in others:

Mr Brougham could say, with perfect truth, in the opening of the speech before us, 'that the prejudices and fancies by which we were assured, that if we taught ploughmen and mechanics to read, they would disdain to work, have now entirely died away'. (9).

The opinions of the time were diverse on the whole concept of education of the 'lower orders' of society, and the possible political and economic outcome of such a course of action. The ideas stirred up in the French Revolution, and later in the Chartist movement in Britain, were alarming enough to the 'men of property', at least in the early part of the nineteenth century, to persuade many that expanding adult education might as easily provide a vehicle of revolution as a vehicle of improvement. For example, Andrew Bell, one of the pioneers of the monitorial system in schools, voiced this feeling of uncertainty very strongly in 1805:

There is a risk of elevating them [the working classes] from the drudgery of daily labour above their condition and thereby rendering them discontented and unhappy in their lot. It may suffice to teach the generality, on an economical plan to read the Bible, and understand the doctrines of our holy religion. (10).

Here, the Scottish Kirk could have given a positive

and definite lead, but, according to J W Hudson, the historian of the adult education movement in the early nineteenth century, its views were, to say the least, restrictive. There were of course, many individual ministers of the Kirk who supported and contributed time and effort to adult education, but in general, the Kirk supplied very little positive guidance to the movement. Hudson said this of the Scottish scene in 1850:

An influence of this misguided character has acted most prejudicially to the advancement of literary, scientific and artistic institutions in Scotland. Numerous societies formed in the best spirit of liberty of conscience, and eminently calculated to disseminate truth, enlightenment and happiness, have been destroyed by the unjust breath of fanaticism. (11).

If enlightenment and education of the farm-worker, in however limited a sense by present-day standards, were pre-requisites for the ultimate improvement of Scottish agriculture, it must have been doubly important to ensure similar advances in those other sections of the rural community -- the tenant farmer and landlord -- for obviously no progress in this direction could be initiated or sustained without their conviction of its beneficial nature. That this was eventually achieved is made evident in an article by Charles Stevenson in the

Journal of the Royal Agricultural Society of England, in
1853:

The history of the agriculture of East Lothian, since the end of the last century, teaches one lesson so emphatically that it must not be overlooked in this Report. Its record of improvement is almost universally that of those effected by the tenants themselves, men of the highest intelligence, and many of them with considerable capital .. and an educated and faithful class of farm labourers. (12).

This end state however, was evidently a long, slow, uphill process. It showed clearly for example, in a series of letters written by that pioneer of agricultural improvement in the county of East Lothian, John Cockburn of Ormiston, more than a century before Stevenson's article. Cockburn was an MP in the recently unified Parliament, and although his parliamentary activities kept him away from his farming and estate management at Ormiston for long periods, he kept in close touch with developments there through a series of extremely detailed letters to Charles Bell, his gardener. Though the bulk of the substance of this correspondence, as one might expect, dealt with the technical details of current agricultural and estate problems, Cockburn also managed to shed some light on his thinking about the existing state

of farmers and farming in East Lothian at that period. Far from being content with infusing enthusiasm on his own estate, he was troubled about the stagnation of Scottish farming generally. Cockburn attempted to teach the new methods both by example and by structured learning situations, and in each case the obstructions of indifference and reluctance to change, even for the better, on the part of many landlords and tenants drove him into torrents of invective, or even despair. He seemed well aware that his example in many practices would in all probability be ignored by many of his neighbours:

These are only thoughts of mine of which if you are the better I shall be glad of it, but I am far from expecting any shall follow my ways of thinking in their own concerns further than they think it right and not wherein I am wrong or better methods can be found. (13).

He recognised neglect and ignorance as formidable adversaries in his campaign:

... our humour [Scots] of neglecting something necessary towards success in most things we undertake and saying or acting as if we thought it will do well enough for all that. A little Ignorance is an Ingredient in our not having such things much better ... than we have. (13a).

At times he became very hot-tempered at the gross lack

of rational thought so blatantly displayed by some of his contemporaries:

... Reason would teach us this thorough weeding of crops and many other good Maxims in Agriculture would we employ our heads a little to the use of it and be at pains in executing what a reasoning head would dictate. (13b).

Or again:

But our people are lazie and saying no body will buy and no body will distinguish is chiefly owing to the want of activity ... We are glad of all excuses for our sleeping on in our poverty and our old jog trot. (13c).

Occasionally, like all enthusiastic teachers, he lost his patience altogether:

Tell Mrs Miles that I had a Letter from a Gentleman who was at the last Club Agricultural Club, Bantering me for there being no good Malt drink at Ormiston. I had no excuse to make but to acknowledge the obstinate stupidity of our people -- who talk of being good Countrymen but act against anything can improve it. We complain of Barley being cheap and yet we won't do anything towards adding to the consumption of it...

Can anything be a stronger proof of the indolent stupidity of the people who live in so fine a Barley country and won't be at pains to make good drink of it, tho' the doing so would put money in their pockets and be for their own and the Country's good? (13d).

Another malaise of the Scottish farming world, and one specially relevant to the very landed aristocracy from whom any initial incentive to ultimate improvement of farming practice would necessarily have to spring, was that of showing what was currently regarded as a healthy disregard for anything savouring of a profit motive. Many of the landlords derided and disparaged any of their number who so demeaned himself as to take farming, or any other enterprise, seriously. The idea that 'trade' (and farming to obtain a profit from one's enterprise came into this category) was 'above' the dignity of a gentleman, was one that could prove extremely detrimental to the development and extension of the whole Scottish economy, for only from this section of the community could the necessary capital be forthcoming. A letter to the 'Scots Magazine' of 1739, signed 'An Englishman', illustrates how dangerous this complacency in the upper ranks of Scottish society could be:

Sir,

It has been with much pleasure that I, and all who wish well to SCOTLAND, have read several accounts of Schemes,

Proposals etc. for the enriching of your country by a general increase and improvement in Agriculture, Planting and every other part of Husbandry: and which almost necessary consequent thereon, a large extension of your Trade and Manufactures, in the various branches capable of being rendered beneficial to the poor artificers and advantageous to the whole land:- But it happened, from what cause you may more probably know than I that most, if not all your beneficial plans have terminated in speculation only, without producing so much as an attempt to put into practice what has evidently been calculated for the good of your country. The reason of this may be well worth enquiring into: for some very formidable cause there must be, which can have frustrated the endeavours of so many persons of injenuity and wisdom, of penetration and candour, from taking effect be there no private views beset, no self-interest would influence, and only a love for SCOTLAND could animate ... it is from GENTLEMEN only, men of

liberal education, and the open, generous sentiments resulting from this, that the perfecting such publick undertakings can alone be expected; since, surely, none will urge, that a capacity of serving one's country in a reason for not doing it:- for where Trade is essential to the wealth and prosperity of a nation, Kings themselves disdain not the name nor business of Merchants. (14).

Thus no section of the Scottish rural community could be completely exonerated from some degree of responsibility for the relatively backward state of the nation's agriculture at the opening of the eighteenth century. Before any appreciable improvement in agricultural methods and practice could be achieved, the superstition and ignorance of the ploughman, the indifference and easy-going attitude of the tenant farmer and the aloofness and out-dated thinking of the landlord would have to be eradicated. Attitudes and values would have to be changed, time-honoured custom ameliorated, old methods based on peasant economy and neo-feudal techniques discontinued, to allow the new knowledge free scope and influence. The cardinal importance of the part some scheme of adult education would be called upon to assist in making change possible is evident, though it has probably received a great deal less attention and publicity from historians than the

economic and technical aspects of the transition from run-rig to enclosure with its attendant benefits.

How was such a scheme to be set in motion and maintained at a time when the education of adults (where it existed at all), had little or nothing in the nature of any structure or planned initiative stemming from either statutory or voluntary bodies? Where were the resources, the financial backing, the teachers to come from to implement such a scheme? A number of factors combined, each to a different extent, to make possible a movement in adult education capable of contributing substantially to the changes necessary in attitudes and techniques to stimulate Scotland's rural population first to active support, and finally to enthusiasm, for modern farming practice. The first, and probably the crucial factors, were the economic and technological ones. People changed their ways and methods when it became economically sound practice to do so, and when the technical means of change were available. Such considerations belong to the realm of economic history, and are outwith the scope of the present enquiry. The main agencies whereby educational factors helped to maintain and stimulate such improvement lay in the work and example of a handful of pioneering spirits whose enthusiasm and obstinacy in the face of adversity never faltered. It also came about due to the proliferation of educational societies of a voluntary, locally organised nature which frequently became vehicles not merely of the spread of agricultural knowledge in

a technical sense, but also of adult education generally. It is to a consideration of the birth and growth of these societies in their early stages that we must turn in chapters III and IV.

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CHAPTER III

The Society of Improvers in the Knowledge of Agriculture in Scotland

It is hardly possible in any analysis of the birth and development of agricultural societies of the eighteenth and nineteenth centuries to isolate completely the various factors which first instigated their growth and later stimulated it into a kind of national movement for the improvement and rejuvenation of Scottish farming. The work of the pioneer improvers such as Cockburn, Maxwell and the rest, developed against a background of major economic and political influences. The Union of the Parliaments of 1707, the Jacobite Rebellions, the Industrial Revolution and the wars against Revolutionary France and Napoleon, all exerted vast influence on the lines of development, the educational forces that were to change the rural society of Scotland would take.

Two vital influences seem to be identifiable as major factors in bringing about this change. The first was the movement towards enclosures. This was to form the basis of new improved farming practices. It was however, nothing really new for thinking people had considered the possibilities long before the opening of the eighteenth century. The old open-field system of farming was clearly shown to be inefficient. Indeed, as early as 1235, the English Statute of Merton had sanctioned the enclosure of waste land provided sufficient was left for the needs

of knights and freeholders. These 'closes' or 'assarts' enclosed from what had formerly been waste land might be arable or meadow. If arable, they were well tilled, and probably produced a higher average crop than equivalent areas in the open-fields. When to the wasteful open-field system was added the Scottish method of run-rig, which farmed the land to exhaustion, it became doubly wasteful and highly inefficient. The arguments against change lay not so much in a defence of the existing system, but rather in the social upheaval and heavy capital expenditure involved in the transition to enclosed fields. Only when economic conditions began to exert a pressure which could not be resisted, for example, with rapidly growing urbanism due to the Industrial Revolution, or increasing reliance on home-grown food supplies under the Napoleonic blockade, did the enclosure movement become general in any meaningful sense in Scotland.

Nevertheless, considerable development earlier than the eighteenth century can be seen in the work and example of a few advanced thinkers on agricultural problems. By their example and enthusiasm they attempted to gain converts, while growth of accumulated knowledge in applied science laid a solid basis for the eventual transition of the pattern of Scottish farming which had been dictated by economic and political considerations. The opening decades of the eighteenth century were fraught with consequence for society in Scotland. Symon puts forward the view that the Act of Union of the Parliaments of 1707 was

an event of major importance to Scottish agriculture (1). He cites the influence that must have impressed Scottish Members of Parliament on their journeys to and from London, of the immense difference in farming practice in England. He quotes Cockburn of Ormiston as an obvious example of one so influenced. Undoubtedly, the influence of England was a factor in the improvement of Scottish agriculture, but to suggest that it was largely because of the Union that any improvement came about, as some economic historians of the period have postulated, must concede a great deal of 'post hoc, ergo propter hoc'. Birnie, for example, expresses such ideas as follows;

The development of her agriculture was the compensation which Scotland obtained for the destruction of her trade and industry by the Union ... Her prosperous agriculture furnished a solid base on which she could rear a stronger and more enduring fabric of industry. (2).

Perhaps this assumes too great an influence from the political union of the two countries, for Scotland learned not only from English example, but from other European countries also, notably Holland. Many of the improvers either had grave doubts on the question of union, or were outspokenly hostile to it. Fletcher of Saltoun, for example, a fiery, vociferous republican, was almost as violent in his hostility towards the question of political union with England as he was ardent in his desire to

adapt English improved farming techniques. If we seek an original source for the application of applied science to Scottish farming practice, we must go much deeper than one political event, however significant that event was for Scotland.

The internal strife, the religious bigotry and the constitutional climaxes of the mid-seventeenth century were to contrast markedly with the relative stability of British life after 1688, and even more so by the time the Hanoverian dynasty was established in 1714. A long period of peace ensued for Britain, broken briefly, it is true, in Scotland especially, by the two Jacobite Rebellions. A period of settling down and of stability occurred in this interval between the upheavals of the earlier civil and religious strife, and the later social disruption of the Napoleonic Wars and Industrial Revolution. The harsher, bigoted aspects of Puritanical and Calvinistic doctrines began to relax their all-powerful grip, and unbend slightly from their hitherto dominating position in men's minds. This permitted them to focus on knowledge, ideas, and issues other than those based directly on religious dogma or the Bible. For slightly more than a century, the interests and aims of religion and secular scientific knowledge were allied. It was left to Darwin and his fellow scientists to shatter this in the late 1850s. It was also the period when the voluntary movements in adult education generally were beginning to exert influence which was to have far reaching effect on agri-

cultural thought and practice, especially in the country districts. As Kelly says:

... if we seek the period in which adult education in the modern sense had its substantial beginning, that period must be, not the nineteenth century, but the eighteenth ... its rise has been explained almost exclusively in terms of the Industrial Revolution and the rise of democracy ... how incomplete and misleading this view is. (3).

There is ample evidence to show that an interest in scientific theory and practice began long before any technological or commercial revolution urged concern and participation in adult education solely, or primarily, from utilitarian motives. Indeed, science tended to be adopted as a kind of 'core' subject of the adult education of the period. Much of this thirst for knowledge however, arose without any direct accompanying vocational or utilitarian practice. At its start, the industrial development of the eighteenth century and the early nineteenth century was but little indebted to the army of literate clerks and technicians required for its maintenance in the latter half of the nineteenth century. In its initial stages, the adult education movement of the eighteenth century was essentially a middle-class one. From about the time of the Restoration (1660) the fashion of coffee-houses spread from London to the main provincial cities of England, and

in Scotland, to Edinburgh and Glasgow. These tended to develop, not merely as places of refreshment or social meeting places, but as centres of intellectual discussion and debate which brought together many of the best minds of their surrounding localities. Such establishments were especially important as agencies for the dissemination of news and current topics of local and national interest through the medium of the newspaper which was slowly beginning to acquire some degree of freedom from the restrictions imposed on it by the Stuart monarchs in the seventeenth century. In 1699, for example, the 'Edinburgh Gazette' first appeared, the first Scottish newspaper to acquire any degree of permanence in its circulation. Laws in Scotland however, regarding the publication of books and newspapers were particularly strict, and the Scottish Privy Council continued to exercise a severe censorship which was not really removed until the abolition of that body with the Union of 1707. When the printed word was freed, an impetus was also given to the growth and proliferation of libraries in Scotland, an essential pre-requisite to the adult education movement:

The commercial circulating libraries were the first in the field. The earliest of which we have certain knowledge was that started by Allan Ramsay, poet, wigmaker, and bookseller, in his shop in the High Street of Edinburgh, apparently in 1726 ... (4).

Simultaneously with the development of the freeing and distribution of the written word there arose the popular demand for lecturing, and gifted or original speakers on any topic of current interest, but particularly on scientific themes, were welcome at coffee-house, club or ad hoc meeting. All these ingredients, combined with the 'insatiable curiosity' of the age, led to the birth in the early eighteenth century of the scientific or literary and philosophical society, many with newspaper and periodical reading rooms. The aims of such bodies were to further the growth and dispersal of knowledge of the particular interest they represented, usually through the medium of guest speakers delivering lectures or courses on some pre-arranged topic, the upkeep of a library for the use of members, and generally furthering the concerns and interests of their particular specialism. These might be highly specialist bodies, for example the Medical Society of Edinburgh (founded 1734), or the Physical Society of Edinburgh (founded 1771), or they might be constituted with a view to more popular appeal and the general dissemination of knowledge, such as the Philosophical Society of Edinburgh (founded 1739).

So far as the interests of agriculture were concerned, an early start was made with the foundation on 8th June 1723 of the 'Honourable the Society of Improvers In the Knowledge of Agriculture in Scotland', in Edinburgh, which Symon refers to as 'the mainspring of the movement to

transform Scotland's agriculture' (5). So far as we are aware, this was the earliest society of its type, for although Colville mentions the fact that in Clackmannan a Society of Husbandry existed as early as 1699, this appears to have been more of a benefit society than one primarily devoted to the education of its members (6). The opening sentence of the 'Select Transactions' of the Edinburgh Society, edited by Robert Maxwell of Arkland, seems to sum up the general purposes envisaged:

If our agriculture and manufactures were improved and carried on to the Height they could bear, we might be near as easy and convenient in our Circumstances, as even the people of our Sister Kingdom of England: seeing neither our soil nor our Climate is unfriendly and since we enjoy the same Previlages of trade with them ... If we are far behind, we ought to follow the faster. (7).

In the preamble to the formal constitution of the Society, Maxwell emphasised that he and his fellow members were under no illusion as to the gigantic task the achievement of these objects could entail. The very low state of Scottish farming was largely due to a combination of neglect and lack of the necessary technical skills. Also it suffered from a woeful dearth of the facilities for experiment, or the means of accumulation and dispersal of the results of such experiments at home or elsewhere.

It was this vicious circle of neglect, ignorance and lack of experimentation that the Edinburgh Society hoped to break:

... considering in how low a state the manufacturers in Scotland are, and how much the right Husbandry and Improvement of Ground is neglected, partly through the want of skill in those who make Profession thereof, and partly through the want of due Encouragement for making proper Experiments of the several Improvements that the different soils in this country are capable of .. (8)

The preamble also detailed some of the main points in which Scottish agricultural practice and methods were especially inefficient, and attempted to outline solutions to such problems which the formation of a Society of Improvers could most readily effect. Time and again, Maxwell insisted that the greatest contribution his fellow members could make would be that of communication of the results of their experiments to others willing, but perhaps hesitant through lack of such information, to follow. The importance of the element of communication of information must have been paramount in a country like eighteenth century Scotland where communities tended to assume a local rather than national structure, and which lacked modern sophisticated means of dispersal of such information. Since the constitution of the Edinburgh Society

gives a great deal of information on the educational methods employed, and since the Edinburgh Society served in many respects as a model for later societies of a more local character, it is important to consider it in some detail.

In the first article of the constitution (9) the duties of the secretary were outlined. These consisted mainly of keeping an accurate list of the members' names with records of their subscriptions as paid, and to attend to the general correspondence. This latter duty would be no light task, since the society carried out a voluminous correspondence. Money obtained from subscriptions 'collected from time to time, is to be applied for purchasing such books as the Society or Council shall think proper'. The following article stated that applications for membership were to be by letter, with the approval of two or three members of the committee, and that 'each Subscriber or Intrans pay a Crown at his Entry, and thereafter yearly a Crown at the anniversary Meeting'. The third article outlined that the affairs of the Society were to be managed by a committee of twenty-five, who were to be elected annually by the members. In any committee so elected, at least thirteen of them must be residents in and about Edinburgh. The committee were to divide themselves into classes to, 'chuse different Subjects upon Agriculture and mark down their Thoughts thereupon in Writing'. They were to correspond with 'the most Intelligent in all the different Counties in the Nation, concerning their different ways

of managing their Grounds, that what may be amiss may be corrected, and what is profitable imitated'. They resolved to recommend to the 'several Gentlemen of the Society to send up the different ways of the Management of their Farms, and so form small Societies of Gentlemen and Farmers in their several Counties'.

How far the formation of local societies was directly influenced by the model of the Edinburgh Society, or how much they were an integral part of the more general interest in science which later gave rise to the mechanics' institutes, we have no ready means of deciding. Certainly, Cockburn of Ormiston, a prominent member of the Edinburgh Society, helped to establish an agricultural society at Ormiston, but many of the local societies of a later date, though interested in agriculture, held courses of lectures on a wide variety of subjects. A typical example was the Haddington School of Arts (see Ch IV). The Society's influence in stimulating written works however, was more direct. Maxwell himself, published 'The Practical Husbandman' in 1757, and, by the early 1860s, so much had been written that the Rev Adam Dickson, minister of Duns, published his very lengthy, first volume of a 'Treatise on Agriculture'. The second volume of this work appeared in 1769. These volumes were largely an immense collation of new methods and recent experiments, introduced or tried out in Scotland and their results. The instant success of Adam Dickson's works were shown in the fact that they ran to three editions. Later, Andrew Wright, who

farmed at Ormiston and was an intimate acquaintance of Cockburn's, wrote a treatise surveying the whole of Scottish agriculture in the 1780s. Though this devoted much attention to the 'Forfeited Estates', its emphasis was on the achievements of the improvers, and he paid tribute to the earlier work of the Edinburgh Society as an agent for its stimulating influence in the movement for better farming in Scotland.

The fifth article of the Society's constitution affirmed, 'that Farmers and Gardeners who shall desire to be members, be received in gratis, if by the Society or Council found qualified ... that advertisement be given to such Workmen as please to come and enter their names in a Book to be kept by the Secretary for that purpose'. Just how successful this attempt was to make the Society mixed or comprehensive socially by means of waiving payment of subscription, would be mere speculation. From the list of members it would appear that farmers and gentlemen tended to predominate (taking the possession of a title, or the word 'of' followed by a place name as an indication of property). Such experience in adult educational schemes generally is not uncommon, then or now. Nevertheless, some degree of social mixing there must have been, however tenuous. An inspection of the membership list shows the noble Dukes of Athole and of Hamilton, together with the names of Mr Baden, 'Engineer', and Mr Boutcher, 'Gardener'. The next article showed clearly the advisory as well as the purely educational

nature of the Society's activities, stating that, '...all Members of the Society, who want the Opinion of the Council concerning their Farms or Grounds, shall, upon sending to the Secretary the exact situation and nature of them... be answered by the Council, without any expense, except Postage'. Like the modern Colleges of Agriculture in Scotland today, the Society undertook a consultative as well as an educational role, and a further condition of this was that the recipient of the advice was to acquaint the secretary of the results, or, if he considered them important enough, he could send reports to the press for publication and circulation to as wide a readership as possible.

Article seven dealt largely with the all-important Council in whose hands the development and progress of the Society lay. Firstly, the election for that body was to be publicly advertised in the press, and a statement issued that the secretary would be in attendance at 'Muirhead's Coffee-house' for three appointed days between two and four in the afternoon, 'to receive in from the different Members a subscribed list of twenty-five to serve for their Council till the anniversary Meeting'. The Committee were then to peruse the lists and decide who had been elected. The Council so elected were to act within the basis of the constitution outlined above, but there was nothing of a rigid nature about this, for they were empowered to add to, or amend the rules as they deemed necessary. Following the constitution of the

Society in Maxwell's 'Transactions', is a detailed series of papers which were presented to the members by leading improvers of the day of national or local importance, such as Sir Archibald Grant of Monymusk. Interspersed with these lectures or addresses, are letters received by the secretary in answer to members' enquiries on agricultural topics, for consideration from prominent agriculturalists. Jethro Tull, for example, carried on a lengthy correspondence with the Society. Many of the contributions are framed in the form of questions, for example:

Number XI .. Queries by Col Halket, concerning the Improvement of a Meadow, of various Soils, over-run with Spretts, and fogged. With the Society's answers. (10).

For over twenty years the Society of Improvers continued its activities in Edinburgh, and the names of many prominent agriculturalists of the period were associated with its activities, either as members or contributors. The Society appears to have gone into abeyance during the 1745 Jacobite Rebellion when a Highland army occupied the Scottish Capital and caused considerable disruption to its activities. (11).

How far did the improvers of the early eighteenth century, who constituted the Edinburgh Society, achieve their object of injecting a new spirit of enquiry and experiment into Scottish farming? Or, how successful were they in persuading others to adopt their methods and emulate

their enthusiasm? The only fair assessment can be that they achieved but partial and limited success. Those who hoped for an agrarian revolution in a few short years were disappointed. Economic conditions nationally in the early decades of the eighteenth century were not generally conducive to agricultural change on the scale the improvers sought, and the influences of patriotism or admiration of the methods of the more affluent English were insufficient in themselves to induce the bulk of Scots to follow. One major impediment to copying the improvers' methods must have lain in the fact that many of them achieved little financial gain from their efforts. As Professor Smout points out:

Why did they become improvers? It was not because they were good business men. Cockburn lost his estate to the Earl of Hopetoun. Maxwell of Arkland, so lavish with advice as secretary of the Society of Improvers, undermined its propoganda by becoming bankrupt ... The reason for so many of the first improvers' failure to make farming pay was not only that they were pioneers, or that they were operating in a country where incomes were low and demand for agricultural produce generally slack ... It was also that at the deepest level they were not ... impelled by economic

necessity to farm as they did ... As a result most tenants were deeply contemptuous of the dilettante ways of the 'gentlemen farmers'. (12).

Yet, to see the significance of the Society of Improvers as merely superficial or ephemeral would not be strictly in accordance with the facts. The improvers failed to convert the country en mass, or to enlist the bulk of the rural population to their cause, but the educational forces they unleashed were to leave a valuable legacy to a later age where social and economic conditions were more amenable to their aims. A map made by Roy (now in the British Museum) of the Haddington area about 1750 shows many enclaves of improved, enclosed fields side by side with the old style rigs. Smout concludes:

On the other hand, in the long run, the contribution of all these vigorous amateurs was of incalculable importance. They broke the crust of custom by riddling it with holes of experiment and endeavour... The main function of the first improvers had thus been to provide the only possible models on which the transformation could be based, but thanks partly to their own characters and partly to the economic situation before 1780, they were generally unable to perfect the models or

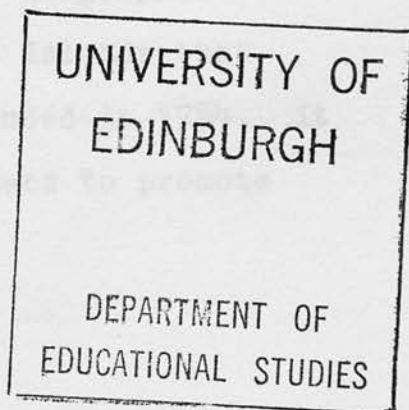
bring about the transformation
themselves. (13).

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CHAPTER IV

The Growth and Development of National and Local Agricultural Societies

By the closing decades of the eighteenth century, the introduction of new methods and improved practices to Scottish agriculture were beginning to show undeniable benefits to the whole farming community. This was made evident in the greater profits to tenants, increased wages of farm servants, higher rent-rolls, and, in general, the more pleasing aspect of the countryside. Development in this respect however, was exceedingly uneven throughout Scotland as a whole. In the east, the counties around Edinburgh showed the work of the improvers in its most advanced state - a tribute to the work of the Edinburgh Society and the many small local bodies that had sprung up largely due to its influence. Further north, from Fife to Moray on the eastern side of the country and in parts of the west country, scattered patches of improved farming showed the work of individual enthusiasts. Above the Highland line however the incidence of change was hardly seen at all. The Highland crofters fiercely resisted any move which would infringe their 'common rights' of pasturing stock or interfere with the old, inefficient cooperative methods of husbandry. It was largely to promote improvements in the Highlands and Islands that the Highland Society of Edinburgh was founded in 1784. It was originally the intention of the founders to promote

improvements in this 'educational priority area', not merely in agriculture but in many other respects, including language, poetry and music. In time however, the central interest became agriculture and its main purpose was to supersede the laborious and wasteful techniques of Highland agriculture by an importation of more advanced systems from the Lowlands adapted to Highland conditions. Not only did the Highland Society 'pool' knowledge on the latest information on agrarian improvements, but also actively encouraged the spread and utilisation of this knowledge by the publication of essays and the award of gold medals to those who presented papers on current agricultural problems. Later, its interests broadened to include, not merely the Highlands, but the whole of Scotland as its province. Under its encouragement ploughing matches and cattle shows were staged (the first in 1822), which quickly grew to events of nation-wide interest to the Scottish agricultural population. Today, under its changed title which bears witness to its more widespread and comprehensive role in Scottish farming circles, the Royal Highland and Agricultural Society of Scotland, it is recognised as one of the major influences in agricultural advancement in the country. Its annual show, for example, now permanently sited at Ingleston, remains one of the most important educational events in the farming year, and its active encouragement in the improvement of ley farming systems in Scotland, entitle it to claim spiritual

Kinship with the old Society of Improvers of 1723 as the true successor to the work of the early pioneers. (1).

One major achievement of the Edinburgh Society of Improvers lay in the impetus and example given to the foundation of many local societies.

Article IV of the Society's constitution:

... resolved to recommend to the several Gentlemen of the Society to send up the different ways of the Management of their Farms, and so form small Societies of Gentlemen and Farmers in their several Counties. (2).

Perhaps however, as stated in the previous chapter, this proliferation of local societies in many of the Scottish provincial towns probably owed as much to the general interest in science which gave rise to the foundation of the mechanics' institutes. There were a great many local societies founded in south-east Scotland in the early nineteenth century, and although the majority outside the big cities took agricultural education and those branches of science which offered a major contribution to applied agriculture (botany, chemistry etc.) as their main interest, their activities frequently were of a much wider nature and included many subjects of general scientific or literary content.

Typical of these local societies was the Haddington School of Arts founded in 1822. The earlier minute books

of the society are no longer extant, but the fourth annual report of the School for the year 1826/27 opened on a note of optimism and faith in its future growth by the use of such phrases as, 'their Institution continues to flourish'; 'its condition during the past year has been more prosperous than at any period since its commencement'; 'created a fresh, and it is hoped a permanent interest in its favour'. (3). Much of the credit for this success, the writer of the annual report claimed, must go to the efficient manner in which the eighteen elected members of committee, together with the secretary-treasurer, librarian, and president, had conducted the running and organisation of the School's affairs. The president, Samuel Brown, pioneer of the itinerating library service in the east of Scotland (Appendix II), received special mention for his unstinting efforts and contagious enthusiasm. Two other factors, the report stated had greatly helped to bring about the healthy state of affairs of the School. In the first place, there had been no shortage of able and enthusiastic lecturers willing to devote time and energy to the members' needs, and to spread their knowledge and experience amongst those willing to receive it. Secondly, the originality and novelty of many of the courses had attracted large and attentive audiences:

This interest was happily still further encouraged by the novelty of the subjects on which the Committee were fortunate enough to obtain Gentlemen willing to deliver Lectures.

Instead of renewing instructions on a science which was in some measure known, not less than three of the subjects on which the members of the School of Arts were addressed during the session, were perfectly new to them:- a fact, which, without any disposition to boasting, it is apprehended could not easily be

affirmed of any town of the same magnitude. (4)

The unbridled enthusiasm and self-congratulatory tone of that paragraph speaks for itself. The School of Arts at Haddington was flourishing and expanding, and its founders were rightly showing some degree of pride in their achievement. In the century that had passed between the beginnings of the Edinburgh Society of Improvers (1723) and the opening of the Haddington School of Arts (1822), rapid change had been a dominant item in agriculture, industry, and social and political life generally in southern Scotland, as in the rest of Britain.

Agriculture (at least in this region) had almost totally abandoned 'run-rig' and 'common grazing' for enclosure, rotation and selective breeding of stock, except perhaps for a few individuals reluctant to surrender their 'enclaves' of old Scotland to the hands of the improvers. Trade and industry, under the impact of coal and steam power, were daily growing into factors powerful enough to pose a challenge to the hitherto supreme landed interest in Scotland. Britain had recently emerged from a protracted

war against revolutionary France and Napoleon, and an economic depression which had followed. More liberal attitudes were slowly making headway against the strength of religious bigotry and exclusive aristocracy. Thus the aims and aspirations of the Haddington School of Arts differed to a marked extent from those of the Edinburgh Society of Improvers, as did the public they sought to serve. Where the Improvers had restricted their objectives to a narrowly vocational plane, the conversion of those engaged in the practice of agriculture to new methods and concepts, the Haddington School of Arts took a much wider outlook, and offered a variety of courses designed for the general educational improvement of the 'whole person' in the social and liberal sense as well as the vocational one, and for the raising of the cultural standards of the community at large. This is an idea much more in keeping with modern thinking on adult education. As the recent Russell Report puts it:

However, no sharp line could be drawn between vocational and non-vocational education for what makes a course of study vocational or not is the student's motives for taking it rather than the nature of the course itself. (5).

Thus the Haddington School of Arts was not, strictly speaking, an agricultural society in the narrow sense. Nevertheless, it dispensed education in the heart of an

agricultural district to a population predominantly dependant, directly or indirectly, on agricultural activities. It thus merits inclusion in this paper.

In the session 1826-27, the Haddington School of Arts offered five courses to its students. Firstly, there was Dr Lorimer's course on Natural Philosophy which ran from the end of October to the end of January. Though the report does not give a great deal of detail of the content of the course, it appears to have concentrated largely on physics, but it also included other topics of a more general scientific nature. Today, it might be more accurately described as a 'basic sciences course'. This was followed by a course on agricultural chemistry by the same lecturer. Again, few details of the actual syllabus are given. The report stated that due to pressure of other work, Dr Lorimer was unable to complete the course, but that it would be repeated in full next session. Running parallel with these courses was a course conducted by Mr J G Lorimer (a brother of the doctor) on 'Popular Political Economy', which lasted from November till the end of March. This was followed in turn by a short series of lectures given by Mr Johnstone of the parochial school, on astronomy. Throughout the entire session, instruction in algebra, arithmetic and geometry were given by Mr Nisbet, described as an old pupil of the institution. Kelly's contention that in the nineteenth century, 'the urge to study science inevitably found its



chief outlet in adult education ...' (6), seems borne out in the courses offered in the Haddington School of Arts. It might also be contended that much of the content of the courses would find ready application in a relevant, practical sense for a young trade apprentice or agriculturist in a vocational or social setting. Nor can we dismiss the astronomy course as completely irrelevant to the farm worker. George Henderson, in his description of his own apprenticeship in farming, speaks of some elderly shepherds whose use of the movements of the heavenly bodies was almost phenomenal:

Marking the position of Deneb in the constellation of the Swan, at dawn on the day the rams were turned in with the flock, the shepherd expected the arrival of the first lambs when Vega occupied the same position at sunset.

While other people, using gestation tables, roamed the hillside night after night looking for lambs, our man would remain tranquilly in his cottage, saving his energy until the stars showed that the lambs were due. (7).

We may presume that Mr Nisbet's instruction in algebra, arithmetic and geometry were intended, at least in part, as a kind of background study to enable those whose basic education was not extensive, to make greater use of the more complicated parts of the lecture programme. It is

an accusation frequently levelled at the nineteenth century adult education movement that it failed to make adequate provision for many of its students in this category, and was thus foredoomed to failure in its higher aspirations. The Haddington School of Arts as early as 1826 appeared to have been conscious of that problem in its attempt to provide classes of a more elementary nature in addition to its main courses. A further indication of the School's sensitivity to this need was contained in advice given in the report:

... they earnestly recommend to the students to form themselves into classes for Mutual Instruction:-

A plan which is not only of easy adoption in itself, but highly important in its results; as the experience of similar Institutions can testify. (8).

The more able and experienced were to spread their knowledge and give assistance to those less confident in the basic subjects on which the courses rested.

The course in political economy however, was obviously the pride and joy of the writer of the report on the School's activities. He devoted no less than a quarter of the pages of the report to its praise and defence, and, of all the courses, it was the only one where a detailed syllabus was given. The Haddington School of Arts was essentially a rather conservative and conventional body (a brief glance at the list of subscribers to donations

confirms this), and any suspicion at that time that political radical doctrines were being preached to young apprentices and ploughmen had of necessity to be quashed:

Should it be imagined that Political Economy ... holds any dangerous alliance with politics; and should any impressions unfavourable to their Institution have arisen from this cause, your Committee beg to remark, that these are perfectly distinct subjects - that not only might the latter have flourished though the former had never existed - that not only are Political Economists often ignorant of politics, and vice versa: but that Political Economy is in its best, its soundest state, when left wholly to itself, untouched in any part by the foreign influence of Political power - so that, the objection is founded in mistake. (9).

Another charge against this course which the report sought to refute was that of the possible irrelevance of political economy to the young workmen and agriculturalists engaged in what were essentially manual tasks. That the constant fear of elevating the 'lower orders' above their station had to be guarded against, was evident, as the writer continued:

Or should it be imagined that Economical science is full of uncertainty, and that to pursue it is abstracting the mind from what is useful to what is unprofitable, it may not be amiss to observe, that Political Economy ... rests upon moral and on demonstrative evidence ... It is to be remembered that the science is taught in our Universities, not as an idle or fruitless speculation, but as containing most important practical truths. (10).

The report however, could not entirely dispel the issue that much of the material of which the course was composed might lead to some degree of discussion and speculation about the established order, and so fell back on a moral defence:

... and is the mechanic the only person from whom the knowledge of it [political economy] is to be carefully withheld: merely because it occasionally awakens a discussion, though that be the very exercise which best prepares the mind for the discharge of the active affairs of life: where matters must be decided upon, not by resistless evidence, but after weighing probabilities and obviating objectives? ... that no science can be more conducive to the

temporal welfare of the mechanic, or to
peace and good order of Society; and this
they have no doubt, will in a few years,
be the universal belief on the subject. (11).

The detailed summary for this course illustrated plainly
a number of problematical points closely related to
current thinking on the provision of adult education at
that period in time. For example, should the working
people in their quest for education seek the patronage,
the directions and the financial support of the middle-
class and civic or local authorities? Should they rely
largely on their own resources, and by those means escape
direction and conditioning by their employers? There
were two distinct lines of thought on the issue, for and
against the acceptance of patronage. Leonard Horner, the
founder of the Edinburgh School of Arts, spoke of:

... that unhappy circumstance of the
mechanics throwing off their assistance
of the better educated classes, from
a most mistaken notion of independence. (12).

On the same theme Hodgskin, one of the editors of the
'London Mechanics' Magazine', wrote in the initial manifesto
of the London Mechanics' Institute;

... men had better be without education..
than be educated by their rulers: for
then education is but the mere breaking
in of the steer to the yoke ... (13).

Indeed, the later split of working class opinion on this issue of aims and means, of the 'left wing', Chartist section of the mechanics' institutes movement who would overturn the reform society, and the 'right wing' section who saw adult education as a means of 'getting on' in society as at present constituted, lay a basic weakness which contributed in no small part to its decline. The same problem is with us yet, for we have seen a distinct parallel in the dissention over this issue between the NCLC and WEA of our own era. How much 'gentling of the masses' was integral to the provision of adult education in the early nineteenth century, and to what extent was the provision of courses angled at conformity and compliance in the working strata of the population? The condensed syllabus of the Haddington School's lecture course on popular political economy seems to justify, in no small measure, the apprehension felt in 'left wing' circles of the adult education movement at that period. In addition to the usual topics one would expect to be included in the twenty lecture course, capital, labour, population etc., were included items of both political and religious bias bordering on deliberate indoctrination. For example, lecture IV contained the following items on property:

... History of property ... Strong popular prejudices against landed property ... Shown to be unreasonable. (14)

Or again, lecture XII, which dealt with labour relations, was even more prejudiced, and reads curiously to late twentieth century observers still very much immersed in this

problem, but certainly adopting a more liberal standpoint:

COMBINATIONS among workmen ... General observations on, and history of ... Quite unable to raise wages ... In every view disadvantageous ... To the consumer, the Capitalist, the Revenue, but most of all to the Labourer himself ... Remedy for .. Where no violence ... Should be left alone ... Where violence is there ought to be severe punishment. (15).

Perhaps the reactionary extremism of this view owes much to the prevailing wave of change from the rigid mercantilism of the early eighteenth century, due to the influence of Adam Smith's fierce advocacy of laissez-faire principles in his 'Wealth of Nations' (1776). So fervently was the idea of mercantilism rejected and laissez-faire adopted in its place, that by the time of the foundation of the Haddington School of Arts in the early 1820s, any possible restriction of trade and expanding economic development, whether from government agencies or organised labour, was regarded with disfavour. Birnie postulates that, largely due to this attitude:

A valuable opportunity was lost of setting up permanent machinery for the settlement of trade disputes, which might possibly have averted the bitter industrial warfare of the nineteenth century. Working class opinion

was favourable at this time to conciliation and arbitration. But the attitude of Parliament threw the workers back on their unions and compelled them to rely on the barbarous weapon of the strike to secure consideration for their grievances. In time, they became so wedded to trade union methods that they refused to abandon them even when Parliament and the employers had become favourable to industrial conciliation. (16).

In all the courses the religious motive was never neglected. To attempt to explain the whole *raison d'etre* of the growth and expansion of adult education in the early nineteenth century in terms of the Industrial Revolution, the Agrarian Revolution and the quickening pulse of democratic ideas in the body politic, is to omit an important reason for the popularity of science at that time. The view that a knowledge of man and nature could reveal religion, was one which was strongly felt and expressed by writers and educationalists from the Mid-seventeenth century to the mid-nineteenth century, when Darwin's theories on evolution began a major rift between science and religion. The report of the Haddington School of Arts verifies such a contention very clearly with regard to the courses provided, and the ultimate aims of such provision:

Nor is it secular interests alone that

are concerned. Science when rightly considered carries the mind continually upwards to the All-wise Creator of the Universe ... it is scarcely possible, one would think, that its truths could be familiarly and perseveringly contemplated without awakening in the mind a sense of the divine Providence. (17).

The concluding lecture of the course on political economy reinforced these sentiments:

LECTURE XX -- Religious instruction .. Remarkable evidence of its power to civilize in the history of modern missions .. Also in Sunday Schools at home ... The necessity of literary and ecclesiastical endowments to the improvement of the labourer ... The splendid prospects of Great Britain when Science and Religion shall have pervaded all ranks ... The facilities to this result ... Conclusion of the course ... Counsels to form a just estimate of science and remember the higher interests of an eternal state of being. (18).

The essentially optimistic note of sincerity in this seems to go a long way towards explaining the underlying

concepts which prompted the early nineteenth century adult education movement into activity, and sustained its efforts till after the mid-point of the century. What these educationalists were seeking was not so much to produce efficient ploughmen or mechanics, as their eighteenth century counterparts had attempted to do, but to indulge in the much more weighty task of eugenics and social engineering. They sought efficiency in a vocational sense, but did not limit their aims merely to this. They were interested in the improvement of the 'whole man', and the conversion of all society. It is this essential difference that distinguishes the work of the Edinburgh Society of Improvers from that of the Haddington School of Arts a century later - the difference between initiation of improvement, and development of the initially improved state. It is easy with the wisdom of hindsight to look back and belittle their efforts.

It is true that they grossly underestimated the immensity of the task they undertook -- to raise the cultural and educational standards of the early nineteenth century working class to levels probably far above their capacities. The machinery of the early nineteenth century educational system was by no means geared to drive the heavy load they tried to impose on it, nor was the vast bulk of the working class of the day sufficiently motivated or in a receptive enough mood to accept the programmes of adult education they devised. The wording of the Haddington report suggests the committee was not completely

oblivious to these problems, but in its new-found optimism tended to minimise the difficulty of the task of community education in its anticipation of many of the basic problems that still plague us today, some five generations later:

Your committee are confident that those who take a fair estimate of the subject, will, so far from being impatient for practical results, be ready to make all allowances for the difficulties which those men must necessarily encounter, who, to the disadvantage of labouring perhaps under an imperfect early education, have now, for the first time, to form persevering habits of study which the weariness and langour produced by bodily exertion are ever tempting them to break through. (19).

What sort of people attended the courses? After announcing that the numbers for the 1826-27 session were slightly greater than in the previous one, the report gave a breakdown of students' occupations:

127 names appear upon the Secretary's list - of which 48 were tradesmen: 35 shopmen and clerks; 13 agriculturalists; 31 of various professions:- thus showing, that the persons for whom the Institution was principally designed maintain their proportion.(20.

Now, it is virtually impossible from that classification to obtain anything but a very rough estimate of the socio-economic grouping of the membership. The thirty-one of 'various professions' may well have included many whose occupations were closely akin to farm workers; foresters, estate workers and such. In a district where agriculture was the predominant occupation, this is not an unreasonable assumption. If we allow that about half of that group were following such occupations, this would mean about fifteen members might be classified under the heading of 'working class'. With the agriculturalists, this is more difficult, for that category would include wealthy East Lothian farmers as well as ploughmen, but if we allow that half of those were in the latter occupation, this would give us another six members in the lower socio-economic grouping. From the 'shopmen and clerks' we could perhaps allow that no more than about ten might be counted as working class. (The list of donations to the School included the names of many local shop-keepers who were probably also members.) In the 'tradesmen' section, we could allow three-quarters of that group to be working class. On this conservative estimate, about sixty-seven of the School's membership could have been working class students, or almost fifty-three per cent of the total membership. Even if this estimate is hopelessly optimistic of possible working class membership, and one was forced to reduce it considerably, it would still seem a remarkably high proportion. Dr Lowe's figures for the 1960s of groups of

W.E.A. and Extra-mural classes in some English centres show that the highest proportion of total working class attendance at these classes was only twenty-six per cent (Leeds Evening Institute) (21). Thus it would seem perfectly justifiable to conclude that in the mid-1820s the Haddington School of Arts was attracting a considerably larger proportion of the working people than many comparable, present-day institutions.

Was this merely a passing fancy of the curious to attend a new educational institution, a novelty which would soon decline with familiarity, and the passing of time? The writer of the report did not draw this conclusion, despite the fact that he was forced to admit, 'that of the total membership only about half were old pupils; the remainder were students for the first time. (22). That seems a dangerously high 'drop-out' ratio by any standards, though, admittedly it is difficult to be hard and fast here since we simply do not know the numbers for the previous years, and as the writer insisted:

From this we are not to infer that science in former years had excited but a passing interest, and after a few months notice had been forgotten. Many of the absentees had left Haddington: and perhaps it is more pleasing to consider that your committee had been instrumental in cherishing and directing a scientific

taste where still undecided, than in superintending the progress of those who by its means were now able to instruct themselves. (23)

ADDENDUM.

The statistics below show the occupational groups of people who attended extra-mural classes conducted by the University of Edinburgh. It should be noted that the commercial/professional category accounts for more than 50% of the total number of students attending in both cases.

	<u>EDINBURGH EUEA</u>	
	<u>1930/31</u>	<u>1959/60</u>
Industrial	8.5%	4.8%
Commercial	24.2%	18.7%
Domestic	11.1%	5.6%
Professional	33.5%	33.9%
Miscellaneous	22.7%	37.0%
	<u>100.0%</u>	<u>100.0%</u>

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In 1957, British agriculture was a
vigorous and healthy industry. The state
of affairs, however, had recently
been altered by the war, and the
state had to take steps to ensure
the health of the industry.

CHAPTER V

Developments in the Late Nineteenth Century

'In the midst of a farming revolution' (1), are the words used by Sir James A Scott Watson to describe Scottish farming in the 1850s. To the previous improvements of the eighteenth century -- enclosures, rotations, root crops -- had been added those of the early nineteenth century -- field drainage, liming, mechanisation. Now there came new resources -- Peruvian guano, Chilean nitrate, sulphate of ammonia from the newly established gasworks, and superphosphate. Agricultural chemistry was producing a real understanding of plant nutrition. Better farm management and the introduction of such machines as McCormick's reaper, was reducing the sheer drudgery of the farm workers' daily round. Farming stood poised on the brink of a new era of advance and prosperity -- the 'Golden Age' of British farming -- which was to last till the introduction of refrigerated steam-ships and American and Canadian railway development brought serious foreign competition in the 1870s. Dennis Whitney, agricultural economist, sums up the position as follows:

In 1857, Scottish agriculture was a vigorous expanding industry. The whole of Scotland, then only recently linked up by a network of railways, presented scenes of intense activity, and trade was booming ... Food imports counted for

but little and there was a ready market for all the food that our farms could produce. (2).

It may thus seem almost paradoxical that in that period of agricultural boom, unequalled before or since, the educational structure which had done so much to further that state of affairs should show marked signs of regression. The mechanics' institute movement, which had begun with such a flourish in Scotland under founders like Birkbeck and Horner, and had spread so rapidly from the cities to local centres like Haddington and Dunbar, now suffered from a gradual tapering off in membership and local support. In the more rural areas of the country, this falling away of local, adult educational societies based on the voluntary principle of organisation, was especially evident. Why should the main agencies of technical and agricultural education atrophy in a period of apparent boom?

There was widespread feeling among contemporaries that the institutes, especially in rural settings, had failed in all, or most of their aims. They had failed to attract the rank and file of the working class, and had in many cases degenerated into social clubs dominated by a middle-class element. The Haddington School of Arts, for example ceased its activities in 1854. Perhaps the founders underestimated many of the difficulties which become more apparent in retrospect. Professor Wallace, writing in 1885, sums up a major difficulty in this respect:

It is against the laws of human nature for a man to be actively employed in the open air during the day, and to come in and do any good at his books in the evening. It is impossible to carry the two on together -- one must suffer -- and consequently it is much better to apportion to each a different season ... (3)

Perhaps also, the whole idea of erecting a scheme of vocational and liberal adult education of this magnitude on the base of a rather inadequate state system of elementary education (as in Scotland before the Education Act of 1872), was too ambitious. The need for classes of a more basic and elementary nature was constantly stressed by many adult educators of the period.

Yet to dismiss the whole movement which led to the foundation and spread of mechanics' institutes as a failure, would be to neglect certain other vital aspects of the situation. It is true, they encountered difficulties of a major nature which they were unable to resolve completely or satisfactorily, given the circumstances of the late nineteenth century. A result nearer to what happened to adult education in rural communities of southern Scotland in the decades after 1850 appears to lie in the movement towards absorption by larger, officially constituted educational bodies with resources more adequate to the task, and eventually by the state and local authorities.

There appear to have been two main influences towards absorption of the smaller, locally organised, voluntary adult educational establishments by larger undertakings. In the first place, society was coming to rely to an ever increasing extent on certification of competence as a medium of selection and promotion in most trades and professions. In 1870, Gladstone, by an Order in Council, introduced the system of open, competitive examinations for entry to certain posts in the Civil Service, in place of the old system of recommendation. There is ample evidence to show that in most fields the basis of the 'certificated society', with which we are now so familiar, was laid in that period of the nineteenth century. An adult educational movement which was largely a voluntary affair, and heterogeneous in its structure, could not function efficiently as a national certificate granting body, without some form of overall direction from above. To have 'served one's time with Rennie of Phantassie' (see Appendix II), or to possess a certificate of competence of the Haddington School of Arts class in agricultural chemistry, however impressive to those in the locality, might mean little in more open competition. Since the 1860s, the Royal Agricultural Society of England and the Highland and Agricultural Society of Scotland, had conducted examinations in agriculture and the cognate sciences, granting certificates and money awards to successful candidates. In 1898-9, the two societies evolved a joint scheme of examination in agriculture. Their award, first granted in 1900, was to be

known as the National Diploma in Agriculture. In addition to the two societies chiefly concerned, the examination board contained representatives of the Scotch Education Department and the Board of Agriculture and Fisheries. In 1897, a similar examination in dairying had been started. The National Agricultural Examination Board controlled both examinations. These larger bodies had produced what smaller, locally organised ones could not have achieved -- a nationally recognised, uniform qualification in agriculture.

The second of these powerful influences towards large, national agencies in the field of adult educational provision, was bound up with international and economic factors after 1850. Britain had led the world in her industrial and agrarian revolutions, and this initial start had given her many advantages over competing nations in trade, technology, commerce and the production of food necessary to maintain a manufacturing, urban population. Had she made adequate provision for scientific and technical facilities to stimulate and maintain these auspicious developments? Many in the mid-nineteenth century felt strongly that complacency and an ultra-conservative attachment to an outmoded educational system based on classical and religious tradition, rather than on science and technology, had cost Britain her lead among trading and manufacturing nations. Eric Midwinter points out:

The 1851 Great Exhibition at the Crystal Palace was intended to parade England's

scientific and cultural glories, but it led to misgivings at the onset of foreign competition. Richard Cobden warned that, 'the very security, trade and progress of a nation' was heavily reliant on education. By the Paris Exhibition of 1867, the mood was even more desperate, for some British goods looked little less than pathetic beside Belgian, German and American competition. (4)

In agriculture, as in trade and industry, there were ominous signs that we, as a nation, were not keeping in the foremost rank of technological achievement. 1851 was the year of Cyrus McCormick's original reaping machine, exhibited in the Great Exhibition by the American firm of International Harvester. Also at the Crystal Palace, German and American manufacturers displayed a vast array of ploughs, cultivators, seed drills, drainage tools, steam and horse-powered threshing machines and a wide variety of barn machinery, much of which was of vastly superior standard to similar British products. The implication was clear -- we had failed to maintain or develop the lead in agricultural technology which men like Andrew Meikle, James Small or George Rennie (see Appendix II) had initiated. One of the main factors in this failure lay in the fact that small, local societies providing agricultural education, organised on a voluntary, privately

financed basis were no longer adequate to provide for the demands which a heavily industrialised, urban based population would place on its agricultural producers in the latter half of the nineteenth century in Britain. Another factor for change at this time came with the development of a network of railways throughout Britain. In 1846, for example, the North British Company linked Edinburgh with Berwick, and the farming communities and market towns of East Lothian were no longer the isolated communities they had previously been. Communication with the Capital became a relatively easy matter, and the educational resources of the larger centres became more readily available to Scotland's rural communities. For all those reasons, the growing desire for recognised and accepted certification of competence, the demands of rapidly developing technology and the easier and more efficient means of communication, larger centres and more complex educational establishments tended to eclipse the work and achievements of what had been essentially small, locally organised units in agricultural educational provision in south east Scotland.

Foremost in this field of providing agricultural education of a more advanced nature to a wider public, stood the University of Edinburgh. The first course specifically directed to this aim was delivered by William Cullen, professor of chemistry in the University, in 1768. Those lectures were subsequently published in London under the title, 'The Substance of Nine Lectures on Vegetation and

Agriculture'. In 1788, another professor, John Walker of the department of Natural History, gave a course of lectures on agriculture which was later published in a volume entitled, 'Essays on Natural History and Rural Economy' (1812). The work of these two men, to a large extent, provided the stimulus for Sir William Pulteney, on 7th July 1790, to endow a chair of agriculture and rural economy with £50 a year. Thus the University of Edinburgh has the distinct honour of being the influential force which gave form to the oldest professorship of agriculture in the British Isles.

The first occupant of this chair was William Coventry, who retained the post till 1831, It appears that at first he held regular annual courses, which in some sessions extended to as many as a hundred and forty lectures. Latterly however, due to pressure of other interests, he lectured only in alternate years, advising those who wished to attend his course in the intervening years to take up chemistry and botany and wait till he was ready to resume his agricultural lectures. In 1830, the Universities Commission examined Coventry's rather bizarre conduct in this matter. The professor gave evidence that his classes numbered from thirty to seventy-eight students, but he apparently failed to convince the Commission that his system of intermittent instruction was in the best interests of either students or subject. In their report, the Commission recommended the abolition of the chair unless regular teaching could be provided. Coventry seemed to be

somewhat taken aback by their censure, for much of his time was taken up with agricultural valuations, works of land reclamation and improvement, and his extensive writing on farming topics. Rather than suffer interference in these activities, he resigned his professorship in 1831.

He was succeeded by David Low, who held the chair till 1854. Low conducted his class lecturing on a less intermittent principle, and the class size expanded to as many as ninety students in each session. He was a prolific and a popular writer, and his work on 'The Breeds of Domesticated Animals of the British Isles', which was published in 1842, became a standard text of the time on livestock husbandry. It was largely due to Low's persuasion and influence that the Chancellor of the Exchequer, in 1833, provided a grant of £300 a year towards the cost of providing an educational museum of rural economy in the University. Also from this grant, supplemented by the resources of a private bequest and aided out of his private income, Low commissioned an artist (Shiels) to visit a number of neighbouring countries making paintings of the best examples of the various breeds of livestock. Altogether some £3000 was spent on this collection, of which some £1500 came from government funds, £300 from a private bequest, and £1200 from Professor Low himself. It was under Low's professorship and able organisation that the department of agriculture and rural economy became an accepted and respected teaching and research unit of university activity, and he did much to further the advancement of lecturing on agriculture and related topics

in southern Scotland.

Low's successor was John Wilson, who had previously held the principalship of the Royal Agricultural College at Cirencester. He had resigned this post after some friction with the governing body owing to his insistent proposals that all the grassland of the college farm be put under tillage. He came north to Edinburgh bringing with him certain very definitely expressed views on the state of Scottish farming, which were not entirely of a complimentary nature. Basically, Wilson was interested in arable husbandry rather than livestock, on which Low had laid greater emphasis. Scotland in the 1850s, in general, had a farming system in which livestock production predominated over cropping, and thus many of Wilson's views did not harmonise with those of Scottish authorities. Nevertheless, his ability as a teacher of his subject was unchallenged, and he continued to build on the work Low had begun. His best known literary work, 'Our Farm Crops', which appeared in 1860, ranked with and complimented Low's work on animal husbandry. In 1868, Wilson, by a remarkable feat of persuasion, managed to induce both the Highland and Agricultural Society of Scotland, and the government, to provide an additional endowment of £150 a year each for a series of bursaries associated with the chair of agriculture of the university. Professor Wilson resigned in 1885, and was succeeded by a former student of his -- Robert Wallace. Though his emphasis on arable farming (some might contend his over emphasis), may have to some extent eclipsed his

memory in a country where it was always maintained that 'the farmers' strength lay in livestock', Wilson did much to consolidate the work of the university department begun by Low. He also began in Edinburgh the serious study of comparative agricultural systems of production, in which his abilities were widely recognised by foreign agriculturalists.

It was with the coming of Wallace to the chair that Scottish agricultural education at university level began to exert major influence throughout the farming community in south east Scotland. His interests were predominantly those of a stockbreeder, and he firmly believed that he who would master the art of stock management must start, not at the age of entry to a university course, but 'before his assistance could be estimated at anything but a nuisance' (5) Throughout childhood and early adolescence the process of practical education must be recognised as an important aspect of training, along with learning of the school-room. He criticized the recently established School Boards for too frequently neglecting such training:

The whole system is one of cram -- cram
of book-work without connexion with
anything practical ... their mental
training must go hand in hand with their
physical development ... (6)

He was one of the main instigators in persuading the government of the day to appoint a Departmental Commission to report on agricultural teaching institutions, and to allocate

appropriate grants. Supported with a resultant treasury grant of £300, Wallace, in 1888, began a series of class lectures for rural school teachers. Some fifty volunteer teachers attended his first class, having to give up a month of their summer break to do so. On the purpose of this experiment Wilson was outspokenly clear:

Teachers are not to be transformed into farmers in the course of a few weeks as by a magic wand. It is intended merely that they should be building on the foundation of a good general education, become literery experts in the subject of agriculture, and be able to direct the youthful mind in proper grooves: above all to encourage the development of the power of observation ... (7)

This movement by the Scottish School Boards to introduce organised courses in agriculture through the medium of rural schools and school-master instructors in an elementary form to day school pupils, and in more advanced stages in evening classes for adults, seems to have been crowned with a fair amount of success. Addressing the third class for rural schoolmasters held under the auspices of the university department, in 1890, Wallace made the point;

The movement, so far, has been crowned with unexpected success. The teachers who have been members of the classes

here have been fortunate enough to secure the confidence of those in their own districts in whose interests the movement had its origin, and during the past season nearly 3000 pupils have been under instruction, either in day schools or in evening classes arranged to suit those who are employed during daytime in the fields. (8)

As mentioned previously, Scottish agriculture in the late 1870s and 1880s began to meet ever growing increased foreign competition, largely due to the introduction of improved transport facilities abroad. Many in the farming world looked for government legislation to solve their economic problems through protection and tariffs. Wallace however, was not among these. The solution to the current problems of the unprosperous condition of British agriculture, he maintained, lay with the farmers themselves. They must be more flexible in adapting to changed situations and conditions, more ready to experiment and to embrace new means and methods. Mixed husbandry, for example, had the undoubted advantage of dividing the risks among a number of enterprises. The introduction of crops such as potatoes and vegetables in place of wheat, could lessen the blow of fierce foreign competition. Above all, the provision of an efficient system of agricultural education, he felt,

was even more essential in hard times than in times of boom:

Adversity teaches many salutary lessons.

One of the most important which the hard times have demonstrated is the necessity of extending a knowledge especially of the newer and more directly scientific processes which have of late years gradually crept into the every-day life of the farm without being accompanied by any adequate explanation. (9)

One of Wallace's main ambitions on his becoming professor at Edinburgh was to introduce a degree course in agricultural science. In his inaugural address in 1885, he paid marked respect to the enterprise of the Highland and Agricultural Society, together with its English and Irish equivalents, in initiating diplomas and fellowships. These however, were rapidly becoming insufficient in a world where the importance of the applied sciences were growing daily. The faculty of engineering, he pointed out, had recently offered the degree of Bachelor of Science to its best students, and the university authorities should now extend this to agriculture:

As it stands at present, there are far too many of those second-rate diploma holders floating about. What is wanted is really a high-class examination, to

make a proper and appreciable distinction
between competitors. (10)

In his introductory lecture to the agriculture class of the following year (1886), he proudly announced that the Senatus and University Court had formally granted his application for the granting of a degree in agriculture, and concluded:

The granting of this degree will be one of the greatest triumphs gained by Agriculture in recent times. Agriculture will be by this act recognised as a subject worthy of notice and worthy of reward, and this fortunately at a time when such distinction is likely to prove of some value to it. (11)

The period of Wallace's occupation of the chair of agricultural science at the University of Edinburgh (1885-1922) covered an era of very mixed and varied economic conditions for the farmers of Britain. His professorship began at the point in time when serious foreign competition in agricultural produce cut across the boom period of the early 1870s, continued through the partial recovery of the decades at the turn of the century to the peak production crisis of World War I, and the gradual slackening off to the economic doldrums of the 1920s. Yet, throughout this long period of rapidly changing economic fortunes for British farming, he retained his faith in the basic beliefs

that had initially inspired him. Like Smiles (see Appendix I) he believed in 'self-help'. The solution to economic pressures lay in adapting one's methods and actions to meet such changes, not in appeals to governmental authorities to put the clock back to the days of the Corn Laws. Only by means of a thorough, basic education in farming practice and scientific background, could a man become flexible enough in his thinking, or knowledgeable enough in his application to adopt this advice sensibly:

What I say is, prepare, or, in other words educate yourselves in the faith that there is a future before you which not only concerns you individually, but is of importance to your country. It is as true a saying of this or any language, that 'fortune helps those who help themselves' (cf Smiles). Now, knowledge or learning, or ... understanding is the one store of wealth that a man can lay up for himself, is the one means of help always with him. (12)

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CHAPTER VI

Further Developments in the Late Nineteenth Century

Towards the closing decades of the nineteenth century, the growing tendency towards centralization in the utilization of educational provision in Britain, mentioned in the previous chapter, continued to exert an ever widening and centralizing influence. The belief that only by a rigorous reappraisal of the whole educational system could Britain hope to maintain her former leadership and prestige against rapidly developing foreign rivalry in commerce, in manufactures, and in the production of raw materials, threw new emphasis on the more positive role, which, it was felt, central government ought now to assume with regard to educational provision.

The Education (Scotland) Act of 1872 became the corner-stone of educational provision in Scotland in the late nineteenth century, and brought about a complete transformation of the existing system. The preamble to this Act leaves no doubt of its intended purpose:

And whereas it is desirable to amend and extend the provisions of the law of Scotland on the subject of education, in such manner that the means of providing efficient education for their children may be furnished and made available to the whole people of Scotland. (1)

The important phrase here is 'the means of providing efficient education'. We have already seen that a major part of the provision of education in a rural community such as East Lothian, in the earlier part of the nineteenth century, was largely dependant on the work of voluntary bodies or the ingenuity and enterprise of certain outstanding individuals. Under the terms of the 1872 Act, educational provision in Scotland would now be unified and controlled through the election of ad hoc school boards, under the general direction of government inspectors. The Act also made provision for adult education. Article 40 stated:

It shall be lawful for a school board
to establish and maintain ... one or
more evening schools for the instruction
of scholars above thirteen years of age:
and for the purpose of such evening schools
a school board may use any schoolrooms
vested in them under this Act. (2)

Further provision was made later in the Act to enable the school boards to exercise 'powers to establish industrial schools' (3) in their areas for instruction in technical subjects.

How successful was the attempt to establish a unified system of educational provision throughout Scotland by means of this legislation? Was adequate provision made for adult education in the evening schools which the school boards were empowered to set up? It is virtually impossible to speak generally here. Since the school

boards were locally elected, ad hoc bodies, degree of a variation from the best to the worst, from the most enthusiastic and efficient to the casually indifferent, soon became evident. The inspectors appointed to supervise the scheme could not hope to bring rigorous efficiency to a system which allowed such a wide scope for individual interpretation. The wording of the Act also, left a very open interpretation for the school boards to follow in places. Certainly, so far as the provision of adult education was concerned (Ref (2)), there was an absence of legislative compulsion.

Perhaps the legacy of laissez-faire had not entirely spent its force in 1872 and fear of direct interference and regulation from central government toned down the wording and implementation of the Act in practice considerably. In education particularly, there lingered definite feelings of alarm at any tendency for the centralised power to lay down stringent and inflexible rules in this area as it would lead to rigid stereotyping of the individual. John Stuart Mill expressed such reservations:

That the whole or any large part of the education of the people should be in State hands, I go as far as anyone in deprecating. All that has been said of the importance of individuality of character, and diversity of opinions and modes of conduct, involves, as of the same unspeakable importance, diversity

of education. A general State education is a mere contrivance for moulding people to be exactly like one another: and as the mould in which it casts them is that which pleases the predominant power in the government ... it establishes a despotism over the mind, leading by natural tendency to one over the body. (4)

Thus a marked dichotomy existed with regard to educational provision in the later decades of the nineteenth century. On the one hand, the tendency to centralize and coordinate was evident as a means for greater efficiency. On the other, the fear of an all-powerful central authority stamping out inflexible minds to a rigidly stereotyped pattern, tended to restrain uniformity. The Act of 1872 was the result of a compromise between these two schools of thought. It sought to divide power and direction between central government and locally elected bodies. Another controversy which tended to split the educationalists of the period lay in the new attitude of the Scottish Kirk towards science. In the 1840s, the view predominated that science served the cause of religion, since all knowledge in the natural sciences led to an enhanced illumination of the powers and glories of God (see the views of Dr Thomas Dick, Appendix I). In 1859, the publication of Charles Darwin's 'Origin of Species', in which the theory of evolution was advanced in place of the Old Testament theory of creation, caused serious modification of the Kirk's

earlier views on the pursuit of scientific knowledge. Perhaps the 'safest' educational provision lay in the classical and Christian tradition, rather than in the innovations of science and technology. In many areas, especially the more rural ones, the Kirk was sufficiently established and powerful to make its views felt on the school boards.

As previously mentioned, it would be inaccurate to move from a single instance to a generalisation so far as the work of the school boards was concerned. It is probably largely true however, that in the transition, adult education tended to be relegated to a subsidiary position, and to be regarded by many school boards as a kind of optional extra to their main work of providing children with a basic knowledge of the 'three Rs'. The Haddington school board for example, only referred very briefly and occasionally in its records to the provision of evening classes. Its main task was that of running the day school for the local children up to the age of thirteen, and the school board minutes leave no doubt, it was frequently short of funds. The amount of money it would have to spare for any form of adult education must have been strictly limited.

A prospectus was published for the guidance of parents by the Haddington school board for the session 1893/94. It showed a marked emphasis on the basic reading, writing and arithmetic, with religion also very much in evidence. The tendency in the senior classes to specialise in classics, English literature, and mathematics, was also shown.

There was no mention of any technical, scientific or applied science subject in the prospectus. This omission was duly noted by an inspector, and a minute from the school board records stated:

4th Sept 1893 ... that this Board take into consideration the recommendation of the inspector, Dr Curry as to the desirability of starting science classes. (5)

Next year, a resolution in similar vein was put forward:

25th June 1894 ... Mr E proposed that this Board appeal to the Finance Committee to give them a grant of say £100 towards the building and appointment of a classroom for the teaching of Chemistry and allied subjects. (6)

and in the following year:

15th July 1895 ... Mr E proposed ... that arrangements be made at the Knox Institute in the coming session for the teaching of Chemistry and Physics. (7)

Mr E however, had some difficulty in persuading the board to take any direct or positive action, whether from lack of financial resources or lack of interest:

27th April 1900 ... Mr G moved and Mr E seconded that a share of the Grant be applied for and the money when obtained be utilised for providing a suitable room, apparatus etc for

teaching Chemistry and allied subjects. (8)

The evening classes were always referred to in the school board records as 'continuation classes'. They were taught by the day school teachers (at 2/6 an hour), in the same school premises. Thus the facilities available for the teaching of science or applied science subjects, if they were taught at all (and the records make no mention of them), must have been minimal. There must however, have been some instruction in technical subjects, probably as a direct result of the 1890 Local Taxation Act, which diverted a proportion of a new tax on spirits to educational purposes within the framework of technical instruction. A school board minute for 1898 recorded:

23rd Sept 1898 ... The Clerk submitted a communication from the County Council offering a payment of £7.10/- to evening Schools in which a technical subject was taught on certain conditions. (9)

On the whole, the evening continuation classes were poorly and irregularly attended, and, in most years suffered from a falling off in numbers, especially after the Christmas break: a common feature of evening classes:

18th Jan 1895 ... The chairman stated that the meeting had been called in consequence of the falling off in attendance at the evening continuation classes ... it was agreed to stop the classes after 24th inst. (10)

Next session an experiment was tried in an attempt to improve attendance:

14th Oct 1895 ... Evening continuation classes -- 41 boys and 19 girls in attendance ... proposal that as an encouragement to regular attendance the fee of pupils attending regularly should be reduced... The Board approved this suggestion. (11)

From later entries, it appears that this had little effect, and a falling off in numbers towards the end of the session continued so far as evening school classes were concerned.

This brief analysis of the work of the Haddington school board in the last decade of the nineteenth century brings a number of points to light relevant to the development of adult education generally, and agricultural education in particular. Firstly, the enthusiasm and enterprise of the Haddington School of Arts in the earlier part of the century contrasted markedly with the cold, official attitude of the school boards. Numbers attending evening classes had greatly diminished, and attendance was poor in the 1890s. Secondly, the school board made only minimal provision for the teaching of technical or applied science subjects. If any of their teachers participated in Professor Wallace's scheme of lectures for rural school teachers in the teaching of agriculture (Chapter V p 62), the records of the Haddington school board made no mention of it. Perhaps the Professor's criticism of the work of school boards

of this period was to a large extent justified:

The whole system is one of cram -- cram
of book-work without connection with
anything practical ... (Chapter V ref (6))

In all justification, the Haddington school board might have replied to that allegation, that their financial resources and available facilities precluded the provision of anything more elaborate than a very basic educational system. For those who wished to further their education in agriculture or the applied sciences, there was adequate provision in Edinburgh (now within easy reach by rail), so that any local provision of such classes might be mere duplication. The Knox Institute prospectus for 1893/94 gave a list of honours gained by former pupils. Of the eleven graduates mentioned, one, J S Thomson, gained second class honours in agriculture in 1893. (12) Certainly, so far as agricultural education was concerned at that period, a policy of centralization of educational resources appears to have been operative, and it is to Edinburgh, rather than the rural areas of south east Scotland, that we must turn to trace its continuing development.

In addition to his work on degree courses in agriculture, and his classes for rurals school teachers, Professor Wallace of the University of Edinburgh (see Chapter V) began an extra-mural course in agriculture and such related sciences as chemistry, botany and veterinary science. In 1892, a body of lecturers was formed into the Incorporated School of Agriculture, whose prime purpose was to conduct courses

in agriculture and the related sciences in evening classes, at a less advanced standard than the degree courses offered in the University. A Board of Directors was set up of prominent agriculturalists and those interested in agricultural education, and the school, so constituted, became eligible to receive grants from government sources. The next stage of development was to attempt to consolidate the teaching of agriculture in a combined centre through consultation with the Highland and Agricultural Society, and the neighbouring county authorities. These latter now had funds at their disposal (as a result of the passing of the Local Taxation Act of 1890) to promote technical education. To this end a Joint Administrative Board, representing all the interested parties, was set up in 1894, under the chairmanship of the Lord Rector of the University of Edinburgh, Lord Justice General Robertson. Its main purpose was to decide precise allocation of the grant from the Board of Agriculture for agricultural education, and to draw up suitable curricula for the different courses provided.

Generally speaking, provision of courses in agricultural education at four levels was advocated by the Joint Administrative Board. Edinburgh University continued to conduct courses to degree standards, and though at that time there was no provision for conferring the degree of Doctor of Science in Agriculture, the right was granted for the graduate in agriculture to proceed to the Doctrate in Pure Science. Next, came the two years' curriculum drawn up for day class students. In their first session, this class followed course in physics and chemistry, botany,

mensuration, mechanics, and drawing and handicraft. In the second session, the student followed more advanced courses in, agriculture, agricultural chemistry, botany, zoology, entomology, veterinary science, and forestry. All the first year subjects were taught at the Heriot-Watt College. Second year subjects were conducted at the University, the Royal Botanic Garden, and the Royal (Dick) Veterinary College. The course seems cramped and overloaded in the extreme, as Alex McCallum points out in the handbook of the Edinburgh and East of Scotland College of Agriculture:

... this curriculum must have been determined upon rather from the point of view of the institutions involved than that of the student, as it hardly appears reasonable to expect from the unfortunate victim of such a course more than the merest smattering of knowledge of so many subjects studied in two sessions of less than six months each. (13)

The third level of course provided consisted of evening classes in agriculture and the related sciences, horticulture, and forestry, held in the Heriot-Watt College. The fourth type of course was the annual vacation course for schoolmasters in rural areas (see Chapter V), which was conducted partly at the University, and partly at the Royal Botanic Garden. In 1898, a fifth course was made available by the institution of a month's course in agriculture and related

sciences for farmers' sons, held at the University.

The Board of Agriculture gave approval to these courses, but made it clear that it would expect to find evidence of interest and some degree of financial support from Edinburgh Town Council and the neighbouring local authorities. Accordingly, the Joint Board began the task of approaching these authorities with appeals for financial support. The Town Council of Edinburgh, and the County Council of Midlothian agreed to lend their support and were duly given representation on the Board, though Edinburgh made the condition that evening classes suitable to the needs of her citizens would be made available. This venture of obtaining the direct interest and support of the local authorities led to a reconstruction of the Joint Board and a new constitution. The new Board was to consist of four members appointed by the University Court, four members appointed by the Highland and Agricultural Society, four members appointed by Edinburgh Town Council, and three members appointed by contributing county councils. The venture was to be designated the 'Edinburgh School of Rural Economy', a name it was to retain until it was merged in its successor, the Edinburgh and East of Scotland College of Agriculture. In 1895, Fife County Council became a subscribing member and was given representation. West Lothian, East Lothian, and Perth followed suit two years later. Two important co-opted members were added to the Board in 1901 -- the Director of the Royal Scottish Museum, Mr F Grant Ogilvie, and Professor Wallace of the University

Chair of Agriculture.

In 1897, the administration of the government grant in aid of agricultural education in Scotland was transferred from the Board of Agriculture to the Scottish Education Department. The income of the School of Rural Economy derived largely from this grant and from contributions from Edinburgh Town Council and neighbouring local authorities, was expended largely in allowances made to the University, the Royal Botanic Garden, the Heriot-Watt College, and the Royal (Dick) Veterinary College, in proportion to the amount of teaching provided by these institutions. Also, each institution retained the fees from students for the classes it provided. This arrangement of the classes for which the School was directly responsible -- the two years' course for day students, evening classes, vacation courses for rural schoolmasters, and the month's course for farmers' sons -- was continued in this form under the administration of the Joint Board till 1901, with the addition of a few extension lectures in the neighbouring counties. The Education Department did not consider this provision altogether satisfactory, and particularly advocated an increase in the number of classes provided in the extension work.

Had the process of centralization gone too far? The Education Department evidently felt that there was some evidence to show that it had. There were many advantages which could accrue from centralization of agricultural education. Facilities and resources could be provided at a large centre which no county authority could possibly

aspire to, or hope to provide on its own account. At the same time, the Education Department pointed out that the taking of instruction to those actually engaged in farm work constituted a vitally necessary part of a properly organised system of agricultural education. In addition, the county authorities were not likely to take a very lively interest in, or make substantial contributions to, the activities of a central school in Edinburgh unless it could show an ability to extend the scope of its operations throughout the country districts of south east Scotland.

The main difficulty in such an extension of the teaching of the School of Rural Economy along these proposed lines was the lack of the necessary financial backing. The School could obviously not extend its operations without substantial provision of additional funds to maintain an extension staff, while the county authorities, on the other hand, would be reluctant to contribute until they had visual demonstration of the School's effectiveness to provide educational facilities in their respective areas. In 1899, Parliament voted an additional £2,000 for agricultural education in Scotland. The Department of Education were quick to point out both to the county authorities and to the Joint Board that the distribution of this extra grant would be conditioned by the amount of financial support given by the local authorities in their respective areas. At the instigation of the Joint Board, a conference was held on the 2nd March 1901, to consider what steps should be taken in the light of these provisions to secure better:

provision for agricultural education and research in the south east counties of Scotland. The conference was attended by representatives of the University, the Town Council of Edinburgh, the Highland and Agricultural Society, the Edinburgh School of Rural Economy, and the County Councils of Berwick, Midlothian, Fife, East Lothian, Kinross, West Lothian, Peebles, Perth, Roxburgh, and Selkirk. The conference reached agreement that a sensible compromise between centralization and dispersal should be contemplated, and, to this end, proposed a twofold scheme to provide agricultural education in the area. A Board of Management was set up with representatives from the local authorities and the teaching institutions involved, with the remit of, firstly, consolidating the work of the central college in Edinburgh, and secondly, of expanding extension teaching in the associated counties. The Board of Governors of the Edinburgh and East of Scotland College of Agriculture was constituted on 3rd July 1901 and immediately took over the work of the School of Rural Economy. In November 1901, Mr William Bruce BSc was appointed senior lecturer for county work. Later, a permanent staff of county lecturers was appointed to give courses at selected centres in the associated counties, and to carry through experimental and demonstration work.

In agricultural educational provision in south east Scotland at the turn of the century, the main influence was a growing tendency towards centralization, pooling of resources and cooperative effort, over a fairly wide

geographical region. There are inestimable advantages to be gained in locating educational provision in a large, populous centre with adequate financial and material resources. Library and laboratory facilities are more readily available. Teachers and lecturers can be obtained more easily for the many subjects it is necessary to include in a full course of agriculture and the related sciences. Economies of scale in congregating large numbers of students in a single centre are evident, and uniformity of teaching standards and qualifications can be more readily attained by this means than in a number of scattered teaching units. Moreover, the teaching of a subject such as agricultural chemistry calls for expensive and sophisticated equipment, and highly skilled technicians and lecturers, if the best use is to be made of such a course of instruction by modern day standards. We have moved a long way from the Haddington School of Arts (Chapter IV). At the same time, it must be borne in mind, that the Haddington School of Arts possessed a vital ingredient in agricultural educational provision which the large, urban centre, for all its sophistication and superior resources, would certainly lack -- close contact with the farming community. Thus a compromise had to be made using the yardstick of common sense. The benefits which could accrue from centralization had to be measured against the fact that agricultural education would need to be taken to the people who would gain most directly from it -- the farming community in the counties. It was with these precepts in mind, that the Edinburgh and East of Scotland College of Agriculture set about its work of educational provision in 1901.

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APPENDIX I

The Men Behind the Movement I

It is almost a truism to say that any organisation or society is as strong as its leadership. The fortunes of any organisation may vary with time, with political or national circumstance, or with economic environment. The whole purpose for which it was founded may change under the influence of any, or all of these factors. The community may react to its activities and policies with enthusiasm. It may remain elusively indifferent to any enticement those aims may offer to it, or stamp out in sullen bigotry, or outright hostility the very roots of the ideology that has brought the society into being. But whatever the forces that beset it, no society or group, however laudable its aims, can hope to initiate, develop or maintain these aims without capable and clear sighted leadership.

In the course of the educational development and enlightenment of Scotland's rural population, historians have tended (not perhaps unnaturally) to lay weight of emphasis on the great pioneers and initiators of the movement. Those who come after, to maintain and develop the work of the initiators, generally receive less of the limelight, however difficult their task may prove. The contrast is that between a frontiersman and a settler. Who is to be over adamant on which is the more important in the development of untrodden territory? Pioneers in almost any movement are usually figures of romance, of flamboyant and

engaging character. The kind that make good biography. Such were the Cockburns and Sinclairs, the Fletchers and Maxwells of the movement that was to shake Scottish farming from its medieval lethargy, and urge all sections of the rural community to relinquish their apathetic state for standards of culture and well being more in keeping with progress.

The second generation of improvers were, on the whole, quieter men. Their task was not that of 'selling' a new idea to a public reluctant to forsake its old 'jog-trot', or convince their neighbours through enthusiasm and example. When the combined forces of the fervour of the early agricultural improvers and the economic circumstances of the period had brought enclosures and modern methods to most of southern Scotland, the pace of innovation slowed. In this less hectic atmosphere, those who were to follow and sustain the movement, found more time to broaden their aims for the education of the rural, adult population. There was now time and scope, for example, to consider the provision of a much wider scheme of general, as well as strictly vocational, education for the agriculturalist. The contrast was clearly evident in the objectives of the Edinburgh Society of Improvers, compared with those of the Haddington School of Arts. The contrast in the men who led the two waves of the movement was equally marked. Many of them were not agriculturalists, so much as teachers, moralists or philosophers. Others were plain, simple men of no great pretensions, farmers or shopkeepers, who worked mainly with their hands, but who still found time to take

their own brand of learning or experience to people in their communities. The two chapters of this appendix will attempt to examine the work of a number of these men, and to estimate the relative contribution of their efforts to advance the progress of adult education among the agricultural and rural population of south east Scotland in the early and middle decades of the nineteenth century.

The Haddington School of Arts owed its being principally to two idealistic forces then prevalent in southern Scotland. The first was a direct product of the movement to bring in improved farming methods and a more enlightened rural community. A community, it was hoped, that had cast off the fetters of superstition and rigid custom, and now sought broader and further educational horizons. The second stemmed from the general interest in science which had recently arisen among both working and middle classes. There seems to be ample evidence that in the opening decades of the nineteenth century groups of itinerant lecturers could readily capture enthusiastic audiences in many of the small country towns by providing short courses at a guinea each on popular scientific topics (1). A Scottish schoolmaster, Dr Thomas Dick of Methven, in Perthshire, wrote a series of articles in the 'Monthly Magazine' of 1814, suggesting a scheme of local societies being set up in the larger country burghs where regular lectures might be conducted for the general benefit of the local population. He himself, set an example at Methven by organising classes in scientific subjects, setting up a library and pouring forth

from his prolific pen, a series of 'paper-back' volumes (the price varied from 1/6 to 8/- according to size) on religion, philosophy and general science, addressed mainly to lay readers in these subjects. The titles of his works proclaim the main tenets of his educational philosophy 'The Philosophy of Religion', 'The Philosophy of a Future State', 'On the Mental Illumination and Moral Improvement of Mankind', 'On the Improvement of Society', 'Diffusion of Knowledge' etc. Dr Dick's best known work, 'The Christian Philosopher, or the Connection of Science and Philosophy with Religion', leaves us with no doubt of the sincerity of his convictions that the true purpose of scientific enquiry was to illuminate the works of God's creation, and to engender a sense of awe and reverence in the enquirer:

The object of the volume is to illustrate the harmony which subsists between the system of Nature and the system of Revelation: and to show, that the manifestations of God in the material universe ought to be blended with our views of the facts and doctrines recorded in the volume of Inspiration. (2)

Compare this with the expressed objectives of the Haddington School of Arts, Chapter IV'. Occasionally this intimate connection between science and religion produced what would appear as strange conclusions to modern scientific thought. For example, in the midst of a discussion on the speed of light, he broke off from the facts of physics to observe:

Were a seraph travelling at the speed of light through the universe ever to arrive at a limit beyond which no further displays of the Divinity could be perceived, the thought would overwhelm his faculties with unutterable anguish and horror. (3).

Thus, argued the schoolmaster of Methven, it was the duty and obligation of all Christians, both to advance the frontiers of human knowledge, and to ensure its widest dispersal in all ranks of society, and in the less enlightened regions of the world:

... to enquire after rational liberty and mental improvement ... to stimulate the energies of the human mind from which they spring ... under the control and direction of that omnipotent Being who made and who governs the world. (4)

The advice Dick gave to his Scottish contemporaries came at an opportune time, and did not fall on deaf ears. From his experiments in adult education, in the climate of religious fervour, technological needs and growing democratic sentiment, was to spring the mechanics' institutes. The movement later became nation-wide with the foundation of institutes in cities, towns and villages throughout the land, of which the Haddington School of Arts was a typical example. The movement which Dr Dick's suggestion triggered off enjoyed a sustained and expanding, if fluctuating, growth, till its gradual demise in the late 1850s. Hudson,

the historian of early nineteenth century adult education, surveying the scene in 1851, stated that:

The total returns from the literary and mechanics Institutions of the Kingdom at the present time, present the following statistics: No of institutes, 704. Members, 120,081. Issues of books in 1850, 2,026,095. (5)

The mechanics' institute movement throughout the course of its growth and development had many prominent figures associated with its courses and activities as students or as lecturers. Even a comparatively humble, small scale institute such as the Haddington School of Arts could count among its proteges a Victorian writer of considerable contemporary influence in Samuel Smiles, the exponent of the gospel of 'Self-Help'.

Born in 1812, the son of a general dealer in the burgh, young Samuel did not excel at the local school. He recalled his teacher, Patrick Hardie as, 'a toady and a tyrant ... with black eyes that sparkled when he was angry'. According to Smiles, that anger was very frequently exhibited, and he suffered regularly and often under Hardie's tawse. The master's verdict however, that he would never be fit for anything but 'sweeping the streets of your native burgh', proved to be wrong. Despite such early privations, Smiles did not complain, and later wrote in affectionate terms of his birthplace. At the age of fourteen, his widowed mother insisted he choose between medicine and the church as a

career. Neither appealed to him very much, but, after three years of part-time study at Edinburgh University, he set up in practice in his native Haddington as a doctor. He found himself however, the youngest of eight such practitioners, all competing for very limited local business. For Smiles this consisted mostly of the rather gruesome task of amputations, for the inhabitants of the burgh and its surroundings seemed remarkably healthy on the whole. Also, he was left mainly to practise among those too poor to pay very much in the way of fees, though he was able to augment his income to a limited extent by giving lectures on chemistry and physiology in what was by day the Sheriff's courtroom, and by contributing articles of topical interest to Edinburgh newspapers. This background of poverty and intellectualism of his early days in Haddington was to provide much of the material and ideas for his later prodigious writing. His grand-daughter and biographer, described the scene of his early upbringing as follows:

During the day time there was not much to do in Haddington, but at night there was plenty of amusement, if you call learning amusement. The public appetite for lectures was amazing. There were lectures on Chemistry, Heat, Electricity, Galvanism, Mathematics, Physical Geography, Minerology, Geology. The Parish School, full of children by day, harboured adults at night. It was a breathless time of self-improvement.

There was so much to be learned in this wonderful world. But to learn needed individual effort. (6)

In the course of about four years of medical practice, writing and lecturing in Haddington, Smiles saved up sufficient funds to go on a walking tour of Germany. Incorporating work with pleasure, he took a further medical degree at Leyden, in the hope that this additional qualification might enable him to acquire a better medical practice on his return. Arriving back at Haddington, he was greatly surprised to find a letter of acceptance for the editorship of the 'Leeds Times', a post he had applied for in a 'try-anything-once' spirit, and had all but forgotten during his German travels. Smiles had never been to Leeds, and his only experience of newspaper work was his occasional contributions to the Edinburgh press. Exactly how the job was offered to him remains something of a mystery. Full of confidence however, he accepted, and soon doubled the newspaper's circulation. What attracted the reading public to the 'Leeds Times' apparently, was Smiles' outspoken leader articles usually on some moral or philosophical theme, which frequently extended to four or five columns of every issue.

The attractions of newspaper work however, did not prove permanent. He soon became bored with his task of thrashing out the same issues every week, to say nothing of the difficulties of maintaining his household on a salary of £200 a year. His attempt though, to return to

medical practice again proved almost as non-remunerative as his earlier experiences at Haddington had been, and a later effort to secure a life of middle-class comfort and security as secretary of the Leeds and Thirsk Railway Company was dashed when the company was swallowed up by a larger organisation, and Smiles found himself out of a job. At length however, he found his true forte as a free-lance writer, and a publisher, John Murray, who had faith in him. The year 1859 was not a particularly auspicious one for a comparatively unknown writer to launch his work on the British public. He was competing against formidable rivals, for this was the year of publication of Dickens's 'Tale of Two Cities', Eliot's 'Adam Bede', Darwin's 'Origin of Species', Tennyson's 'Idylls of the King' and Fitzgerald's translation of Omer Khayyam. Nevertheless, 'Self-Help' stood up to this competition, and Murray boasted that every copy of the original edition was sold, almost before the review copies had got to the newspapers. Much to Smiles's indignation, it was printed in America and Russia without either acknowledgement or payment of any kind. The Japanese were among the first to print several editions, believing the work contained the inner secrets of European progress. Even Smiles himself, was astounded at the instant success and fortune (estimated at £20,000) which 'Self Help' brought. He was later to protest that he had written it ostensibly to help a group of working men in Leeds, through a series of lectures he had delivered in 1845. The idea that the published product of these lectures would become a

'best-seller' apparently never struck him. From then till his death in 1904, Smiles published no less than twenty full-length books and numerous newspaper and magazine articles. Most of these were either works of self-improvement with titles like, 'Thrift', 'Character', 'Duty', or biographical studies with the enevitable 'self-help' moral.

The philosophy that inspired 'Self-Help' was in essence simple and unqualified. Virtuous achievement, was its own reward. The individual could elevate himself through self-improvement and constant perseverance. The words of the opening page of 'Self-Help' condensed the message Smiles gave to the world:

Even the best institutions can give a man no active help. Perhaps the most they can do is to leave him free to develop himself and improve his individual condition. (7)

This is a lesson it has taken us a long time to learn. For too long, we have sought to achieve educational progress and equality of opportunity in the improvement of our educational institutions. Indeed, the fact that improvement of institutions is only one of the many factors involved in the achievement of such aims is becoming more and more obvious. In a recent article in the 'Observer', Peter Wilby, quoting from 'The National Child Development Study' (a survey of all 17,000 children born in Britain in one week of 1958), made this point:

The conclusion that the authors [of the Survey] drew was inescapable: 'Equality of educational opportunity cannot be

achieved solely by improving our
educational institutions'. (8)

In 1887, Smiles wrote 'Life and Labour', a work which represented the height of maturity of his thinking, and his considered conclusions. The vast bulk of his reasoning on educational problems seems curiously modern in its tone. Looking back, we are inclined to generalise that the late Victorian age believed and followed certain set principles, educationally speaking. There was the inevitable rote learning, accompanied by the lash for failures. Little attention was paid to mental and physical growth. Education was a process gone through largely in childhood and adolescence, and abandoned in adulthood. The classical tradition was everywhere evident and universally respected. Smiles had grave doubts, and made major qualifications on all of these. On the 'life-long' learner and 'late developer' he concluded:

Education begins and ends with life ..
The difference of age at which men display
the ability of thinking, and attain
maturity of intellect, and even of
imagination, is very remarkable. (9)

Nor was he convinced, as many of his generation were, that education could cure all social ills and evils if only all strata in society could be convinced of its value as a universal panacea:

At the same time knowledge, and the love
of knowledge, are not necessarily accompanied

... by pure taste, good habits, or the social virtues which are essential to the formation of a lofty character. (10)

He remained convinced that there was a dual purpose in the educational process -- to the individual, and to the community at large:

... the conscientious cultivation of the intellect is a duty which all owe to themselves as well as to society. (11)

On the methods of the educational process itself, he was convinced that, 'Education does not mean stuffing a lot of matter into the brain'. There were other qualities than mere memory, essential to development. For example, the most highly valued purpose of education was to, 'bring out the intellect and character'. Learning to learn was vitally important to Smiles, '... the mind can be best

informed by teaching boys and girls how to use their powers'. (12) He repeatedly emphasised the importance of attention being focused on physical, as well as mental development:

Parents and teachers sometimes forget that the proper function of a child is to grow ... that the body-muscles, lungs and stomach -- must first have its soundness established: and that the brain is one of the last organs to come to maturity. (13)

Though Smiles in no way despised classical learning, and observed great respect for classical scholars, he neverthe-

less deplored the idea of many Victorian schoolmasters, that classical learning was the sum total of education:

Hazlitt held that 'anyone who had passed through the regular gradations of a classical education and is not made a fool by it, might consider himself as having had a very narrow escape'. (14)

Perhaps his early experiences at Haddington under Patrick Hardie inspired this further comment on many schoolmasters of the day, though it should be noted that Smiles was not simply content to condemn -- he looked for an explanation:

These bad schoolmasters seem to have been unacquainted with the nature of youth, ignorant of the character of boys, and without any conception of the art of encouraging them to learn -- trusting mainly to the lash. (15)

It seemed too that Smiles was prepared to concede that parents could misunderstand and misdirect their children. This is certainly not the traditional view of child-parent relationships in Victorian times that has come down to us. Perhaps again, Smiles was recalling his own mother's better disappointment that he shared no enthusiasm for her chosen calling for him in his own youth -- the ministry:

Experience only brings to light his real tastes and sympathies. It may be that he has been put into a wrong

groove by his parents ... it is impossible to predict what the future man will be. The child is not always father of the man. (16)

Smiles has been widely criticised for the smugness and impracticality of the thinking which inspired 'Self-Help'. To many later historians it has appeared as the epitome of the bourgeois doctrine of 'getting on', joining the 'rat-race', 'keeping up with the Joneses', and all the epithets of Victorian middle-class morality. Dr David Thomson spoke of his work as:

This long series of smug lay sermons on the virtues of industry and honesty, connecting always the practice of such virtue with the reward of material prosperity, is the shoddiest side of the mentality of the time. (17)

It is probably true, that Smiles pushed puritannical morality at times to a point beyond normal logic or rational acceptance. For example, speaking of the poet, Robert Burns, he declared:

... it is not saying too much to aver that his immoral writings have done far more harm than his purer writings have done good: and that it would be better that all his writings should be destroyed and forgotten, provided his indecent songs could be destroyed with them. (18)

At times too, he was prepared to twist or exaggerate historical facts to emphasise his point, and was thus occasionally guilty of writing what a professional historian of Thomson's calibre would rightly dismiss as nonsense.

For example:

Beranger's songs and Thier's History probably did more than anything else to re-establish the Napoleonic dynasty in France. (19)

Nevertheless, shorn of its occasional moral and factual overpowering exaggerations, the work of Smiles contained a valid message for both his contemporaries (see Professor Wallace's views p 66), and those generations that followed. The fact that 'Self-Help' is still selling at the rate of about 20,000 copies per annum in paperback, and that Sphere Books plan to issue a revised, new edition this year (1974), show the long-lasting nature and degree of acceptance of his basic thinking. Certainly many of his precepts on education would not be unacceptable to current trends of thinking today. His belief in the 'life-long learner', the need to change society, and not merely educational institutions to ensure equality of opportunity, and that a great deal of education can be imparted in field or workshop as well as in a structured learning situation, are all precepts on which present educational practice could be soundly based. Together with John Knox, he stands as one of Haddington's most prominent sons, and a worthy product

of the intellectually stimulating climate of the period which gave birth to the Haddington School of Arts. Though neither Dick nor Smiles were directly concerned with the development of agricultural education as such, their influence in a general sense affected the provision of adult education to such a marked extent as to justify inclusion here. The mechanics' institute movement which Dr Dick suggested initially, became central to any adult educational provision for both vocational and literary education in the early and middle decades of the nineteenth century, prior to the state and other officially constituted bodies turning their serious attention to such educational provision.

The basic gospel of Smiles' 'Self-Help', though later in its impact, provided a set of objectives and justification for both the education of the individual and the enlightenment of society generally. Both these men spent considerable periods of their lives living and working in rural settings, and were probably well acquainted with country people and their ways and ideas. They must have seen personally, at first hand, the impact of change on the agricultural way of life in nineteenth century Scotland. The basic tenets of Smiles' writings are still not too moral, too materialistic, nor too far removed in time or place to be irrelevant to us:

To the good, the world is good: to the bad, it is bad. If our views of life be elevated -- if we regard it as a sphere of useful effort, of high living and high

thinking, of working for others' good as well as our own -- it will be joyful, hopeful, and blessed. If, on the contrary, we regard it merely as affording opportunities for self-seeking, pleasure, and aggrandisement, it will be full of toil, anxiety, and disappointment. (20)

- (1) Mill, James, *Principles of Political Economy*, 1848, p. 10.
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- (12) Ibid (9) p 84
- (13) Ibid (9) p 83
- (14) Ibid (9) p 145
- (15) Ibid (9) p 146
- (16) Ibid (9) p 147
- (17) Thomson, David, England in the Nineteenth Century,
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- (19) Ibid (18) p 178
- (20) Ibid (18) p 371

APPENDIX II

The Men Behind the Movement II

The work of moral philosophers, educationalists and writers, such as Dick and Smiles, though it helped and encouraged the general movement towards increased scope of adult educational facilities in mid-nineteenth century Scotland, could never be anything more than overall and general in its effect. The actual interpretation of ideas and implementation of schemes for particular areas or localities could only be undertaken by men on the spot. There was as yet no national structure to carry forward such a programme, and much was left to the enterprise and ingenuity of individuals. The state had only begun tentatively to interest itself or take any direct active part in educational matters, and, for many decades to come, confined its legislation and supervision to children in schools rather than adults in part-time education.

We have already seen that at Haddington from the 1820s onwards there existed a society, the Haddington School of Arts, which did much to spread education among a predominantly rural population. How far was it successful in achieving these aims, and what limitations had it to overcome? Certainly, in its situation, an object of prime importance to this would be to convince local farmers and their work people of the need for further experimentation in agricultural improvement, against a background of general scientific and literary education. Improvements in farming

practice must be shown to be both feasible and economic, and this called for example and experimentation in the field, every bit as much as lectures in the applied sciences delivered in classrooms. Fortunately for the advancement of improved methods, there were men in East Lothian in the nineteenth century who were competent in both spheres.

Typical of this class of enlightened agriculturalist was George Rennie of Phantassie. Taking over the farm of Phantassie in 1785, Rennie quickly set out to transform it by modern methods into one of the show-pieces of East Lothian. He developed the growing of root crops, introduced by Cockburn and Wright. It was largely due to his efforts, with the able assistance of Andrew Meikle, a prominent nineteenth century agricultural engineer, that the use of windmills to drive thrashing machinery came into common practice. One of the major hindrances to crop production in Scotland had lain in the acid nature of much of her soil. Soon after his entry to Phantassie, Rennie erected kilns, and commenced to burn limestone which he found in natural deposits on the south side of his farm. The effect of heavy doses of lime soon showed themselves in the production of heavy crops, especially of wheat. His ability as a stockbreeder was also marked, and he won many prizes at local shows and at those of the Highland Society.

Soon his efforts began to attract widespread attention. Rennie was teaching by example, as a writer in the 'Edinburgh Courant' of 1831 remarked:

Phantassie was often visited by agriculturalists of mark from home and abroad to inspect Mr Rennie's improved mode of farming. They always went away pleased and delighted after viewing in his fields the perfection of farming, whether in the grain and turnip crop, or in the rich feeding quality of the grass ... (1)

At an early stage in the development of his farming enterprise, Rennie quickly realised the necessity of competent and intelligent workers. He thus turned his attention to a carefully planned training programme in all aspects of farm work, for the young men he engaged. After a time, having 'served one's time' under Rennie of Phantassie became the hallmark of allround ability on the land, and Phantassie-trained men were much sought after by other farmers:

Mr Rennie's farm-servants and stewards were always accounted the best in the country for skill and intelligence in their work. Many young men bred at Phantassie obtained excellent and trustworthy situations in England and abroad. (2)

A contemporary, and intimate acquaintance of Rennie was Robert Brown of Markle. While following closely Rennie's example in the field, the main outlets of Brown's reforming energy lay in his literary bent. Rennie taught largely by

example. His operations had to be viewed personally before they could be appreciated, and hence were in a sense ephemeral. It was left to Brown to record, publish and disseminate through his writings, much of the work Rennie had proved in practice. In his 'Treatise on Rural Affairs' (1811), Brown gave a very thorough summary and analysis of Rennie's methods and innovatory improvements, together with his own experiences in attempting to follow the latter's example.

Brown was a man of advanced, liberal opinions. He lent his support unstintingly to the movement for the general education and enlightenment of the agricultural worker. He long advocated the extension of the elective franchise, though he did not live to see the First Reform Bill passed, and was, like Cockburn before him, in favour of long leases and security of tenure for the tenant farmer as the basis of incentive to improvement. It was a favourite idea of his that an agricultural museum should be established in the county town of East Lothian. There, collections of seeds, models of farm implements, scale models of farms showing the new, improved husbandry, and so forth, could be on view to the public. An agricultural library was to complete the proposed plan. He got as far as interesting the Town Council of Haddington in his scheme. They debated the possibility of utilising a piece of unused ground behind the Corn Exchange as a possible site for the museum. But, though the idea was favourably entertained for some time, nothing came of it probably due to lack of funds.

Rennie and Brown were only two of the most outstanding among many prominent improving farmers of this period in south east Scotland. It would be possible to compile a fairly lengthy list of competent agriculturalists of the time who sustained, further improved, and taught the new farming methods and innovations. For example, William Brodie of Upper Keith, a noted sheep breeder who did much to improve the Cheviot breed, introduced the new Leicester breed of sheep in 1776. His initial work in breed improvement was carried on by Adam Bogue of Woodhall and Linplum. John Hepburn of Bearsford was an enthusiastic supporter of the work of agricultural societies in the education of the poorer strata of the rural population. Hepburn had republican and extreme egalitarian views of society, and used both the Salton Agricultural Society and the local press as a platform for his advocacy of a community in which wealth was more evenly distributed, and equality of opportunity readily available to all. Robert Tweedie of West Hopes was an able improver of hill farming techniques and the betterment of hill grazing land. James Miller, the East Lothian poet and historian, eulogised their efforts in some verses published in 1837:

From dull obscurity's ungenial shade,
Fletcher brought Meikle' art their skill to aid:
While labour stretched his arms with cheerful smile
And blest the man that lightened all his toil.
Then Brown uprose, his pen with ardour glowed,
And taught what Rennie in his practice showed:

While Brodie skilful -- Hepburn, zealous now,

Bid us exulting cry, 'God speed the Plough'. (4)

In the general climate of improvement, the work of the societies, or zeal of the educationalists and the farmers, would be of little avail without some amount of effort from the individual member of the rural community himself. The legend of the Scottish shepherds who tramped the hills all day and read Plato and David Hume in the evenings, contains more than a germ of truth. To many inhabitants of nineteenth century East Lothian, adult education must have meant a book read by the light of a guttering candle through the long winter nights. The lectures of the Haddington School of Arts or similar local institutions might well have been outwith the reach of many in the absence of modern transport facilities or two-hundred-horse-power snow ploughs. In estimating the difficulty of attempting to provide anything approaching an adult education service for what was essentially a very dispersed, rural community, we are often inclined to neglect the fact that many of the more remote farm and village communities were extremely isolated, especially under wintry conditions. Mr Robert Tweedie of West Hopes, in a peripheral area of the county, expressed this view of his situation in the 1830s:

'Yes', said Mr Tweedie, 'it is a beautiful place in summer; but in winter you do not see the sun for three months, and we are often blocked up with snow for a much longer period, and you seldom see the

face of a friend. It is a solitary place,
entirely out of the world; you cannot get
to Haddington for weeks'. (5)

In such circumstances the importance of the printed
word must have been paramount for those seeking educational
advance. But where were the books to come from? Books
were scarce and expensive, and ploughmen's wages pitifully
low. Any account of the development of adult education
among the rural communities of south east Scotland which
omitted the work of the men who attempted to rectify this
situation, in the provision of adequate and appropriate
reading matter, would be grossly incomplete.

In the closing decade of the eighteenth century,
George Miller took over a business in Dunbar which had been
allowed to run down to a considerable extent by the previous
owner, who preferred hunting and attending race meetings
much more than attending to his shop. Miller decided to
specialise in the sale of books, for, as he said:

... such a thing was so much wanted in
this quarter of the county ... laying
the foundation of that useful reservoir
for accumulating, and copious source
for diffusing, the means of knowledge
and useful information, throughout
the adjoining parishes. (6)

Despite that rather altruistic and optimistic approach
however, Miller found his aims far from being easy to carry
out, and very demanding of his time and energy. A customer

once asked him, 'Dear man, I wonder if you'll ever take time to dee?' (7) Despite initial struggles, and the onslaught of a severe illness in 1803 which almost killed him, Miller eventually established a successful retail business in the book trade. Before his illness he had begun to entertain the idea of widening the scope of his business into the wholesale sector. This at first took the form of what he termed 'raids of business' through the Border and Lothian country towns and larger villages. With the aid of his wife and younger brother, the orbit of the wholesale side of the business was greatly extended after his recovery of normal health. Soon Miller had a network of agents from Inverness to Newcastle selling books, mostly by auction sales, to retail booksellers up and down the country. The management of such an enterprise called for a great deal of travelling over long distances by sailing ship and stagecoach, which would have sorely tried a strong man in robust health. Miller certainly did not enjoy that physical attribute, and suffered great privation and considerable discomfort in these expeditions. He had other troubles as well. Unreliable or dishonest agents, and the extreme difficulty of communicating decisions or orders over wide distances by means of the unsophisticated postal system before Sir Rowland Hill's reforms, added greatly to his task. The economic depression which beset many parts of the country in the years after Waterloo also had a depressing effect on his business. His 'Later Struggles' for the year 1818 recorded:

The most alarming accounts began in a short time, to pour in from my auction agents in all quarters. From Prestonpans, T C writes of the 6th November, 'The people in this quarter are in the utmost misery, and not able to purchase books, probably we may do some better in Ormiston, but I very much doubt it.' Of November 12th, P C writes from Edinburgh, 'I never saw the like before, at this time of the year-- they will bid for nothing ...' (8)

Despite these many handicaps and drawbacks, Miller steadfastly pursued his purpose of 'diffusing the means of knowledge and useful information': 'to promote the moral and mental amelioration of my species ... while my own individual interests, in the fair exercise of my profession, were not neglected nor forgotten.' (9). In 1795, he had set up the first printing press in the county, at Dunbar. This was later transferred to Haddington, and in 1802, Miller began the publication and sale of his famous 'Cheap Tracts'. They consisted of a series of twenty small booklets on moral and religious themes, issued mainly to counteract what he believed was the evil influence of certain cheap publications then popular with the country folk, emanating from 'that copious source of mischief, the hawker's basket ... which I shall not pollute my pages by naming.' (10) The series contained such titles as: 'The History of a Reformed Prostitute', 'Counsels to Young Men',

'Moral Tales', 'The Drunken Husband', 'An Antidote to Superstition', and other titles in similar vein. Miller also expressed the intention of 'furnishing for the children of the cottar a more wholesome ... food, from what they had previously been accustomed to', and the inclusion of tracts with such titles as 'Short Stories for Little Folks', and 'The Little Fabulist', were evidence of his aims here. (11)

Like many others after him (eg Richard Hoggart, 'The Uses of Literacy'), Miller had grave doubts on the moral and educational influence exerted on the masses by the popular press. With a view to improvement in this area of mass communication, Miller first published in 1813 his 'Cheap Magazine', and later followed this up in 1815 with 'The Monthly Monitor or Philanthropic Museum'. In his description of these in 'Later Struggles', Miller let the reviewer of the London periodical, 'The Philanthropist', of July 1814, speak for him:

This work [the 'Cheap Magazine'] ... is a commencement of such a series of publications, for the instruction of the more numerous classes, as will convince all men ... that, notwithstanding the state of the Press, which no man laments more deeply than we do, it is yet possible, by means of that Press, to be of infinite service to a reading people. (12)

Miller's publication was, as he said, 'to contribute largely to the innocent amusement, and to the instruction of multitudes', and was couched in the same highly moralistic vein as his 'Cheap Tracts'. He was personally congratulated by 'no less a person' than William Wilberforce, and responded with the publication of a 'Cheap Tract' on 'The Slave Trade'.

(13). The first impression of the 'Cheap Magazine' ran to more than twenty-one thousand copies, which he described as:

... no small undertaking ... for a single, unsupported individual, considering the then limited extent, to which periodicals usually ran. (14).

Indeed, in many ways, Miller seemed prouder of the success of his magazines than of his longer work, 'Popular Philosophy,' published in 1827. On this latter work he quoted from a letter of the Rev James Thomson of Dundee:

If I had influence, I would recommend to the patrons of Mechanics' Institutions, to encourage those who are under their care, to procure for themselves, a book, at once so full of important facts, and so well calculated to afford them religious and moral instruction. (15)

George Miller of Dunbar, bookseller and publisher, stands out as one of the great exponents of adult education in the early nineteenth century through the medium of the printed word. Like Thomas Dick (Appendix I), he believed that all knowledge and science led directly to divine revelation.

Like Samuel Smiles (Appendix I), he believed in hard work and perseverance as the prime activities of mankind in seeking a full and profitable life. Yet he lacked the confidence and assurance of Dick, and at times his approach to learning was much more timid and unsure:

... not to presume to scan too critically,
by our imperfect and feeble powers ...
by our very limited faculties, the operations of that all-powerful and Mighty Mind. (16)

Nor did he possess the unbounding optimism of Smiles:

No truth, indeed, is more clear, as things are presently constituted, than, let some men's talents, qualifications, and acquirements, be what they may, and let their industry and application in the use of them be ever so great, they cannot, with all their exertions, rise above a certain mediocrity in their circumstances ... while others, in no respect superior to them in talent, or industry, easily ... rise rapidly in the scale of wealth, honours and distinctions.. (17)

A man who could put forward such a sympathetic view of the force of circumstances on human affairs, would also realise quite clearly that the East Lothian ploughmen of his day could certainly not afford to buy extensively in his bookshop, however ardent their enthusiasm for education or

reading. Miller sought to cater for such people in the publication of his 'Cheap Tracts', 'Cheap Magazine', and by the founding of the 'Dunbar and County Circulating Library', which by 1809 contained upwards of three thousand, five hundred volumes. (18)

But, to some extent, libraries in a widely dispersed, rural community suffered from the same defect as lecturing. So long as they were confined to towns and the larger centres of population, they remained virtually inaccessible to much of the community in the more remote districts. The problem was how to establish and maintain village libraries to serve these less accessible areas in the absence of vast financial resources and elaborate, country-wide organisation.

About the time when George Miller was beginning to establish his Dunbar business, Samuel Brown, the eighth son of the Rev John Brown, author of the 'Self-Interpreting Bible', was born in the Old Manse at Haddington (1799). On the death of his father, his mother moved the family to Edinburgh to be nearer the college attended by her older sons, and young Samuel was apprenticed to her rather eccentric, bachelor brother, John Croumbie. 'Uncle Croumbie' ran a wholesale general merchant's business, with active interests in the southern Scottish and northern English counties from his base in Haddington, and, though kindly and considerate, tended to neglect his ward's education. Samuel was withdrawn from school at eleven to learn the drysalter and ironmongery trade. Croumbie was absent a great deal on

business ventures, and the young apprentice increasingly came under the influence of his uncle's mother, Violet Croumbie. From her, he developed a love of reading which was destined to have important effects on his later activities:

She was especially voracious of books, a thing not to be commended perhaps: and literally read the libraries of the burgh dry after her return from the metropolis at this time. (19)

Later, as an established merchant in Haddington, Brown continued the reading habit to capacity -- religion, natural sciences, philosophy, political economy. He was one of the founder members and initial presidents of the Haddington School of Arts, where his special contribution was advice on the choice of books for the School's library. Despite his own 'book-worm' habits, Brown believed in moderation in reading for most, but of the best quality in literature or science. His biographer expressed his views as follows:

It behoves the professional man to be largely studied in the things belonging to his intellectual and bookish craft, of course: above all things the Scholar proper, must be vastly read: but for the man of common life, however high a place in life he may be called to, commend me to a few books, but these the

very best, and read again and again,
indeed continually. (20)

Like George Miller before him, Samuel Brown was greatly concerned to make quality reading material available to the public of his county. Also, like Miller, he was alarmed at the undesirable influence of the 'trash from the hawker's basket' on their reading habits, and hence their moral and intellectual development. Where Miller had sought to amend the situation through his 'Cheap Tracts' and 'Cheap Magazine', Brown turned his attention to the establishment of local libraries of an itinerating nature.

Brown had noted the fate of several small, local libraries in the county. After a period of time they had ceased to excite very much attention from the community. Frequently their funds rapidly diminished to the point where the number of new books they could add to their shelves was too few to maintain people's interest. After much thought and preliminary enquiry, Brown began in 1817 the foundation of his itinerating library scheme. With a sum of money accrued from unclaimed insurance policies from the agency of John Croumbie ('notwithstanding of various advertisements and letters sent to the parties'), he purchased two hundred 'select volumes'. He then divided his newly acquired library into four assorted sets of fifty volumes each. These he stationed respectively in the villages of Aberlady, Salton, Tynningham and Garvald, under the supervision of 'gratuitous librarians', usually the local schoolmaster or a shopkeeper. After two years, each

of these sets of books was to be removed, its place being taken by a set from one of the other villages on a rota system. In this way he could stock four village libraries for eight years with all the advantages of a standing library of two hundred volumes each, at a quarter the expense of four such libraries.

The scheme, he discovered, also carried the side-benefit of novelty in reading material every two years, which kept interest alive. With the larger, standing libraries, he had found that unless extensive purchases of new books were forthcoming, interest tended to drag after two years. With his itinerating scheme the reverse was the case, since the whole stock was replaced every two years. In 1817-19, the total issues for the two hundred volumes were, for the initial year, 1461, and 733 for the second year. In the period 1819-20, after the first change, the lending rate was, 1313 for the first year, and 928 for the second (21). The success of the original venture soon induced him to expand the experiment. He proposed to divide the county into five sections with sixteen villages in each. Each section was to be permitted to make mutual exchanges of requested volumes to any reasonable extent. Thus he would have the equivalent benefits of five standing libraries of 4,000 volumes each, at one-eightieth of the normal expense, and with all the benefits of sustained novelty and motion. If the plan could be adopted on a nation-wide basis, he argued, it could 'actually become, one of the agents of the ultimate illumination of the world'.

The biggest disadvantage to the expansion of the scheme was the cost of stocking the libraries in the first instance. At first, this seemed an insurmountable difficulty to one 'feeble in health, far from rich, his hands full enough of an extensive and complicated business.' (22). The results of his appeals to philanthropists with educationally orientated sympathies, and to various missionary societies, were woefully inadequate for his purpose. Finally, he hit on a scheme which greatly helped to reduce expenses. The newly purchased books were to be kept in town libraries (Haddington, North Berwick, Dunbar) for two years, and given out to would-be readers at small subscription rates, before being merged in the village libraries. Though expensive in time, the idea greatly helped to reduce costs.

By 1836, after some twenty years of devotion to this enterprise, forty-seven of these itinerating libraries were in existence, carrying 3,850 volumes. His biographer remarked, '... this was something considerable for an agricultural district' (23). The plan however, did not expand to the extent proposed by Brown, and after his death in 1839, lacking the drive and enthusiasm of the founder, fell into decay in most districts. Nevertheless the itinerating libraries served a need of the time, and provided, through Samuel Brown's ingenuity and enterprise, a source of quality reading material to sections of the rural population who could probably not have obtained this service by any other means:

The interior wish of his heart was to effect religious good by his ever-moving book-cases. It was by their instrumentality that he hoped to do his share...(24)

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(7) *Ibid.* (6) p. 50

(8) *Ibid.* (6) p. 193

(9) *Ibid.* (6) p. 40

(10) *Ibid.* (6) p. 49

(11) *Ibid.* (6) pp. 49 & 50

(12) *Ibid.* (6) p. 51

(13) *Ibid.* (6) p. 54

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(15) *Ibid.* (6) p. 51

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(17) *Ibid.* (6) pp. 51 & 71

(18) *Ibid.* (6) p. 52

(19) Brown, George, *Transacting Librarians and their Pioneer*, Edinburgh, 1896, p. 13

(20) *Ibid.* (19) pp. 15 & 16

(21) *Ibid.* (19) p. 59

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APPENDIX III

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EPILOGUE

The period covered by this paper, from the early eighteenth to the opening of the twentieth century, was one of remarkable progress and development for Scotland's agriculture generally. From a deplorably backward and inefficient agricultural country she rose in the course of two centuries to become one of the most highly mechanised and forward-looking farming communities in western Europe. This progress was especially rapid in favourable situations like East Lothian where relatively fertile soil, climatic conditions, the early development of transport facilities, and the close proximity of a large centre of population like Edinburgh, all aided development. To these must also be added the influence of able and enthusiastic individuals who, either brought in new methods and ideas, or made an effort to spread existing improvements and the results of experiments by means of lectures, correspondence, the printed word, or practical example.

In this process, technological advance depended on specialist education in agriculture and the related sciences, but not on that alone. It was equally evident that a general uplifting of basic educational standards of the whole rural community was a necessary pre-requisite to ensure scientific and technological advance. The founders of the Haddington School of Arts saw that very clearly and responded to the need in their provision of a wide diversity of courses in their educational programme. Visitors to the Great Exhibi-

tion of 1851 were also convinced of the need to reassess general educational standards to improve technical efficiency in the light of growing foreign competition. The Haddington School Board endeavoured to provide sound basic courses of education so that future specialist knowledge could rest on strong foundations.. Professor Wallace of the University of Edinburgh insisted on practical training, together with schoolroom learning as the soundest base for future specialist studies. A measure of their success can be seen in the fact that where Cockburn of Ormiston had to struggle manfully to convince fellow Scots in his own parish that ideas from the outside world could be of value and benefit to them, Professor Wallace, about two centuries later, was sending out highly trained Scots to every quarter of the globe as teachers, managers, and agricultural advisors.

The initial beginnings of improvement of Scotland's agriculture appear to have been originally an imported idea from countries like England and Holland where farming practice was more advanced, but imported by her own sons -- not by foreigners. The Edinburgh Society of Improvers became the first society to generate ideas and distribute agricultural knowledge, that Scotland had known. Partly by its influence and by the influence of the general growth of science and technology brought forward in the mechanics' institute movement, local societies like the Haddington School of Arts became the main vehicles of advance. The essence of the printed word to education in a dispersed, rural area through cheap publications or village libraries

was also of marked importance, as was the visible example of improved methods given by practising farmers in the area. These, however, proved to be inadequate to bear the growing pressure which the increasing needs of education and the mounting volume of scientific and technological knowledge placed on their resources. Though local school boards could provide a basic education for the children and young adults in their own area, they had neither the financial resources nor the facilities to provide full programmes of adult education, especially in such demanding subjects as agriculture or its related sciences. Improved transport towards the last decades of the nineteenth century enabled East Lothian people more ready access to Edinburgh, where the advantages to be gained from centralizing agricultural education in larger units could be fully utilised. These advantages, however, had to be carefully weighed against a growing remoteness of the main centre of agricultural education from the farming community in the counties. A sensible via media was arrived at in the courses provided by the Edinburgh and East of Scotland College of Agriculture in the opening years of this century.

The development of facilities and the widening of the scope of agricultural education may be viewed both as an accumulative and as a continually varying process. Each generation throughout the period contributed something of value and helped to prepare the way for the next addition or improvement. Although the early societies may appear in retrospect as unsophisticated and woefully inadequate

in their resources, they nevertheless played a vital part in their contribution to the general advance. It was from such humble beginnings that our present system of nation-wide provision in agricultural education and research developed. The importance of such advance to Scotland as a nation cannot be over stressed, as George Henderson reminds us:

In the soil lies all that remains of the work of countless generations of the dead. We hold this sacred trust, to maintain the fertility and pass it on unimpaired to the generations to come. The farmer above all must have faith in the future... for a civilization lasts but a thousand years, while in his hands lies the destiny of all mankind. (1)

REFERENCE

- (1) Henderson, George, The Farming Ladder, Faber & Faber, 1943, pps 45-46.