

The Background to Burns

Part 2

Industry and Commerce in 18th Century Ayrshire

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In 18th century Ayrshire, agriculture was of fundamental importance, and the agricultural improvements overshadowed all other changes. Nevertheless, alongside the revolution that was transforming the countryside there were new industrial developments which with increasing momentum were altering the whole fabric of economic life.

In the subsistence economy of the early 18th century and before, such products as were available for the market were an incidental surplus beyond what was produced for domestic requirements. But although incidental they were not without importance. While the farming folk of the farm-touns sought to satisfy their own needs as far as food was concerned and in other items as well, there was a division of labour allowing a range of trades and handicrafts to be carried on throughout the countryside by specialist workers in various types of production and service. Beyond that, while the Ayrshire economy was largely self-supporting, it was not entirely so, and a certain amount of produce had to be devoted, when it could, to export to other parts of the country or abroad, to exchange for the limited quantities of those few—surprisingly few—essentials which could not be produced locally. In the days before Burns, Ayrshire marketed, so far as difficult conditions permitted, a small but significant proportion of the harvest products of a farming and maritime community—meal, cattle, wool, and some flax, leather, timber, fish. There were also manufactured woollen and leather goods, which accounted for a fair proportion of the total, but the amounts involved were small.

THE BEGINNINGS OF THE INDUSTRIAL REVOLUTION

The 18th century brought with it a growing demand for all these wares—foodstuffs, raw materials, and manufactured products. The stimulus can be found in the widening of the world market that had been proceeding ever since the 16th century and which was opened up more fully and completely to Scottish enterprise with the Union of the Scots and English Parliaments in 1707 and the admission of the Scots to partnership in overseas commercial and colonial activities. American trade in particular offered opportunities to the south-west of Scotland, through the

demands of the Glasgow merchants for goods to export to the West Indies and the American continental colonies. The social classes that emerged to devote themselves to manufacture and trade for a livelihood, increased the demand. For these new classes depended for foodstuffs and other needs on the purchasing power of their profits and wages; and as an increasing proportion of a numerically-increasing population came into their ranks, a new large home market grew up alongside the foreign markets.

It was some considerable time after the Union before these economic trends made their influence fully felt in Ayrshire. Glasgow was growing as the Clyde-American trade expanded—exporting a variety of manufactured goods, including woollen and leather products and increasing quantities of linen materials; and importing exotic goods, above all tobacco for re-export to the Continent. But Ayrshire does not seem to have experienced any appreciable immediate influence. In the early part of the 18th century the county's only manufacturers of any consequence were the traditional handicrafts, carried on in four main centres. In the royal burgh of Ayr there were the nine incorporated trades of weavers, dyers, tailors, skimmers, shoemakers, hammermen, coopers, fleshers and squaremen (including masons, wrights, slaters and glaziers). In the other royal burgh of Irvine there were incorporated trades of weavers, tailors, shoemakers, hammermen, coopers and squaremen. Inland, Kilmarnock had weavers, bonnetmakers, glovers, tailors, skimmers and shoemakers as its trades. Stewarton, though not a burgh, had a corporation of bonnetmakers. Manufacturing in these places was conducted on conservative lines. The members of the incorporated trades, holding a monopoly of production, were jealous of their ancient privileges. By their apprenticeship system they restricted entrance to the crafts; by inspection of products they not only sought to maintain standards but also regulated output; and in general their sympathies and interests were not disposed towards the unrestricted development of manufacturing.

Elsewhere in Scotland the production of linen was being extended to become for a time the country's staple industry, under the aegis of the Board of Trustees for Manufactures which had been established in 1727. From just over two million yards produced in that year, national output doubled in the short space of five seasons and continued past the ten million mark by mid-century; till, despite competition from other textiles, in the last decades of the 18th century over 20 million yards of linen were being produced in Scotland annually. Ayrshire took little share in this development. Flax-growing here hardly advanced beyond the planting by farmers of sufficient for spinning and weaving domestically into a rough linen cloth

known as harn, for family and local use. The only Ayrshire district where appreciable quantities were produced for the market was the Garnock valley and nearby parishes in the north-west, adjacent to Paisley and Clydeside. That the thoroughfares were so abominably poor and the Ayrshire farmers still so backward in their methods seem sufficient reasons to explain why there was no further extension of linen manufacture in the county.

The Ayrshire when Burns was born in 1759 was as yet hardly affected by the stirrings of industrial growth; his early years saw some beginnings; and as he reached manhood, change when it came, came swiftly. In the year 1781 Burns went to Irvine to learn flax-dressing, for the linen trade was continuing to expand, though in Ayrshire still largely restricted to the north-west. Robert and brother Gilbert had done some experimental flax-growing at Lochlea, and it has been said that Robert had plans of returning there to devote the farm principally to that crop. His stay in Irvine was cut short by the burning down of the flax-shop and the failure of his partner; and the call of duty took him back to Lochlea and his sick and impoverished father early in 1782. By this time Ayrshire was experiencing the rising tide of industrial development. When Burns was in Irvine, a few miles away in Stevenston the coal seams were being exploited, new deep pits sunk, with steam engines for pumping, and canals to convey the coals down to Saltcoats and Irvine harbours. Not long afterwards, in 1787, the year after Burns left Mauchline for Edinburgh, the famous Catrine cotton factory was opened by the brother of the "Bonnie Lass of Ballochmyle," and further up the River Ayr the Muirkirk Iron Works were established in the same year. Kilmarnock was booming with greatly extended manufacture of woollen and leather goods. All over North Ayrshire weavers were setting up handlooms to produce muslins with the cotton that was coming in to become the new staple of Scotland.

The progress of manufacturing and trade was bound up with the course of national and international events. Nationally, the suppression of the Jacobite menace brought settlement to the country after 1746. Internationally, the defeat of the French in the Seven Years' War gave Britain a dominant position in world affairs after 1763. It turned out to be only a temporary setback when the revolt of the American colonies in 1776 brought reverses to British prestige and foreign trade—in particular the collapse of Glasgow's tobacco trade as the American growers after the war were free to export directly to the markets on the European continent. The manufacturing classes were to experience from time to time reverses of fortune,

as particular markets were lost or the demand for particular types of merchandise declined. At the same time the whole community began to be affected more intimately by the fluctuations of prices that came with the trade cycles, and by the periodic "dull trade" that was a novel experience for people accustomed to the unchanging traditions of the older subsistence economy. When Burns was at Mossgiel he was moved to declare: "Scotland till of late was flourishing incredibly in silk, lawn and carpet weaving. We are still carrying on, but much reduced. We had a fine trade in the shoe way, now entirely ruined . . . In short, this country has been and still is decaying fast." His conclusion may in retrospect be judged unnecessarily pessimistic, but it was not an unnatural judgment for one who could hardly be expected to understand that what was being experienced were the birth-pangs of a new industrial society.

Despite temporary reverses and periodic fluctuations the second half of the 18th century saw a new and continuous expansion of economic enterprise which set Ayrshire on the way to industrial success. It was in textiles that the most significant developments occurred; locally as nationally it was in this type of work that Scotsmen made a name as manufacturers.

TEXTILES

Initially the traditional branches of the textile industry enjoyed expansion. In various places throughout the county where local wool was obtainable in greater quantities, there was an increase in domestic spinning and weaving of coarse woollen plaidings. This was true of hill-foot sites in central and south Ayrshire and of the established centres of Kilmarnock and Stewarton. In these two places the traditional bonnet-making suffered a slight decline, and in Kilmarnock the weaving of serges too; but this marked only the partial changeover to newer and more profitable types of woollen production. In Kilmarnock, in particular, there was a notable expansion into an extended range of products. In 1746 a group of local merchants set afoot a novel and successful experiment in mass production by establishing a weaving shed producing blankets, carpets, and other coarse woollen goods. Other small companies and individuals followed this lead in extending production and turning over from the older serges. To meet increased demands for yarn the original company installed carding and spinning machinery, powered by a water mill, but the actual weaving was still done by handlooms. Stocking manufacture began too; they were knitted on needles by women who were "so expert at the business, that many of them could knit three stockings of the largest size, every day." Bonnet-making continued in

Kilmarnock and Stewarton, and though fashions changed and local demand waned, there was considerable export trade, especially for the American market.

In the Garnock valley area there had been some expansion of domestic linen weaving after the Union, and the establishment of waukmills followed. The demand for coarse linen called harn began to languish in the thirties, but a fresh impetus was given in this area by increased trade in linen yarn. After a boom in 1760 trade slackened and finally became concentrated in Beith, whose considerable thread-making business made it a new manufacturing centre. By the beginning of the 19th century Beith had over sixty "mills" for twining thread, 32 of them worked by a steam engine.

Scotland was making its first experiments with cotton in the late sixties and in the seventies. First of all the linen weavers, turning their attention to French lawns, cambrics, and other fine fabrics, tried cotton as a weft. It was difficult to spin a strong enough cotton thread, for a warp especially, and when cotton was tried alone, only coarse calicoes and fustians could be achieved. The development of the trade had to await the technical innovations of English inventors. Of these, Hargreaves' spinning jenny (1770) multiplied the output of weft, Arkwright's water frames (1769, 1775) provided stronger warps, while Crompton's mule (1779) made possible strong yet fine threads for both purposes and rendered practicable the large-scale manufacture of muslins. Just about this time the Glasgow merchants were seriously turning their attention to cotton. Their tobacco trade had been ruined by the secession of the American colonies and they were seeking a new line of business. After the end of the American War in 1783 there was an increasing flow of cotton across the Atlantic, while to meet the rising demands there was extended cultivation in the U.S.A., and ultimately Whitney's cotton gin (1793) enabled the producers to supply the enormous quantities that the manufacturers by that time were wanting.

In 1779 the first cotton factory in Scotland was established at Rothesay, followed by others at Neilston, Johnstone, East Kilbride, Deanston, New Lanark, and, in 1787, at Catrine in Central Ayrshire. These mills were devoted to yarn spinning, with water wheels providing power to operate the frames, and with "jeanies" and mules worked by hand. From these and smaller establishments yarn was supplied to the thousands of handloom weavers who set up looms in their but-and-bens in towns and villages throughout the west of Scotland and carried on this process domestically, as contrasted with the factory

spinning system. From about 1785, when cotton manufacture was introduced into Ayrshire, there were boom conditions and the making of cotton cloths rapidly became Scotland's chief trade and Ayrshire's leading manufacture. "The rapid rise of the cotton industry in Glasgow and the surrounding countryside in the last twenty years of the eighteenth century," says a modern authority, "is one of the most remarkable episodes in the economic history of Scotland." In the early 1790's those who compiled the Statistical Account reported many local developments in cotton manufacture. Practically every parish in North Ayrshire had taken it up, and it was spreading southwards. Three different branches of work are mentioned—spinning, weaving, and tambouring.

Cotton spinning in Ayrshire began in 1787 with the founding of the Catrine Cotton Works by Claud Alexander and David Dale. The former was a younger son of the family of Alexanders of Newton-upon-Ayr. He had a successful and profitable career in India, in the service of the East India Company, and retired home to Scotland. For his return he had purchased the estate of Ballochmyle on the banks of the Ayr, only a few miles from Mossgiel, where Burns was living. The previous owners were "the amiable and excellent family of Whiteford," but, said the poet, "Sir John's misfortunes obliged him to sell his estates." The new proprietor took possession of Ballochmyle in 1786; not yet married, he was accompanied by his 31-year-old spinster sister Wilhelmina, whom Burns addressed as "the bonie lass of Ballochmyle." Claud Alexander must have conceived the idea of a cotton works almost as soon as he arrived, if not before, for by 1787 the works were built. These were under his personal management, and, indeed, he was the creator and virtual overlord of the new community of Catrine that grew up where previously were only a few cottages. As far as his partner was concerned, this was only one of a multitude of businesses with which Dale was concerned. David Dale had been born in Stewarton in 1739, had been a herd boy, a handloom weaver, a dealer in linen yarn, and entered the cotton trade in 1783 by building the New Lanark Cotton Mill in association with Richard Arkwright, the English inventor. Other manufacturing enterprises followed, with Dale supplying capital and technical advice, and others like Alexander or Robert Owen—who married Dale's eldest daughter—exercising the management over the individual businesses. One of the first of Scotland's "captains of industry," Dale amassed a considerable fortune, part of which he liberally devoted to charitable and religious purposes. In Glasgow it was said of him that "David Dale gives his money by sho'elfuls, but God Almighty sho'els it back again."

The mill erected at Catrine was a considerable building of five storeys, plus garrets, containing 5,240 spindles, worked by water power, and soon employing 318 persons (men, women, children) in carding, roving, and spinning; with another 226 women working at home picking cotton. It was, and remained for long after, the biggest manufacturing establishment in Ayrshire. So successful was it that three years later, in 1790, Alexander and Dale built alongside it a jeanerie factory containing 76 spinning jennies, also operated by water power, with 200 persons employed, as well as 55 associated domestic pickers. These model works later passed into the hands of Kirkman Finlay (1801); in due course power loom weaving was introduced (1805); and the famous Big Wheel was erected (1828); well over a century and a half after its inception the business is still in thriving condition under the management of James Finlay & Co. When it was established, the Catrine Works was devoted solely to spinning and associated processes. It was joined by a group of similar but much smaller businesses known as "cotton houses," in the north and west of Ayrshire. These sprang up around 1790—in Beith, Dalry, Kilwinning (2), Irvine (3), Kilmarnock (several), Dundonald, and Monkton (2). They carried on spinning and sometimes carding, and were operated by water power usually—by horse power at Dundonald. The largest, in Irvine, had 80 employees, and altogether fewer than 400 persons were involved as compared with Catrine's 800. Like the Catrine Works they supplied cotton yarn almost exclusively to merchants in Glasgow and Paisley, whose agents presumably distributed it to the local weavers.

The handloom weavers, who had a tradition of working with wool and linen, and sometimes had experience with the exotic silk, began to turn, many of them in the later 1780s, to cotton which was now available in quantity and capable of being woven into the muslins for which the Glasgow and Paisley merchants had a ready market. The writers of the Statistical Account in the mid-nineties report weaving in every parish in North Ayrshire. Linen was still being worked for the market in the Garnock valley area; silk was restricted to the same corner; woollens were being produced throughout the region. But they were all being rapidly outstripped by the new muslin weaving. In the Garnock valley from Kilbirnie down towards Irvine and Ardrossan; in Kilmarnock and eastwards up the Irvine Valley—every year the numbers engaged in the trade increased. Between the 1790s and 1810 numbers grew in Beith from 70 to 205, in Kilwinning from 146 to 333, in Newmilns and Darvel from 344 to 640, and in Kilmarnock from 200 to over 1,000. Others took up the weaving further south, but never to the same extent. In central Ayrshire it

became popular at Catrine in the shadow of the spinning works; in and around Ayr; but hardly beyond that. In other parts of Kyle such weaving as there was, was nearly all in woollens, producing plaidings and blankets. Curiously, Carrick was more enthusiastic about cotton, which challenged wool in Maybole, Kirkmichael, and even remote upland Straiton, while Girvan with 500 weavers in 1810 had become one of the principal muslin towns of Ayrshire. Altogether by that year nearly 6,000 muslin weavers were at work in the county, about 4,000 of them in Cuninghame, north of the River Irvine.

By that time, too, an associated branch of the cotton industry was growing up—that of tambouring or flowering. It was in 1782 that an Italian embroiderer, Luigi Ruffini, came to Edinburgh with the technique of stretching fine muslin over hoops or "tambours" to embroider it. Before long the method had spread widely in the west, and in Ayr, Irvine, Kilmarnock, and a few other places in Ayrshire several hundred women and girls were employed tambouring gauzes, silks, and muslins for Glasgow merchants. Young girls were introduced to the work "as soon as they can wind pirns, handle the tambouring needle, or clip off the excrescencies of raised work." Though one writer wrote of the "many female children happily engaged in the tambouring business," another complained that by so doing they failed to learn even to "cook their own victuals, wash their clothes, or manage ordinary domestic business. Their health is by no means promoted by these sedentary employments; and I am sorry to say that their virtue is often but very slender." When we visualise the dimness of the cottage rooms where they stitched, often by the flicker of candlelight, we cannot but marvel at the delicate intricacies of their embroidery, and the even more remarkable Ayrshire needlework of their 19th century successors.

OTHER MANUFACTURES

While the expansion of the textile trades was the outstanding manufacturing development of the later 18th century Scotland, the demands of both home and foreign markets stimulated parallel, though more modest, developments in other branches of manufacture. Traditional small-scale production of local wares was augmented—but by establishment of additional small businesses rather than by changes in the mode of production. In various parts of Ayrshire pottery was manufactured, to provide domestic utensils for local use. In all parts leather was tanned, boots and shoes made, and saddlery work carried on; from Kilmarnock and Ayr particularly part of this increased output was exported. Other small industries

were localised—there were dyers and fullers wherever woollens were made; ropes and sails were made in the harbour towns; salt was obtained from sea water along the central coast at West Kilbride, Saltcoats, Troon, Prestwick, and Newton-upon-Ayr; and some kelp was burned as well. There were breweries, for example, at Ayr, Irvine, Catrine, and Stewarton. More distinctive enterprises there were as well—the making of snuff-boxes at Cumnock; there was a paper-mill at Galston; West Kilbride produced millstones; Stair made whetstones which were sold in different parts of Britain and across the Atlantic; Kilmaurs was celebrated for its knives; coal tar and lamp black were made at Muirkirk by Lord Dundonald after 1787; at Ayr sugar was refined for a time after 1770 and there were three soap manufactories.

COAL AND IRON

In retrospect we may be specially interested in examining the development of mineral working in the 18th century, to trace the beginnings of the heavy industry that was later to become so important a feature of Scottish economic life. To the contemporaries of Burns, however, the story of mining had not yet acquired the significance with which later observers were to invest it. At the beginning of the 18th century coal was worked over the greater part of Ayrshire, in association with limestone, by farmers who burned the lime for spreading on their fields. The coal was quarried from outcrops, or sometimes there were “ingaunees”—entered by sloping shafts. Production was on a small scale, sometimes intermittent, and the coal was available only to the immediate neighbourhood. There was as yet no association between mining and heavy industry. Though more coal was dug as the century progressed, most of it went to burn the vastly-increased quantities of lime that were demanded on the improved farms—the improving lairds had often to become coalmasters as well. Some was used in salt-making. More was devoted to domestic consumption. And an export trade grew up to supply coal, especially to Ireland, where it was also wanted for lime burning.

The first mining enterprise on a large scale was the work of Robert Cuninghame of Auchenharvie. An Edinburgh surgeon and father of 17 children, in 1678 he inherited from a cousin the Cuninghame estates in Stevenston and adjacent parishes. He set to work making improvements on these estates, and was particularly interested in the coal that lay beneath his Stevenston property, with the idea of developing an export trade to Ireland. About 1684 he began the construction of a harbour at Saltcoats, where previously there was only an

anchorage for small craft and half-a-dozen cottages for fishermen and saltmakers. Just inland from the new harbour, which was completed about 1700, Cuninghame made detailed surveys and sank several shafts, including one known as “the deep shank,” which was drained by two pumps operated by water wheel and horse power. It was possibly the first deep coal pit in Scotland. At the harbour he built four new salt pans, using his small coals to evaporate salt on a larger scale than had been undertaken by the “poor people who lived in cots on the shore, and who at very small expense dug up their coal near the surface of the ground, to carry on their manufacture . . . in their little pans or kettles.” To assist him in his enterprise, in particular the building of the harbour, the Scots Parliament in 1686 granted Cuninghame for 20 years the uplifting of excise on ale and beer in Stevenston and Ardrossan parishes, extended in 1693 to include retailed spirits, and renewed in 1707. For this privilege Cuninghame paid £117 quarterly, so that his net gain must have been slight. And in the building of the harbour, for several years winter storms demolished much of what had been erected in the summer. To recoup himself, he was compelled to sell off a fair part of his estates. The first instalment went in 1685, and the next—including the lands of Ardeer—in 1707, leaving only a small tract near Saltcoats where he built the small mansion house of Seabank. He retained the right to work the coals of Ardeer for 57 years, but when he died in 1715 the works were at a low ebb, and soon afterwards his successor leased out the pits and saltworks. Water was always a difficulty and in 1719 a Newcomen engine—the second steam engine to be used in Scotland—was installed. Neither this, nor a larger engine in 1732, solved the problem; the lease passed through several hands, and in 1766 the right to work the Ardeer coal came to an end.

Four years later Robert Reid Cuninghame succeeded to the diminished estate of Auchenharvie and entered into partnership with Patrick Warner, owner of Ardeer. Warner was to contribute the coals that lay under his land, Cuninghame added his saltworks, such coal as Auchenharvie possessed, and—his managerial abilities. These were considerable, and he had inherited the enterprising spirit of his great-grandfather. He set to work repairing and extending Saltcoats harbour, making a new deep sinking on Ardeer land, and constructed a canal which was opened in 1772, which shares with the Monkland Canal the honours of “first in Scotland.” The canal was $2\frac{1}{2}$ miles long, 12 feet wide, and 4 feet deep, to carry coal from the pits down to Saltcoats harbour, where it was loaded for export to Ireland or burned under the salt pans. The work of construction was supervised by Warner’s brother, the minister of Kilbarchan, and it cost less than £500, which was

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recouped in less than a year—not surprising when one horse-drawn barge could carry as much as 50 carts could manage over the Ardeer sands. In 1778 further east, a second deep sinking of 40 fathoms was made, drained by steam engine, and two short canals took the coal to the River Garnock for loading. By 1793 over 200 men (not counting boys) were employed, and 23,000 tons of coal were being raised annually, most of it for export. Despite heavy capital expenditure, difficulties in making sinkings through the sand, and in 1788-9 legal disputes over the terms of co-partnership, before R. R. Cuningham's death in 1814 the profits were ranging from two to six thousand pounds per annum.

By the last decade of the 18th century coal production had been expanded in other parts of the county as well. In most places the tremendous demands for lime on the improved farms, especially after 1770, provided the principal stimulus. There was also by this time a sizable market for domestic fuel in the growing towns and villages, and some of the manufacturing establishments also used it. But with one exception to be noted, the manufacturers' need for coal was limited, so that coal-working played no significant part in the distribution of the growing manufacturing industry. The success of the Auchenhavrie export trade after 1770 encouraged imitation wherever transport to the coast was feasible. Next to Stevenston in Irvine, Kilwinning, and Dreghorn parishes half-a-dozen pits, employing possibly 200 miners altogether, began to produce coal for export through Irvine harbour. Further inland around Kilmarnock ambitious developments were undertaken by Sir William Cunningham of Caprington and others, and by the nineties about 120 miners were producing over 3,000 tons annually, to be transported also to Irvine for export. Further south, Ayr harbour was handling loads from the half-dozen pits of Ayr, Newton, and St. Quivox parishes. Most important of these were the Newton and Blackhouse pits which after initial difficulties were exploited more successfully by an Edinburgh firm after 1786. Some coal was also brought down from Coylton, though, as in the case with Kilmarnock, transport proved a limiting factor. In areas further away from the harbours efforts to develop the coal trade were even more difficult. Deep sinkings were made and steam engines sometimes introduced for drainage, in the parishes of Loudoun, Galston, Mauchline, Sorn, Stair and Cumnock, but—as an example—when the Earl of Dumfries attempted to export his Cumnock coals through Ayr he found it impracticable. Similarly in south Ayrshire, on the small isolated coalfield at Dailly—where about 1700 a coal seam went on fire and is still burning—the coal could be used only locally, “due to the expense of land carriage to the coast, and the want of a good harbour at Girvan.” As an odd exception, down the Doon

valley the Dalmellington pits were able to supply customers in coal-less Galloway, thirty miles off.

In 1787 a new enterprise in mineral exploitation was commenced away in the remote uplands—the Muirkirk Iron Works. One of the promoters explained: “Nothing can induce us to go into such a Desert and Inland Place as Muirkirk but the absolute Certainty of having the coal and ironstone and limestone very cheap.” Actually this was not the first attempt to develop the iron trade in the area. Lord Cathcart and others had earlier in the century undertaken the mining of iron ore at Muirkirk and had it transported for smelting at Bunawe Furnaces in Argyllshire (founded 1753). It was at several such places in the Highlands where wood was available that charcoal furnaces were founded in the first part of the 18th century. From Bunawe pigs of iron were returned to Muirkirk where they were manufactured into bar iron with the help of charred peat. Transport difficulties rendered these operations at Muirkirk too expensive and the work was abandoned. Meanwhile the charcoal furnaces of the Highlands were being joined by a number of new iron works based on the mineral fields of the lowlands, the first and most famous being the Carron Iron Works established in 1759 near Falkirk; and eventually the Muirkirk Iron Works in Ayrshire. In the year that these latter works were started Robert Burns paid a visit to the former. He was not admitted, since it was a Sunday, but he left behind some uncomplimentary lines descriptive of such new establishments:—

“We cam na here to view your warks
In hopes to be mair wise,
But only, lest we gang to Hell,
It may be nae surprise.
But when we tirl'd at your door
Your porter dought na bear us;
Sae may, should we to Hell's yetts come,
Your billie Satan sair us.”

During the 1780s several of the leading figures of the growing Scots iron industry had been prospecting in Ayrshire and when Muirkirk was chosen as a likely site, the iron company which was formed comprised representatives of various existing companies. The idea was that Muirkirk should supply their works with bar iron, and be in the nature of a subsidiary undertaking. Thomas Eddington, one of the promoters, explained: “My original idea of the business was that we should erect cheap works to smelt the materials while they were got cheap, and to abandon them whenever the Stone and Coal became dear and carry our machinery to some other situation.” In fact, Muirkirk proved to be a worthwhile

venture, and so far from being temporary, continued in operation till 1923. Work started in 1787; two years were spent opening up pits and building furnaces; the first furnace was blown in 1789. There were three furnaces for making pig iron, a forge for making bar iron, and a foundry. By 1811 between three and four hundred men were employed. Pig iron was being supplied to foundries in Kilmarnock, Ayr, Paisley, Carlisle, and Ireland. Malleable iron was sold to a wide market. Various iron products were being manufactured at the iron works. Nearby at Glenbuck another blast furnace and foundry were established by an English company.

Virtually the whole output of coal in the Muirkirk area was consumed by the iron works, and in 1811 it was estimated that about 50,000 tons were being produced for that purpose. That would amount to twenty per cent. of Ayrshire's annual output, estimated at 250,000 tons. The mines in the Stevenston-Irvine area were probably producing rather more than twenty per cent.; those around Ayr rather less; the Kilmarnock field, still of minor importance at the end of the 18th century, was destined to make rapid advances in the early decades of the 19th, following upon the improvements in transportation.

TRANSPORT

In the new economy improved facilities for the transport of produce and people were essential. The new enterprises, both agrarian and industrial, involved the receipt of raw materials and fuels, or the dispatch of produce, or both, and on a regular basis too. The thoroughfares that had been sufficient for the casual and limited traffic of earlier days were no longer adequate. It is difficult for us to imagine our land without made roads, yet that was precisely the state of affairs in Ayrshire till the middle of the 18th century. Before that time such travellers as there were made do with rude tracks, which were suitable enough for horsemen, occasional pack animals, and droves of cattle. They were, said Aiton, "formed by accident in barbarous times, by far too numerous, crooked and ill constructed." They twisted and turned to avoid traversing arable land, perhaps following the irregular march lines between properties. Sometimes lairds encroached by inches, then feet, upon the thoroughfare, and—to quote Aiton again—"when the ground, on the opposite sides of the road, happens to belong to two of these kinds of earth-worms, I have seen a public road, in the vicinity of a market town, reduced to eight or nine feet, in width." The coast road followed the shore over a fair part of its distance and remained in use at least till 1775 when Armstrong on his map warns: "There is a dangerous quick-sand on the Road at the Foot of Powburn—to avoid it

keep as near the Sea as the Tide will allow." The same map indicates the sort of difficulties met on the upland drove roads: "At the Nick of Darlae & half a Mile West the Road leads on the side of a very steep Hill; it's not above two feet broad and if you stumble you must fall almost Perpendicular six or seven Hundred Feet." Rivers were more often than not crossed by fords. In Roy's map (1755) twenty-four bridges are shown in Ayrshire. Some of these were recent, but others had been in existence long before the 18th century. Two well known examples of these still survive—the Auld Brig of Ayr (joined in Burns' lifetime by Robert Adam's short-lived New Brig); and the Auld Brig o' Doon over which Tam o' Shanter escaped from the witches.

Wheeled vehicles were rare. According to Aiton, "the first carts, that were used in Ayrshire, were in laying down the materials, of which the bridge over the water of Irvine, between Kilmarnock and Riccarton, was built in 1726." Fullarton reported that about the middle of the 18th century, "the late Lord Cathcart, being extremely desirous of improving his estates, ordered a number of carts to be made, and given gratis to his tenants. But they were at that time so little accustomed to these machines, and the roads were so bad, that very few accepted of his Lordship's present." Farmers continued to use cars or sledges, while loads like coal, lime, grain and other produce were carried in creels or sacks on horseback.

From time to time efforts were made by the Scots Parliament and later by that of the United Kingdom, to improve the public highways. But the central government lacked the administrative machinery to make its will effective locally. The Justices of the Peace and the Commissioners of Supply on their part lacked the resources, the experience, and for a long time the incentive to do very much about roads. Nor did the system of statute labour—by which "tenants, cottars, and other labouring men" should work six days a year on road repair—prove particularly efficient. At best it was practicable to "mend holes in roads that had never been made," but improvement was exceedingly difficult. The records of the Ayrshire Commissioners show them reasonably assiduous in the repair of bridges and the levy of a rate on local heritors to cover costs. Much depended on the initiative of individual proprietors, many of whom sponsored the building of new bridges. But the Ayrshire Commissioners did not concern themselves with highways, and if the Justices did, their records do not survive to tell us so. What evidence there is suggests that the sporadic attempts at road maintenance in the early part of the century were totally ineffective. With increasing traffic there must have

been an actual deterioration in conditions, and demands for improvement became clamant.

John Galt in his *Annals of the Parish*, under the year 1767, graphically depicts the state of affairs: "The king's highway, as I have related in the foregoing, ran through the Vennel, which was a narrow and crooked street, with many big stones here and there, and every now and then, both in the spring and the fall, a gathering of middens for the fields; insomuch that the coal-carts from the Douray moor were often reested in the middle of the causey, and on more than one occasion some of them laired altogether in the middens, and others of them broke down. Great complaint was made by the carters anent these difficulties, and there was, for many a day, a talk and sound of an alteration and amendment; but nothing was fulfilled in the matter till the month of March in this year, when the Lord Eaglesham was coming from London to see the new lands that he had bought in our parish. His Lordship was a man of a genteel spirit, and very fond of his horses, which were the most beautiful creatures of their kind that had been seen in the country side. Coming, as I was noting, to see his new lands, he was obliged to pass through the clachan one day, when all the middens were gathering out, reeking and sappy, in the middle of the causey. Just as his lordship was driving in with his prancing steeds, like a Jehu, at one end of the vennel, a long string of loaded coal-carts came in at the other, and there was hardly room for my lord to pass them. What was to be done? His lordship could not turn back, and the coal-carts were in no less perplexity. Every body was out of doors to see and to help; when, in trying to get his lordship's carriage over the top of a midden, the horses gave a sudden loup, and couped the coach, and threw my lord, head foremost, into the very scent-bottle of the whole commodity, which made him go perfect mad, and he swore like a trooper that he would get an act of parliament to put down the nuisance—the which now ripened in the course of this year into the undertaking of the trust-road."

The Statistical Account gives details of mid-century conditions in different parts of the county. In Symington the roads were "deep and unformed." At Sorn, "there was nothing of any extent in this parish that could properly deserve the name of road." Around Galston there were only "almost impassible clay roads." In the south, by Ballantrae, "there were few roads that were barely passable." Aiton, writing in 1811 of what he always considered the bad old days, tells that "twas only within the last fifty years, that anything like a good road was to be met with, in the county of Ayr." Wryly he remarks that "the road towards heaven was too much talked of, to admit of anything being done to those leading to market towns."

One early example of an effort made locally was the work of the agrarian improver, the fourth Earl of Loudoun. "He prudently began with making roads through the parish, as early as the year 1733, and an excellent bridge was, by his influence, built over Irvine water; and the road from thence, and from his house to Newmilns, was the first made road in the shire of Ayr, which was done by the statute work." But this pioneer work was not followed up till a generation later, when John Loudon McAdam had appeared on the scene.

The McAdams were a Kirkcudbrightshire family, one of whom, James McAdam, helped to found the Ayr bank. His son, the roadmaker-to-be, was born in Ayr in 1756. Some of John's early years were spent at Blairquhan near Straiton. While there he attended Maybole School and is reputed to have constructed in his leisure hours a model for a new road between Maybole and Kirkoswald. When he was fourteen years old his father died and he was sent to America to be under the care of an uncle, a prosperous New York merchant. As McAdam reached manhood he set up in business himself and made a fortunate marriage; despite financial reverses after the War of Independence, he was still a fairly wealthy man when he returned to his native Ayrshire in 1783. He purchased the estate of Sauchrie, between Ayr and Maybole, and for the next thirteen years interested himself largely in road improvement, carrying out experiments at his own expense around Sauchrie, pushing through schemes for highway development as a member of the Ayrshire Turnpike Trustees, and earning recognition as a Deputy Lieutenant for the county. When he left Ayrshire he had formulated the ideas that won him eventual fame, and left behind him a legacy of good roads in many parts of Ayrshire.

Large-scale work on road improvement started while McAdam was still a lad. In 1767, "An Act for repairing and widening several Roads in the County of Ayr" was passed, to cope with a score of main thoroughfares mainly in north and central Ayrshire which "were much frequented by travellers, but . . . impassable in winter for wheel carriages and horses." This measure was typical of a whole series of local Acts which were taken out for different parts of Scotland from 1751 onwards. The nominated roads were placed under the supervision of a Board of Trustees who arranged for the levy of tolls at suitable points and applied the proceeds to reconstruction and maintenance work. The statute labour of six days per year, under the provision of the 1669 Act, was commuted for a money payment to be applied to parish roads. There was opposition to the turnpike system. Landowners objected to encroachments on their properties. Travellers resented and sometimes evaded tolls. Those for

whom the probably-casual demands of statute labour had been a slight imposition found the regular levy of a money rate a burden. All landholders were required to pay at the stipulated rate of 3d. per £1 Scots valued rent. Householders occupying property worth less than £12 Scots paid a fee fixed at 3/- Stg., unless the minister certified their indigence. It was, said the minister of Irvine, "a very hard and oppressive tax."

Seven years later in 1774 a second Turnpike Act was obtained to take in more thoroughfares, in south Ayrshire particularly. An important provision, the Trustees were now allowed to borrow money for roadmaking, repaying the loan from the income derived from the statute labour rate and from the rents they made from letting out their tolls. The work of road improvement was accelerated by this Act and by the accession of McAdam to the Turnpike Trustees some ten years later. The writers of the Statistical Account and the Agricultural Reports at the turn of the century acknowledge how busily progress was being made and how great were the achievements. "Few counties, on the whole, are so well accommodated," wrote Fullarton in 1793; and Aiton re-iterated this in 1811: "There are probably few districts in Scotland, where so many excellent roads have been made, within so short a period, and at so much expense." The changed outlook of new circumstances can be seen in the writers of the Statistical Account who one after another criticise the remaining inadequacies of their local roads, plainly taking as the new desideratum a network of roads to serve every corner of their parish and every farm therein.

The roads were made of broken-up local whinstone covered with gravel, to a depth of 12 to 18 inches. The main turnpike roads, made and repaired by the produce of the tolls, were from 34 to 42 feet wide; the by-roads, provided by the statute labour rate or sometimes by the landlords privately, were usually at least 24 feet wide. Very often the line of old thoroughfares was followed, sometimes tackling gradients which should have been circumvented; other roads were laid along new routes; and particularly in the south some old ways were abandoned.

Traffic rapidly multiplied. Farmers provided themselves with carts, usually single-horse vehicles with two wheels of 48 to 54 inches diameter, carrying 10 to 12 cwt., or latterly more than a ton. By the 1790's in the parish of Loudoun there were more than 250 carts, as compared with the 1730's when the only ones belonged to the Earl and his factor. In Colmonell in the 1760's there were only two; a generation later there was "scarcely a farmer who has not one, two, three, and some even more." Besides the

everyday farm traffic, the transport of coal and lime about the county increased, and carriers' businesses were established with carts plying as far afield as Edinburgh. Passenger traffic was augmented too, and besides the private vehicles of the gentry public coaches appeared on the roads. There was a thrice-weekly service from Glasgow to Ayr via Kilwinning and Irvine, with an extension southwards to Portpatrick. On the more direct route from Glasgow to Ayr via Kilmarnock there was a daily mail coach. The "Camperdown" coach also followed the same route from Glasgow to Kilmarnock before branching off through the Cumnocks, past Ellisland, to Dumfries, Carlisle, and the south. Later, direct communication was also established with Edinburgh. Robert Burns, however, like many others, continued to travel on horse-back.

Even the new improved roads were not able to stand up very well to the constant passage of heavy coal traffic. Novel methods were considered. The Saltcoats Canal, opened in 1772, was such an experiment, and following on its success the Kilmarnock coalmasters discussed the possibility of a canal to the sea at Troon. A survey of the route was made by John Goldie, and a Bill promoted by Colonel Fullarton—both acquaintances of Burns. "This undertaking . . . would certainly render Kilmarnock the most eligible and flourishing manufacturing town in the west of Scotland . . . Perhaps the canal, instead of stopping at Kilmarnock, ought to be extended to Glasgow, which is only 21 miles farther." But the project, like the later and more grandiose one for a ship-canal to Glasgow from Ardrossan, came to nothing. An alternative means of communication was chosen—the railway. On Armstrong's Map of 1775 two "coal waggon ways" are shown at Newton-upon-Ayr; later, Richard Oswald laid a line at Auchencruive; while at Muirkirk the Iron Company also had one. It was a similar but more elaborate railway which a generation later was constructed between Kilmarnock and Troon. Pedantically speaking it belongs to the 19th century, since construction did not begin till 1808; but logically it deserves mention here as an end-point of 18th century Ayrshire transport developments. The Kilmarnock-Troon Railway was sponsored by the Duke of Portland—who had recently become a county proprietor—and was the first railway in Scotland constructed under Act of Parliament. It was nine and a half miles long, with a double track of four feet gauge. Cast-iron flanged rails (made in Glenbuck) were laid on stone blocks, and the intervening track filled with road metal. The line traversed Shewalton Moss; it crossed the river Irvine by a four-arch bridge; and took four years to complete at a cost of over £50,000 sterling. Later, in 1816, the first steam locomotive in Scotland was tried (unsuccessfully) on this line. Normally, coal and other merchandise in waggon-loads up to 12 tons were hauled by horses. Passengers

were sometimes carried, and this appears to have been the first railway in Britain to do so. Altogether the line, relaid in 1844 and still in use, has a strong claim to have been the first real railway in Scotland.

SHIPPING AND TRADE

The spectacular advances in land transport were accompanied by an improvement in facilities along the Ayrshire coast for the growing volume of shipping. There was ample scope for development. Before 1700 the only harbours were those of the ancient royal burghs of Ayr and Irvine, which had been in fact the principal ports in the west of Scotland. In the middle of the 17th century they had between them no more than 8 or 9 small ships, but Glasgow itself had only a dozen, supplemented by 3 or 4 at Renfrew. A small trade was carried on with Ireland and the West Highlands; France, Netherlands, and the Baltic; and Ayr had made some efforts at trade with the West Indies. Both the Ayrshire ports were situated at the mouth of rivers, constantly troubled by silting and the expense of maintaining quays. During the troubled times of the 17th century trade was disrupted and both ports suffered. In 1656 Thomas Tucker discovered that Irvine was "clogged and almost choked up with sand . . . soe as it wrestled for life." In 1688 Irvine Council complained to the Convention of Royal Burghs that it had become "mightily depauperat through the absolute decay of trade these many years bygone." Ayr had declined still further. In 1656 it was "growing every day worse and worse, by reason of their harbour being filled up with sand." It had 5 vessels carrying 177 tons—as compared with Irvine's 3 or 4, none greater than 16 tons and totalling only 40 tons. But by 1692 Ayr had no ships at all. Efforts were made to improve matters. In 1688 Ayr and Irvine were both granted a levy on local ale and beer for nineteen years, supplemented in 1695 by a levy on malt. Despite this, Ayr continued to stagnate. In 1724 Commissioners of the Convention of Royal Burghs found the harbour "very much out of order," its trade "very low and much decayed," and only 2 small ships. Irvine, however, had begun to revive: in 1677 the Town Council authorised the building of a quay; further improvements were made possible by the 1688 and 1695 levies; while in 1706 the Privy Council approved a petition for a national voluntary church collection for the benefit of Irvine harbour. Already in 1692 there were 8 ships, and its trade was being greatly augmented in the early years of the 18th century. It was handling, for Glasgow, goods carried thither and thence on pack horses. There was also some traffic in coals. "They were carried coastways in birlings or small boats. When these arrived, they blew a large horn, which was fixed to a post at the quay by an iron chain; and upon this signal, the country

people loaded their coal poneys or small horses, and carried down what quantities were wanted."

The beginning of the 18th century saw Irvine joined by the nearby new harbour at Saltcoats, constructed by Robert Cuninghame of Auchenhavie and specialising in the export of coal to Ireland. Irvine itself continued to make steady progress, taking up coal export on a larger scale, and especially benefiting from its development as Glasgow's entre-pot. From 1707 when American trade was opened to Scottish enterprise, until 1773 when the dredging of the Clyde made the inland city of Glasgow itself a seaport, Irvine shared with Greenock and Port Glasgow the handling of the annually-swelling bulk of merchandise for Scotland's commercial and manufacturing capital. Foodstuffs from Ireland, and tobacco, timber, and grain came pouring in, until by 1760 Irvine ranked as Scotland's third port. Out of the nation's 999 ships, Port Glasgow and Greenock together had 327; Leith had 79; and Irvine (together with Saltcoats) had 77. There was a relapse in the 1770's when the Clyde was deepened, and the American war interfered with trade. But from 1783 onwards, even though Irvine had lost most of its Glasgow business, there was plenty of new trade. By the 1790's Irvine was a thriving port with 51 vessels of its own, the largest being 160 tons, and carrying altogether 3,682 tons. There were 305 sailors belonging to the town. Saltcoats had 41 ships and a total capacity of 4,200 tons, manned by 320 men—though a dozen of the larger vessels "do not frequent their own incommodious port, but find employment in the carrying trade." Ayr with 33 vessels—2,500 tons, 190 sailors—was reviving. In the second and third decades of the century the Council had rebuilt part of the quays, purchased a drag for dredging, and installed a harbour light; in 1772 larger-scale development was promised by an Act empowering the Council to borrow up to £15,000 for harbour work; on the north side of the river a lighthouse was erected in 1790 by the coalmasters of Newton. By 1807 Ayr had taken the lead, with 54 ships (4,325 tons) as compared with Irvine's 52 (3,871 tons) and Saltcoats' 30 (2,924 tons).

None of the three harbours was really adequate to cope with the growing volume of trade towards the end of the century. The councils of the royal burghs had neither of them the resources to undertake large-scale new installations of the kind that could quite easily have proved worthwhile; nor was R. R. Cuninghame in a position to contemplate them at that time in Saltcoats. Irvine was particularly penalised, because ships of more than 80 tons could not cross the bar with a full cargo, but had to load and unload outside. Saltcoats could take vessels up to 200 tons and Ayr (latterly) up to 250 tons. But the former had a narrow,

rocky, and dangerous entrance and was exposed to gales. In the case of the latter access was also difficult, the bed of the river was narrow, and in December, 1789, twelve vessels were stranded in one night—one wrecked with the loss of all hands. As late as 1811 Aiton pointed out that there was "not a harbour between Liverpool and Greenock that a ship over 250 tons can enter." Fullarton rightly observed that the three Ayrshire harbours were "too defective to admit of trade sufficient to produce a direct influence on the character of Ayrshire husbandry" . . . and, we might add, on Ayrshire manufacturing either. The Ayrshire economy developed despite the harbours. There was a certain lack of vision; or simply a lack of capital to invest in harbour development when more sure profits could be anticipated from coal, land, and manufacturing.

There was a similar failure to make the most of shipbuilding prospects. True, during the American War when it was no longer possible to purchase American-built vessels, shipbuilding was begun at Saltcoats. There were three yards and an associated rope works. Between 1775 and 1790, 64 ships, up to 200 tons, and altogether 7,095 tons, were constructed. But by 1820 building had been given up, only repair work was done, and the numbers employed had dwindled from 90 to 30. At Newton-upon-Ayr, 60 were engaged in 1792. The only other yard was at Irvine

Besides the harbours there were a number of creeks along the coast, but nothing was done to develop the fishing industry. On the contrary, the picture at the end of the 18th century was not particularly bright. Fishing for herring was on the decline all along the coast, particularly since the shoals were becoming less plentiful in these latter years. And in the fishing for salmon and white fish as well, there was competition from fishers "from the north country." At Largs, the Highlanders from across the Firth were monopolising the taking of salmon and selling their catches in Greenock and Port Glasgow, while the local trade in white fish and herring was in decline. At West Kilbride, where there had been about 150 fishermen at the beginning of the century, their community had virtually disappeared. There was only a handful of fishers at Ardrossan. The Saltcoats busses were being driven out of business by those from Campbeltown and Rosa, and three boats which annually went to the Newfoundland fisheries had given up. "The great trade in fishing" that Pocock found in Irvine in 1760 had gone. At Troon salmon fishing was in the hands of people from Elgin. At Ayr the days had passed when the harbour was busy with fishing fleets and herring curing and foreign buyers, though a fair amount of all kinds of fish was still landed on both sides of the river, by local and Highland fishermen, including a

surplus for sale in Kilmarnock, Irvine, Paisley, and Glasgow. Along the Carrick coast, there was fishing at Dunure, Turnberry, Girvan and Ballantrae, but it was nearly always the same story of difficulties and reverses. Altogether the picture of maritime activity contrasts sharply with the vigorous enterprise in nearly every other branch of economic life in the 18th century Ayrshire. "I am sorry," complained Aiton, "that this branch of industry has never yet been attended to, in any degree suitable to its great importance. I should be happy to see a part of the cotton weavers, who are by far too numerous, employed in fishing."

Only at the very end of the century, when the economic developments were rapidly accelerating, and the county was booming, was the now-urgent need for vastly-improved port facilities faced. The change in outlook can be seen at Troon. In 1707 William Fullarton of that ilk had obtained a charter erecting his lands into a barony and constituting Troon a free seaport, giving him the privilege of lifting anchorage dues. But nothing was done to improve what was simply a creek. About the 1740's the merchants of Glasgow proposed to feu the lands of Troon and proceed with the construction of a harbour, but the offer was rejected by a later William Fullarton, "lest a rise should be occasioned in the price of butter and eggs." But by the 1790's his only son, Colonel William Fullarton, the agriculturalist, was considering the possibility of building a harbour at Troon and making a canal to link it to Kilmarnock. He himself had not the means to carry the scheme to fruition, but in 1805 the Fullarton estate was taken over by the Duke of Portland, who in 1808 began work on Troon harbour and a railroad connection to Kilmarnock. The harbour itself cost £100,000, met almost solely by the Duke. It was sited in the shelter of Troon promontory, and was commodious and easy of access. Further up the coast, on another promontory at Ardrossan, just about the same time, the construction of another deep-water harbour was begun by the 12th Earl of Eglinton, who was an outstanding figure in Ayrshire at the end of the 18th century and the beginning of the next.

Born in 1739 at Coilsfield near Tarbolton, Hugh Montgomerie joined the army at the age of 17, served in the Seven Years' War, and later reached the rank of colonel. Elected as Ayrshire's representative in the House of Commons in 1780 and again in 1784, he was the "soger Hugh" of Burns' "Earnest Cry and Prayer." In 1789 he resigned his seat to become Inspector of Military Roads in Scotland, and with the outbreak of war in 1793 raised the West Lowland Fencibles. He was elected M.P. for Ayrshire once more in 1796, but had to resign again almost immediately after, when on the death of his cousin he became the 12th Earl

of Eglinton. In this capacity he was elected to the House of Lords as a Scots peer in 1798 and again in 1802, until 1806 when he was created a peer of the United Kingdom. Among his general interests, which ranged from music to the turf, he had a particular interest in Ayrshire, of which he was for a time Lord Lieutenant. Immediately after his elevation in 1796 he rebuilt Eglinton Castle, laid out roads and extended and beautified its policies. He raised a new town at Ardrossan, which Thomas Telford had surveyed and selected as the site of a seaport, to be connected by a ship-canal to Glasgow. Acts for the harbour and canal were obtained in 1805. The former was to be "the safest, most capacious, and most accessible harbour, hitherto erected on the western side of Britain." Construction began in 1806 and by 1810 it was far enough advanced to receive its first cargo from abroad—timber from Salem, U.S.A. Ayrshire proprietors and Glasgow merchants invested in the harbour and canal companies, but anticipated government aid was not forthcoming. The canal from Glasgow (Port Eglinton) had reached Johnstone in 1811 but proceeded no further. Work on the harbour was suspended in 1819 on Earl Hugh's death. He had spent some £100,000 on his project. Though work was later resumed on the harbour the initial dreams were never realized. Nevertheless, even on a more restricted scale the harbours at Ardrossan and Troon were successes from their inception. Between them they took the bulk of the increased business that had to be handled from the early years of the 19th century and became at once the most important of the Ayrshire ports. Plans that had been mooted in the 1790's for the enlargement of Saltcoats came to nothing; Ayr and Irvine lost their commanding position; and down the Carrick coast the improvement of the harbour at Girvan and Thomas Kennedy's new harbour at Dunure were of limited, hardly more than parochial, significance.

But that is again looking forward into a 19th century future. The picture at the end of the 18th is of the older ports manfully coping with the now-booming trade—the harbours busy with colliers and fishing boats, larger vessels from overseas, and little packet boats plying between Greenock, Irvine, Ayr and Liverpool—which many travellers, even for London, found a convenient route and mode of transport.

All these were sailing vessels. But the steamship had already been invented. In the summer of 1788 a paddle steamer designed by William Symington carried out successful experiments on Dalswinton Loch, Dumfriesshire, under the patronage of Patrick Miller. Miller's tenant at Ellisland nearby, Robert Burns, may have been on board. By 1802 Symington's *Charlotte Dundas* was operating successfully on the Forth-Clyde Canal, and ten years

later Henry Bell's *Comet* began regular steamer services between Glasgow and Helensburgh.

The extent of Ayrshire trade by the end of the 18th century can be gauged from the customs house registers of shipping. For 1792 the Irvine port district (including Saltcoats) handled 112 vessels (9,972 tons) in foreign trade, 11 (221 tons) in coastal trade, and 6 fishing boats (301 tons); Ayr had 44 (5,398 tons) and 13 (444 tons) in foreign and coastal trade. Imports were then almost entirely of foodstuffs and raw materials. As far as the former were concerned, most was unloaded at Irvine for transshipment to Paisley and Glasgow. Grain came from Ireland and Galloway to Ayr, Irvine, and occasionally Saltcoats, while some was brought from America through Irvine. Dairy products from Ireland also passed on their way through the county via Irvine. From America and the West Indies came from time to time cargoes of sugar, tobacco, and other produce, to Irvine or Ayr. Raw materials which arrived were on the contrary nearly all for use in Ayrshire. All three ports kept up a steady trade in timber from the Baltic, while Irvine and Ardrossan supplemented their requirements with cargoes from America, and ship-timber came from Wales for the shipbuilding yards. The Baltic also supplied iron and hemp. Hides were brought from Ireland and Galloway. From Ireland also were imported lime, linen yarn, and some manufactured linen cloth. The principal export of all three ports was coal, shipped mainly to Ireland in colliers which returned in ballast; some also went to America from Irvine. Coal was also handled by coastal vessels, as was farm produce, some salt, and miscellaneous merchandise, for Arran, Kintyre and Galloway. Exports of manufactured goods were largely handled by Irvine. Textile and leather products went to Ireland and America, including silks and cottons sent from Paisley to Ireland. The greatest proportion of Ayrshire's manufactures, however, went by way of the Clyde. This was particularly so in the case of cotton. The cotton trade was in the hands of Glasgow merchants and there is no record of any raw fibre being landed at Ayrshire ports, and their only exports of cotton fabrics were for Ireland. There is evidence here of a deficiency in Ayrshire enterprise. In fact, apart from the export of coal, Ayrshire's commercial development was bound up closely with that of Glasgow, and by 1800 the roads of north Ayrshire were busy with loads of raw cotton and manufactured products of many kinds, coming from and going towards the warehouses of the city, and loads of farm produce going to feed the city population.

Until the 18th century most of the buying and selling was carried on at the weekly markets and periodic fairs of the burghs. Besides the two royal burghs of Ayr and Irvine there were burghs

of barony functioning in Newton-upon-Ayr, Prestwick, Tarbolton, Maybole, Girvan, Kilmarnock, Kilmaurs, Newmilns and Saltcoats. Charters had been obtained for other places also but they had either not been carried into effect or had lapsed. The royal burghs, by their charters, had a monopoly of foreign trade. In practice there were constant infringements of this privilege, and in 1672 the Scots Parliament agreed to substantial modifications whereby the other burghs might handle some imported goods and export certain of their wares. Irvine, after this, complained in 1692 to the Convention of Royal Burghs of competition from Kilwinning; Kilmarnock, Kilmaurs, Newmilns, Stewarton, Beith, and Largs. Ayr was similarly perturbed by the activities of traders in various places in central and south Ayrshire, and in 1714 was moved to prosecute such "unfree traders" in Maybole, Straiton, Girvan, Ballantrae, Mauchline, Dalmellington and Cumnock. Commerce was progressing despite, and in defiance of, feudal restrictions, and by the 18th century burghal trading privileges were being widely and openly ignored. Not only had the royal burghs lost their control of foreign trade, but as far as internal trade was concerned the other burghs were also losing their key-positions as marketing centres. New markets and fairs were instituted whenever and wherever the necessity was felt until by 1811, according to Aiton, "There are some fairs held at every town, and at every parish church, in the county of Ayr. There are five or six in Ayr, five in Irvine, three great, and several small ones in Kilmarnock, four in Maybole, five in Newmilns, five or six in Cumnock, and no less than twelve in Mauchline every year." There were altogether more than two hundred fairs (and races) in the county annually, with perhaps an average of a thousand people attending each. The initial impulse for these meetings was economic—though by the end of the 18th century the fairs had become principally, and in many cases exclusively, popular social assemblies. "In former times, these fairs were attended by a vast number of merchants, with cloths of all kinds, hard-wares, and all sorts of merchandise. Mechanics and manufacturers carried thither the various articles of their several crafts. The shoemaker exhibited his shoes; the carpenter his rakes, flails, cars and harrows; the turner his plates, ladles, and caps; the cooper his bickers, boyns, and cogs. Wool, flax, yarn, etc., were sold at every country fair. Every travelling merchant, and even those who kept shops in town, exhibited their goods and wares, at the country fairs, for many miles round their residences." But in the course of the century the markets and fairs were being superseded and losing their commercial importance. "Since all the towns and villages have been supplied with shops containing every species of goods, and the number of chapmen greatly curtailed, horses or cows form the chief articles of traffic or show; except at the fairs at Ayr and Maybole, where the home manufactured

plaidings are sold, to a great extent. . . . Every farmer can now sell his cattle, cheese, butter, grain, and other produce of his farm at his own door, to greater advantage, and at higher prices, than he can obtain by carrying them to fairs. And nine-tenth parts of them are sold by the farmers at home." Obviously, too, for the sale of many of the new products, local markets were an anachronism. The new economy required new methods of exchange. Participating in, and assisting the development of commerce, after 1775 the Bank of Scotland had branches in Ayr and Kilmarnock and there was a branch of the Paisley Bank (founded 1783) in Irvine. Locally, the Ayr Bank—established in 1773 as successor to the ill-fated firm which had crashed the previous year—had offices in Ayr, Irvine and Maybole; and a Kilmarnock Bank was formed in 1802.

While the first stages of the new economy can be discerned early in the 18th century, it was not until the 1770's that Ayrshire began seriously to devote herself to large-scale production for the Glasgow market. In that decade the agrarian improvements got fully under way and the making of the new roads was being tackled in a business-like manner, while the exploitation of the coal seams was being widely undertaken. The production of textiles was being expanded and in the 1780's the cotton industry was introduced and rapidly developed to outstanding importance; and iron-working followed. These dramatic beginnings were taking place just at the time when Burns was passing through his formative years to maturity, at Lochlea and Mossgiel. His poems were published, in 1786, in an Ayrshire which was pulsating with progressive change: the Kilmarnock Edition is contemporaneous with the real beginnings of the industrial and agrarian revolutions in Ayrshire.

SMUGGLING

A study of 18th century commerce would be incomplete without special mention of one considerable type of enterprise—the contraband trade. How prevalent this was on the coast-line of the south-west of Scotland can be measured by the estimate that in the vicinity of Irvine in one year twenty thousand pounds worth of goods were smuggled.

Along the Ayrshire coast smuggling had been known "from time immemorial." Before the Union, during the 17th century, there was widespread evasion of the restrictions imposed by the Scots Parliament on Irish trade—protectionist devices to limit, and sometimes prohibit, the importation of manufactured goods and foodstuffs. Salt smuggling was particularly prevalent. In 1661 an inland duty was levied of fifteen shillings "upon ilk

boll of inland salt." This locally-manufactured "small salt," used for ordinary household purposes, was not refined enough for fish-curing, which required Irish "great salt," whose importation was restricted.

With the Union of Scotland and England in 1707 a joint system of customs and excise had to be devised. While Scotland was to remain a separate unit of excise administration, new Commissioners were appointed and a more efficient service on the English model was instituted. A beginning was made to standardise the duties in the two countries, but to secure an equitable fiscal settlement Scotland was exempted from certain duties which were due to expire in England shortly thereafter, while imposition of the higher English levy on salt was deferred for seven years. In 1714 this new Salt Tax came into operation. It was bitterly resented; throughout the 18th century it was evaded wherever possible; Irish salt was smuggled all along the coast from Mull to the Solway; ultimately the imposition contributed to the decline of the Scottish fishing and curing industry. There was similar unpleasantness over the levy of a malt tax. Scotland by the terms of Article XIV of the Act of Union was exempted from the English malt tax for the duration of the war with France. In 1712 an effort to impose a levy of sixpence per bushel on malt was resisted in Scotland as an oppressive measure and an infringement of the Union; and a peculiar compromise was reached that the duty was imposed, but would not be collected. In 1724 the government resolved to enforce the levy at the rate of threepence per bushel. There were riots in Glasgow and Edinburgh, and the Jacobites raised the cry of "No Union, No Malt Tax, No Salt Tax." But popular resentment could not be translated into effective political action. The Malt Tax had to be accepted. There followed a rapid decrease in the brewing of ale. "Twopenny" could no longer be sold at twopence per Scots pint (two English quarts) and was abandoned in favour of the new whisky or of smuggled foreign spirits.

After 1707 the contraband trade grew to tremendous proportions. Landings were made all along the Ayrshire coast of brandy, rum, wines, tea, tobacco, salt, cambric, and other excisable goods. On the rocky Carrick coast the contraband arrived in "large vessels, then called Buckers, lugger-rigged, carrying twenty, and some thirty, guns," and was brought ashore with the assistance of local farmers who kept boats, ostensibly for fishing—a ruling elder was one of the principals at Ballantrae. Casks were deposited in brandy-holes at convenient spots—some were sited under farm roads around Kirkoswald, one actually in the kirk at Ballantrae. "A hundred Lintowers, some armed with cutlass and pistol and

with horses" transported the goods through the country for disposal in Glasgow and Edinburgh. Girvan, the largest community in the area, grew in size and importance on the profits of the trade. How flagrant the smugglers became, and how much they could rely on public compliance, is evidenced by their activities on the most populous part of the Ayrshire coast between Ayr and Ardrossan. Ardrossan was a convenient spot for landing spirits, and Saltcoats was specially qualified for the handling of Irish salt. The busiest stretch was the open coast from Irvine to Troon. There was a good sandy shore, while the promontory at Troon offered shelter in stormy weather; there were sandhills in plenty for concealment, and hills behind; and a population many of whom were thirled to the trade. In Dundonald, Loans and Dreghorn there were houses with specially-constructed double walls, and the countryside was pockmarked with brandy-holes. In Dundonald Kirk on a Sabbath morning the free traders and their families sat in the "Smugglers' Loft," smugly listening to the diatribes of the General Assembly against the contraband trade. The Rev. Micah Balwhidder reported (in Galt's *Annals*) that "the great smuggling trade corrupted all the west coast, especially the laigh lands about the Troon and the Loans. The tea was going like the chaff, the brandy like well-water, and the wastrie of all things was terrible. There was nothing minded but the riding of cadgers by day, and excisemen by night—and battles between the smugglers and the king's men, both by sea and land. There was a continual drunkenness and debauchery; and our session, that was but on the lip of this whirlpool of iniquity, had an awful time o't. I did all that was in the power of nature to keep my people from the contagion: I preached sixteen times from the text, "Render to Caesar the things that are Caesar's." The impunity of the Ayrshire smugglers can be gauged from a report in the Irvine Custom-House records of a typical incident (in 1764): "Between seven and eight in the morning they descried a boat coming from the Troon, which proved to be a small Isle of Man one, and which they believed contained foreign spirits. She no sooner arrived than about 100 men, mounted on horses, having large sticks in their hands, accompanied with some women, instantaneously came down from the country, and took possession of the Troon; and though the officers immediately made an attempt to seize the said boat and spirits, they could by no means get access to her for the mob, who threatened to put them to death if they offered to touch her or what was in her. They at length, however, laid hold of three carts, with six casks of spirits in each, but had no sooner made a seizure than they were attacked by one ———, servant to ———, in Loans of Dundonald, and by three other men unknown to them, disguised in sailors' habits: all were provided with great sticks, who

deforced them of the seizure, while other drove off the carts and spirits, swearing every moment to knock them down, and sometimes lifting up their sticks ready to lay on blows." When (in 1768) the river was flooded and the fords impassable, the smugglers did not hesitate to fight their way across Irvine Bridge. On one occasion (in 1769) a ship in Irvine harbour was seized and its cargo carried off. There were repeated attacks on Irvine Custom-House to recover goods which had been confiscated, particularly in 1733, when the premises were broken into and sacked by forty or fifty armed men from Beith, which was a notorious centre for the distribution of contraband goods. In 1767 there was an attempted assassination in Ayr of a Surveyor of Customs. Obviously the authorities were incapable of coping with the situation, and while troops were stationed in the area for a time in 1730 "for the assistance of the officers of the customs in the execution of their duty," this was only an emergency measure which never became permanent, despite repeated requests for military assistance.

Smuggling became a profitable occupation with the extension of customs duties after the Union, and it was condoned and even fostered by those who objected to the Union. After the arrest of George Wilson, a smuggler from Fife, and the ensuing Porteous Riots in Edinburgh in 1736, the smuggler became more than ever a popular hero; and the "free trade" proceeded merrily as the century progressed. It began to decline only in the latter part of the century when, after the final suppression of the Jacobites, the government was able to take steps towards a more effective system of law and order, with the backing of those classes whose new economic enterprises could not prosper in an unsettled society.

Most of the contraband goods landed on the west coast were brought from the Isle of Man, which, being outwith the authority of the British government, was an ideal depot for the smugglers. In a report from Irvine to the Commissioners of Customs in 1764 it was stated: "We find that as the Isle of Man is so situated, and that as it is not above six or seven hours' sail from the nearest port of Scotland, and but about twelve hours' sail from this port, it is now more than ever become the greatest storehouse or magazine for the French and other nations to deposit prodigious quantities of wines, brandies, rums, &c., coffees, teas, &c., and other Indian goods and all manner of goods and merchandises that pay high duties in Great Britain or Ireland, or are prohibited to be imported into these kingdoms, which are afterwards carried off in small boats and wherries built for that purpose, and smuggled upon the coast of Scotland to an enormous degree, as well as upon

the coast of England and Ireland, which no method has yet been found out to prevent in any degree (not one in a hundred of the boats, wherries or vessels concerned in the smuggling trade being taken at sea or seized afterwards); it cannot therefore be supposed that it can much longer be suffered to be carried on to such an exorbitant degree . . . Smuggling into this part of Scotland has so far increased, that it is believed that goods thence have been smuggled into the precinct of Irvine to the value of £20,000 in the last twelve months, notwithstanding of the king's cruisers, and the endeavours of certain of the officers of the Customs and Excise upon land to suppress it." In 1765 action was taken by the government and the sovereignty and revenues of Man were surrendered to the Crown for the sum of £70,000, to the great inconvenience of the trade. Thereafter cargoes had to be brought by more circuitous routes, from Ireland, the Faroe Islands, or directly from Continental sources such as Dunkirk. The importation of illicit whisky from the Western Highlands was unaffected, and as late as 1813 there was a skirmish at Dundonald between the excise officers and the whisky traders. But the minister of Dundonald, writing near the end of the 18th century, noted the decay of smuggling, and dated it from the acquisition of the Isle of Man in 1765.

Another means by which the government sought to counter the contraband trade was by improving the efficiency of the excise service. Before the Union the Scots Excise was inadequate, and sometimes the collection of revenue had to be farmed out. Even after 1707, when new Commissioners were appointed, and English-trained subordinate officers introduced more business-like methods, they found that in the remoter areas it was impossible to operate at all, and were compelled to resort to farming the excise. Even in the more settled lowland areas of Scotland it was difficult for the excise officers to cope with the smugglers. It was impossible to keep effective watch along the coast; local people were loath either to report landings or to co-operate with the officers if one were reported; and in any case the detection and prevention of smuggling was only one of the excisemen's multifarious duties. Furthermore, there is evidence that the law was not always held in high respect by the officers of the excise themselves. Mungo Campbell, who, on one of his frequent poaching expeditions, murdered the Earl of Eglinton in 1769, was an excise officer. Earlier in the century, in 1731, the Surveyor, Landwaiter and Collector's Clerk at Irvine were dismissed for shipping at Saltcoats peats and stones, pretending these to be tobacco, on whose re-export a rebate on duty could be claimed. In 1764 a more elaborate case of corruption was discovered. It appeared that officers in the Collections of Ayr and Irvine (together responsible for the

Ayrshire coast) were in collusion with the smugglers. They had an agreement that when a cargo was run at Troon four casks of spirits were laid aside for each of the officers in the area, to remain untouched till the remainder of the cargo was landed and uplifted. To try to obviate such cases of collusion, which were not uncommon, Pitt instituted a system of compulsory transfer of all officers every five years. And to secure better officers in the lower grades, salaries were increased in 1799 from the scale which had been in operation for nearly a century and which was palpably inadequate.

When Robert Burns was commissioned in the Excise in 1788 he was entering a service whose work prevented it from enjoying a high public esteem, a service whose officers were often a poor type, but a service which the authorities were making efforts to improve.

BURNS AND THE EXCISE

Burns' first ideas of becoming an exciseman may have come to him while he was still in his 'teens. The son of a poor tenant-farmer, the prospects of himself getting a farm later on were slim. The only escape from a lifetime of farm service was a transfer to some other trade. So at various times he tried the flax-dressing in Irvine, planned to emigrate to the West Indies, and even toyed with the idea of soldiering. It was a commendable effort at vocational education when his father sent Robert for three months in the summer of 1775 to stay with his uncle, Samuel Brown, at Kirkoswald, to take there a course which was a useful training for one who would later enter the excise service; though what precise motive took him to Kirkoswald has never been made clear. Of his training, Burns later wrote: "I spent my seventeenth summer on a smuggling coast, a good distance from home, at a noted school, to learn mensuration, surveying, dialing, &c., in which I made pretty good progress . . . The contraband trade was at this time very successful, and it sometimes happened to me to fall in with those who carried it on. Scenes of swaggering riot and roaring dissipation were, till this time, quite new to me; but I was no enemy to social life. Here, though I learnt to fill my glass, and to mix without fear in a drunken squabble, yet I went on with a high hand with my geometry, till . . . a charming *filette*, who lived next door to the school, overset my trigonometry, and set me off at a tangent from the spheres of my studies."

A decade passed, and in 1786 there is evidence that he was exploring the possibilities of an excise appointment through some of his Ayrshire friends. Appointment and advancement both depended on the patronage of friends of influence, and

after his visit to Edinburgh and the publication there of his second edition, Burns was able successfully to solicit directly the help of Robert Graham of Fintry, one of the Commissioners of Excise. Concurrently with this he was negotiating with Patrick Miller of Dalswinton for the tenancy of Ellisland Farm, and how well served he was by both his patrons is seen in the favourable arrangement he made with Miller in March, 1788, while in the same month the Excise Board issued his Order for Instruction, requiring him to take the six-week training in gauging and book-keeping, which he did with James Findlay, the exciseman at Tarbolton. He entered Ellisland at Whitsun; a month later his Commission as an exciseman was issued. He was not yet allocated to any post, but with Graham of Fintry's intervention the officer of the district in which Ellisland was situated was transferred to another position, to leave it open for Burns, who commenced duty in October, 1789. Obviously Burns' interests were being well fostered. His first post was that of gauger in the Dumfries First Itinerancy, a riding station involving some two hundred miles on circuit each week at a remuneration of £50 per annum, plus a proportion of fines. In some respects he did not find it altogether congenial work. "There is a certain stigma affixed to the character of an excise-officer," he admitted. As to his duties, they involved "searching auld wives' barrels" and the like, "grinding the faces of the publican and the sinner on the merciless wheel of the excise." Well, he thought, might the people applaud when—

"The Deil cam' fiddlin' thro' the town,
And danc'd awa' wi' th' Exciseman,
And ilka wife cries, 'Auld Mahoun,
I wish you luck o' the prize, man'."

While Burns was on his excise work, the labours of the farm were left largely in the hands of servants, but despite this his management was effective and the new farm came along satisfactorily. Clearly, however, he could not hope to carry on two arduous jobs at once and make an outstanding success at either, a sufficient success to provide him and his family with security and scope for his continued literary pursuits. He had to make his choice, and selected the excise when a chance of promotion came along. He acted wisely, because he was proving himself an efficient officer—"turns out well" the excise records have it; he was backed by influential friends, and was marked out for rapid promotion. In December, 1791, he left Ellisland and moved into Dumfries. After less than two full years in the excise he was promoted to the Dumfries Third Division at £70 per annum, plus the probability of another twenty or thirty pounds in fines. Just a year later he was

transferred to the Dumfries First (Port) Division, the best assignment in the area because of its opportunities of prize-money from confiscated contraband. His income was now in the three-figure range—as compared with artisans and ploughmen who earned around £15 a year, and parish schoolmasters whose average annual income was a pittance of £13. Burns' name, furthermore, was on the list of persons recommended for promotion. His work was proving satisfactory—though the tale of the heroic capture of the smugglers' brig *Rosamond* in 1792 is probably apocryphal. Towards the end of that year he was panic-stricken when complaints were made about subversive political activities, but after investigations there was no official rebuke of any kind. In December, 1794, indeed, when Alexander Findlater, his superior officer, fell ill, it was Burns who served as Acting Supervisor of Customs for Dumfries during the four-month period. Had Burns lived beyond 1796, it seems likely that in the normal course of events he would through seniority have reached a Supervisor's post by 1797, with a basic salary of £90 and supplements to bring it up near the considerable annual income of £200. And there is no reason to suppose that he might not have advanced beyond that. He might have been promoted to become a Collector in charge of an area (basic salary £120); and there was really nothing to prevent his becoming eventually an Assistant Commissioner (£200). It is worth recalling that another famous Scot, Adam Smith, author of the *Wealth of Nations*, had held a post as Commissioner, at £800, from 1778 till 1790.

During the last few months of his life Burns was involved in some financial difficulties which, added to the distress of his illness, plunged him into deep despair. But the legend that he lived his last years in penury and died bankrupt has been exploded by his most competent biographer. Burns' resources were ample to cover the few petty debts that were worrying him; he was in a post that offered a comfortable security and prospects of considerable advancement. Until his final illness he was still in the full flood of literary activity. Had he been spared the grip of rheumatic endocarditis, the future would have been bright for him. Burns, like many others, found that the later 18th century was an age of opportunity for those with the courage to grasp it. His tragedy was that he died when only thirty-seven years old, before he could enjoy the complete fulfilment of his success.

The above is a sequel to the study of the agricultural background in Volume 3 of these *Collections*. Towards the end of the 18th century the condition of the land and its improvement was being widely studied and reported on; but industrial and commercial topics did not receive the same contemporary attention,

and there are no special local studies. Information may be gleaned from many of the sources referred to in the bibliography in Volume 3, page 172. *The Statistical Account* provides useful though unrelated facts for all the parishes. Fullarton's *Report* gives only a few details. Most of our information comes from 19th century writers. Aiton's *Report*; George Chalmers' *Caledonia*, whose first volume appeared in 1807; and Paterson's *History of Ayrshire*, are invaluable. Mitchell's *Memories*, Robertson's *Cunninghame*, Donaldson's *Account*, and, of course, Galt's *Annals of the Parish* are helpful. Graham's classic *Social Life in the Eighteenth Century* provides some local material as well as the general picture.

Much use has been made of local histories, the most useful being *The Royal Burgh of Ayr*, ed. A. I. Dunlop, 1953, especially the contributions by G. S. Pryde, A. Kennedy and H. McGhee; A. F. McJannet's *Royal Burgh of Irvine*, 1938; *Muniments of the Royal Burgh of Irvine*, ed. J. S. Dobie, 2 vols., 1890, 1891; A. McKay's *History of Kilmarnock*, 1848 and later editions; A. Guthrie's *Ardrossan and Saltcoats*, 1882; P. C. Carragher's *Saltcoats Old and New*, 1909; A. M. Moody's *Stevenston Past and Present*, 1902; J. Kirkwood's *Troon and Dundonald*, 1875; J. H. Gillespie's *Dundonald*, 2 vols., 1939; J. G. A. Baird's *Muirkirk in Bygone Days*, 1910; J. A. Hodge's *Through the Parish of Muirkirk*, n.d.

Information on special subjects is derived from *A Biographical Dictionary of Eminent Scotsmen*, 3 vols., 1872 edition; Roy Devereux's *John Loudon McAdam*, 1936; *John Loudon Macadam*, 1756-1836, Institute of Municipal and County Engineers, Ayr, 1936; a privately-published volume on *James Finlay & Co., Ltd.*, 1951; Margaret Swain's "Ayrshire Needlework" in Volume 3 of these *Collections*; J. H. G. Lebon's "The Development of the Ayrshire Coalfield" in the *Scottish Geographical Magazine*, 1933, and his "Beginnings of the Agrarian and Industrial Revolution in Ayrshire" in *London Essays in Geography*, ed. Stamp and Woolridge, 1951; W. D. Kerr's "Notes on Stevenston and Saltcoats" in these *Collections*, Volume 1; N. M. Scott's "Documents relating to Coal Mining in the Saltcoats District" in the *Scottish Historical Review*, 1922; B. R. Leftwich has *A History of the Excise*, 1908, and articles in the *Burns Chronicle*.

Lastly, there are two books whose outstanding merits need no recommendation; they have provided general information, and data on particular points: Henry Hamilton's *Industrial Revolution in Scotland*, 1932; and F. B. Snyder's *Life of Robert Burns*, 1932.

Further studies on the "Background to Burns," dealing with social life in 18th century Ayrshire, are planned for inclusion in future volumes of these *Collections*.